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Bally's Bronx
Hazardous Materials - Supporting Documentation

LANGAN

# E-1

Bally's Bronx
1999 Environmental Assessment Statement
*Prepared by: Allee King Rosen & Fleming, Inc.*
*Prepared for: NYC Department of Parks and Recreation*

LANGAN

# Ferry Point Park

## Environmental Assessment Statement

**Prepared for:** New York City Department of Parks & Recreation

**Prepared by:** Allee King Rosen & Fleming, Inc.
with
Carter, Ledyard & Milburn
Butler Rogers Baskett PC
Golden Bear International, Inc.
Greenberg Traurig
Environmental & Turf Services, Inc.
JWE Engineering & Environmental Services, LLC
PBS&J
Princeton Hydro, LLC
Thomas Balsley Associates
TRC Environmental Corp.

September 30, 1999

## ENVIRONMENTAL ASSESSMENT STATEMENT

## PART I: APPLICANT INFORMATION & ACTION SUMMARY

### A. LEAD AGENCY

Agency: **New York City Department of Parks & Recreation**

Contact: **Joanne G. Imohiosen, Asst. Commissioner, and Jane Cleaver, Chief of Parklands**

Address: **The Arsenal, Central Park**

**New York, NY 10021**

Phone: **(212) 360-3404/ 360-3401**

Fax: **(212) 360-3434/ 360-3461**

### B. APPLICANT

Applicant: **New York City Department of Parks & Recreation**

Contact: **Joanne G. Imohiosen, Asst. Commissioner, and Jane Cleaver, Chief of Parklands**

Address: **The Arsenal, Central Park**

**New York, NY 10021**

Phone: **(212) 360-3401**

Fax: **(212) 360-3461**

### C. APPLICATION IDENTIFICATION

Project name: **Ferry Point Park**

CEQR # (agency initials followed by year and number): **99DPR006X**

BSA #:

September 30, 1999

ULURP #:

LEGISLATIVE INTRO #:

CAPA #:

## D. ACTION DESCRIPTION

1. Provide a Sanborn or other land use map showing the boundaries of the directly affected area.*

   **See Figure 1**

2. Describe the location of the directly affected area as follows:

   Borough **Bronx**

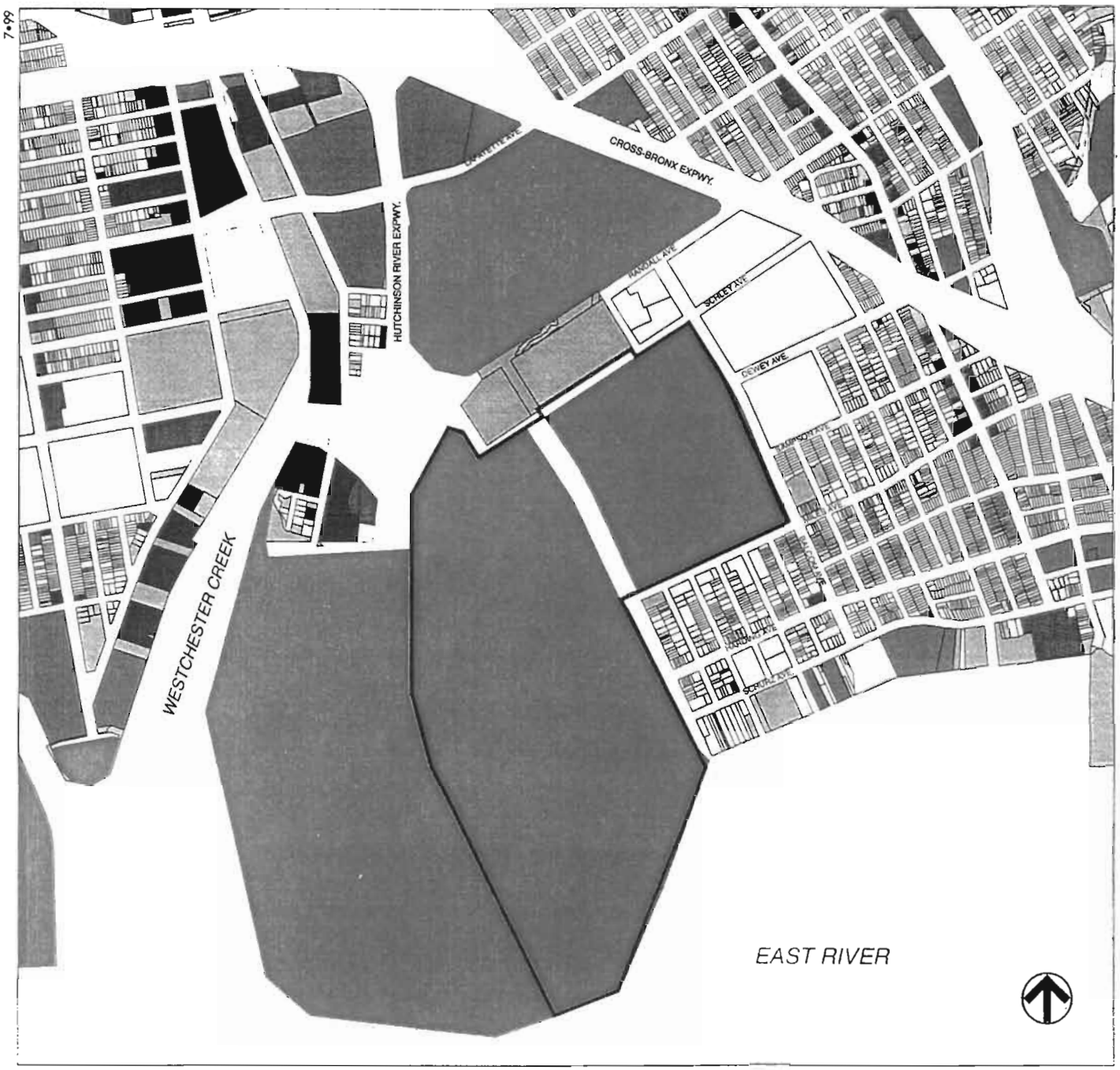
   Community District(s) **10**

   Tax block(s) and lot(s) **Block 5583, Lot 100 and Block 5622, Lot 1.**

   Street address, vanity address and nearest cross streets (minimum of two) to property:

   **The eastern portion of Ferry Point Park, bounded by the Bronx-Whitestone Bridge to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue to the north, and the East River to the south.**

* The directly affected area consists of the project site and the area subject to any change in regulatory controls that the action includes.




*Ferry Point Park*

**Land Use**

*Figure 1*

If the action would apply to the entire City or to areas that are so extensive that site-specific description is not appropriate or practicable, describe the areas likely to be affected by the action:

**N/A.**

3. Describe the action for which environmental review is being performed and, briefly, what consequences would result from or be generated by the action:

**The proposed project has the following actions which will require discretionary approvals and are subject to environmental review:**

- **The application by the New York City Department of Parks and Recreation (DPR) to the City Planning Commission (CPC) for a major concession for the development, construction, operation, management, and maintenance of a public recreation facility at Ferry Point Park, and the issuance of a license agreement by DPR to Ferry Point Partners, LLC, for the development, construction, operation, management, and maintenance of a public recreation facility at Ferry Point Park. The project site (after the proposed demapping of the two unbuilt and undeveloped streets discussed below) is approximately 222 acres. The proposed public recreation center would include a waterfront park of approximately 19.5 acres (including a waterfront esplanade, walkways, kiosks, and a boathouse grill restaurant); a community park of approximately 7 acres (including active and passive recreational areas such as a ballfield, basketball court, and children's recreation area); and a comprehensive golf facility (including an 18-hole tournament quality golf course, driving range, practice areas, clubhouse with full-service pro shop/snack bar/ locker rooms, maintenance building, and facility managers residence), and fine dining/ banquet facility on approximately 195.5 acres. The proposed public recreation facility would be developed on the eastern portion of Ferry Point Park, an area of the park that is undeveloped except for an organic recycling and composting facility that is located in the northwestern portion of the project site (currently operated by DPR, and planned to be relocated), informal dirt bike paths, an informal model airplane area in the western portion of the project site, and a ballfield and basketball court located on the northeastern portion of the project site. The proposed public recreation center would function primarily as a regional park. Vehicular, pedestrian and bicycle access to the site would be via I-678 under the Bronx-Whitestone Bridge. Pedestrian connections would be provided between the project site and the portion of Ferry Point Park located to the west of the Bronx-Whitestone Bridge. Access for emergency vehicles would be provided via Emerson Avenue.**

- **The application by DPR to CPC to demap two unbuilt and undeveloped streets—Emerson Avenue between Miles and Schley Avenues, and Schley Avenue between Buttrick and Emerson Avenues—which would be incorporated into Ferry Point Park and add approximately 6 acres of new parkland. Sewer corridors or easements would be provided for both of these demapped streets.**

**The proposed project will be subject to New York City's Uniform Land Use Review Procedure (ULURP).**

4. Physical dimensions and scale of project (fill in dimensions as appropriate):

Total contiguous square feet owned or controlled by project sponsor:

**9.67 million*** square feet.

Project square feet to be developed: **9.67 million** square feet.

Gross floor area of project, in square feet: **53,100****

If the action is an expansion, indicate percent of expansion proposed in the number of units, square feet or other appropriate measure: **Demapping will add approximately 266,500 square feet of new parkland.**

_____ % of _____

Dimensions (in feet) of largest proposed structure***:

**150'** height; **30'** width; **440'** length.

Linear feet of frontage along a public thoroughfare **7,700 feet**

5. Construction:

Will the action result in demolition of or significant physical alteration to any improvement?

**Yes.**

**Notes:**

* Approximate area of existing parkland subject to this action is 9.45 million square feet. This does not include existing parkland west of the Bronx-Whitestone Bridge/Hutchinson River Parkway, and does not include parklands in the East River under water. Approximate area of Emerson and Schley Avenues to be demapped as part of this action is 266,500 square feet.

** Approximate area of buildings above grade.

*** The driving range will include tees in a structure of approximately 30 by 440 feet and an open driving range of approximately 400 by 950 feet, surrounded by netting approximately 50 to 150 feet in height. The driving range may include a removable dome that would be approximately 400 by 400 feet and 120 feet in height. The dome would be utilized during the winter months.

Will the action involve either above ground construction resulting in any ground disturbance or in-ground construction?

**Yes. The project would involve ground disturbance for construction of the proposed public recreation facility (including the golf facility, the community park, and the waterfront park). In-ground construction would include the five proposed buildings planned as part of the project (i.e., clubhouse, facility managers residence, boathouse grill, maintenance building, and fine dining/banquet facility), the support system for the golf driving range, park gazebo, kiosks, shelters, restroom facilities, utility connections, and irrigation and drainage systems.**

If single phase project:

Anticipated period of construction (including demolition): **30** months

If multi-phased:

Total number of phases anticipated: _____ (number)

Describe phases and construction schedule:

Anticipated date of commencement of phase 1 (including demolition):

**January** month **2000** year

Approximate completion date of final phase:

**Spring** month **2002** year

## E. APPROVALS

1. Will the action be reviewed pursuant to the Uniform Land Use Review Procedure (ULURP) set forth in section 197-c of the Charter?
   **Yes.**

2. Identify below and describe as appropriate all City approvals required for the action, regardless of whether environmental review is required for any individual approval.

LAND USE APPROVALS SOUGHT

(For BSA approvals, see following section):

Zoning text amendment: _____

Zoning map amendment: _____

City map change: _____

Street map change: **Demapping of Emerson Avenue between Miles and Schley Avenues, and Schley Avenue between Buttrick and Emerson Avenues.**

Park map change: **To include demapped streets that are to be remapped as park land.**

Special permit: _____

Specify type: _____

Specify section of Zoning Resolution: _____

New or renewal? _____

Expiration date: _____

Site selection for public facility: _____

Acquisition of real property by the City: _____

Public easement: **Sewer easements to be provided.**

Franchise: _____

Type of franchise: _____

New or renewal? _____

Expiration date: _____

Urban renewal area designation or alteration: _____

Urban renewal plan: _____

New or amended? _____

Concession: **Major concession pursuant to a license agreement.**

Sanitary or waterfront landfill: _____

Revocable consent: _____

New, modified or renewal? _____

Expiration date: _____

City Planning authorization: _____

Charter §197-a plan: _____

Disposition of City property: _____

Other (specify): _____

BOARD OF STANDARDS AND APPEALS APPROVALS SOUGHT:

Special permit: _____

Type of special permit: _____

Specify section of Zoning Resolution: _____

New or renewal? _____

Expiration date: _____

Variance: _____

Type of variance, if known (use or bulk): _____

Other (specify): _____

OTHER CITY APPROVALS SOUGHT:

Legislation: _____

Rulemaking: _____

Specify agency: _____

Construction of public facilities: _____

Specify: _____

Funding of construction: _____

Specify: _____

Funding of programs: _____

Specify: _____

Policy or plan: _____

Landmarks Preservation Commission approvals (exempt from CEQR): _____

Department of Buildings approvals (exempt from CEQR): **Yes.**

Other (specify): _____

**New York City Department of Environmental Protection (DEP)**
**Stormwater Pollution Prevention Plan Review; sewer and water connections.**
**New York City Department of Transportation (DOT)**
**Roadway repair for existing Parks road.**
**New York City Art Commission**
**Landscape and building design approval.**
**New York City Department of City Planning (DCP)**
**Review for consistency with Local Waterfront Revitalization Program.**

2. Specify all State and federal approvals, actions or funding required for the action, regardless of whether environmental review is required for any individual action.

Possible Involved Agencies:

**New York State Department of Environmental Conservation (DEC)**
**Stormwater Pollution Prevention Plan Review.**
**Triborough Bridge and Tunnel Authority (TBTA)**
**Maintenance facility under Bridge.**

## F. ACTION TYPE

Is the action a Type I action or an unlisted action? Consult the Type I list in 6 NYCRR §617.12(b) and the City list at §6-15(a) of Executive Order No. 91 of 1977. (See attachments 3 and 4.) Type I actions have been determined to be more likely to require preparation of an environmental impact statement than other actions. Prior to finalizing the EAS, it may be appropriate to reconsider the answer to this question in light of other parts of the EAS or supporting materials. Check below as appropriate:

Unlisted: _____

Type I: ✓

Specify Type I category or categories: **Alteration of parkland of over 2.5 acres.**

After completing or receiving Part I, the lead agency must send a copy of it, with any other information it deems necessary, to the Mayor's Office of Environmental Coordination -- 100 Gold Street, Second Floor, New York, New York, 10038. In addition, if an action includes discretionary actions/approvals by city agencies other than the lead agency, the lead agency should provide those involved agencies with notice of its lead agency status and send them Part I of the EAS.

## PART II: SITE AND ACTION DESCRIPTION

This Part provides a detailed description of the proposed action and addresses the physical and socioeconomic context of the proposed action. Materials prepared for other purposes may be used to satisfy this Part where appropriate. Where appropriate, the action description should include the cumulative effects of related actions. This Part also requires applicants to submit analyses for all applicable categories of environmental impacts.

### A. CATEGORIZING YOUR ACTION

(1) LOCALIZED ACTIONS include: a) site specific actions which would result in a specific or known development at particular locations; and b) actions involving changes in regulatory controls that affect one or more sites in a well defined localized geographic area and are not associated with specific or known development on each of those sites. Localized actions may be a mix of (a) and (b).

(2) AREAWIDE/PROGRAMMATIC ACTIONS include those actions that would apply to the entire City, or to areas that are so extensive that site-specific description and/or analysis would not be appropriate or practicable.

Check the category of action that is reflection of the actions proposed:

Category 1: (a) ✓ and/or (b) _____

Category 2: _____

For more information on categorizing your action, consult the introduction to the EAS Guidebook, at pages 8-9.

Subparts B, D, E and F of this Part should be completed for all localized actions. Subpart C, entitled "Project Description," is generally completed only for site specific actions which would result in a specific or known development at particular locations.

If your action is localized and involves changes in regulatory controls that affect one or more sites not associated with a specific development, then it is generally appropriate to include in Subpart E one or more reasonable development scenarios for such sites and, to the extent possible, to provide information about such scenario(s) similar to that requested in Subpart C.

If your action is areawide/programmatic, then you may generally skip subparts B through E of this Part (pages 16-25 of this form), unless completion of those subparts is helpful in describing your action, and proceed directly to subpart F on page 25. If you skip subparts B through E, be sure to attach texts and/or maps that will serve as the action description in lieu of completion of those subparts.

## B. SITE DESCRIPTION

Except where otherwise indicated, answer the following questions with regard to the directly affected areas. (The directly affected area, also called the area directly affected by the action, consists of the project site and the area subject to any change in regulatory controls that the action includes.) Indicate N.A. if not applicable.

1. MAPS:

   In addition to the Sanborn or other land use map requested in Part I, provide a tax map and zoning map showing the boundaries of the directly affected area.

   **See Figures 2, 3a, and 3b.**

2. PHYSICAL SETTING
   (both developed and undeveloped areas):

   Total square feet of directly affected area: **9.67 million** square feet

   Current general breakdown of area:

   **The project site is currently undeveloped parkland, with the exception of an organic recycling facility (in the northwestern), a composting area (in the middle), and a ball-field and basketball court (the northeastern). There are other unauthorized uses.**

   Water surface area: **0** square feet

   Roads, buildings and other paved surfaces: **130,000** square feet

   Other: _____ square feet

3. PRESENT LAND USE:

   Residential **None.**

   Total no. of dwelling units: **0**

   Number of low-to-moderate income units:* **N/A.**

   Gross floor area (square feet): **N/A.**

   Number of stories: **N/A.**

   Describe type of residential structures:

   **N/A.**

   Commercial **None.**

   Retail **0** Number of buildings and gross floor area of each building (sq. ft):

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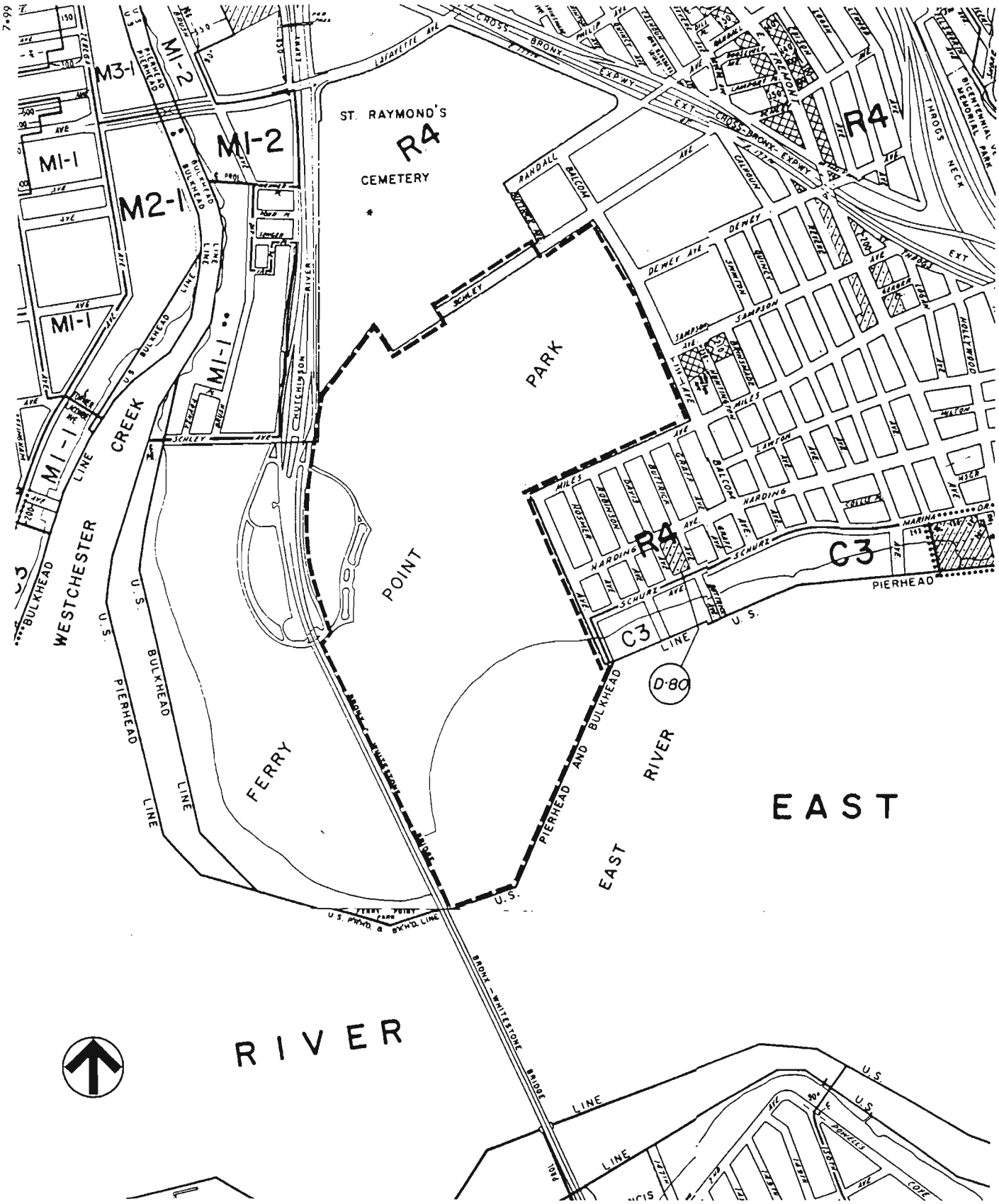
* Low-to-moderate income units are units with monthly carrying costs of not more than 30% of the median area monthly income. The Department of Housing Preservation and Development may be contacted for assistance in applying this definition.




*Ferry Point Park*

**Zoning**

*Figure 2*

Office: 0 Number of buildings and gross floor area of each building (sq. ft):

Other: 0 Number of buildings and gross floor area of each building (sq. ft):

Specify type(s):
**N/A.**

Number of stories and height of each building:
**N/A.**

Manufacturing/Industrial **None.**
Type of use(s):
**N/A.**

Number of buildings and gross floor area of each building (sq. ft.):
**N/A.**

Number of stories and height of each building:
**N/A.**

Open storage area: **N/A.** square feet.
If any unenclosed activities, specify:
**N/A.**

Community Facility **None.**
Number of buildings and gross floor area of each building (sq. ft.):
**N/A.**

Number of stories and height of each building:

**N/A.**

Type of community facility:

**N/A.**

Vacant Land

Is there any vacant land in the directly affected area? Describe briefly.

**The site is primarily unimproved and undeveloped park land and remapped as park land.**

Publicly Accessible Open Space

Is there any existing publicly accessible open space in the directly affected area? Describe briefly.

**Yes. The project site is primarily unimproved and undeveloped parkland. The ballfield and basketball court in the northeastern portion of the site occupy approximately 274,000 sq. ft., and the composting area and organic recycling facility occupy approximately 414,000 sq. ft.**

Does the directly affected area include any mapped City, State or Federal parkland or any mapped or otherwise known wetland?

**Yes. The project site is mapped City parkland, except for those portions of Schley and Emerson Avenues proposed to be demapped.**

Other Land Use

Gross floor area: _____ square feet.

Number of stories: _____

Type of use:

4. EXISTING PARKING:

Garages: **None.**

Number of spaces accessible to public: **0**

Number of spaces not accessible to public: **0**

Attended or non-attended? **N/A**

Operating hours: **N/A**

Self-park: **N/A**

Non-self-park (please specify): **N/A.**

Lots: **None.**

Number of spaces accessible to public: **0**

Number of spaces not accessible to public: **0**

Attended or non-attended? **N/A.**

Operating hours: **N/A.**

Self-park: **N/A.**

Non-self-park (please specify): **N/A.**

Other: (including street parking). Please specify and provide same data as for lots and garages, as appropriate

5. STORAGE TANKS: **None**

Gas or service stations: _____

Oil storage facility: _____

Other, specify:

Size of tanks:

Last NYFD inspection date:

Location and depth of tanks:

6. CURRENT USERS:

Number of residents: 0

Number and type of businesses:

**One organic recycling and composting facility. Both are run by the Department of Parks & Recreation and will be relocated.**

Number and type of workers by business:

**Fewer than 10 workers.**

Number and type of non-residents who are not workers:

**0.**

7. HISTORIC AND ARCHAEOLOGICAL RESOURCES:

Answer the following two questions with regard to the directly affected area, lots abutting that area, lots along the same blockfront or directly across the street from the same blockfront, and, where the directly affected area includes a corner lot, lots which front on the same street intersection. (See Section F of the EAS Guidebook.)

Do any of the areas listed above contain an improvement, interior, landscape feature, aggregate of landscape features, or archaeological resource that:

(a) has been designated (or is calendared for consideration as) a New York City Landmark, Interior Landmark or Scenic Landmark;
(b) is within a designated New York City Historic District;
(c) has been listed on, or determined eligible for, the New York State or National Register of Historic Places;
(d) is within a New York State or National Register Historic District; or
(e) has been recommended by the New York State Board for listing on the New York State or National Register of Historic Places?

Identify any resource.

**No. See Attachment N, "Archaeological Sensitivity."**

Do any of the areas listed in the introductory paragraph to 7 on page 19 contain any historic or archaeological resource, other than those listed in response to the previous question? Identify any resource.

**No.**

8. WATERFRONT:

Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries? (A map of the boundaries can be obtained at the Department of City Planning bookstore.) If yes, append a map showing the directly affected area as it relates to such boundaries. A map requested in other parts of this form may be used. (See Section K of the EAS Guidebook.)

**Yes. See Figure 4 and Attachment H, "Waterfront Revitalization Program."**

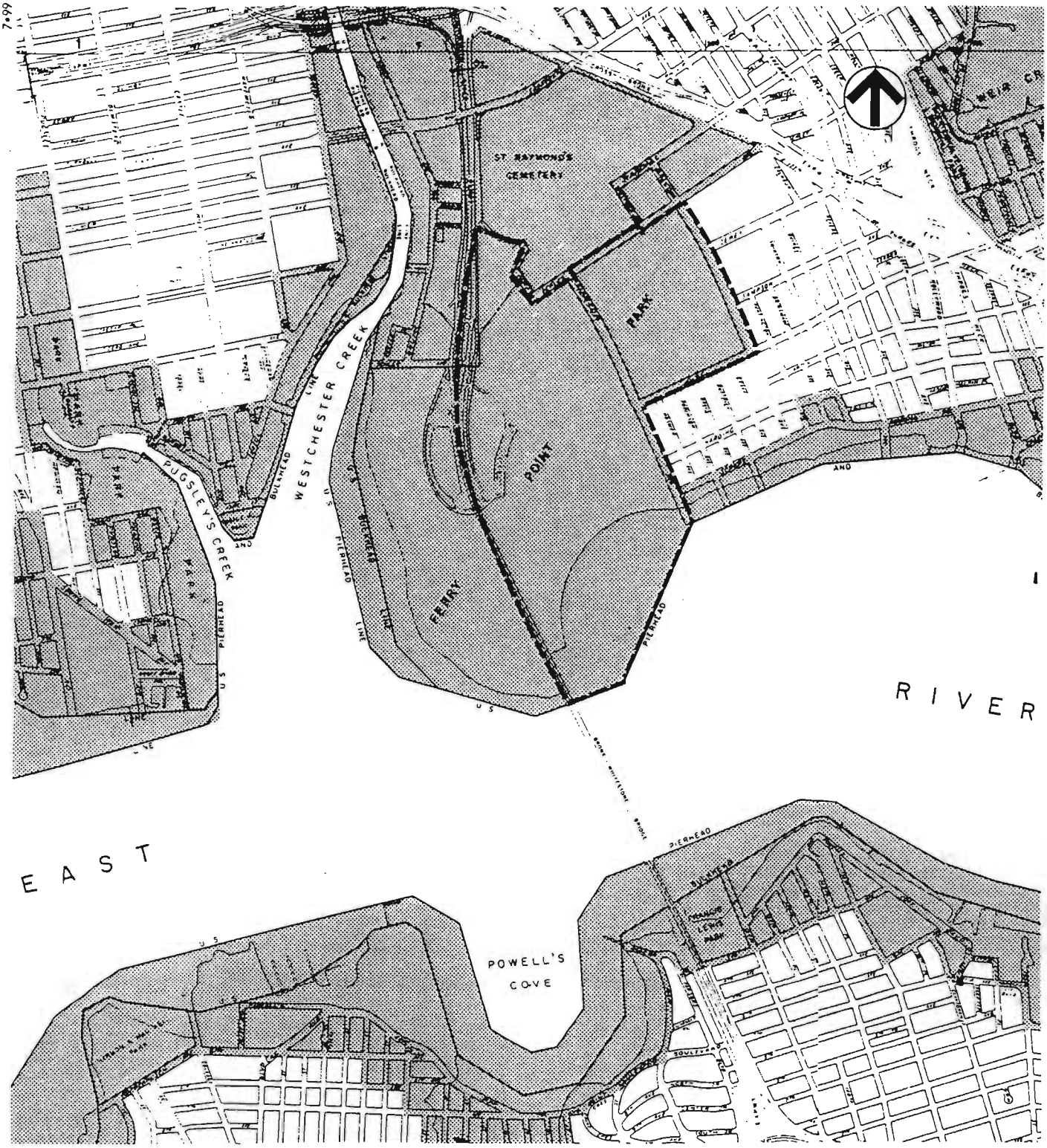
## C. PROJECT DESCRIPTION

This subpart should generally be completed only if your action includes a specific or known development at particular locations.

1. PROPOSED USES:

Residential

| | | |
|---|---|---|
| Total no. of dwelling units: | **4 in 1 structure.** | |
| Number of low-to-moderate income units: | **0** | |
| Gross floor area: | **4,500** | square feet. |




SOURCE: NYC DCP

*Ferry Point Park*

## Coastal Zone Boundary

*Figure 4*

Number of stories: 2

Describe type(s) of residential structures:

**One proposed structure for facility managers residence. One to two units would be approximately 1,000-2,000 square feet; the remaining units would be approximately 600-800 square feet.**

Commercial **See description of proposed buildings and uses under "Publicly Accessible Open Space."**

Retail: **None** Number of buildings and gross floor area of each building (sq. ft):

Office: **0** Number of buildings and gross floor area of each building (sq. ft):

Other: **0** Number of buildings and gross floor area of each building (sq. ft):

Specify type(s):

Number of stories and height of each building:

Manufacturing/Industrial **None.**

Type of use(s):

**N/A.**

Number of buildings and gross floor area of each building (sq. ft.):

**N/A.**

Number of stories and height of each building:

**N/A.**

Open storage area: N/A square feet.

If any unenclosed activities, specify:

**N/A.**

Community Facility

Number of buildings and gross floor area of each building (square feet):

**N/A.**

Number of stories and height of each building:

**N/A.**

Type of community facility:

**N/A.**

Vacant Land

Is there any vacant land in the directly affected area? Describe briefly.

**No.**

Publicly Accessible Open Space

Is there any existing publicly accessible open space to be removed or altered? If yes, describe:

**Yes. The proposed project would provide a public recreation center which would include a waterfront park; community park; comprehensive golf facility (including an 18-hole tournament quality golf course, driving range, practice areas, clubhouse with full-service pro shop/snack bar/locker rooms of approx. 7,500 square feet, maintenance building of approx. 7,500 square feet, and facility managers residence of approx. 4,500 square feet); boathouse grill restaurant of approx. 13,000 square feet; and fine dining/banquet facility of approx. 25,000 square feet in the largely undeveloped and underutilized eastern portion of Ferry Point Park. The portion of Ferry Point Park where this public recreation center will be developed will be altered, and the portions of the two streets to be demapped—Emerson and Schley Avenues—will become additional parkland. The site currently contains an organic recycling and composting facility, informal dirt bike paths, an informal model airplane facility, and a ballfield and basketball court.**

Any publicly accessible open space to be added? If yes, describe:

**Yes. The portions of the two streets to be demapped—Emerson and Schley Avenues—will add approximately 266,500 square feet of additional parkland.**

Other Land Use **None.**

Gross floor area: N/A square feet.

Number of stories: N/A

Type of use:

2. PROPOSED PARKING:

Garages **None.**

Number of spaces accessible to public: 0

Number of spaces not accessible to public: 0

Attended or non-attended? **N/A.**

Operating hours: **N/A.**

Self-park: **N/A.**

Non-self-park (please specify): **N/A.**

Lots:

Number of spaces accessible to public: **965 self-park spaces (including 20 spaces for maintenance vehicles), of which 350 self-park spaces located near the fine dining/banquet facility can be converted to 500 valet-parking spaces providing a total of 1095 total spaces. See Table 1.**

Number of spaces not accessible to public: 0

Attended or non-attended? **Both will be provided.**

Operating hours: **To be determined.**

Self-park: **945 spaces**

Non-self-park (please specify):

**350 self-park spaces can be converted to 500 valet parking spaces for the banquet facility.**

Other: (including street parking). Please specify and provide some data as for lots and garages, as appropriate.

**N/A.**

Number and location of proposed curb cuts:

**N/A.**

3. PROPOSED STORAGE TANKS:

Gas or service stations: _____

Oil storage facility: _____

Other, specify:

Size of tanks: **2-2,500 gallon tanks (1 for diesel and 1 for gasoline at maintenance building).**

Location and depth of tanks **Above ground, double-walled tanks**

4. PROPOSED USERS:

Number of residents: **Up to 10.**

Number and type of businesses:

**Pursuant to a Request for Proposals (RFP) process, Ferry Point Partners, LLC, is the designated licensee for the public recreation facility. Ferry Point Partners, LLC, subject to approval from the Department of Parks & Recreation, may designate other entities to operate portions of the proposed facilities.**

Number and type of workers for each business:

**Restaurant and catering facility uses: 300 workers. Golf course and driving range: 45 workers.**

Number and type of non-residents who are not workers:

**Recreation facility users are estimated to be a maximum of 1,300 per day (750 at the waterfront park, 250 at the community park, and 300 at the golf course and driving range).**

**Table 1**

## Parking by Location and Use

| Parking Location and Use | Number of Spaces |
|---|---|
| Golf facility | 350 self-park |
| Boathouse grill restaurant | 125 self-park |
| Waterfront park | 120 self-park |
| Fine dining/banquet facility | 350 self-park convertible to 500 valet-park |
| Maintenance building | 20 self-park for staff only |
| Total | 965 self-park (1,115 self/valet-park) |

5. HISTORIC AND ARCHAEOLOGICAL RESOURCES:

Will the action affect any historic or archaeological resource identified in response to either of the two questions at number 7 on pages 19 and 20? Describe briefly.

**No. See Attachment N, "Archaeological Sensitivity."**

6. DISPLACEMENT:

Will the action directly displace specific business or affordable and/or low income residential units? Describe briefly. (See Section C of the EAS Guidebook.)

**No.**

7. CHANGES TO EXISTING COMMUNITY FACILITIES:

Will the action directly eliminate, displace or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations? (See Section D of the EAS Guidebook.)

**The organic recycling and composting facility will be relocated. DPR will use its best efforts to relocate the informal model airplane facility to another site.**

## D. ZONING INFORMATION

What is the zoning classification(s) of the directly affected area?

**The project site is mapped New York City park land.**

What is the maximum amount of floor area that can be developed in the directly affected area under the present zoning? Describe in terms of bulk for each use.

**N/A.**

What is the proposed zoning of the directly affected area?

**There is no proposed change in zoning.**

What is the maximum amount of floor area that can be developed in the directly affected area under the proposed zoning? Describe in terms of bulk for each use.

**N/A.**

What is the predominant land uses and zoning classifications within a ¼-mile radius of the proposed action?

**Predominant land uses within a ¼-mile radius include residential, commercial and manufacturing uses, and a cemetery in R4, C1-4, C3, and M1-1 zoning classifications. Additional zoning classifications within a ½-mile radius include M1-2, M2-1, and M3-1.**

## E. ADDITIONAL INFORMATION

Attach any additional information as may be needed to describe the action. If your action involves changes in regulatory controls that affect one or more sites not associated with a specific development, it is generally appropriate to include here one or more reasonable development scenarios for such sites and, to the extent possible, to provide information about such scenario(s) similar to that requested in subpart C on pages 20-24 above.

## F. ANALYSES

Attach analyses for each of the impact categories listed below (or indicate where an impact category is not applicable). For localized actions, sections B through N of the EAS Guidebook set forth methodologies developed by the City to be used in analyses prepared for the listed categories. Other methodologies developed or approved by the lead agency may also be utilized. If a different methodology is contemplated, it may be advisable to consult with OEC. For areawide/programmatic actions, consult section A of the guidebook. You should also attach any other necessary analyses or information relevant to the determination whether the action may have a significant effect on the

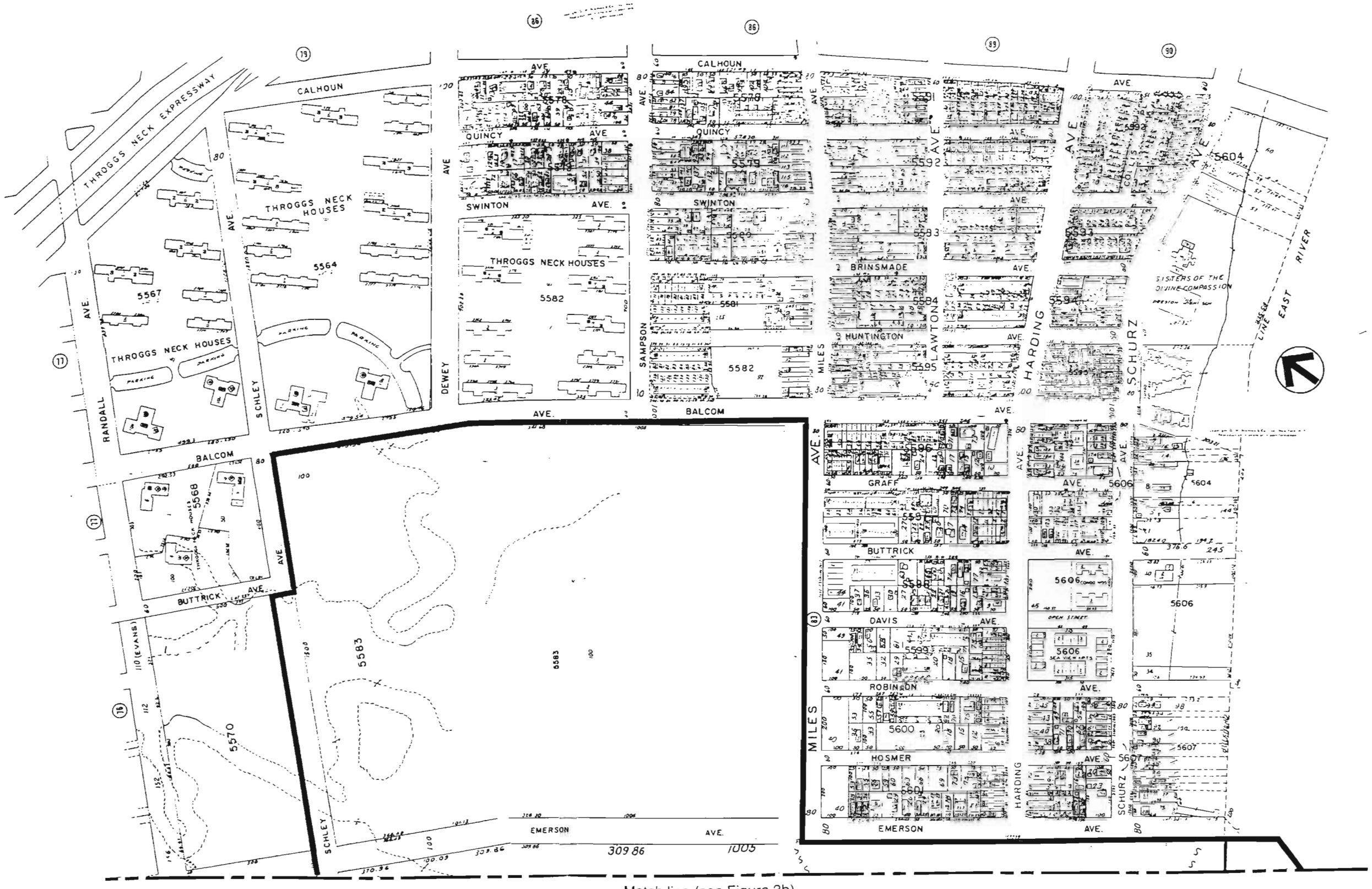
environment, including, where appropriate, information on combined or cumulative impacts, as might occur, for example, where actions are interdependent or occur within a discrete geographical area or time frame.

If you believe that a positive declaration is appropriate because the action may have a significant effect on the environment, you may indicate that here and explain briefly. In that case, the analyses otherwise required by this subpart do not have to be submitted (unless the lead agency specifically requests them).

**See Attachments.**

| | |
|---|---|
| Neighborhood Character<br>**See Attachments.** | Section B of the EAS Guidebook |
| Socioeconomic Analysis/Displacement<br>**See page 26a.** | Section C of the EAS Guidebook |
| Community Facilities<br>**See page 26a.** | Section D of the EAS Guidebook |
| Open Space<br>**See page 26a.** | Section E of the EAS Guidebook |
| Historic and Archaeological Resources<br>**See page 26b.** | Section F of the EAS Guidebook |
| Transportation<br>**See Attachments.** | Section G of the EAS Guidebook |
| Air Quality<br>**See Attachments.** | Section H of the EAS Guidebook |
| Infrastructure* and Energy Impacts<br>**See Attachments.** | Section I of the EAS Guidebook |
| Natural Resources<br>**See Attachments.** | Section J of the EAS Guidebook |
| Waterfront Revitalization Program<br>**See Attachments.** | Section K of the EAS Guidebook |
| Hazardous Materials<br>**See Attachments.** | Section L of the EAS Guidebook |
| Noise<br>**See Attachments.** | Section M of the EAS Guidebook |
| Solid waste<br>**See Attachments.** | Section N of the EAS Guidebook |

* For purposes of this form, infrastructure refers only to the means by which wastewater is discharged and drinking water is supplied.




Match line (see Figure 3b)

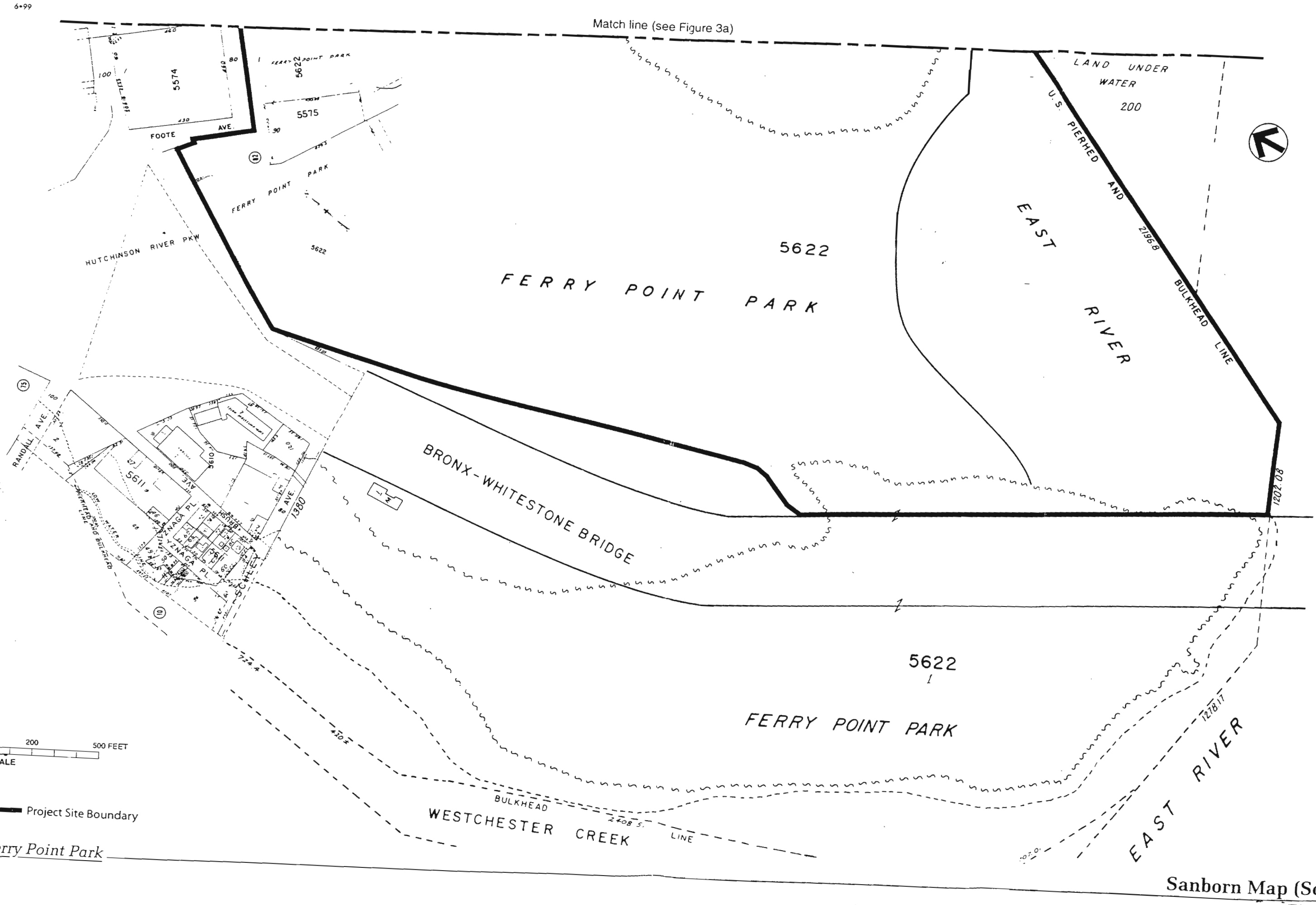
0 200 500 FEET
SCALE

Project Site Boundary

*Ferry Point Park*

**Sanborn Map (North)**

*Figure 3a*




**Sanborn Map (South)**

*Figure 3b*

### Socioeconomic Conditions

According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if an action may reasonably be expected to create substantial socioeconomic changes within the area. The proposed project would not result in the direct displacement of residential units or businesses, nor would it result in the development of new residential units or commercial space. Therefore, no adverse effects are anticipated, and no further analysis of socioeconomic conditions is required.

### Community Facilities

The proposed project would not displace any public or publicly funded community facilities. However, the project would generate approximately 345 new workers to the area. The proposed project would not affect schools, libraries, hospitals, or day care centers. The project is not expected to affect the ability of the local police or fire department to provide protection services. Furthermore, the project would develop an approximately 217-acre public recreation facility, and, with the demapping of Emerson Avenue between Miles and Schley Avenues and of Schley Avenue between Buttrick and Emerson Avenues, would add approximately 6 acres of new parkland. Therefore, no impacts to community facilities are anticipated with this project.

### Open Space

The proposed action would not displace any public or private open space, nor increase the residential population of the area. The demapping of portions of Emerson and Schley Avenues would add approximately 6 acres of new parkland. In addition, the licensee would create a waterfront park of approximately 19.5 acres, a community park of approximately 7 acres, and a comprehensive public golf facility of approximately 195.5 acres in an area of Ferry Point Park which is largely undeveloped and unused. Therefore, no adverse impacts to open space are expected.

### Shadows

The support poles for the netting for the driving range would range from approximately 50 to 150 feet in height. These poles would be approximately 100 feet apart. In addition, the driving range may include a removable dome of approximately 120 feet in height that would be utilized during the winter months. The maximum length of the shadow cast by either the netting structure or the removable dome would be approximately 645 feet in length and would occur during a very short period in December. During the rest of the year, the length of the shadow would be significantly smaller than that length. Even during this brief period, the shadows would not affect any sensitive land uses, parkland, or open space other than the proposed recreation facility.

### Historic and Archaeological Resources

Aerial photos of the project site taken in 1951 show that large portions of the project site were located either under water in the East River or were land being created by landfill. (See Attachment G, "Hazardous Materials," for historic aerial photographs.) The site was in operation as a municipal solid waste landfill from before 1951 to the early 1960's. The proposed project would introduce approximately 700,000-800,000 cubic yards of fill, of which, approximately 600,000-700,000 would be new fill brought to the site, atop the existing landfill. It is not expected that this proposed project would require excavation to the soils into the waste material layer. Therefore, no adverse impacts on archaeological resources are expected (see Attachment N, "Archaeological Sensitivity").

In terms of historic or architectural resources, there are no significant structures on the project site. The adjacent Bronx-Whitestone Bridge built in 1939 was one of many bridges built by Robert Moses. It is a suspension bridge designed by Othmar Ammann, one of the great bridge designers of this century. However, it is not listed nor determined eligible for listing on the State and National Registers, nor is it a New York City Landmark. None of the residential structures in the surrounding neighborhoods are listed or determined eligible for listing, nor are they New York City Landmarks. Therefore, no impacts to historic resources are anticipated. However, it should be noted that Robert Moses's original plans for the area had proposed a golf course at the project site which would be realized as part of the proposed action.*

### Construction Impacts

The proposed project would be completed in 30 months. Construction of the proposed project would have the potential for adverse impacts in terms of traffic, air quality, noise, and soils and hazardous materials. In terms of traffic, impacts are expected to be minimal because access to the project site would be via the Hutchinson River Parkway Service Road, and parking for workers and material storage will be provided on-site. In terms of air quality, appropriate control measures will be taken to minimize fugitive dust emissions. In terms of noise, the project would be required to comply with applicable federal, state, and city control measures; construction activities will be limited to weekdays between the hours of 7 AM and 6 PM, and construction material will be handled and transported in such a manner as to not create unnecessary noise. In terms of soils and hazardous materials, appropriate control measures will be utilized to eliminate any adverse health effects, and a Health and Safety plan will be utilized to protect worker safety. These measures are described in Attachment G, "Hazardous Materials." With these measures, no significant adverse impacts would be expected due to construction activities.

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* Robert Moses, Commissioner of the City of New York Department of Parks, letter to the Honorable Vincent L. Impellitteri, Mayor of the City of New York, 9 October, 1950; excerpt from "The Reclamation of Park Areas by Sanitation Fill and Synthetic Top Soil," City of New York Department of Parks & Recreation, New York, NY, 1950.

Preparer name: **Stephen Rosen, Ph.D.**

Preparer title: **Principal, Allee King Rosen & Fleming, Inc.**

Preparer signature: 

Date: July 30, 1999

Principal: New York City Department of Parks & Recreation

Name of principal representative: Joanne Ingbretsen

Title of principal representative: Assistant Commissioner

Signature of principal representative: Joanne Ingbretsen

Date: 7/30/99

**NOTE: Any persons who knowingly makes a false statement or who knowingly falsifies any statement on this form or allows any such statement to be falsified shall be guilty of an offense punishable by fine or imprisonment or both, pursuant to section 10-154 of the New York City Administrative Code, and may be liable under other applicable laws.**

## PART III: ENVIRONMENTAL ASSESSMENT AND DETERMINATION

The lead agency should complete this Part after Parts I and II have been completed. In completing this Part, the lead agency should consult 6 NYCRR §617.11 (attached), which contains the State Department of Environmental Conservation's criteria for determining significance.

The lead agency should ensure the creation of a record sufficient to support the determinations in this Part. The record may be based upon analyses submitted by the applicant with Part II of the EAS. The EAS Guidebook sets forth methodologies developed by the City to be used in analyses prepared for the listed categories. Alternative or additional methodologies may be utilized by the lead agency.

1. For each of the impact categories below, consider whether the action may have a significant effect on the environment with respect to that impact category. If it may, answer yes.

| | |
|---|---|
| Neighborhood Character | **No** |
| Socioeconomic Impacts/Displacement | **No** |
| Community Facilities | **No** |
| Open Space | **No** |
| Historic and Archaeological Resources | **No** |
| Transportation | **No** |
| Air Quality | **No** |
| Infrastructure and Energy | **No** |
| Natural Resources | **No** |

| | |
|---|---|
| Waterfront Revitalization | **No** |
| Hazardous Materials | **No** |
| Noise | **No** |
| Solid Waste | **No** |

2. Are there any aspects of the action relevant to the determination whether the action may have a significant effect on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? If there are such aspects, explain them and state where, as a result of them, the action may have a significant effect on the environment.

   **None.**

3. If the lead agency has determined in its answers to questions 1 and 2 of this Part that the action will have no significant effect on the environment, a negative declaration is appropriate. The lead agency may, in its discretion, further elaborate here upon the reasons for issuance of a negative declaration. **Based on the EAS, DPR finds that the proposed actions would not have a significant adverse effect on the environment, and therefore determines, as lead agency under CEQR/SEQRA to issue a Negative Declaration for the proposed actions (see attached findings following page 31).**

4. If the lead agency has determined in its answers to questions 1 and 2 of this Part that the action may have a significant effect on the environment, a conditional negative declaration (CND) may be appropriate if there is a private applicant for the action and the action is not Type I. A CND is only appropriate where the mitigation measures identified will modify the proposed action so that no significant adverse environmental impacts will result. If a CND is appropriate, the lead agency should describe here the conditions to the action that will be undertaken and how they will mitigate potential significant impacts.

5. If the lead agency has determined that the action may have a significant effect on the environment, and if a conditional negative declaration is not appropriate, then the lead agency should issue a positive declaration. Where appropriate, the lead agency may, in its discretion, further elaborate here upon the reasons for issuance of a positive declaration. In particular, if supporting materials do not make clear the basis for a positive declaration, the lead agency should describe briefly the impacts it has identified that may have a significant effect on the environment.

LEAD AGENCY CERTIFICATION

Preparer name: **Stephen S. Rosen, Ph.D.**

Preparer title: **Principal, Allee King Rosen & Fleming, Inc.**

Preparer signature:

Date: **September 30, 1999**

Name of lead agency representative: **Joanne G. Imohiosen**

Title of lead agency representative: **Assistant Commissioner, NYC DPR**

Signature of lead agency representative:

Date: **September 30, 1999**

## FERRY POINT PARK FINDINGS

### Description of the Proposed Actions

The New York City Department of Parks and Recreation (DPR) proposes to develop a 222-acre regional public recreation facility at the eastern portion of Ferry Point Park in the Bronx. The project site is bounded by the Bronx-Whitestone Bridge to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue and St. Raymond's Cemetery to the north, and the East River to the south. Subject to satisfactory completion of applicable environmental reviews (including the City Environmental Quality Review [CEQR], and State Environmental Quality Review Act [SEQRA]), land use reviews (including the City's Uniform Land Use Review Procedure [ULURP]), and compliance with other applicable laws and approvals, DPR proposes to enter into a license agreement with Ferry Point Partners, LLC, to develop, construct, and operate the new public recreation facility. The proposed licensee was selected by DPR following the completion of an extensive Request for Proposals (RFP) process.

The project site, which comprises the eastern portion of Ferry Point Park, is a largely unused and undeveloped former landfill that accepted municipal solid waste from before 1951 to the 1960's, and was closed and covered in the mid-1960's, with additional closure operations conducted in the early 1980's. The project site now contains an organic recycling and composting facility (operated by DPR) that is located in the northwestern portion of the project site, informal dirt bike paths, an informal model airplane area in the western portion of the project site, and a ballfield and basketball court located on the northeastern portion of the project site.

The project would permit the development of a 19.5-acre waterfront park with walkways and a boathouse grill, a 7-acre community park with both active and passive recreational facilities, a comprehensive golf facility (with an 18-hole golf course, clubhouse, driving range, practice areas, and maintenance building), and a fine dining/banquet facility at the currently undeveloped eastern portion of Ferry Point Park. As part of the proposed project, two unbuilt and undeveloped streets—Emerson Avenue between Miles and Schley Avenues, and Schley Avenue between Buttrick and Emerson Avenues—would be demapped, adding approximately 6 acres of new parkland.

With the exception of the community park, all access to the facility would be from the west—vehicular, bicycle, and pedestrian access would be from the I-678 north- and southbound service roads under the Bronx-Whitestone Bridge. The service road under the Bronx-Whitestone Bridge, which currently is a two-way roadway, would become a two-lane, one-way roadway. Visitors would enter the site at this location, pass by a stone gateway on the entrance road, and choose to proceed either north to the golf clubhouse area, or south to the waterfront park and the boathouse grill or the fine dining/banquet facility. (Additional access for emergency vehicles would be available via Emerson Avenue to the east.) Parking would be provided at the golf facility, Boathouse Grill restaurant, fine dining/banquet facility, maintenance building, and the waterfront park to accommodate users of the proposed facilities. Pedestrian pathways would connect the proposed waterfront park to the existing Ferry Point Park located to the west of the bridge. In addition, pedestrians and bicyclists would be able to access the site through the main entrance road.

### Actions

The proposed project has the following actions which will require discretionary approvals and are subject to environmental review:

- The application by DPR to the City Planning Commission (CPC) for a major concession for the development, construction, operation, management, and maintenance of a public recreation facility at Ferry Point Park, and the issuance of a license agreement by DPR to Ferry Point

Partners, LLC, for the development, construction, operation, management, and maintenance of a public recreation facility at Ferry Point Park, and;

- The application by DPR to the CPC to demap two unbuilt and undeveloped streets—Emerson Avenue between Miles and Schley Avenues, and Schley Avenue between Buttrick and Emerson Avenues—which would be incorporated into Ferry Point Park.

**Findings**

In order to assess the potential environmental impacts of the proposed actions, DPR has prepared, with the cooperation and assistance of Ferry Point Partners, LLP, a detailed Environmental Assessment Statement (EAS) for the proposed action. Drafts of the EAS were provided to the New York City Departments of City Planning, Environmental Protection, Transportation, Sanitation, Fire, and the staff of the Landmarks Preservation Commission, and to the New York State Departments of Environmental Conservation, and Transportation, and the staff of the Triborough Bridge and Tunnel Authority, for review. DPR staff also met with representatives of all such departments and received comments from most of such agencies. As a result, DPR is satisfied that the final EAS identifies the relevant areas of environmental concern associated with the Ferry Point Park proposal and takes a hard look at each of these areas of potential environmental impact.

Based on the EAS, and for the reasons stated below, DPR finds that the proposed actions would not have a significant adverse effect on the environment, and therefore determines, as lead agency under CEQR/SEQRA, to issue a Negative Declaration for the proposed actions.

**Potential Environmental Effects**

Land Use, Zoning, and Public Policy. The project site lies under and to the east of the Bronx-Whitestone Bridge in the eastern portion of Ferry Point Park. Currently, the majority of project site is unimproved and undeveloped parkland, and is generally inaccessible to the public (portions of the park are fenced off). However, DPR operates an organic recycling and composting facility on approximately 414,000 square feet at the northwestern corner of the site, and occupies approximately 274,000 square feet of open field at the northeastern corner of the site, including a community ballfield and basketball court. Informal uses include dirt bike paths and a model airplane area on the western portion of the site.

Uses within the ½ mile study area (bounded roughly by the Westchester Creek on the west, Lafayette Avenue on the north, East Tremont Avenue on the East, and the East River on the south) are primarily residential to the north and east of the project site, and commercial and industrial to the west of the project site. The project site is mapped as City parkland and is therefore not within a zoning district. Within a ½-mile radius of the project site, zoning classifications include residential R4, commercial C1-4 and C3, and manufacturing M1-1, M1-2, M2-1, and M3-1. The project site is located in Community Board 10.

The proposed project would change the site by creating a regional public recreation facility on the currently undeveloped and generally publicly inaccessible portion of Ferry Point Park. The proposed project complements the existing park use to the west of the Bronx-Whitestone Bridge, and would have a positive impact relative to land use. DPR will endeavor to relocate the organic recycling and composting facility and the model airplane area, that are currently located on the project site, to nearby locations. The existing community ballfield and basketball court will be relocated and expanded in the new community park planned as part of the project. The proposed project would not impact zoning at the project site or in the study area, and would be consistent with public policy for the site.

Archaeological Resources. The proposed project would not require excavation into or below the waste material layer, and consequently, based upon an archaeological assessment, no significant adverse impact is expected to archaeological resources.

Visual Resources. The site is almost entirely undeveloped, with the exception of a organic recycling and composing facility near the bridge on the western portion of the site, an informal model airplane field in the center of the site, and a community park located along Balcom Avenue at Schley Avenue on the northeastern side of the site. On the western and northern sides of the site, the Bronx-Whitestone Bridge and St. Raymond's Cemetery are physical barriers separating the site from more distant views in these two directions. Balcom, Dewey, and Harding Avenues are the main conduits through the study area east and south of the project site.

The proposed Ferry Point Park development would improve the visual character of the project site in a number of ways and from a number of viewpoints. There would be three distinct sections of the park: a golf facility occupying the majority of the site, a waterfront park in the section of the site adjacent to the East River, and a community park near Balcom and Schley Avenues. Each of these sections of the former landfill site would be redeveloped and landscaped in accordance with design standards for such facilities and in consideration of the sensitivity of the neighboring viewers. The proposed project would create a regional public recreation facility with landscaping, and would represent a substantial visual improvement over the existing landfill site with its unkempt natural vegetation. In addition, the landscaping and maintenance of the park's border with the neighborhood, in combination with the removal of the debris and unkempt vegetation, is expected to improve views of the site from nearby residences. Some residents in higher structures to the east of the project site may see the driving range's removable dome (which would only be in place during winter months); however, the dome would obstruct views of the Bronx-Whitestone toll plaza and the I-678 approaches to the toll plaza. This would not be a negative visual impact. Overall, given the visual screening and buffers provided as part of the project, there would be no significant adverse impacts to the visual or urban design character of the surrounding area.

Neighborhood Character. Currently, the project site is composed primarily of undeveloped park land, with the exception of an organic recycling and composting facility operated by the DPR at the northwestern corner of the site, and a ballfield and basketball court at the northeastern corner of the site. Informal uses on the site include dirt bike trails and a model airplane field. The rest of the project site is generally covered with vegetation, and the rocky waterfront area at the southeastern edge of the site along the East River is strewn with debris. Portions of the site are surrounded by chain link fence. Surrounding the project site are the currently developed portion of Ferry Point Park and industrial, commercial, and residential uses (west of the Bronx-Whitestone Bridge), St. Raymond's Cemetery (to the north of the project site), and residential uses (to the east of the project site). Traffic conditions in the area generally reflect the study area's uses and location near the Bronx-Whitestone Bridge, with connections to the Throgs Neck Bridge and the Cross-Bronx Expressway. Streets within the study area have a mixed character, including lightly traveled local streets (e.g., Balcom, Schley Avenues) and a major roadway (East Tremont Avenue) that provides access to and from the Throgs Neck Bridge. With respect to noise, the project site and its immediate environs are subject to frequent flyovers by aircrafts traveling to and from La Guardia Airport. As a result, the entire study area experiences marginally unacceptable noise levels. However, the residential portion of the study area, which is east of the project site, experiences marginally acceptable noise levels..

The proposed project would not cause significant adverse impacts in any of the following elements that make up the character of the neighborhood: land use and zoning, visual resources, traffic, or noise. The project would change the land use and visual character of the project site; bring new activity to the currently undeveloped portion of Ferry Point Park; and would increase traffic, air pollutant concentrations, and noise levels. However, as discussed in various sections of the EAS, the

proposed project would not have any significant adverse impacts in any of these areas. Overall, the proposed project, which would expand park use in the area by upgrading the community park and adding the waterfront park, would not have any significant effect on the neighborhood character of the surrounding area.

Natural Resources. Currently, the project site supports a mixture of common reed (*Phragmites australis*), clusters of trees (tree of heaven (*Ailanthus altissima*), black locust (*Robinia pseudo-acacia*), willow (*Salix* sp.), cherry (*Prunus* spp), and mixed grasses growing on landfill. The site has seven distinct categories of plant communities/land use: two types of urban meadow, developed land, recreational land, urban woodland, emergent wetland, and estuarine intertidal flat. Most of the site is covered by the two urban meadow communities—differentiated by the composition of plant species. The species composition of the plant communities reflects the site's disturbed nature and urban setting. The organic composting and recycling facility, the existing community park, and the informal model airplane area are located in the developed and recreational portions of the site. Approximately 12 acres are covered with wooded areas, with approximately 600 trees with diameters of 6 inches or more. The estuarine intertidal community is devoid of vascular plants, except for a very small patch of smooth cordgrass (*Spartina alterniflora*) proximate to the southern tip of the site. New York State Department of Environmental Conservation (DEC) freshwater wetlands maps do not indicate the presence of any DEC freshwater wetlands on the site. There are, however, three very small isolated freshwater wetlands located in the northwestern corner of the site, that total approximately 11,815 square feet (0.27 acres). This portion of the site will be cleared, filled, and graded as part of the proposed project. The filing of these wetlands will be performed in accordance with Nationwide Permit No. 26 per a letter of authorization from the Corps of Engineers. The loss of this very small amount of wetlands would not be significant.

Due to the uniformity of the plant communities covering extensive portions of the site, particularly the common reed dominated portion of the urban meadow community, and frequent intrusions by human activities, most of the wildlife species inhabiting the site tend to be habitat generalists, and can adapt to varying environmental conditions and are relatively tolerant of human activity. With respect to aquatic resources, the East River's hydrodynamics and estuarine character, coupled with the numerous municipal and industrial discharges that have operated there for many years, makes it a physically harsh environment. Therefore, many of the species using the area are tolerant of highly variable conditions. The upper East River is used as a passageway for several anadromous and estuarine fishes, and as a seasonal, temporary residence for a variety of marine species involved in more general coastal or shoreward movements.

The New York State Natural Heritage Program (NYSNHP) reports no known occurrences of rare or state-listed animals or plants, or significant natural communities for the Ferry Point Park. The NYSNHP identified one significant habitat area near the site, a waterfowl wintering area that extends along the shoreline from the Bronx-Whitestone Bridge east to the Westchester County/Bronx County border. The proposed project would not have a significant impact on this area. The U.S. Department of the Interior, Fish and Wildlife Service (USFWS) reported that the peregrine falcon (*Falco peregrinus*), formerly a federal-listed and currently a state-listed endangered species, is known to breed in the vicinity of the proposed project, and to nest at a distance greater than 1.5 miles from the eastern border of the site. The USFWS has requested and the licensee has agreed that the project will take appropriate measures to protect this species and its habitat. According, no significant adverse impacts would occur. Except for occasional transient individuals, no other federally listed or proposed endangered or threatened species under USFWS jurisdiction are known to exist in the project impact area.

By developing the proposed public recreation facility, the project would remove much of the existing vegetation on the site. However, because the site was previously a landfill, no pristine native plant

communities exist on the site. The project would replace existing ruderal plant communities with new plant communities typical of those found on manicured golf course landscapes and urban parks. In addition, the removal of vegetation associated with development will result in an unavoidable loss of wildlife habitat, such as the loss of nesting, den, loafing, and feeding sites for various wildlife species. However, this wildlife would not experience significant long-term impacts, and could find suitable replacement habitats in nearby comparable areas (e.g., Soundview Park or Pugsley Creek Park). An Integrated Golf Course Management Plan would minimize pesticide use to eliminate any significant risks to plant and remaining wildlife communities.

As noted earlier, the project would fill three small, isolated wetland areas of low diversity, comprising approximately 0.27 acres. No significant impacts to existing aquatic communities are expected to result from the proposed project.

As part of the proposed project, a tree replacement program will be developed, in coordination with the licensee, to enhance existing woodlands communities on the site. At maturity, the new trees planted as part of the tree replacement program, and other vegetation planted as part of the proposed landscaping plan, will provide a greater diversity of plant communities than the ruderal plant communities currently existing on the site. The objective of this program is to first minimize the number of trees removed as a result of project development, and then to plant new trees selected with the goal of establishing a healthier and more diverse woodlands habitat. Furthermore, native grasses will be planted in the waterfront park and between the golf course and St. Raymond's Cemetery, which could serve as new habitats. In planting of new trees, priority will be given to replacing trees onsite, followed by planting trees on the western portion of Ferry Point Park. With the planting of new trees, the tree planting program will ultimately result in higher quality vegetation communities and habitats than currently exist on the site.

Measures will be undertaken to minimize adverse effects during construction activities. Furthermore, selection and placement of fill material, the landscaping plan, the creation of lake and vegetated stormwater detention basins, and an integrated golf course management plan will be undertaken to minimize the adverse effects during operation of the facility.

Turf Management and Water Quality Risk Assessment. The project design includes an Integrated Golf Course Management Plan (IGCMP) for turf management. The IGCMP is based on the latest principles of integrated pest management (IPM). Its basic philosophy can be expressed as follows: 1) minimize the need for pesticides by growing turf quickly and keeping it healthy; 2) generally focus on controlling pests rather than eradicating them, and; 3) utilize the wide range of techniques that can be applied to prevent and minimize pest damage. The key to this holistic approach toward IPM is the judicious use of pesticides and other chemicals. A key part of the IGCMP is a risk assessment. Any potential turf chemical impacts on environmental quality will be addressed by modifying the draft management plan and/or the golf course design, as appropriate. The following protective measures/design improvements will be considered for incorporation into the site plan as appropriate:

- Turf Management Measures. Concern about some pesticides or chemicals may be addressed by using alternative pesticides or chemicals, restricting application methods or areas, and/or the establishment of special management zones.
- Civil Engineering/Drainage Plan Measures. A comprehensive drainage plan has been developed with wet and dry detention to polish the quality of stormwater before it reaches the East River. Additional areas of the course can be planted with naturalized vegetation that can receive stormwater runoff if the risk assessment indicates the need. In addition, if necessary, runoff collected in the numerous shallow drains throughout the course may be pumped to certain detention ponds to ensure longer treatment. Other options considered are construction of grassy swales and percolation areas.

An assessment of the potential effect of the proposed project on pollutant loads due to changes in impervious cover and land use was performed to determine whether the proposed project would have the potential for causing any adverse effect on water quality in the East River. The methodology allows pollutant reduction best management practices (BMPs), included as part of the project design, to be accounted for in the analysis. In addition, the proposed golf facility will utilize a turf management plan designed to decrease the use of pesticides and fertilizers and control the potential for their off-site migration. The analysis results indicate that nitrogen, phosphorous, and BOD will decrease from current loads with the proposed project, while concentrations of heavy metals will remain the same. Therefore, the proposed project would not result in any significant adverse impacts to water quality.

Overall, then, no significant adverse impacts are expected to occur to water quality or ecology as a result of the project.

Hazardous Materials. The project site is a former landfill that was operated by the New York City Department of Sanitation. Municipal solid waste was accepted at the site from before 1951 until the early 1960's, and the landfill was closed and covered in the mid-1960's, with additional closure operations conducted in the 1980's. Soil borings and soil and gas sampling showed results consistent with a municipal landfill of that age. The test programs indicated high methane concentrations at some locations at a depth of two- to three- feet below the surface of the landfill. However, negligible concentrations have been found at the surface. Waste materials test results indicated that SVOCs, PCBs, arsenic and lead are the only contaminants detected at levels exceeding risk based criteria. Soil cover test results indicated that SVOCs and arsenic exceeded risk-based criteria at a limited number of locations. The project is being designed to incorporate a number of measures to minimize exposure pathways for both methane and any soil contaminants. These include the following:

- A health and safety plan will be developed to protect workers and park users from potential exposures to harmful levels of landfill gases and soil and waste materials;
- The proposed project will be designed with a number of measures to prevent the collection of landfill gas (i.e., methane) and its potential safety and nuisance impacts. The measures will include landfill gas interception and venting systems in the vicinity of buildings, periodic low permeability soil plugs to limit gas migration in pipe trenches, conduit seals in electric conduits at handholes and building penetrations, use of special construction techniques for buried storm drain pipe, and storm drain catch basins and drain inlets which reduce the potential for landfill gas accumulation.
- Contaminants in the soils and waste materials on-site will be covered with a shaping layer (which will be used to contour the site and be comprised of excess cover materials moved from other areas of the site, and imported uncontaminated construction and demolition [C&D] materials, which meet the 6 NYCRR Part 360-7 regulations) and a final cover/topsoil layer (comprising uncontaminated soil materials from non-industrial sites which do not exceed background levels);
- The final cover/topsoil layer will be 12 to 24 inches thick in the two public parks. However in all cases a minimum of 24 inches of cover which are similar or identical to typical background soil levels would be placed in or retained for the two public parks. A minimum of 12 inches of material meeting such background levels would be placed or retained in the golf course, excluding the rough waste (out-of-bound) areas. In the rough waste areas of the golf course, a minimum of 6 inches of material meeting such background would be placed or retained; and
- Any waste materials excavated due to construction would be disposed of off-site in compliance with all applicable rules and regulations.

These measures will insure that workers and park users are not subjected to harmful or hazardous materials. Therefore, the project would not have any significant adverse impacts.

Waterfront Revitalization Program. The proposed project would develop a regional public recreation facility, including a waterfront park of approximately 19 acres, on a currently underdeveloped portion of Ferry Point Park adjacent to the East River. The facility would enhance the existing waterfront and provide additional public access to the waterfront. The proposed project would be consistent with the City's Local Waterfront Revitalization Program (LWRP) including the 44 State Coastal Zone Management Program policies and the 12 City LWRP policies.

Infrastructure. Currently, there are existing water mains around the perimeter of the project site. This area of the Bronx is served by a combined sewer system, which ultimately discharges to and is treated at the Hunts Point Sewage Treatment Plant. There are major combined sewer mains along Miles, Emerson, Balcom, and Schley Avenues. A small amount of solid waste and a small demand on energy are generated by the operations at organic recycling and composting facility.

The project will utilize the existing sewer, water and drainage systems adjacent to and throughout the project site to service the proposed golf course, parks, restaurant, banquet facility and other secondary uses. Total average daily demand from the project on the water system, and therefore on the sanitary sewer system (to be treated at the Hunts Point Sewage Treatment Plant), is estimated to be 551,066 gallons per day (gpd). The existing on-site drainage system would be expanded to accommodate additional demand generated by the proposed project. Solid waste would be handled by a private commercial operator to be retained by the licensee. The project will consume energy in the form of electricity and natural gas and will generate solid waste. Estimated demand is 1,090 kilowatts (kw) for electricity, and 5,750 cubic feet per hour (cfh) for gas, and is not expected to result in adverse impacts on the existing system.

With the proposed project, the site would be divided into seven primary drainage areas. The system is designed to mitigate runoff contaminants generated by the proposed project, using wet and dry detention basins. Areas that discharge out of the detention system and into the City's combined sewer system have been designed to include the detention volume necessary to insure that the post-development discharge rates do not exceed the estimated allowable discharge rates based on the estimated design capacity of the existing combined sewer system. The stormwater management system for the site has been designed to adequately control stormwater runoff from the site so as not to adversely affect the receiving system or the adjacent properties.

Overall, the project would not result in any significant adverse impacts on the existing infrastructure or adjacent users.

Transportation. Existing traffic volumes in the study area were based on counts collected during the weekday PM peak hour of 5 to 6 PM, the Saturday midday peak hour of 12 to 1 PM, and the Saturday PM peak hour of 5 to 6 PM. These peaks were selected based on the anticipated peak hours of the proposed project. A capacity analysis for the study area's signalized and unsignalized intersections indicates that all intersection approaches operated acceptably, at mid-range LOS D or better for the weekday PM, Saturday midday, and Saturday PM peak hours.

Based on a proposed program including a 1,000 seat fine dining/banquet facility, 400 seat boathouse grill, 18-hole public golf course, 100-stall driving range, 19.5-acre waterfront park, and 7-acre community park, the project would generate 652, 603, and 654 vehicle trips during the weekday PM, Saturday midday, and Saturday PM peak periods, respectively. The project would provide 965 parking spaces for users throughout the facility.

The following traffic improvements are proposed as part of the project:

- At the intersection of Lafayette Avenue and the I-678 southbound service road, the restriping of the westbound approach from two to three lanes (an exclusive left-turn lane and two through lanes), the addition of an exclusive left turn phase, and coordination of the westbound signal with the intersection of Lafayette Avenue and the I-678 northbound service road. Signal coordination would ensure that left-turn queues can be accommodated within available storage capacity.
- At the intersection of East Tremont Avenue and Lafayette Avenue, daylighting, which would restrict the use of up to three parking spaces at the northbound approach during the weekday PM peak period, to improve traffic flow at this location.

With these improvements, all of the study area intersections would operate at LOS C or better for Build conditions (an improvement from existing conditions), and the proposed project would not cause any significant traffic impacts.

The addition of a proposed bus stop with a shelter at the intersection of Schley Avenue and the I-678 southbound service road will be coordinated with New York City Transit. Pedestrian and bicycle access and connections would connect the park to the existing portion of Ferry Point Park and the entrance road to the public recreation facility.

Overall, the proposed development of a public recreation facility is not expected to result in any significant impacts to traffic, parking, transit, pedestrian, or bicycle conditions in the study area.

Air Quality. While operation of the proposed project would result in increased mobile source emissions in the immediate vicinity of the project site, a detailed microscale carbon monoxide analysis showed that the proposed project would not result in any exceedances of the CO standards or the New York City *de minimis* criteria, and would be consistent with the New York State Air Quality Implementation Plan. Therefore, the proposed project would not have a significant mobile source air quality impact.

The only stationary source of air pollutants associated with the proposed project would be the emissions from the oil- or gas-fired HVAC systems. The primary pollutant of concern when burning oil is sulfur dioxide, and when burning natural gas is nitrogen dioxide. Based on the methodologies in the *CEQR Technical Manual*, either case would not result in any significant stationary source air quality impacts. Because there would be no tall structures or elevated receptors adjacent to the project site, the results of this analysis show that there would be no significant air quality impacts from the proposed project's HVAC system.

Methane concentrations were not detected in the ambient air during a landfill gas survey conducted as part of the project's soil assessment. The proposed project would not change the quantity or overall concentration of this pollutant.

In sum, no significant adverse impacts to air quality are expected to result from development of the proposed project.

Noise. The residential area to the east of the project site would be most sensitive to noise associated with the proposed project. The entire project site and its immediate environs are within the 65 $L_{dn}$ contour of La Guardia Airport, and the area is subject to frequent aircraft flyovers. Three noise receptor locations adjacent to residences on the eastern side of the project site were selected for analysis. At all three sites there were frequent overflights by aircraft. Existing noise levels at the receptor locations were relatively low at all three sites, and in terms of the New York City CEPO-CEQR standards, were in the "marginally acceptable" category. Existing noise levels in some areas of the park are above the 55 dBA $L_{10}$ levels recommended for park use in the *CEQR Technical Manual*.

$L_{10}$ levels in the park vary from approximately 78-80 dBA on the western edge of the park, adjacent to the Bronx-Whitestone Bridge/Hutchinson River Parkway, to approximately 52-53 dBA on interior, northern, and eastern locations, which do not have any adjacent vehicular traffic.

Project-generated traffic would increase noise levels on the feeder roadways to the project site by an imperceptible level (i.e., less than 0.2 dBA) and therefore would not result in any significant noise impacts. Noise generated by the proposed project due to three other sources—grass maintenance, including grass mowing operations, operation of the fine dining/banquet facility including noise from its parking lots, and from use of the ballfield at the community park—would result in imperceptible changes in noise levels and would not result in any significant impacts. The project would be designed so that noise from operation of all mechanical equipment, including HVAC equipment, would meet all applicable codes. The proposed project would be creating new parkland, and would conform to the CEPO-CEQR guideline levels for outdoor areas potentially sensitive to noise. Noise at the back of the fine dining/banquet facility would be minimized by the construction of an 8 to 10 foot noise barrier with landscaping along Emerson Avenue so that no significant impacts would result at nearby residences.

Conclusion. As indicated above, the proposed actions will not have any significant adverse impacts in any area of potential environmental concern and will improve environmental conditions in Ferry Point Park itself. Under these circumstances, and in accordance with CEQR/SEQRA, a Negative Declaration may be issued and no environmental impact statement need be prepared in connection with the proposed action.

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| Neighborhood Character | D |
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**Attachment A:** **Project Description**

## A. INTRODUCTION

The New York City Department of Parks and Recreation (DPR) proposes to develop a public recreation facility at the eastern portion of Ferry Point Park in the Bronx. The project site is bounded by the Bronx-Whitestone Bridge to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue and St. Raymond's Cemetery to the north, and the East River to the south (see Figure A-1). Following completion of an extensive request for proposals process, DPR selected Ferry Point Partners, LLC, to develop, construct, and operate a new public recreation facility at Ferry Point Park, pursuant to a license agreement that, subject to satisfactory completion of applicable environmental reviews (including the City Environmental Quality Review [CEQR], and State Environmental Quality Review Act [SEQR]), land use reviews (including the City's Uniform Land Use Review Procedure [ULURP]), and compliance with other applicable laws and approvals, DPR proposes to enter into with that licensee. This attachment provides a description of the principal components of the proposed new public recreation facility.

## B. DESCRIPTION OF EXISTING SITE

The project site, which comprises the eastern portion of Ferry Point Park, is largely unused and undeveloped. The project site is a former landfill that accepted municipal solid waste from before 1951 to the 1960's, and was closed and covered in the mid-1960's with additional closure operations conducted in the late 1980's (see discussion of site history in Attachment G, "Hazardous Materials"). The project site now contains an organic recycling and composting facility (operated by DPR) that is located in the northwestern portion of the project site, informal dirt bike paths, an informal model airplane area in the western portion of the project site, and a ballfield and basketball court located on the northeastern portion of the project site.

The project site contains vegetative communities and terrestrial wildlife that one would expect on a former landfill site—largely natural grasses and scattered stands principally of non-specimen trees, approximately 0.27 acres of freshwater wetlands, a variety of wildlife species commensurable with the habitat in an area of highly disturbed land in an urban setting, and no threatened or endangered species, other species of special concern, or special habitat areas. (See Attachment F, "Turf Management," for a discussion of natural resources.)

## C. PROJECT DESCRIPTION

### OVERALL SITE PLAN

The site plan for the proposed facility has been developed through a series of in-depth interviews, consultations, and meeting with community representatives, governmental representatives, and park and recreational facility experts. The proposed site plan is a result of months of research and design development to achieve a first-class recreation environment for the golfer,

the park user, and neighboring residents. The proposed project plan provides for a world-class recreation facility, including a private golf club experience for the public golfer, as well as superb public park land for the non-golfing public (see Figure A-2 for site plan).

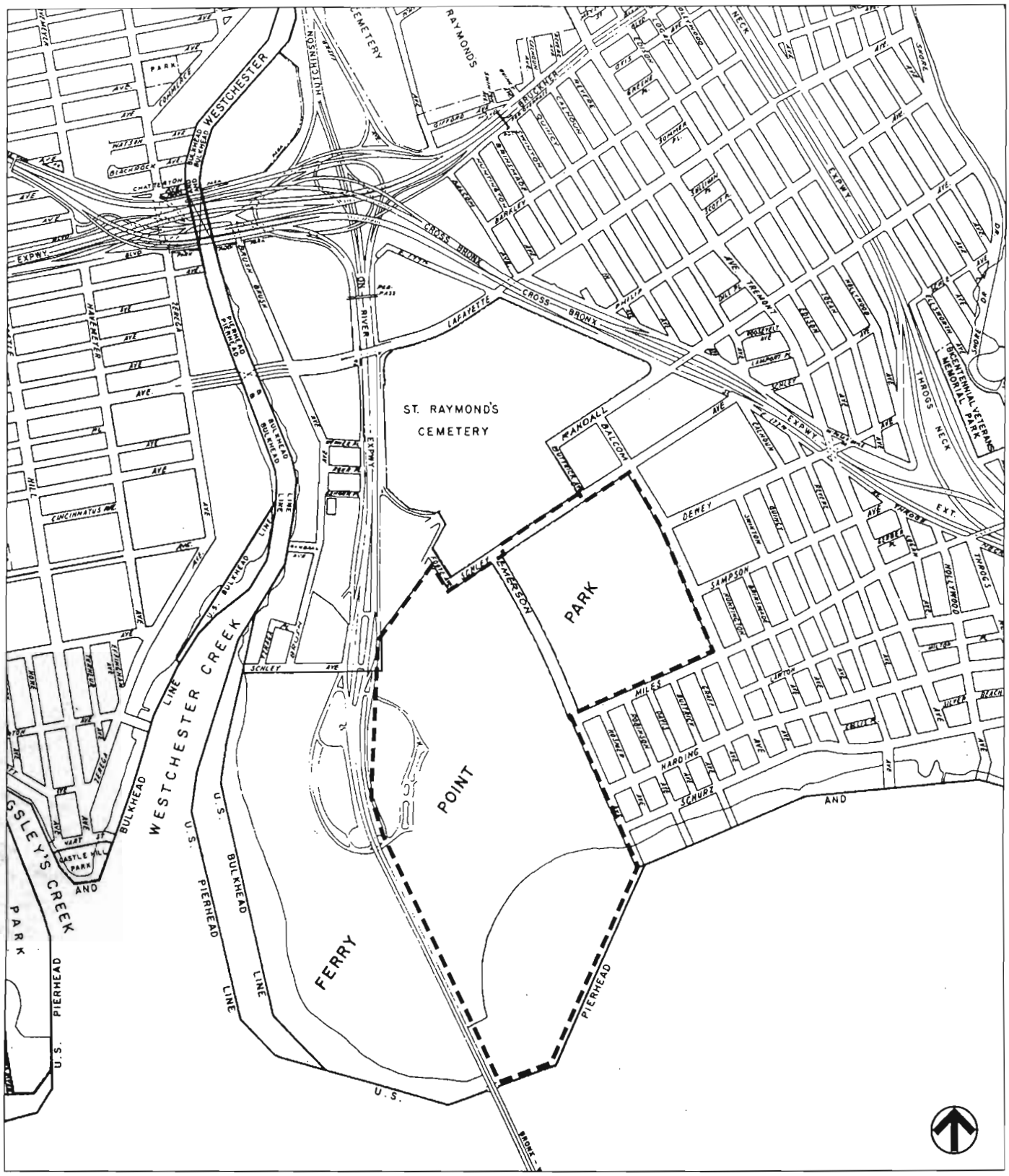
The proposed project, which includes four major elements—waterfront park, community park, comprehensive golf facility, and fine dining/banquet facility—would together constitute a new regional park. The centerpiece of the site plan is the creation of a Jack Nicklaus signature golf course. What was once a relatively flat landfill site, overgrown with scrub grasses and dotted by a few trees, would be transformed and contoured into a tournament level golf course; new lakes would be created to provide definition to the site, a challenge to the golfer, and a bucolic atmosphere; and a landscape containing native and ornamental grasses and trees that would separate and define the out-of-play areas from the manicured tee, green, fairway, and rough areas. Where feasible, particularly in out-of-play and rough areas, native grasses and plantings would be utilized. Trees would be strategically placed throughout the course for articulation and safety precautions. The waterfront park would include walkways, plantings, a tot lot, a comfort station, and the boathouse grill for dining. The community park would replace and substantially expand existing recreational facilities for the residential neighborhood to the east of the project site, while the fine dining/banquet facility will permit park visitors and others to enjoy both fine dining and exceptional views of the East River and Manhattan in the distance.

With the exception of the community park, all access would be from the west—vehicular, bicycle, and pedestrian access would be from the I-678 north- and southbound service roads under the Bronx-Whitestone Bridge. Vehicular access/egress point to the site would be from the southeastern portion of the I-678 north- and southbound service roads under the Bronx-Whitestone Bridge, which currently is a two-way roadway and would become a two-lane, one-way roadway (see Attachment J, "Transportation"). Visitors would enter the site at this location, pass by a stone gateway on the entrance road (the crescent road), and choose to either proceed north to the golf clubhouse area, or south to the community park and the boathouse grill, waterfront park, or fine dining/banquet facility. Access for emergency vehicles would be via Emerson Avenue. Parking would be provided at each of these areas to accommodate park users. Table A-1 shows the amount of parking provided at each use.

**Table A-1**
**Parking by Location and Use**

| Parking Location and Use | Number of Spaces |
|---|---|
| Golf facility | 350 self-park |
| Boathouse grill Restaurant | 125 self-park |
| Waterfront park | 120 self-park |
| Fine dining/banquet facility | 350 self-park convertible to 500 valet-park |
| Maintenance Building | 20 self-park for staff only |
| **Total** | **965 self-park (1,115 self/valet-park)** |

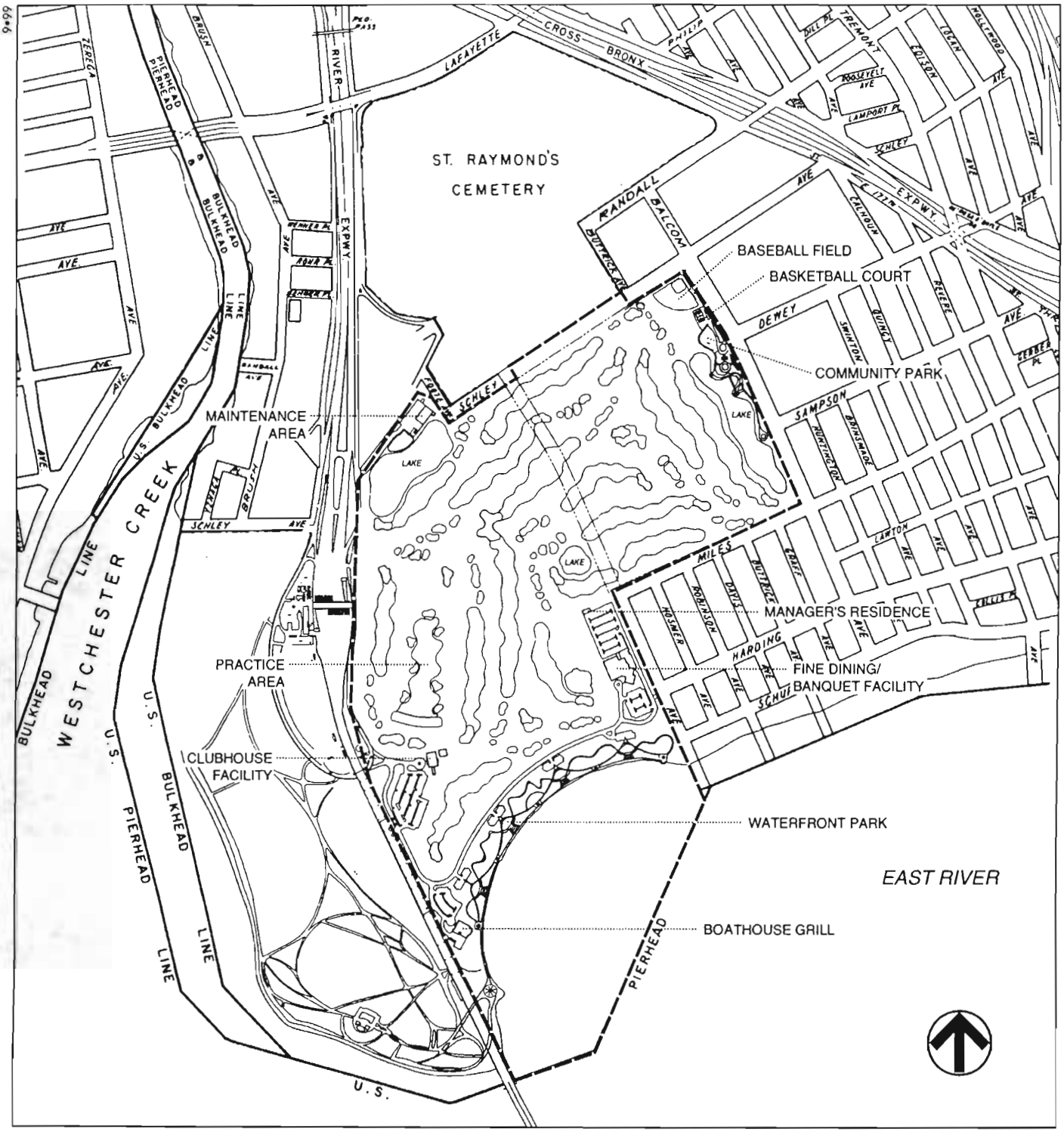
Pedestrian connections would connect the proposed waterfront park with the existing Ferry Point Park located to the west of the bridge. In addition, pedestrians and bicyclists would be able to access the project site through the same entrance road as vehicles. Bicycle racks would be provided in the waterfront park.






**Project Location**

*Figure A-1*




*Ferry Point Park*

**Site Plan**

*Figure A-2*

The architecture and landscaping utilized in the site plan can be characterized as providing a natural, inviting feeling. The buildings have been designed to utilize natural-looking materials, with large pitched roofs with chimneys, and large dormer windows to take advantage of the spectacular views. The architecture can be classified as shingle, a somewhat eclectic, informal style of architecture that was prevalent in northeastern seaside communities at the turn of the century. Landscaping utilizes native plants and trees, where feasible. Areas adjacent to residents on the east side of the project site would all be well buffered and landscaped to provide a pleasant compatible environment.

The proposed project, like other park facilities, would be open from dawn to dusk with the following exceptions (which would be open for night use): the boathouse grill, the fine dining/banquet facility, the Golden Bear Golf Center, the clubhouse building, and possibly three holes of the golf course (holes 1, 8, and 9). The following sections discuss each of the major project elements—waterfront park, community park, comprehensive golf facility, and fine dining/banquet facility in more detail.

*WATERFRONT PARK*

A waterfront park of approximately 19.5 acres would be created on a depth of approximately 300 feet of land adjacent to the East River (see Figure A-3). This park would connect to the waterfront portion of the existing Ferry Point Park providing park users with a total of approximately 6,600 feet of continuous riverfront promenade (i.e., approximately 4,000 feet in the existing western portion of Ferry Point Park and approximately 2,600 feet in the proposed eastern portion of Ferry Point Park).

The park would be a passive recreation area with sitting areas and walking paths. It would contain three levels of pedestrian paths—a primary path system that would be a barrier-free waterfront promenade constructed adjacent to the existing rip-rap at the East River's edge, a secondary path system that provides pathways connecting the four parking areas to the waterfront and paths for leisurely walking, and a tertiary path system that provides a more leisurely, serene, meandering pathway system linking the primary and secondary paths. Bicycle access would be provided via the crescent road, and bicycle racks would be provided at the parking areas.

Native grasses and plantings, and natural materials would be used where feasible to provide a rustic nature. Along the paths, benches and rocks would be placed, forming natural sitting areas so that park users can enjoy the waterfront views. Picnic tables would be located in shaded areas adjacent to the two central parking areas.

Besides the amenities described above, the waterfront park would contain four kiosks, a comfort station, refreshment (and possibly other park-associated vendor) stands, a tot lot, and the boathouse grill.

The tot lot, a unique children's play environment, would be a destination play space offering small children a diverse play experience. It would be a visually stimulating environment imbued with form, texture, and color. Its spatial layout, landscape elements, and play equipment would be designed to provide year-round enjoyment and a learning experience through provocative exploration. Its design will include slides, platforms, climbing features, and other interactive learning devices.

Most important, throughout the waterfront park, users would have wonderful views of the East River, Queens, and the Bronx-Whitestone and Throgs Neck Bridges, and would have the opportunity to enjoy a natural waterfront environment.

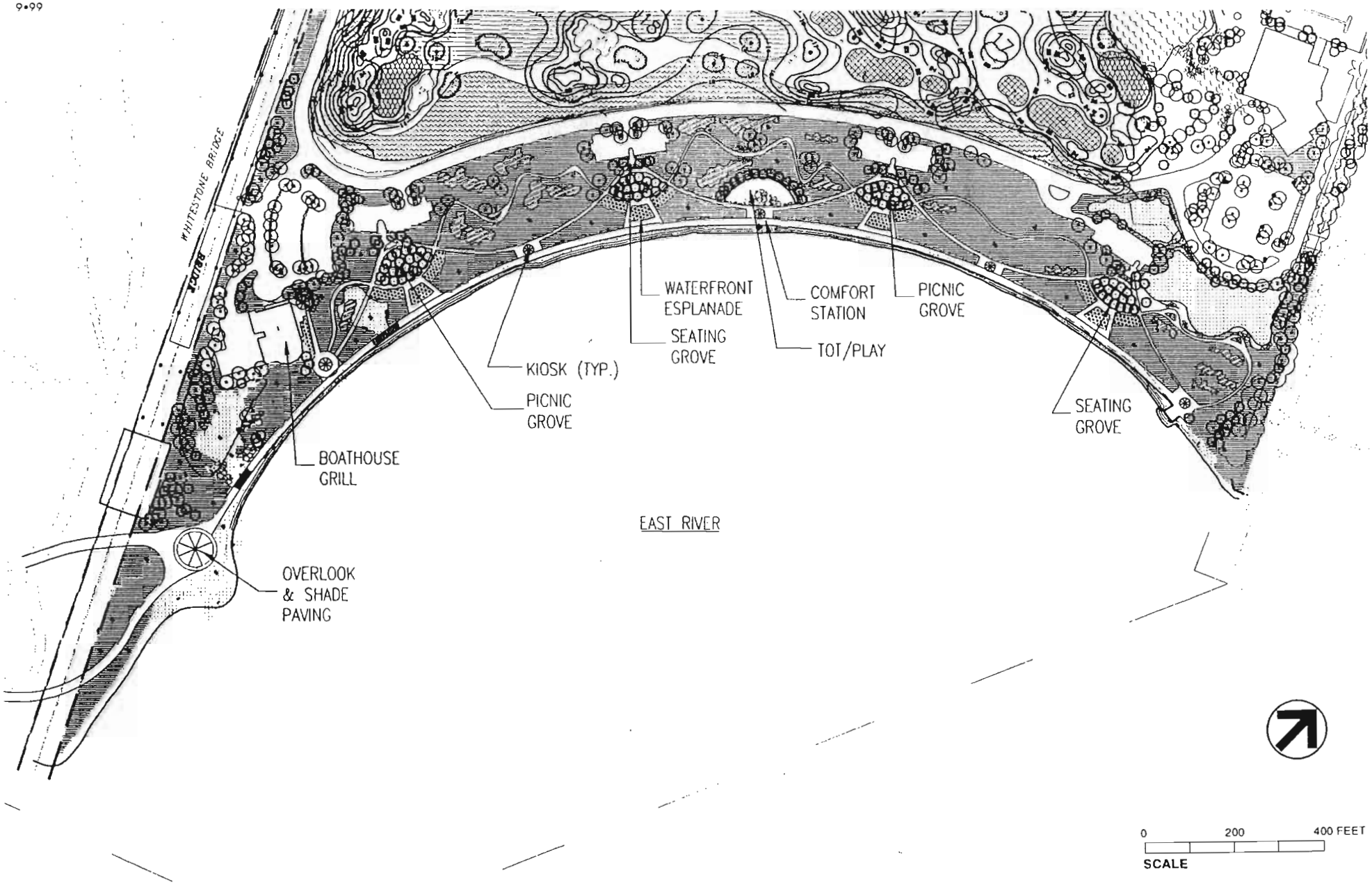
The boathouse grill is planned to be located in the southwestern portion of the site in the waterfront park and provides a location for casual dining with spectacular views of the East River, Bronx-Whitestone Bridge, Throgs Neck Bridge, and Queens. Vehicular access to the boathouse grill would be as vehicles head south via the main entrance roadway to the project site. Park users could also access this restaurant via the pedestrian paths in the proposed waterfront park and via new connections being provided that link the portion of Ferry Point Park to the west of the Bronx-Whitestone Bridge with the proposed waterfront park to the east of the Bronx-Whitestone Bridge. Bicyclists would access the restaurant via the crescent road; bicycle racks would be available at the parking areas. The boathouse grill would be a building totaling approximately 13,000 square feet and rising to a maximum height of approximately 35 feet (see Figure A-4). It is a 1-story building that provides interior seating for approximately 250 people, and contains a large exterior porch which, during periods of good weather, could provide exterior seating for approximately 150 additional people. The building has been designed, in keeping with the overall natural theme of the project site, in the shingle style. It would utilize natural-looking materials, a pitched roof with chimneys, skylights, and large dormer windows. The building would contain a large fireplace, open bar, and five sets of bay windows with bay window seating. The building design provides a rustic, inviting feeling that allows patrons to feel that they are dining at a restaurant in a private club in New England or boathouse that is located on the water.

*COMMUNITY PARK*

A community park of approximately 7 acres (approximately 300 feet by 1,000 feet) would be created in the northeastern portion of the project site, on Balcom and Miles Avenues (see Figure A-5). The park would contain both active and passive recreation uses; facilities for both young and old, and a large lake with stunning park views. Community access to the this park would be provided along Schley and Balcom Avenues.

The design of the community park takes a largely underdeveloped area of Ferry Point Park, which currently contains a baseball field and basketball court, and transforms it into a viable center of recreation for the community. The interests of the community and the proximity to the proposed Ferry Point Park Golf Course have been acknowledged in the design of the Community park, such as providing:

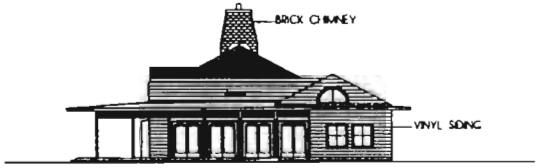
- A new baseball field and basketball court;
- A tot lot for small children;
- A tot lawn area;
- A rolling lawn area;
- Game tables
- Areas with shaded seating, as well as areas with sunning seating;
- Areas with lakefront seating;
- Walkway and pastoral area bridging water;
- A botanical discovery path; and
- Gazebos.



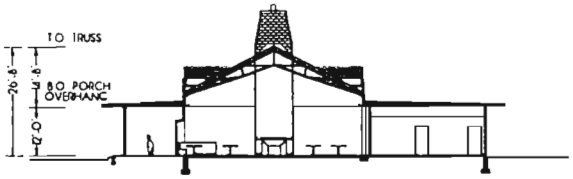

SOURCE: THOMAS BALSLEY AND ASSOCIATES

**Waterfront Park**

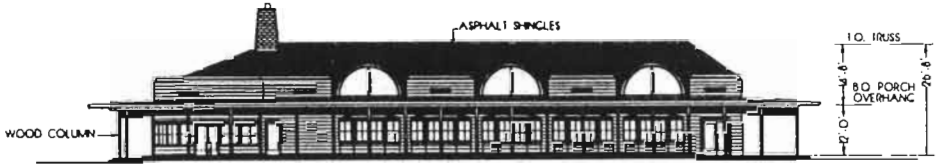
*Figure A-3*



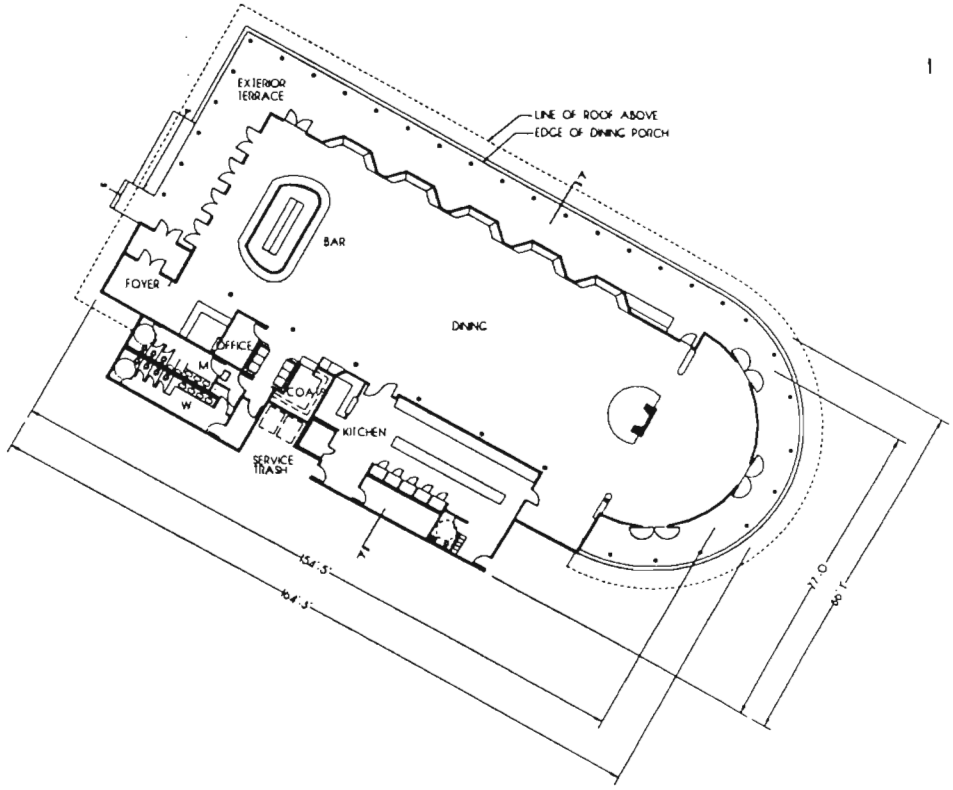

WEST ELEVATION




SECTION - AA




NORTH ELEVATION




FLOOR PLAN

Enclosed Space 9,200 sq. ft.
Exterior Terrace 3,125 sq. ft.

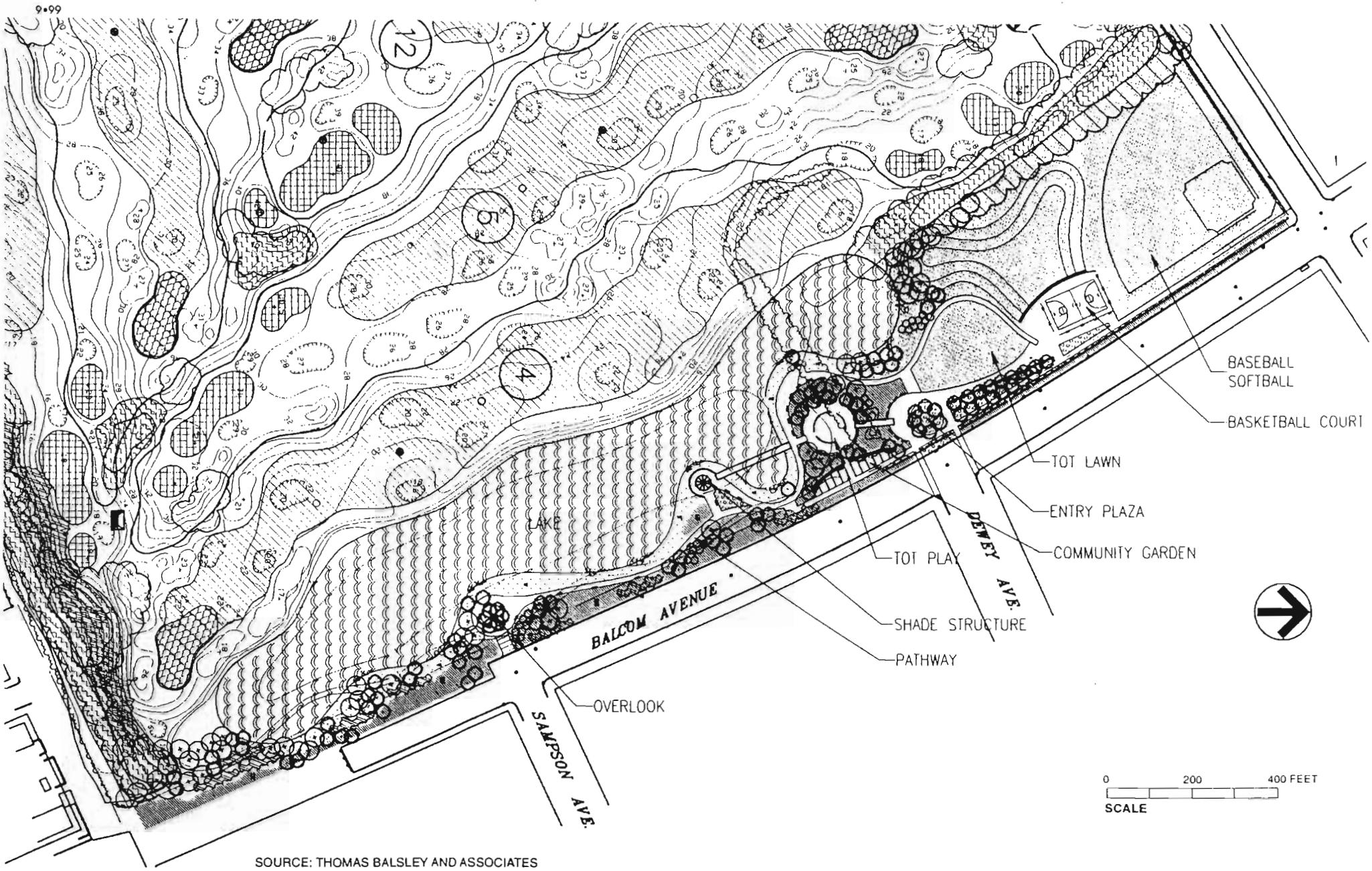
SOURCE: BUTLER ROGERS BASKETT

0 20 40 FEET
SCALE

*Ferry Point Park*

**Boathouse Grill**

*Figure A-4*




SOURCE: THOMAS BALSLEY AND ASSOCIATES



**Community Park**

*Figure A-5*

The design of the community park shown in Figure A-5 integrates these diverse elements into a cohesive and engaging recreation area. The park is designed to complement the golf course, though the park and golf course would function as two separate facilities. No access between the community park and golf course would be provided.

The circular tot lot will be paved with a highly resilient, colorful, rubberized surface to minimize the danger of accidents from children falling. A circular guardian seating area would be provided surrounding the play area. The play equipment would be selected to reflect the natural landscape setting, enhancing its effects with constructed forms whose color, materials, and shapes have been selected to complement their surroundings.

The organization of the community park requires a separation of uses. This is addressed by the placement of the baseball field and basketball court toward the northern portion of the park and the lawn area and lakefront area more to the central and southern portion of the park. The lawn area would serve to separate the contemplative nature of the lakefront recreation from the active play at the ballfield and basketball court. There would be a liberal tree buffer to ensure safe play between the ballfield and the golf course. The space that separates the structured features of the lakefront area from the active play of the ballfield and basketball court is the lawn.

The existing topography in the area of the proposed community park is virtually flat. To create an interesting vista and usable lounging lawn, the land would be contoured with additional soil brought to the site.

The proposed park design provides users who are not using the baseball field or basketball court with a choice—water's edge or bucolic lawn. From the entry, a landscaped bridge pathway spans a stream of grasses to usher children into the tot lot. This pathway also directs pedestrians to the tree-lined lakefront walk and the dappled shade of the "patios" at the lake's edge. The lakefront has been designed to wrap around this area of the park creating opportunities for discovery and beauty at every turn. A walk around the tot lot reveals another bridge, this time crossing the lake at the cove where a botanical discovery zone starts. There is another choice—walk over the bridge or embark on a nature walk provided by a stone dust path that defines the eastern boundary of the lake. This natural environment—also planted with native and ornamental grasses—meanders along the lake's edge, revealing numerous botanical associations with descriptive plaques nestled in the displays. There would also be two gazebos, one at the outlet of the bridge and a second as the terminus of the discovery walk.

*GOLF FACILITY*

The golf facility is proposed to contain an 18-hole tournament quality golf course, a Golden Bear Golf Center with driving range and practice areas for chipping and putting, the clubhouse building with full service pro shop/snack bar/locker rooms, the maintenance building, and the facility managers residence.

The golf course would be a tournament-level 18-hole par 72 daily fee course designed by renowned golf-course architect, Jack Nicklaus. The course has been designed to accommodate a full range of playing skills within a diverse setting that provides stunning views of the East River, Bronx-Whitestone Bridge, Throgs Neck Bridge, Queens, and Manhattan. Water, vegetation, and views would be woven into the course design to maximize both visual quality and playability. Soil would be brought on site to contour the land (see Attachment G, "Hazardous Materials," for a detailed discussion). In addition, four lakes would be created on-site. Golf

features (i.e., hills, sand traps, rough, and water hazards) would be strategically located to reasonably test skills and provide a beautiful setting.

From the championship tees, the course would be approximately 7,000 yards and from the forward tees about 5,500 yards. Tees would be positioned to allow all levels of playing skills to be accommodated. The course has been strategically designed to provide the golfer with a variety of experiences that balance power and precision. Three of the holes nearest to the driving range (holes 1, 8, and 9) may be lit for night play.

The golf facility would include a Golden Bear Golf Center, which includes a driving or practice range, short-game area, and teaching and instructional facilities. These facilities would offer golfers a wide variety of practice experiences.

The driving range would be an all-weather facility with a total of approximately 80 stations or tees on two levels. The tees, instructional area, and related available facilities would be located in a 2-story structure, which would be lit for night play, and would be approximately 400 feet wide and 30 feet deep. The range would be approximately 900 feet long, with swales, bunkers, target greens to simulate on-course conditions, safety netting mounted on support poles (ranging from approximately 50 to 150 feet), that would be placed approximately 100 feet apart around the range area. Lights would be mounted on these poles for night use. The tee area of the range would be heated to accommodate use during cold weather periods. In addition, during the winter months, portions of the range may be covered with a climate controlled dome, approximately 400 feet wide, 400 feet deep, and 120 feet high, to allow year-round use of the driving range. In addition, the three holes of the golf course immediately adjacent to the driving range may be lit to permit night play. The lights would be mounted on the netting support poles of the driving range.

The short-game areas would allow golfers the full range of shot making needs—practice chipping, pitching, sand play, and putting—under conditions similar to those they might experience on a golf course.

Instruction would be available from accredited teaching professionals trained in the Jack Nicklaus/Jim Flick philosophy and method. A full range of instructional programs would be offered, including community-oriented programs for schools, civic groups, and senior citizens.

The clubhouse building is proposed to be located in the center of the western portion of the site and would serve as a focal point for the golf facility. All golfers using the golf facility would pass through this building. Access to the clubhouse building would be heading north via the main entrance roadway to the project site. Preliminary plans for the clubhouse building show a footprint of approximately 8,200 square feet and rises to a maximum height of approximately 34 feet (see Figures A-6 through A-8). It is a 1-story building with a lower or basement level. Site conditions (i.e, depth to the level of waste materials) may require that the basement level be eliminated, and the footprint of the building be expanded to allow the functions currently envisioned for the basement level at-grade. The building has been designed in keeping with the overall natural theme of the project site utilizing natural-looking materials, a pitched roof with chimney, and large dormer windows. The architecture can be classified as shingle style, a somewhat eclectic, informal style of architecture that was prevalent in northeastern seaside communities at the turn of the century. It provides a rustic, inviting feeling combining residential scale in a public facility.

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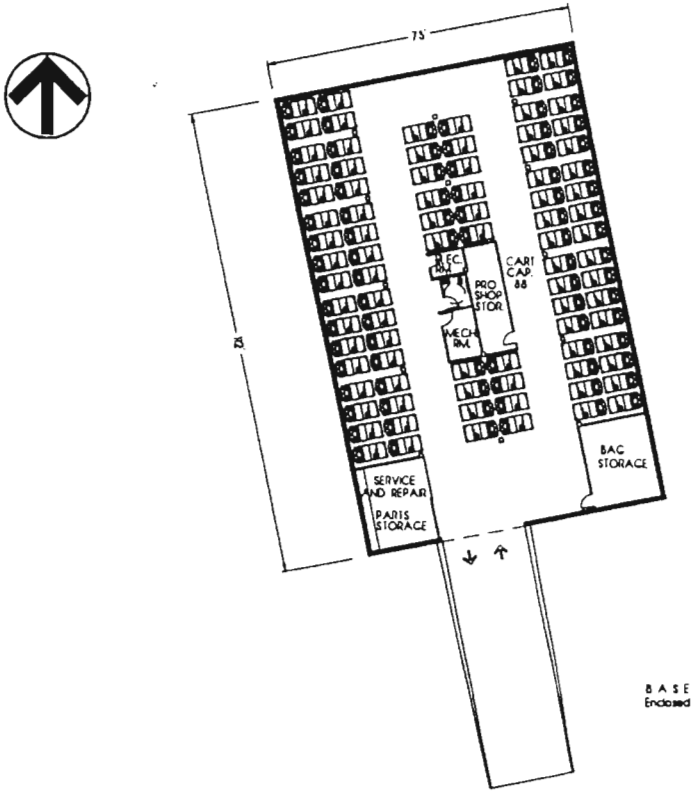
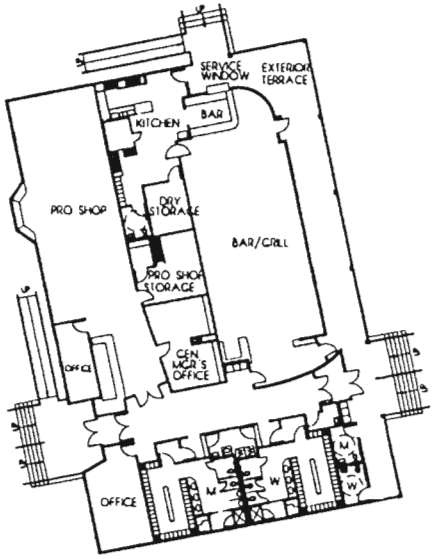
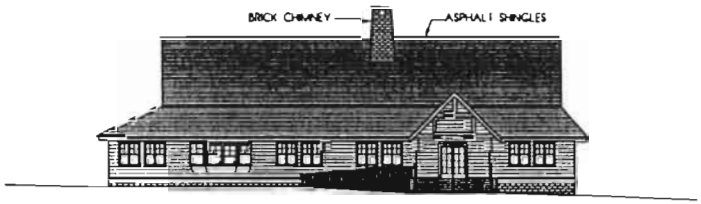



BASEMENT-CELLAR FLOOR PLAN
Enclosed Space 7,810 sq ft



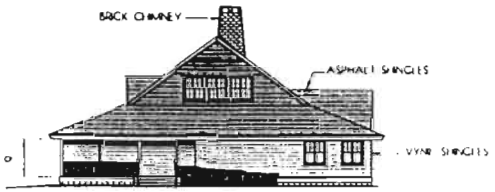

MAIN FLOOR PLAN
Enclosed Space 6,830 sq ft
Exterior Terrace 1,340 sq ft




FRONT ELEVATION (WEST)




REAR ELEVATION (EAST)




NORTH ELEVATION

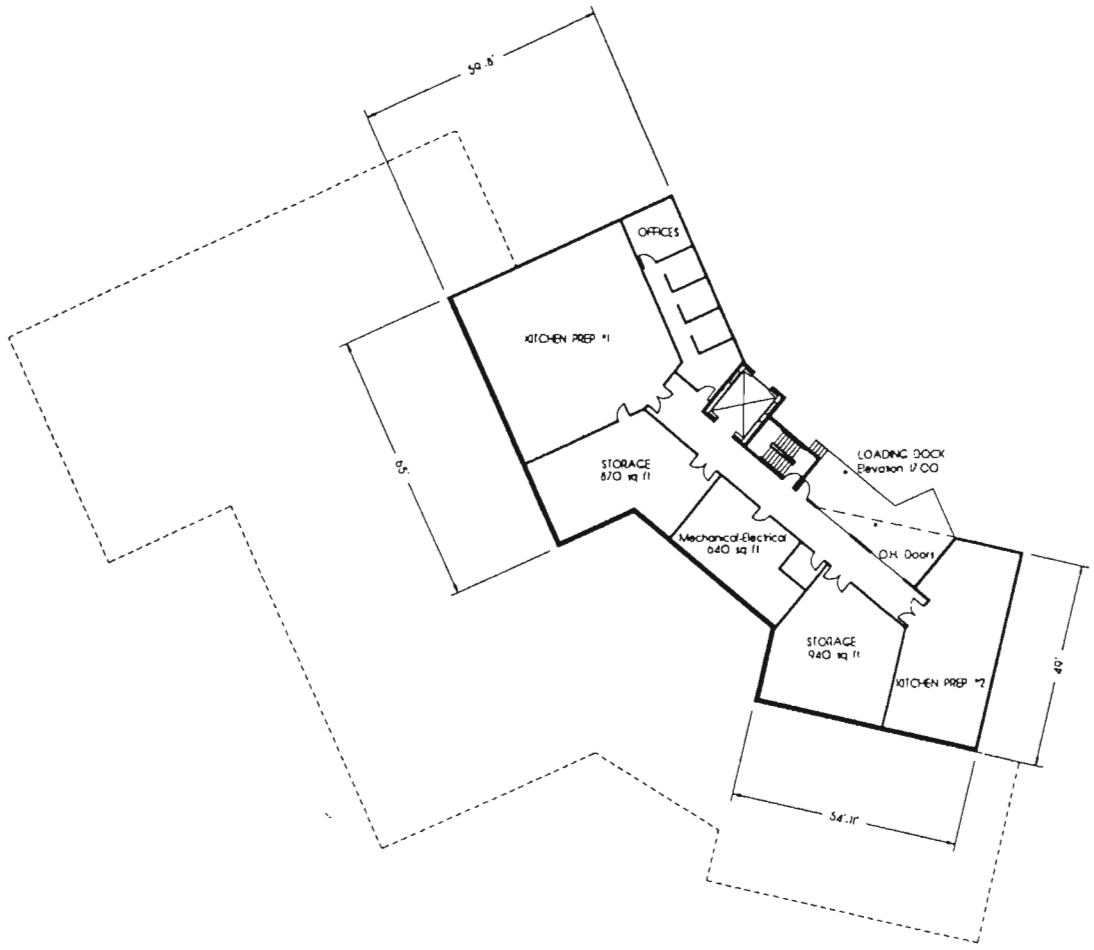
SOURCE: BUTLER ROGERS BASKETT

0 20 40 FEET
SCALE

*Ferry Point Park*

# Golf Clubhouse

*Figure A-6*




SOURCE: BUTLER ROGERS BASKETT

# Fine Dining/Banquet Facility

## Basement Level Floor Plan

*Ferry Point Park*

*Figure A-7*

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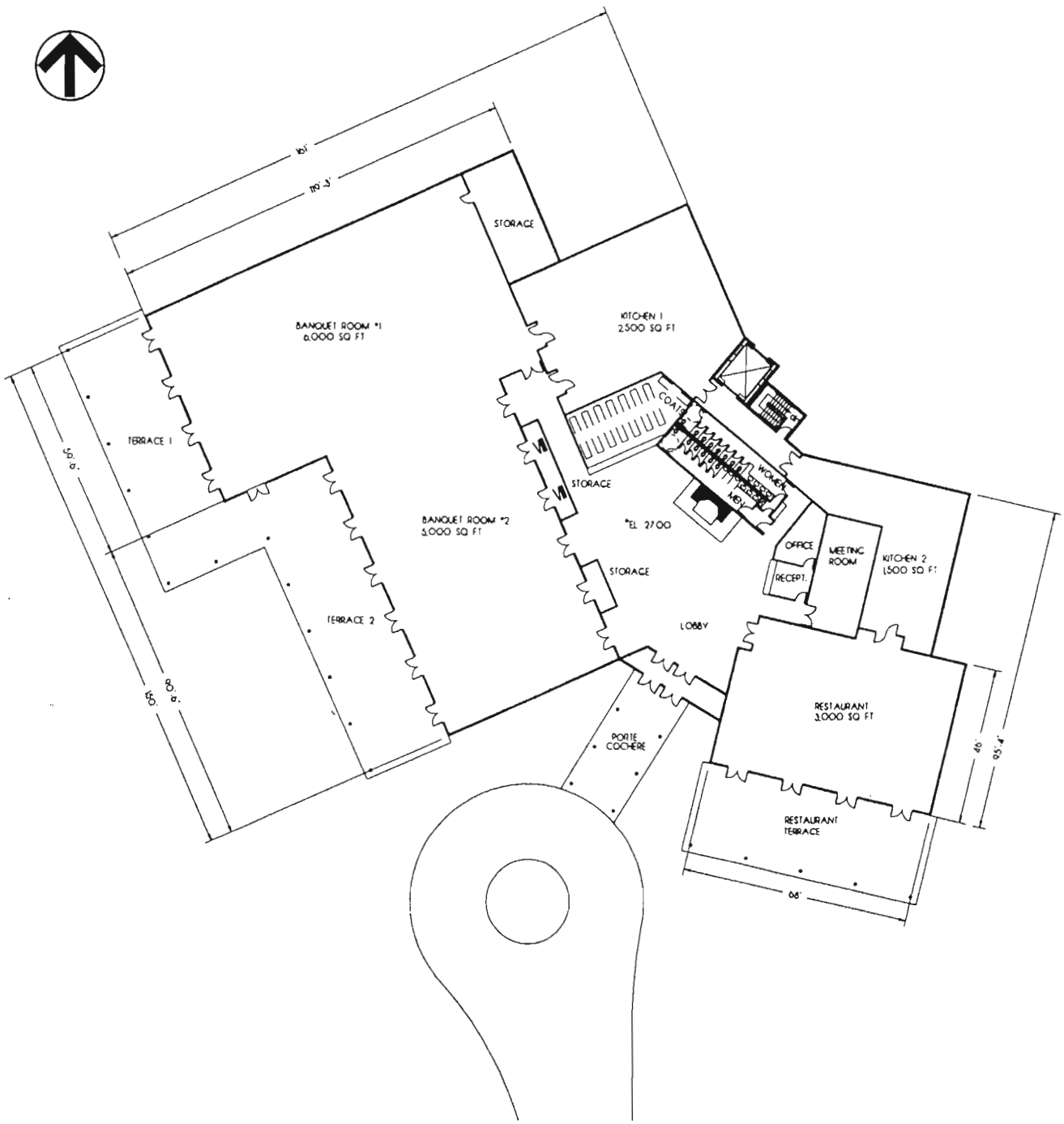



SOURCE: BUTLER ROGERS BASKETT

0 20 40 FEET
SCALE

# Fine Dining/Banquet Facility

## Main Level Floor Plan

*Ferry Point Park*

*Figure A-8*

The main floor of the clubhouse building is about 7,500 square feet. It has a porch on the east side, with some limited outdoor seating, and access to handicapped toilets. Inside is the check-in area for the golf course, driving range, and short-game area, a pro shop, a bar and grill, locker rooms with shower and bathroom facilities, and golf facility offices and the grill kitchen. The lower level of the clubhouse building has been designed for golf cart storage, service, and repair, golf bag and general storage, mechanical and electrical rooms, and handicapped toilets.

The maintenance building is a pre-engineered, 1-story, metal building of about 7,500 square feet in area, with a maximum height of approximately 15 feet. It would be located in the northwestern corner of the site, and would have its own access roadway from the northbound I-678 north- and southbound service roads. The building and adjacent maintenance area would contain space for equipment, chemical and pesticide storage, equipment washdown and maintenance, and maintenance personnel offices. The turf nursery would be located in this area. In addition, the pump station used for irrigation of the golf course would be located adjacent to this building. The building and surrounding maintenance area would be landscaped and shielded by trees from the rest of the facility and the surrounding area.

The facility managers residence is proposed to be a 2-story building located in the eastern portion of the site, adjacent to the fine dining/banquet facility parking area. The building would be approximately 4,500 square feet, with a maximum height of approximately 35 feet. Four or five dwelling units for living quarters for the facility managers residence and groundskeeping and/or security personnel would be provided in the building. The building, like most of the other buildings on the project site has been designed in the shingle style of architecture, utilizing natural-looking materials, and a pitched roof with chimney, to provide a rustic, inviting feeling. While it would not be readily visible to the adjacent residential community to the east of the project site, it would be of a scale that blends well with the residential buildings to the east.

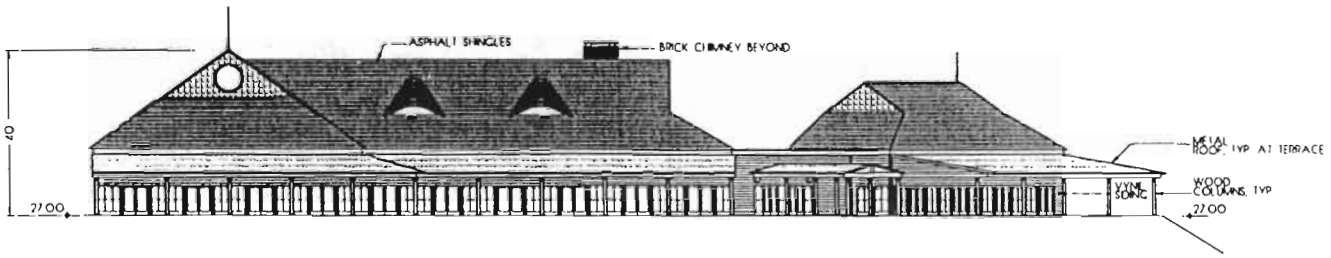
*FINE DINING/BANQUET FACILITY*

The fine dining/banquet facility building is located in the southeastern portion of the site and serves as a location for fine or elegant dining or for private parties, special occasions, and events. The building has a footprint of approximately 25,000 square feet and rises to a maximum height of approximately 40 feet (see Figure A-9). It is basically a 1-story building, although it does contain some office space and some service space (for kitchens and storage) in a partial basement or lower level. Site conditions (i.e, depth to the level of waste materials) may require that the basement level be eliminated, and the footprint of the building be expanded to allow the functions currently envisioned for the basement level at-grade. Like the other major buildings proposed for the project site, this building has been designed in keeping with the overall natural theme of the project site, in the shingle style. It utilizes natural-looking materials, a pitched roof with chimneys, and large glass windows and doors to take advantage of the spectacular views of the golf course, East River, Bronx-Whitestone Bridge, and Queens. The building design provides a rustic, inviting feeling that blends well with its surroundings, and makes this relatively large building seem in scale with its surroundings.

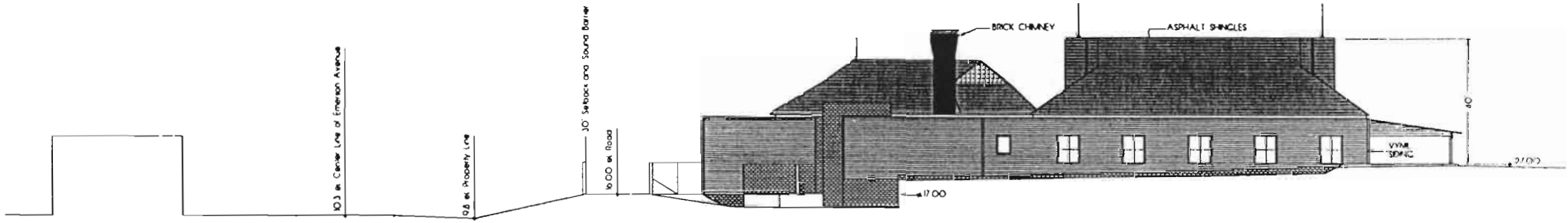
Access to the fine dining/banquet building would be heading south via the main entrance roadway/crescent road to the project site. Restaurant patrons would either self-park or valet park. Attendees of events utilizing the banquet halls would, except for small events, generally utilize valet parking.

The ground floor of the building is divided into three main areas: a restaurant for elegant dining, which is approximately 3,000 square feet and seats approximately 150 people; a catering hall, which is approximately 4,500 square feet and seats approximately 350 people; and a second catering room, which is approximately 6,000 square feet and seats approximately 475 people. Each of the banquet rooms has a separate terrace overlooking and adjacent to the golf course lake, while the restaurant overlooks the waterfront park and portions of the golf course. The two catering rooms can be combined to accommodate large events requiring seating for up to approximately 825 people. An additional paved area, adjacent to the banquet hall terraces would allow for a removable tent for special events (e.g., weddings).

The fine dining/banquet facility is designed to include an 8- to 10-foot noise barrier with landscaping along Emerson Avenue. This barrier would be located behind the fine dining/banquet facility to minimize the effects of this facility on the adjacent community. This barrier would also reduce noise from any vehicle movements and truck deliveries or other service area events. ❖




WEST ELEVATION




NORTH ELEVATION

0 20 40 FEET
SCALE

SOURCE: BUTLER ROGERS BASKETT

# Fine Dining/Banquet Facility

## Elevations

*Figure A-9*

## Attachment B: Land Use, Zoning, and Public Policy

## Attachment B: Land Use, Zoning, and Public Policy

# A. INTRODUCTION

For a study area extending up to a ½-mile radius from the project site, this examines existing land use, zoning, and public policy; projects future conditions without the proposed project through the Build year, 2002; and assesses potential impacts of the proposed project. The ½-mile study area is bounded roughly by Westchester Creek on the west, Lafayette Avenue on the north, East Tremont Avenue on the east, and the East River on the south (see Figure 1, "Land Use," in the EAS).

# B. SITE HISTORY

The project site is a former landfill owned by the City of New York and administered by the New York City Department of Parks & Recreation (DPR). Aerial photos of the project site taken in 1951 show that large portions of project site were previously located either under water in the East River or were land being created by landfill. (See Attachment G, "Hazardous Materials," for historic aerial photographs.) The site was in operation as a municipal solid waste landfill from before 1951 to the 1960's, with additional closure operations occurring as recently as the late 1980's. During its operation as a landfill, a ballfield and basketball court were present on a northeastern portion of the project site. The landfill was closed and covered in the mid-1960's, and has been in its current condition, with growth and development of its current vegetation, since the 1980's. DPR began operation of an organic recycling and composting facility on a northwestern portion of the site in 1994. Robert Moses, in his 1950 plans for the eventual development of the park, envisioned a golf course at this location.

# C. EXISTING CONDITIONS

## LAND USE

*PROJECT SITE*

The approximately 222-acre project site encompasses the eastern portion of Ferry Point Park under the Bronx-Whitestone Bridge, and is bounded by Schley Avenue and St. Raymond's Cemetery to the north; Balcom, Miles, and Emerson Avenues to the east; the East River to the south, and the I-678 north- and southbound service roads and the western portion of Ferry Point Park to the west. Currently, the majority of project site is unimproved and undeveloped parkland, and is generally inaccessible to the public (portions of the park are fenced off). However, DPR operates an organic recycling and composting facility on approximately 414,000 square feet at the northwestern corner of the site, and occupies approximately 274,000 square feet of open field at the northeastern corner of the site, including a community ballfield and basketball court. Informal uses include dirt bike paths and a model airplane area on the western portion of the site.

The roadways surrounding the site include Schley, Emerson, Miles, and Balcom Avenues—lightly traveled local roads that serve the residential uses bordering the eastern portion of project site. Schley, Emerson, and Miles Avenues do not provide through access to the project site. The Ferry Point Park access road borders the western portion of the site and is a two-way road operating with one lane in each direction. The developed portion of Ferry Point Park lies to the west of the Bronx-Whitestone Bridge, and is accessed via the lightly traveled Ferry Point Park access road, which connects the I-678 north- and southbound service roads under the Bronx-Whitestone Bridge.

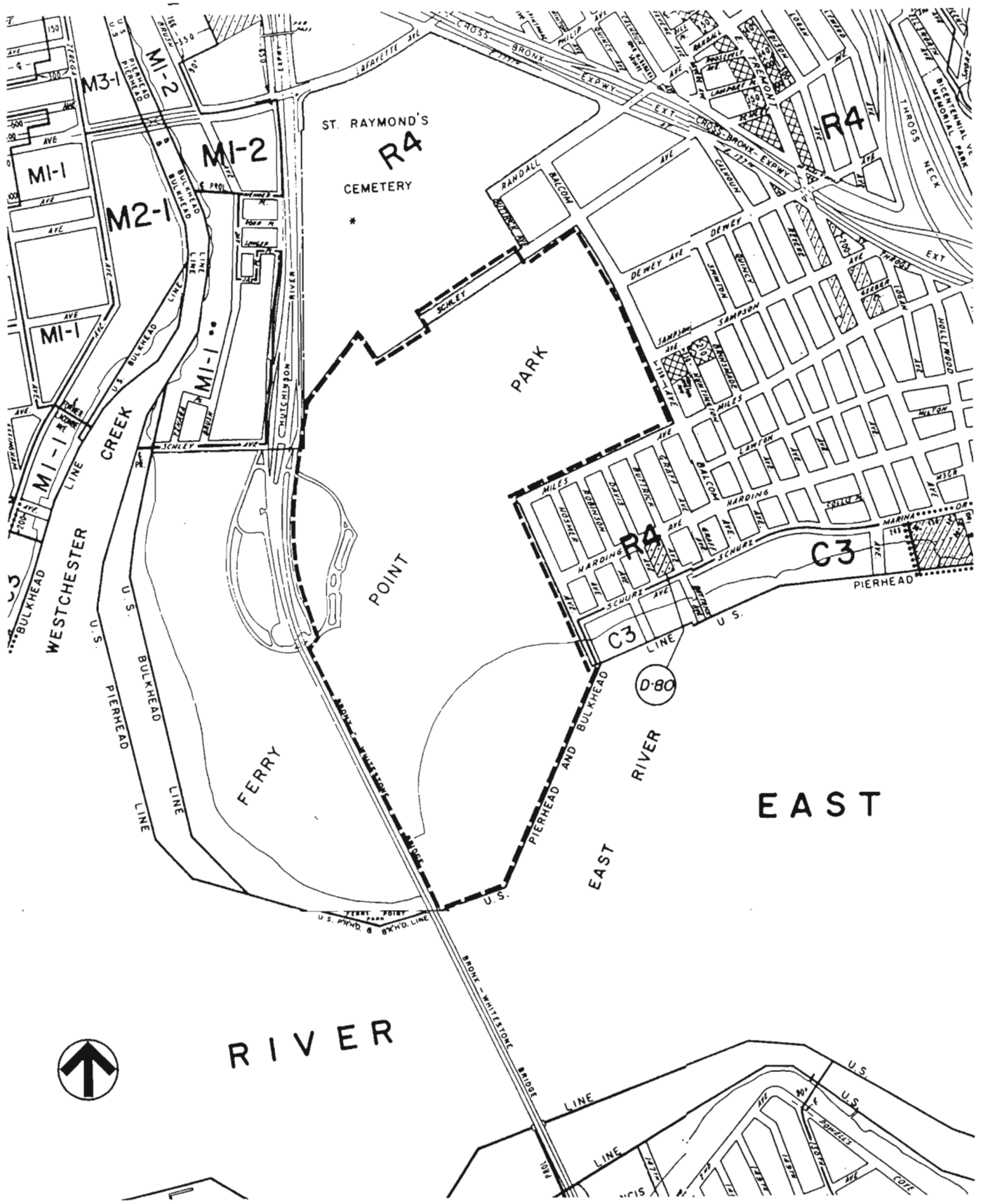
*STUDY AREA*

Uses in the study area are primarily residential to the north and east of the project site, and commercial and industrial to the west of the project site. As noted above, the project site lies under and to the east of the Bronx-Whitestone Bridge in the eastern portion of Ferry Point Park. The portion of Ferry Point Park that lies to the west of the Bronx-Whitestone Bridge includes ballfields and picnic areas, and contains a waterfront walking area. The park serves variety of users, and draws people from throughout the Bronx. As mentioned earlier, the project site is currently an undeveloped portion of the existing park.

Major roadways in the study area include Lafayette Avenue, the I-678 north- and southbound service roads, East Tremont Avenue, and the Cross-Bronx Expressway.

The eastern portion of the project study area is predominantly residential. Residential uses including single- and two-family attached and detached homes, as well as public housing facilities such as the Throggs Neck Houses and the Randall-Balcom Houses, border the project site. Open spaces within these public housing complexes are landscaped and include outdoor community spaces with benches and a ballfield. Single- and two-family attached and detached houses, as well as walk-up apartment buildings, can be found to the north of Lafayette Avenue east of the I-678 northbound service road, and to the east of the project site, in the area bounded by Balcom, Miles, Emerson, and Hollywood Avenues and the East River. Construction of new residential units bordering the site along Miles Avenue near Hosmer Avenue is under way. There are six schools located within this portion of the study area: St. Joseph School for the Deaf near the intersection of Lafayette Avenue and the I-678 northbound service road, P.S. 10 and P.S. 401 on Lafayette Avenue to the west of East Tremont Avenue, P.S. 72 on Dewey Avenue near East Tremont Avenue, St. Frances De Chantal School on Harding Avenue near Hollywood Avenue, and Preston High School on Schurz Avenue near Huntington Avenue. Along East Tremont Avenue between Lafayette and Miles Avenues, there are commercial and retail uses, light industrial uses, and auto-related uses, including local retail stores, restaurants, and gas stations.

The southwestern portion of the study area bounded by Lafayette and Schley Avenues between the I-678 southbound service road and Westchester Creek contains predominantly warehousing/storage yard and heavy industrial uses. There are also residential and commercial uses in this area including single- and two-family detached houses, a hotel, and office buildings. This portion of the study area also contains some vacant lots. Warehousing and heavy industrial uses in this area are generally located to the west side of Brush Avenue. Land uses across Westchester Creek are similar to those on the east side of the creek, primarily including commercial, industrial, and warehousing uses, along with a number of overgrown vacant parcels.




*Ferry Point Park*

**Zoning**

*Figure B-1*

The northern portion of the study area bounded by Lafayette and Zerega Avenues between Brush Avenue and the I-678 northbound service road includes primarily industrial uses with some vacant lots. Monsignor Scanlon High School and St. Helena Commercial High School are located at the northwest corner of the intersection of Lafayette Avenue and the I-678 southbound service road.

## ZONING

The project site is mapped as City parkland and is therefore not within a zoning district. As shown in Figure B-1, within a ½-mile radius of the project site, zoning classifications include residential R4, commercial C1-4 and C3, and manufacturing M1-1, M1-2, M2-1, and M3-1. Generally, allowable uses in the residential R4 district include rowhouses and small multiple dwellings, in addition to community facility and retail uses. In the commercial C3 district, permitted uses include waterfront recreation and uses related to boating and fishing, in addition to allowable uses, such as residential and community facility uses. Manufacturing M1-1, M1-2, M2-1, and M3-1 districts include manufacturing uses as well as commercial and residential uses. Table B-1 summarizes zoning districts and floor-area ratios (FAR) in the study area. A comparison of Figures B-1 "Zoning," and Figure 1 "Land Use," in the EAS shows that the zoning of the study area generally is consistent with its land use patterns.

**Table B-1**
**Zoning in the Study Area**

| Zone | Use | Floor Area Ratio (FAR) |
|---|---|---|
| **Residential Zoning** | | |
| R4 | Low-density residential | 0.75 R plus 0.15 attic allowance, 0.75 to 2.0 CF |
| **Commercial Zoning** | | |
| C1-4 | Commercial (local shopping and services) | 1.0 C, 0.75 R plus 0.15 attic allowance |
| C3 | Waterfront Recreation District | 0.5 C, 0.5 R plus 0.1 attic allowance, 0.5 to 1.0 CF |
| **Manufacturing Zoning** | | |
| M1-1 | Light manufacturing, high performance standards | 1.0 M, 1.0 C |
| M1-2 | Light manufacturing, high performance standards | 2.0 M, 2.0 C |
| M2-1 | Medium manufacturing, medium performance standards | 2.0 M, 2.0 C |
| M3-1 | Heavy manufacturing, low performance standards | 2.0 M, 2.0 C |

**Note:** CF = Community Facility, R = Residential, C = Commercial.
**Source:** New York City Zoning Resolution.

There are currently two unbuilt and undeveloped streets located on the project site—Emerson Avenue between Miles and Schley Avenues, and Schley Avenue between Buttrick and Emerson Avenues.

## PUBLIC POLICY

The project site is located in Community Board 10, which encompasses the area bounded by the Bronx City Line to the north, the Hutchinson River Parkway and Westchester Creek to the west, Eastchester Bay to the east, and the East River to the south, and includes the communities of Westchester Square-Zerega, Throgs Neck, Pelham Bay, Country Club, City Island, and Co-Op City. The Community Board's *Fiscal Year 1999 District Needs Statement* addresses a variety of concerns, including the need for evening youth recreation programs and the effects of budget cuts on the Park Enforcement Program, which enforces existing ordinances and regulations of

the Parks Department. The statement also recognizes the importance of Ferry Point Park and local playgrounds and parks to the district.

## D. THE FUTURE WITHOUT THE PROJECT

### LAND USE

In the future without the proposed project, land uses are expected to remain similar to those in existing conditions. The residential condominium units now under construction bounded by Miles and Harding Avenues and Emerson and Robinson Avenues (adjacent to the southeastern portion of the project site) will be completed. In addition, other residential sites to the east of the project site are likely to be developed, and mapped, unbuilt streets in the area, such as Miles Avenue between Emerson and Robinson Avenues, would likely be built.

### ZONING

According to a representative of the Bronx Department of City Planning (DCP) borough office, zoning in the study area is not anticipated to change by the year 2002.

### PUBLIC POLICY

There would be no changes to public policies in the future without the project.

## E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

### LAND USE

The proposed project would change the site by creating a regional public recreation facility on the currently undeveloped and generally publicly inaccessible portion of Ferry Point Park to the east of the Bronx-Whitestone Bridge. Ultimately, the proposed project, which would result in three distinct sections, represents the expansion of the existing park use, and would develop 7.0 acres of community park (near Balcom and Schley Avenues) and 19.5 acres of waterfront park (adjacent to the East River) in addition to a golf facility and restaurant uses (on the majority of the site). As part of the proposed project, two unbuilt and undeveloped streets—Emerson Avenue between Miles and Schley Avenues, and Schley Avenue between Buttrick and Emerson Avenues—would be demapped, adding approximately 6 acres of new parkland. As part of the proposed project, best efforts would be made to relocate the existing informal model airplane facility.

The proposed project's location adjacent to the Bronx-Whitestone Bridge, the Hutchinson River Parkway (I-678) and its service roads, and the Ferry Point Park access road allows for site access without adding vehicular traffic to the adjacent residential community located to the east of the project site. With the exception of the community park, the proposed recreation facility would be primarily a regional park.

The New York City Department of City Planning's (NYC DCP) *Greenway Plan for New York City (1993)* proposes, in general, a greenway along the I-678 north- and southbound service roads, as well as along the Bronx Whitestone Bridge (via bus service). In addition, NYC DCP's and DPR's *1999 Draft Greenway Master Plan: Soundview Park to Ferry Point Park* proposes possible locations for a greenway connection from Brush Avenue and Lafayette Avenue to the I-678 northbound service road. With the proposed park road improvements, a two-way bicycle

path could be feasible on the I-678 southbound service road; this bicycle path could connect to the proposed project's entrance road.

The proposed project would add a waterfront park that would provide a pedestrian and bicycle connection between the existing waterfront portion of the western part of Ferry Point Park and a community park, public restaurants and banquet facilities with water views, as well as a high-quality public golf facility. The waterfront park is designed to reclaim the waterfront for public use. The community park would transform the existing underdeveloped community park at Schurz and Balcom Avenues into a viable center of community recreation and leisure. This park would be directly accessible to residential areas to the east of the project site. In addition, the existing ballfield and basketball court would be rebuilt at the northern end of the community park. The golf facility would be the culmination of the concept of providing a public golf facility at this site developed by Robert Moses. Currently, New York City, like other downstate areas, does not have a sufficient number of golf courses to meet public demand. This facility would help satisfy the need for a high-quality, public golf facility within the City. Therefore, the proposed project would add needed recreation facilities and would have a positive impact relative to land use.

### ZONING

Development of the proposed recreation facility would not require any changes to zoning at the project site or in the study area.

### PUBLIC POLICY

The proposed project would introduce additional developed parkland to the community and would be consistent with the Park Enforcement Program. The project would provide a public recreation facility on parkland that is generally undeveloped, unused, and inaccessible to the public. This development would be consistent the Community Board's quality of life goals for the area. Therefore, the proposed project would be consistent with public policy.

## CONCLUSION

The proposed project would create an approximately 222-acre regional public recreation facility with a waterfront park, fine dining/banquet facility, golf facility, and a community park on currently underdeveloped parkland, and would have a positive impact relative to land use. The proposed project would not impact zoning at the project site or in the study area, and would be consistent with public policy. ❖

## Attachment C: Visual Resources

## A. INTRODUCTION

This attachment considers the potential effects of development of Ferry Point Park on its visual environment. Because the project, from a visual resources standpoint, consists primarily of landscaping and five moderately sized buildings, the distance from which it would be seen is limited to a radius of only a few blocks in most cases. The structures nearest the project site are small-scale low residential buildings and low-rise multi-family housing generally without long views. The closest views of the proposed structures on the project site are from the blocks adjacent to the proposed banquet facility and facility managers residence along Emerson Avenue. The Bronx-Whitestone Bridge forms a strong physical and visual boundary along the western edge of the site; this defines the study area as bounded to the west by the Bronx-Whitestone Bridge and its approaches, to the north by St. Raymond's Cemetery, to the east by a line running approximately from the intersection of Swinton and Dewey Avenues to the intersection of Balcom and Schurz Avenues, and to the south by the East River (see Figure C-1).

## B. EXISTING CONDITIONS

### PROJECT SITE

The Bronx-Whitestone Bridge and its Hutchinson River Parkway approaches divide Ferry Point Park in half and define the western boundary of the project site (see Figure C-2, View 1). The project site, a former landfill, is located on the East River southeast of St. Raymond's Cemetery and Schley Avenue (see Figure C-2, View 2).

The site is almost entirely undeveloped, with the exception of a small organic recycling facility near the bridge on the western portion of the site, an informal model airplane field in the center of the site, and a community park located along Balcom Avenue at Schley Avenue on the northeast side of the site. The organic recycling facility consists of a gray aluminum pole barn of recent construction (see Figure C-3, View 3). There are two simple aluminum shelters in a fenced enclosure associated with the model airplane field. Access to these two sites is via the I-678 north- and southbound service roads. Elsewhere in the vicinity there are old tires and other debris. The community park features a baseball diamond with backstop, a basketball court, and a large lawn with mature trees along Schley Avenue (see Figure C-3, View 4).

Several informal dirt bike trails wind through the project site (see Figure C-4, View 5). Access to these trails is from the eastern edge of the site through the community park. The section of the site roughly north of a line extending northwest on line with Emerson Avenue is grassland and above the grade of the surrounding streets. The rest of the project site is at a slightly lower grade and has more vegetation, with a number of trees that have grown up on the former landfill. The southeastern edge of the site on the East River takes the form of a crescent. This rocky waterfront area is strewn with debris and has a remnant of an old rubble wall at its eastern end (see

Figure C-4, View 6). The northern section of the project site lies adjacent to St. Raymond's Cemetery and is similar to the rest of the undeveloped site (see Figure C-5, View 7).

The site boundary along Miles Avenue is overgrown with some vegetation reaching into the street. Trees and large bushes edge the site. On Emerson Avenue plant growth is even more dominant, with the knee-high grasses of the northern section of the site giving way to 6-foot-tall reeds and scraggly bushes.

## STUDY AREA

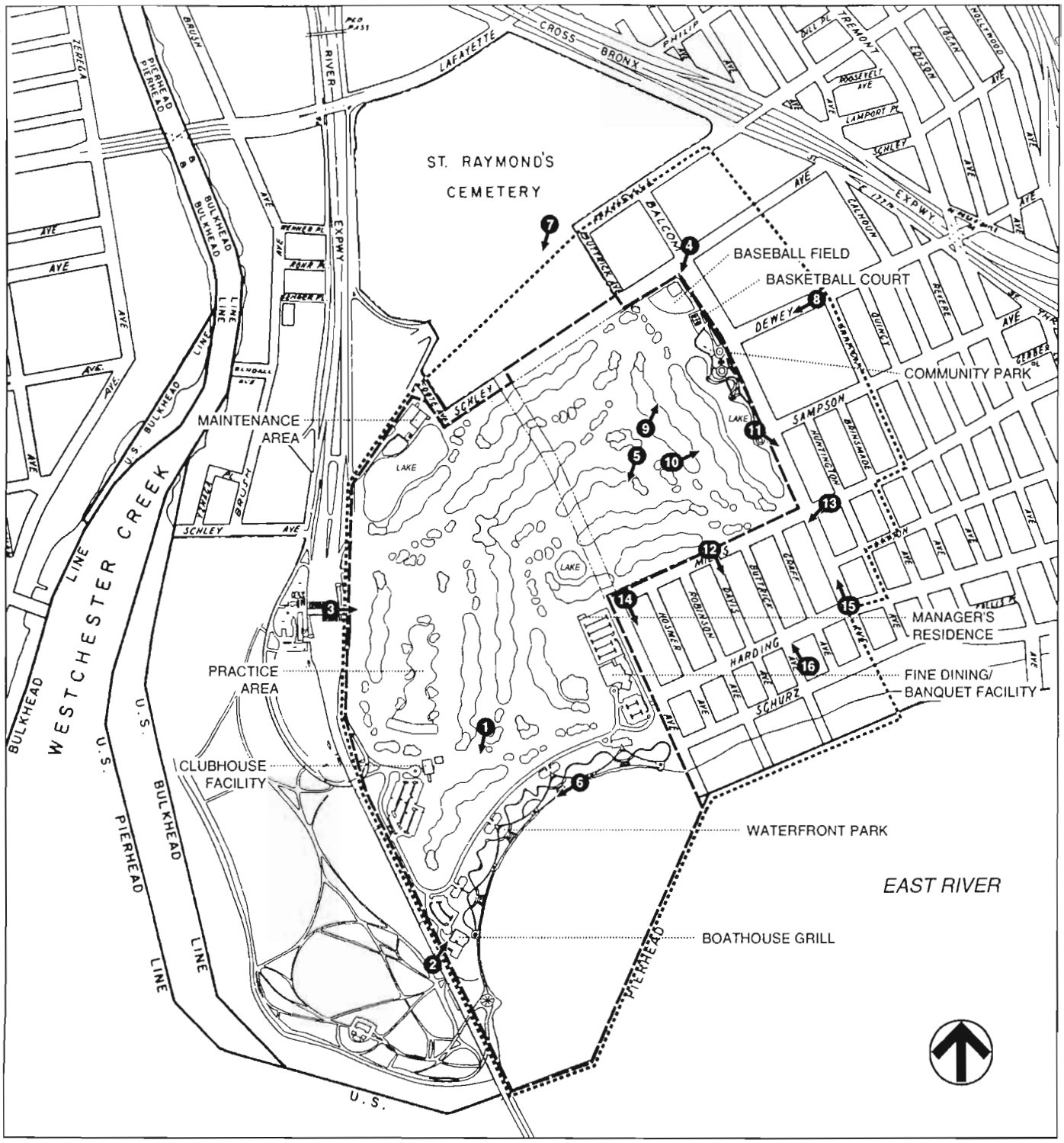
On the west and north sides of the site, the Bronx-Whitestone Bridge and St. Raymond's Cemetery are physical barriers separating the site from more distant views in these two directions. Balcom, Dewey, and Harding Avenues are the main conduits through the study area east and south of the project site. Balcom shares a border with the project site from Schley Avenue south to Miles Avenue. Dewey and Harding Avenues run west-east, with their western ends terminating at the project site (see Figure C-5, View 8). The neighborhood to the north and east of the project site is divided into two different areas by Sampson Avenue.

### *NORTH OF SAMPSON AVENUE*

North of the project site and in the block east of Buttrick Avenue, there are three L-shaped six-story apartment buildings with red and brown brick facades. Known as the Randall-Balcom Houses, they are arranged around a circular central courtyard and associated walking paths. A one-story aluminum Quonset hut of recent vintage has been constructed along Buttrick Avenue at the Randall-Balcom Houses. Between Randall and Sampson Avenues are the Throggs Neck Houses, a complex of both three-story and eight- to nine-story brick apartment buildings (see Figure C-6, View 9). These buildings built in the 1940's through the 1960's occupy three superblocks. Four eight-story apartment buildings front Balcom Avenue. On the facades, dark red and beige bricks are in a rectilinear pattern that relieves the flat facades. The buildings are elevated on columns leaving space underneath for outdoor community space. The open space surrounding the buildings is landscaped with trees and bushes and benches are provided. There is a small parking lot at the northern corner of the intersection of Balcom and Schley Avenues diagonally across the street from the community park on the project site. More parking lots and a ballfield are on the far side of the eight-story buildings. The rest of the Throggs Neck Houses are smaller three-story apartment buildings that feature stylized brushed aluminum entrances and some brick quoining at the corners. There are courtyards and pathways that provide pedestrian access to the interior of the block. These three-story buildings front the project site along Balcom Avenue between Dewey and Sampson Avenues (see Figure C-6, View 10). There is a basketball court in the interior of this block.

### *SOUTH OF SAMPSON AVENUE*

Southwest of Sampson Avenue, the street plan is a typical urban grid pattern. There are a variety of housing styles and types, including attached rowhouse buildings, large peaked-roof houses, and smaller hipped-roof bungalows. None of these structures are taller than three stories and most of the single-family homes are one to two stories. The rowhouse buildings have flat or mansard roofs and are built in strips of 5 to 10 duplex or triplex units. The buildings are typically set back from the curb amidst driveways and walkways, while the remainder of the houses are separated by lawns and other open spaces. Some of the houses in this section appear to have been built around 1920, while others are of recent construction. The older buildings are almost




Project Site Boundary

Study Area Boundary

View Direction of Photograph

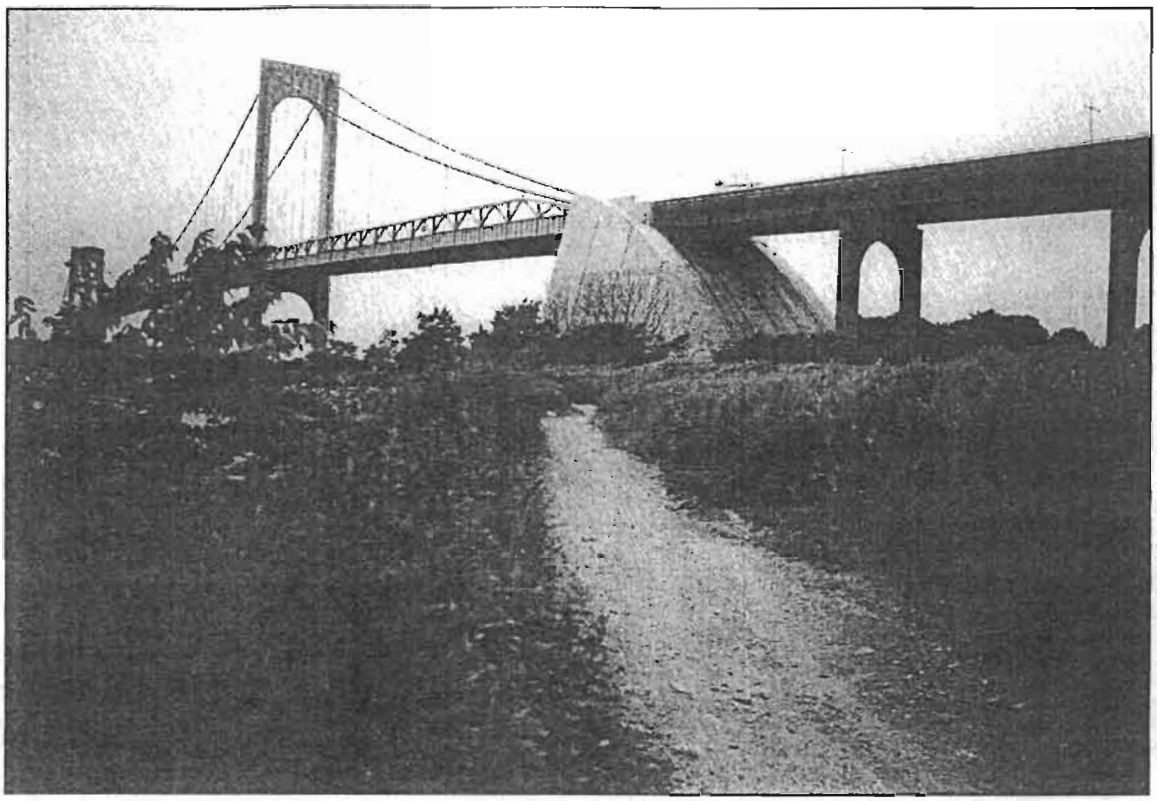
0 400 1000 FEET

SCALE

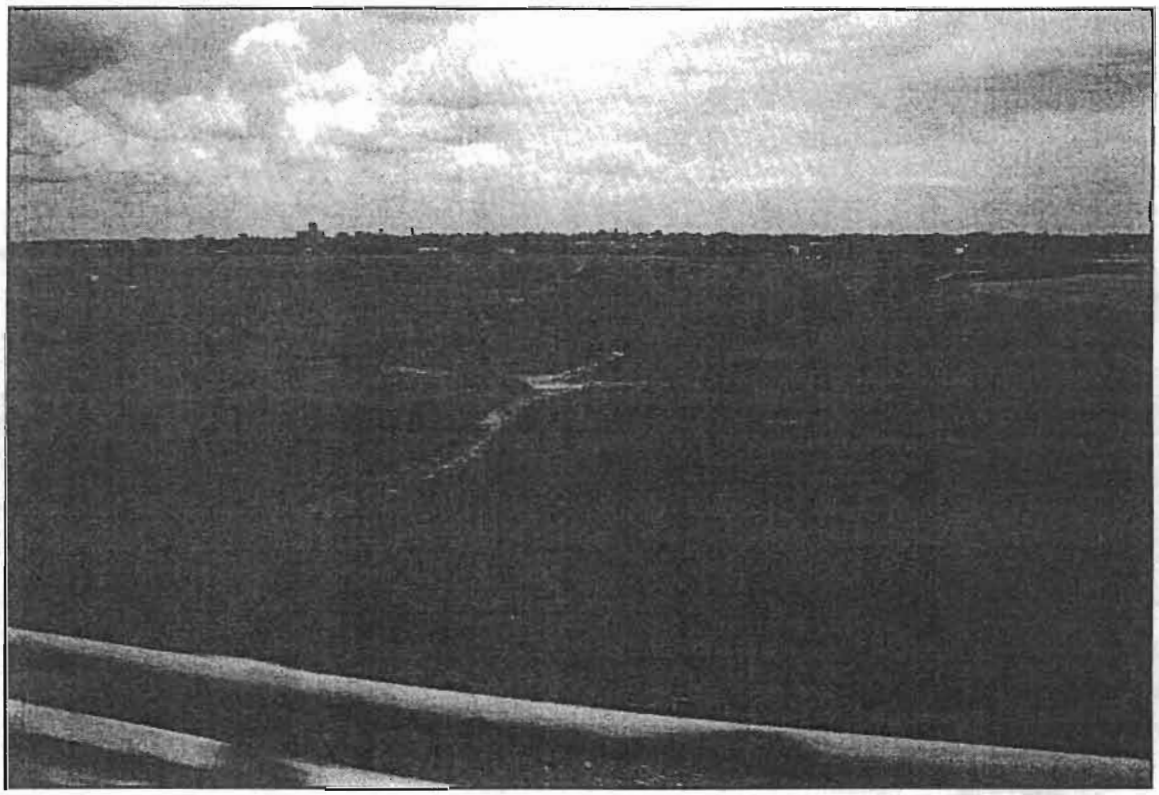
*Ferry Point Park*

## Visual Resources Study Area

*Figure C-1*



View south, with Bronx-Whitestone Bridge in background **1**

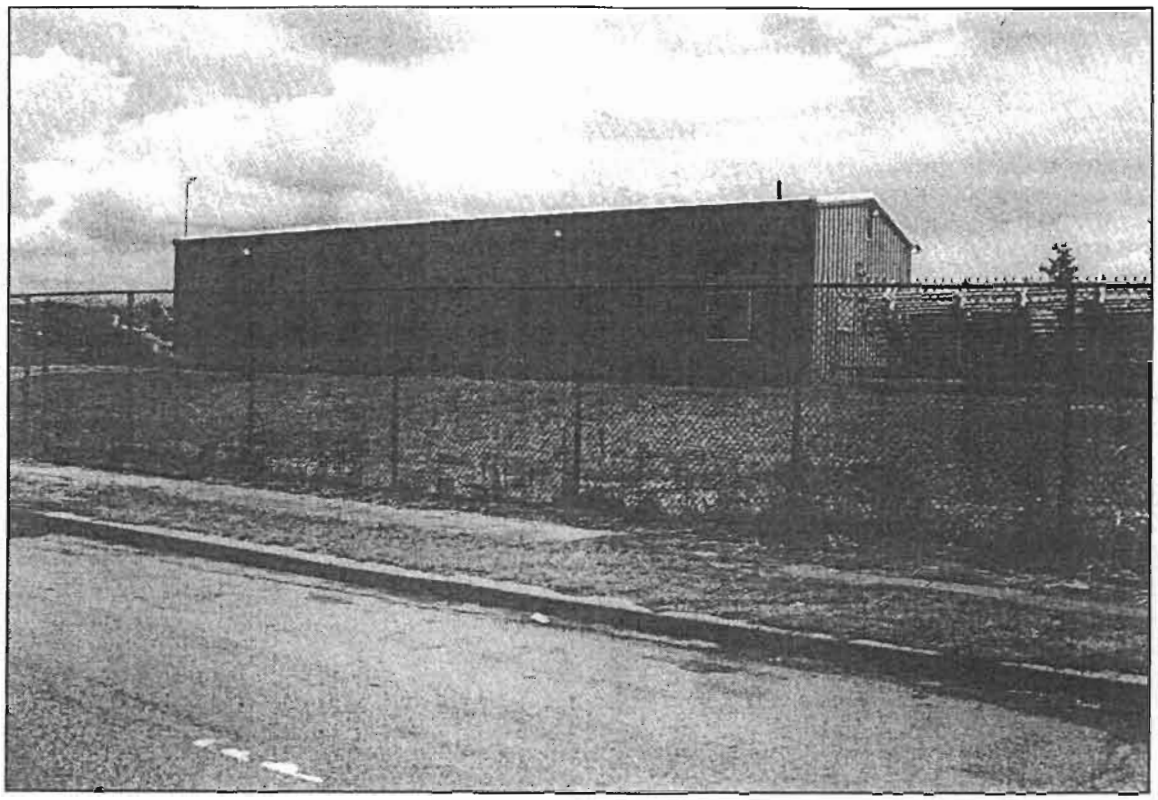


View north from the Bronx-Whitestone Bridge **2**

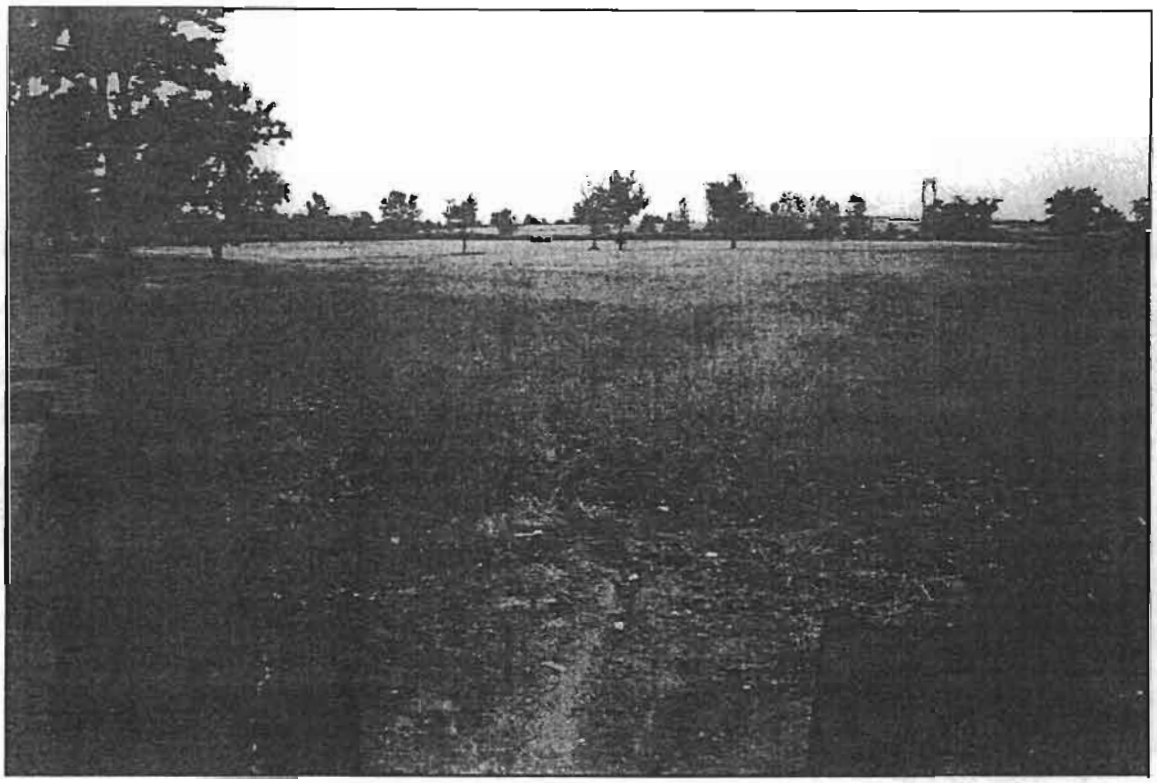


## Views of the Project Site

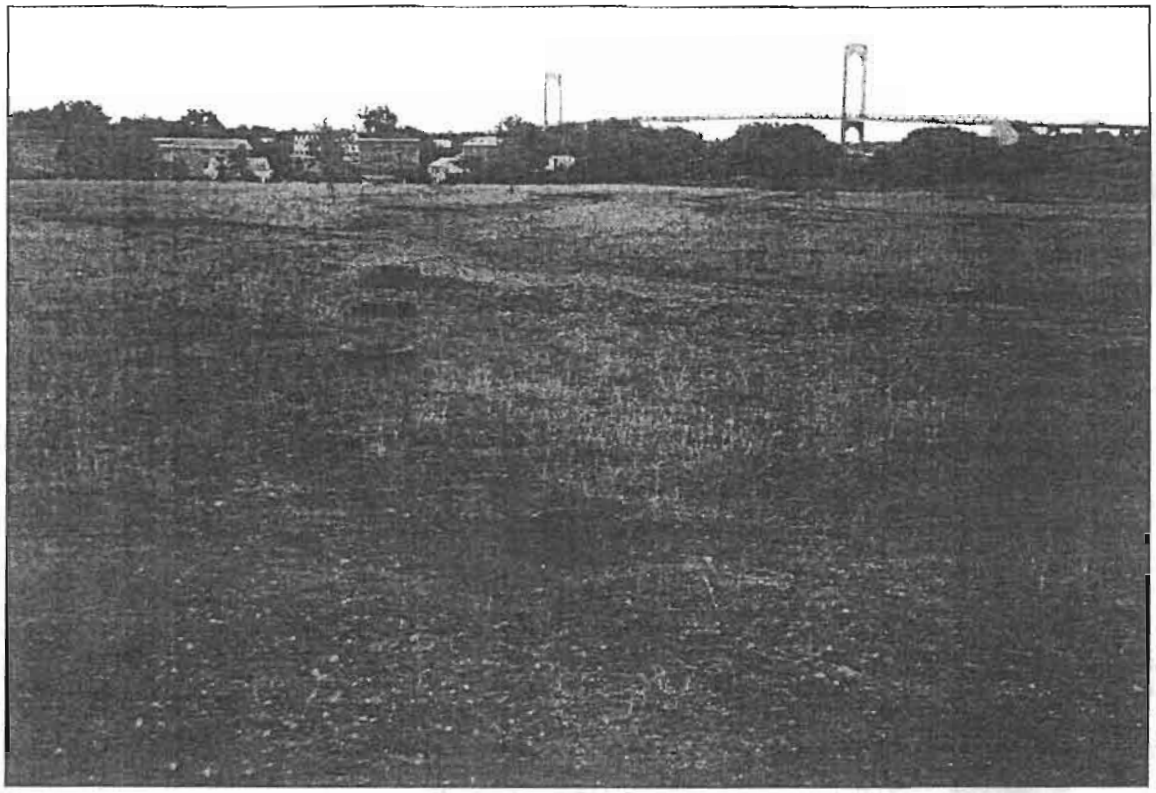
*Figure C-2*



View to the east of mulching facility from Hutchinson River Parkway Service Drive **3**



View south from the intersection of Schley and Balcom Avenues, site of community park **4**



View south from center of northern section of project site, showing Miles Avenue and the Bronx-Whitestone Bridge **5**



View to the south of East River shoreline **6**



## Views of the Project Site

*Figure C-4*

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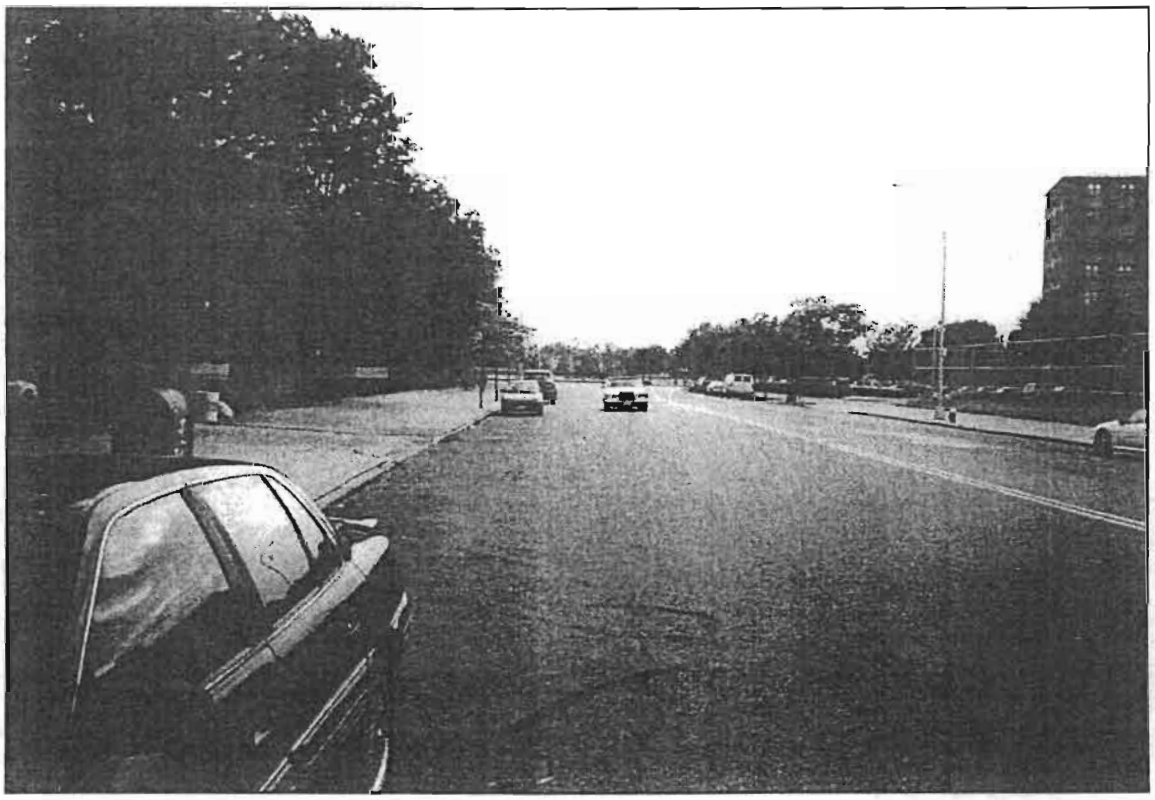
View to the south of St. Raymond's Cemetery with project site in background **7**



View to the west of Dewey Avenue at Throggs Neck Houses, with project site at center **8**

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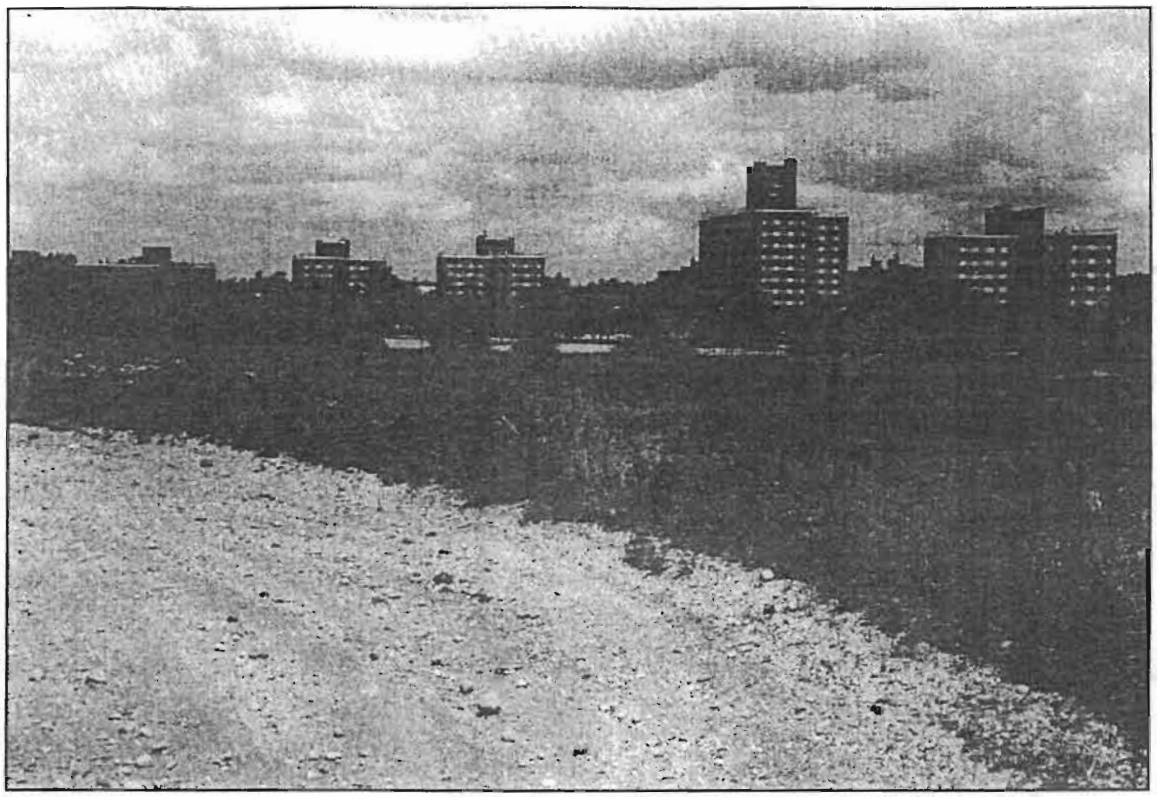
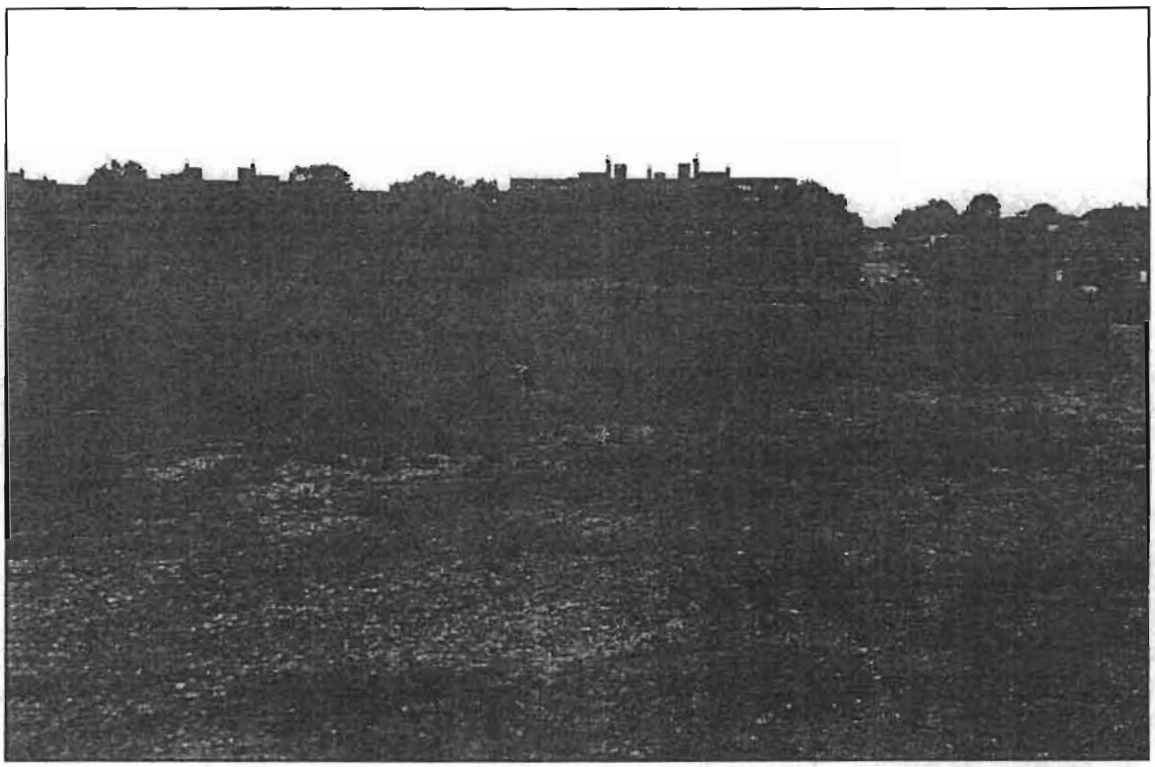


View to the north of Throggs Neck Houses from project site **9**



View to the east from project site with houses along Balcom Avenue and Sampson Avenue extending eastward **10**

exclusively wood-frame construction, while the more recent multi-family rowhouse-type dwellings generally have red or pink brick facades.

Across Sampson Avenue and bordering the project site along Balcom Avenue is a strip of nine attached, beige brick houses with porches at the entrance level facing the project site (see Figure C-7, View 11). Identical rowhouse strips are found along Huntington and Brinsmade Avenues to the northeast. At the southeast end of these rowhouses is a debris-ridden vacant lot that abuts the project site and extends northeasterly to the middle line of the next block, obstructing passage through Balcom and Huntington Avenues to points southeast.

At the northern corner of the intersection of Balcom and Miles Avenues and adjacent to the project site is a mansard-roofed, three-story, 10-unit brick apartment building that faces Miles Avenue and extends along the block all the way to Huntington Avenue. Several more of these three-story brick rowhouse buildings, with varying numbers of units, are found on Balcom Avenue southeast of Miles Avenue, on Miles Avenue between Buttrick and Davis Avenues, and near Miles Avenue on Graff, Robinson, and Hosmer Avenues. Also predominant on the streets terminating at Miles Avenue are some older 1½- to 2½-story frame houses and bungalows (see Figure C-7, View 12).

Miles Avenue abuts the project site between Balcom and Emerson Avenues. The avenue descends into a valley and then back to a higher grade in the block between Balcom and Graff Avenues (see Figure C-8, View 13). South of Graff Avenue, it is unpaved and irregular due to the encroachment of vegetation from the project site. This is the only unpaved street section in the study area. The ends of the blocks fronting Miles Avenues, with the exception of the rowhouse buildings already mentioned, are weed-choked, trash-strewn vacant lots marked with scrub brush and trees.

Miles Avenue at its intersection with Hosmer narrows to about 15 feet of passable roadway due to the overgrowth from both the project site and the vacant lots to the southeast. Bushes and weeds encroach on the dirt roadway and an abandoned street lamp pole tilts northward at a sharp angle. The western limit of Miles Avenue, at its intersection with Emerson Avenue, is an impassable mound of fill overgrown with weeds and marked with litter and debris. There is a small footpath that allows pedestrians access to Emerson Avenue. The houses at the northwestern limit of Emerson Avenue are largely obscured by this overgrowth when viewed from Miles Avenue.

Emerson Avenue is fully paved and better maintained than Miles Avenue. The dead end is marked with a barrier and a sign, and a combination of fences and barriers keep the park's wild growth from encroaching on the street's right-of-way. In contrast with Miles Avenue, nearly every building along Emerson actually fronts on the street (see Figure C-8, View 14).

Buildings fronting Emerson Avenue southeasterly from its intersection with Miles Avenue exhibit a diversity consistent with the surrounding study area. These include 1- to 1½-story brick and frame houses, a three-story three-unit brick rowhouse building with at-grade garages and entrances, a wood shake sided two-story frame house, and a three-story multi-family dwelling with second level entrances reached by a stoop, among others.

At the intersection of Emerson and Hosmer Avenues are two groups of rowhouses with their sides toward the project site. The buildings are brick-faced frame structures and face each other across Hosmer Avenue. Facing the project site along Emerson Avenue between Hosmer and Schurz Avenues are a brick, two-story, three-unit building with below-grade garages, and two

frame bungalows. The intersection with Schurz Avenue is marked by a large lot occupied by a single-frame bungalow on Schurz. The termini of Harding and Schurz Avenues with the project site are marked by highway barriers and signs, mostly overgrown from neglect. There is a small footpath from the intersection of Schurz and Hosmer Avenues southward toward the waterfront of the project site.

The surrounding streets that do not directly abut the proposed project site closely resemble the development already described (see Figure C-9, View 15). Exceptions to this predominant mixture of frame houses and brick multi-unit rowhouse groups include the Sea View Apartments, a complex of four two-story buildings on the block bounded by Davis, Harding, Robinson, and Schurz Avenues; and recently constructed suburban-style condominiums on the block bounded by Buttrick, Harding, Davis, and Schurz Avenues. The condominiums are two to three stories tall, and have brick facades and glass block circular exterior stairs. Balconies and patios face out toward the street with parking and entrances arranged around the interior parking lot.

Harding Avenue is wide, devoid of large trees, and correspondingly sunny in comparison with Miles and Schurz Avenues (see Figure C-9, View 16). The houses along Schurz Avenue on the East River side are mostly two-story frame houses on large lots. The view of the river is largely obscured by verdant plant growth in the rear of the houses and along the shoreline. Towering, mature deciduous trees especially mark this section of the study area.

## C. THE FUTURE WITHOUT THE PROJECT

### PROJECT SITE

If the proposed project is not implemented, it is assumed that the existing organic recycling and composting facility, the informal dirt bike trails and model airplane facility, ballfield and basketball court, park infrastructure, and vegetation growing on the former landfill site will remain undisturbed.

### STUDY AREA

The condominium rowhouse buildings under construction on Hosmer Avenue are expected to be completed and landscaped. It is possible that some of the other vacant lots and older single-family dwellings will be replaced with similar rowhouse development. Further, the unbuilt streets will likely be built.

## D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

### PROJECT SITE

The proposed Ferry Point Park development would improve the visual character of the project site in a number of ways and from a number of viewpoints. There would be three distinct sections of the park: a golf facility occupying the majority of the site, a waterfront park in the section of the site adjacent to the East River, and a community park near Balcom and Schley Avenues. Each of these sections of the former landfill site would be redeveloped and landscaped in accordance with the highest design standards for such facilities and in consideration of the sensitivity of the neighboring viewers.

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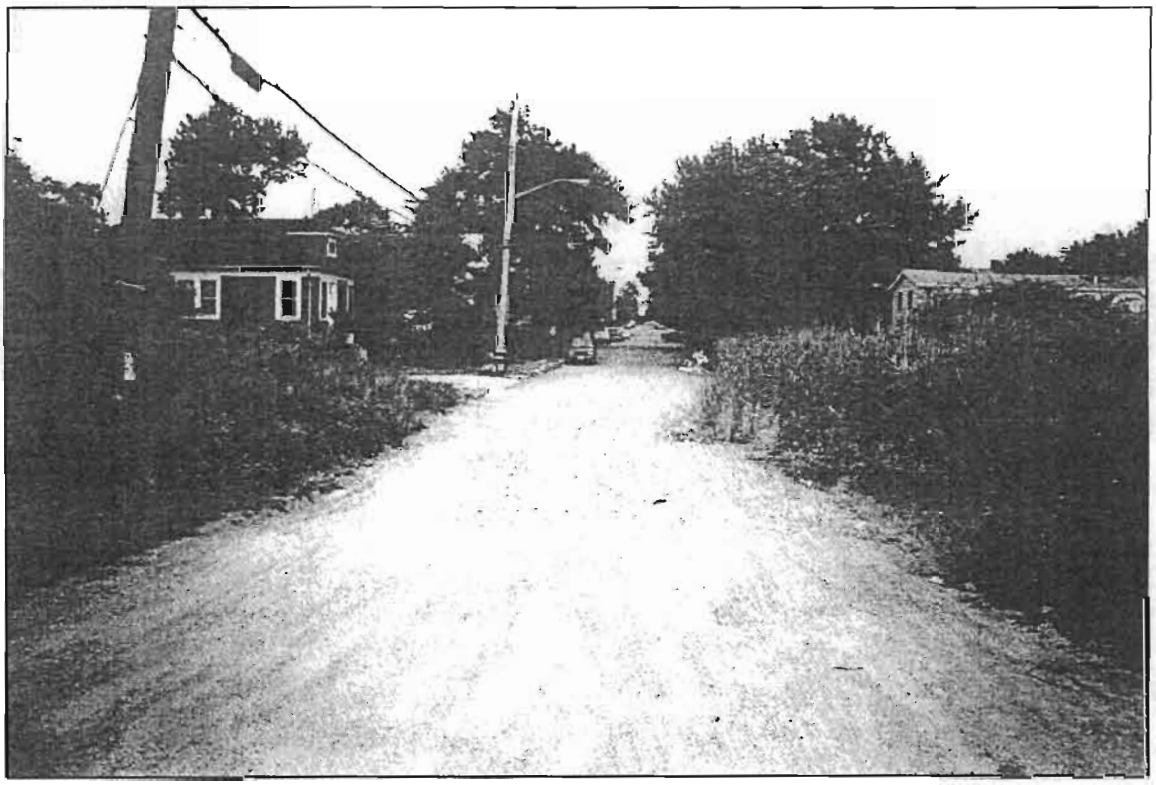
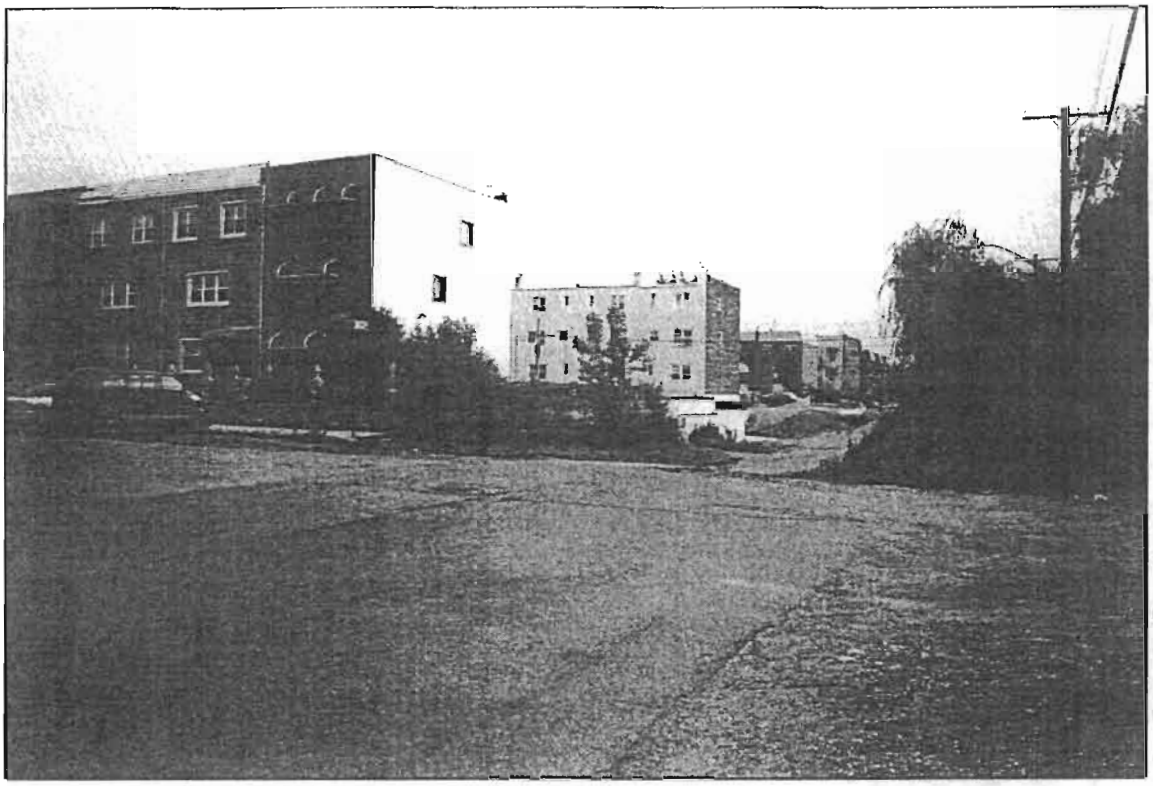
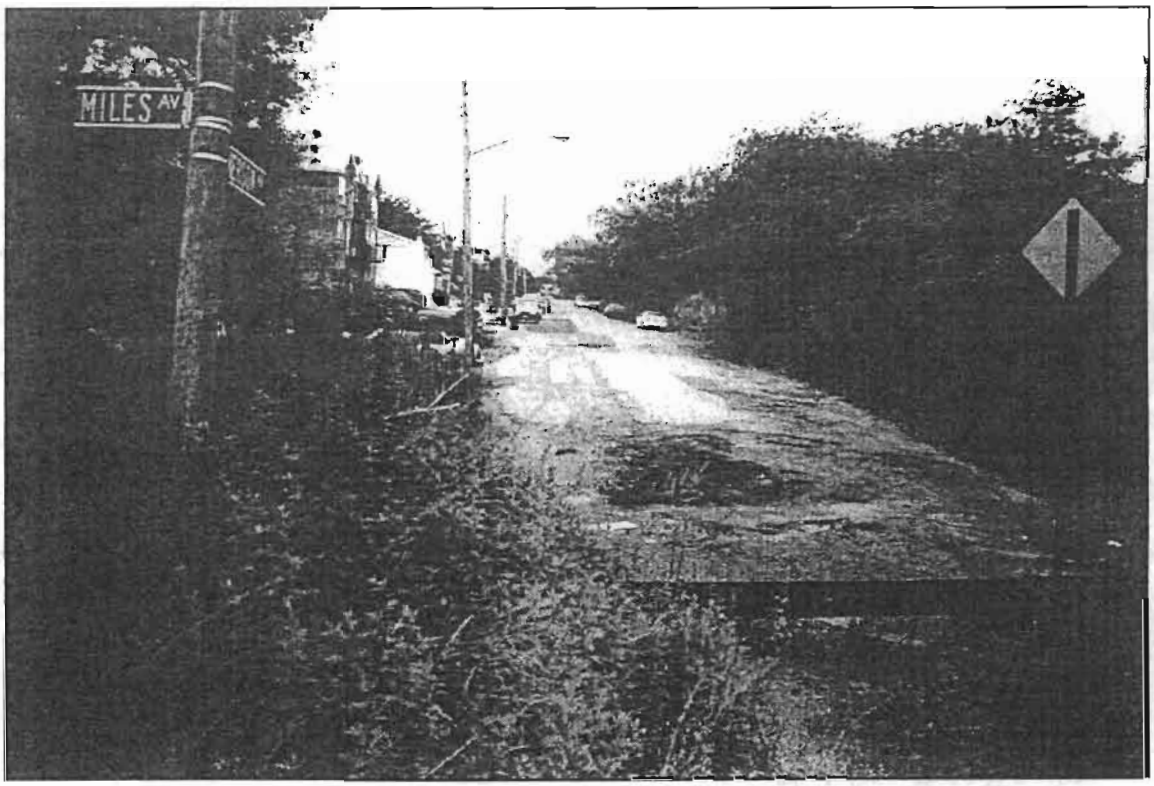
View to the east of Balcom Avenue at Sampson Avenue with project site at right **11**



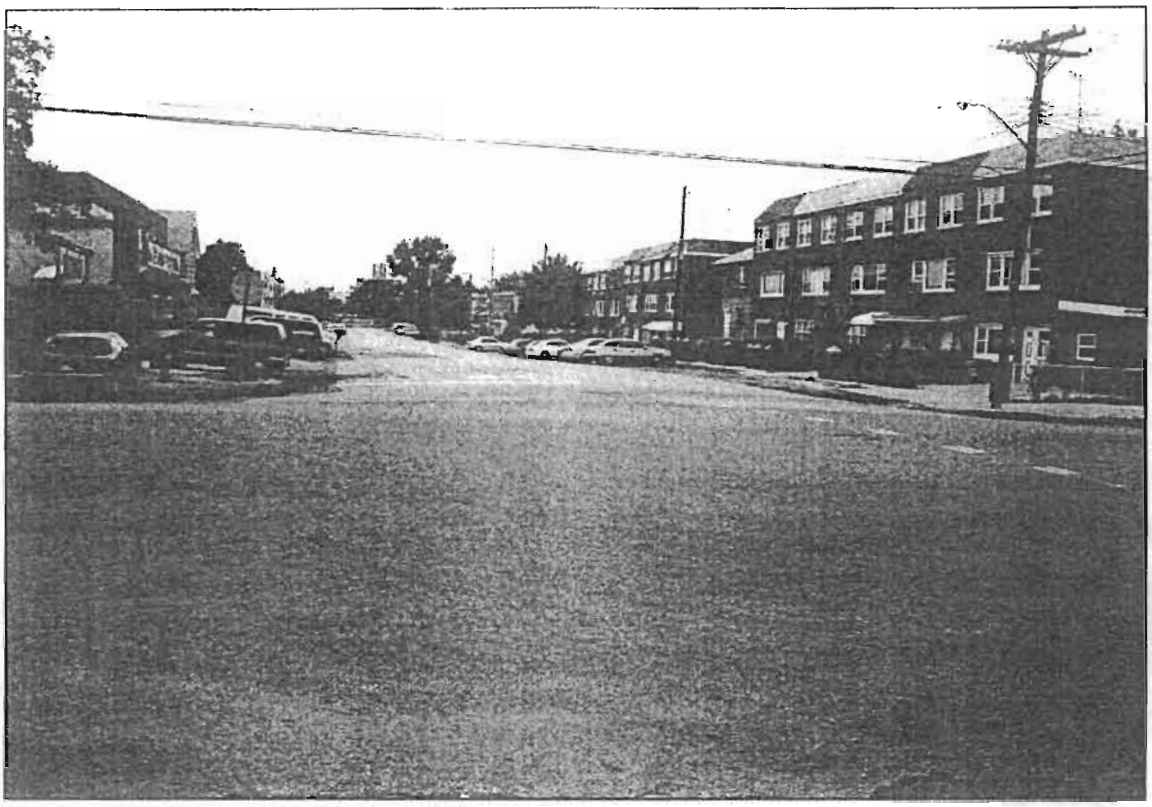
View to the southeast of Davis Avenue at Miles Avenue **12**



View to the southwest of Miles Avenue at Balcom Avenue with corner of project site at right **13**




View to the southeast of Emerson Avenue at Miles Avenue with project site at right **14**



View to the northwest of Balcom Avenue at Harding Avenue **15**




View to the northwest of Buttrick Avenue at Harding Avenue **16**

*GOLF FACILITY*

The currently flat terrain of the northern portion of the site would be manipulated to create the ponds and the gently sloping topography that distinguishes golf courses. Native and ornamental grasses would define out-of-play areas from manicured tees, greens, fairways and rough. Trees would be strategically placed throughout the course for articulation and safety precautions. A fence would be constructed along the site's border with the Hutchinson River Parkway. A maintenance building and an artificial lake would be constructed in the northwestern corner of the site adjacent to the existing St. Raymond's cemetery.

There would be three major buildings on the golf course section of the park: the clubhouse, fine-dining/banquet facility, and maintenance building. The clubhouse would be located just east of the bridge. The materials and construction of these buildings would be consistent with a river-oriented location and have wraparound porches and low sloping roofs. The two-story clubhouse would have siding and wood trim. A colonnaded sitting porch would be located on the east side of the building. The large peaked roof would be marked by several semi-circular dormer windows and a prominent chimney. The clubhouse would measure about 110 feet along its east/west elevations and about 75 feet along its north/south side elevations.

The fine-dining/banquet facility would be on the eastern side of the golf course near the waterfront park (described below) and Emerson Avenue. North of the fine-dining/banquet facility and near the intersection of Emerson and Miles Avenues would be the facility managers residence. While the designs for these two buildings have not been finalized, it is expected that the restaurant would be oriented to provide river views for its patrons and the back of the building would face east. In order to buffer the views of the parking areas and the service area of the banquet and dining facility, a landscaped visual barrier most likely consisting of a berm and low wall on top of the berm would be provided along Emerson Avenue (see Figure C-10). The maintenance building would be in the northeastern portion of the site. It would be accessed via the I-678 service road. The building would be landscaped and generally would not affect views of the project site.

With the exception of the community park, all access to the proposed project would be from the west—vehicular, bicycle, and pedestrian access would be from the I-678 service roads under the Bronx-Whitestone Bridge. Vehicular access/egress point to the site would be from the southeastern portion of the I-678 north- and southbound service roads under the Bronx-Whitestone Bridge, which currently is a two-way roadway and would become a two-lane, one-way roadway (see Attachment J, "Transportation"). Visitors would enter the site at this location, pass by a stone gateway on the entrance road (the crescent road), and choose to either proceed north to the golf clubhouse area, or south to the community park and the boathouse grill, waterfront park, or fine dining/banquet facility. Access for emergency vehicles would be via Emerson Avenue. Parking would be provided at each of these areas to accommodate park users.

Pedestrian connections would connect the proposed waterfront park with the existing Ferry Point Park located to the west of the bridge. In addition, pedestrians would be able to access the project site through the same entrance road as vehicles. The proposed project allows for the future implementation of elements of NYC DCP's *1999 Draft Greenway Master Plan: Soundview Park to Ferry Point Park.* Bicycle racks would be provided in the waterfront park.

The driving range would be located near the bridge and north of the clubhouse. The driving range will be lighted for night use, and three adjacent holes of the golf course will be designed

to accommodate lighting for night use. In this location, it is anticipated that the lights illuminating the driving range (and possibly the three adjacent holes—holes 1, 8, and 9—of the golf course) would be designed to accommodate area-specific lighting that is not intrusive to residents in the adjacent area. The driving range will include tees in a structure of approximately 30 by 440 feet and an open driving range area of approximately 400 by 950 feet surrounded by netting approximately 50 to 150 feet in height. The driving range may include a removable dome (for use during the winter months) that would be approximately 400 by 400 feet and approximately 120 feet in height. Views of the driving range from the study area are discussed below.

*WATERFRONT PARK*

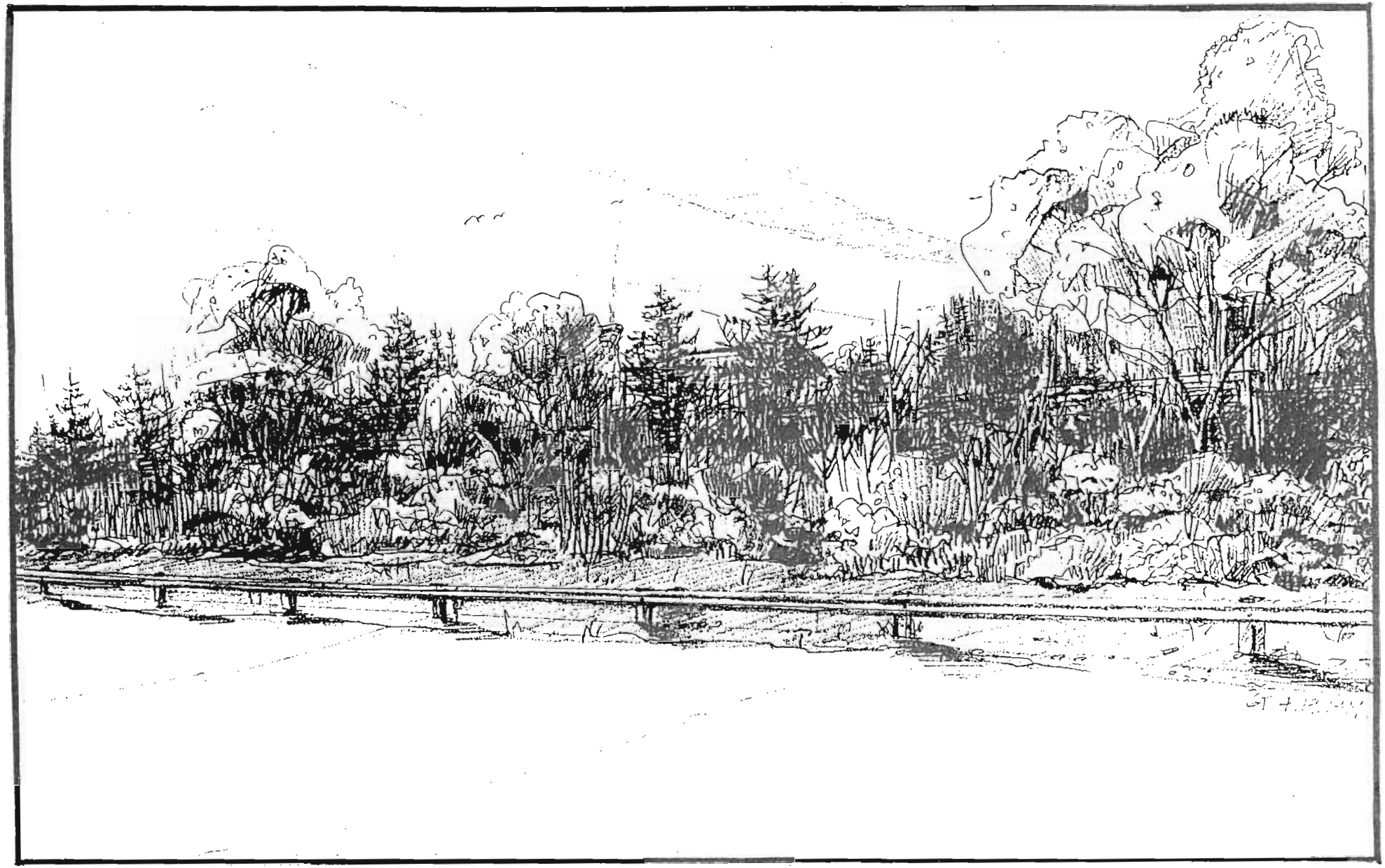
Vegetation and trees would be created to separate the golf course from the waterfront park along the East River. The park is designed to reclaim the waterfront for public use. Pedestrian connections would connect the proposed waterfront park with the existing Ferry Point Park located to the west of the bridge. A barrier-free promenade would rim the water's edge. Paths slightly inland would wind through the newly planted natural grasses. Benches and boulders would provide informal seating opportunities for park visitors. A comfort station and refreshment stand would be provided. The park would connect to the more active section of Ferry Point Park lying west of the Bronx-Whitestone Bridge.

The waterfront park's dining facility, the boathouse grill, would be located just east of the Bronx-Whitestone Bridge. It would be similar in design and materials to the clubhouse and feature a wraparound veranda and a bank of large bay windows facing east toward the park and the river. The building would be 140 feet long (east-west) and approximately 48 feet wide. Its hipped roof would be lower than the gable-ended clubhouse roof and would have identical chimneys at its northern and southern ends. Up to 400 patrons may be accommodated at once in the Boathouse Grill.

*COMMUNITY PARK*

The community park at Schurz and Balcom Avenues would be transformed from an underdeveloped amenity to a viable center of community recreation and leisure. Community access to the this park would be provided along Schley and Balcom Avenues. The active play area would include a basketball court that would be relocated to be adjacent to the new ballfield. A new artificial lake would be created along Balcom Avenue, extending nearly to its intersection with Miles Avenue. The exact type and location of amenities in the redesigned community park would be determined in consultation with the local Community Board, and are expected to include a tot lot for small children, a rolling lawn area, game tables, shaded seating, sunny seating, lakefront seating, bridge crossings, a botanical discovery path, and a gazebo. From the entry, a landscaped bridge pathway spans a stream of grasses to usher children into the tot lot. This pathway would also direct pedestrians to the tree-lined waterfront walk and the dappled shade of the patios at the lake's edge. The existing ball field would be rebuilt at the northern end of the community park. Separation of uses between the active ball field and the passive landscaped area would be accomplished by the lawn and a liberal tree buffer.

The existing topography is virtually flat. The proposed redesign suggests sculpting the land to create an interesting view vista of the golf course and a usable lounging lawn. The pastoral lawn could be enjoyed from the tree-lined plaza along Balcom Avenue or from the park itself. The rear of the park and the rest of the project site's border with the surrounding streets along



*Ferry Point Park*

**View Along Emerson at Fine Dining/Banquet Facility**

*Figure C-10*

Balcom (southeast of Sampson Avenue), Miles, and Emerson Avenues would be raised in grade and feature a landscaped berm, fence, and trees (see Figures C-11 and C-12).

## STUDY AREA

Overall, the landscaping and maintenance of the park's border with the neighborhood, in combination with the removal of the debris and unkempt vegetation, is expected to improve views of the site from nearby residences.

### *NORTH OF SAMPSON AVENUE*

In the vicinity of the community park and its relationship to the Throggs Neck Houses at Balcom Avenue, the view would change from an undeveloped grassy plain in the background to a landscaped, welcoming facility including a lake, lawn, gazebo, and abundant seating. The addition of trees at the rear of the park would screen errant golf balls while allowing glimpses of the golf course beyond. Residents at many locations would have a bucolic lakeside setting with views looking toward the project site. Some residents in higher structures may see the driving range's removable dome; however, the dome would obstruct views of the Bronx-Whitestone toll plaza and the I-678 approaches to the toll plaza. This would not be a negative visual impact.

### *SOUTH OF SAMPSON AVENUE*

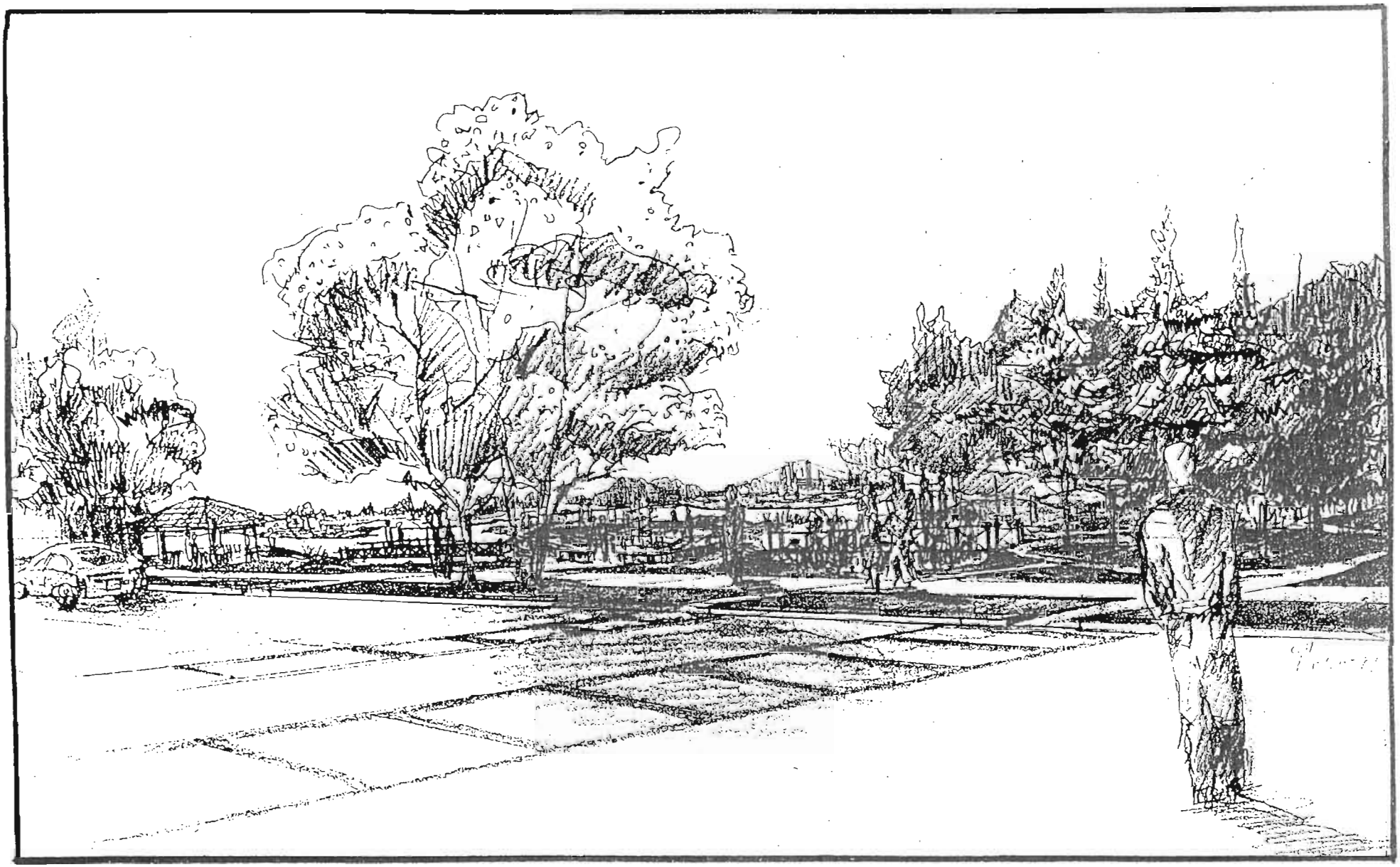
Views of the project site from Miles and Emerson Avenues south of Sampson Avenue would be primarily of the landscaped berm at the site's edge. This berm would limit views of the golf course and help finally to define a well-manicured edge for the avenues. Views of the netting and removable, temporary, winter season dome associated with the driving range, service area and parking for the fine-dining/banquet facility, and the facility managers residence near Emerson Avenue would also be buffered by the landscaped berm. Some views of the driving range's removable dome would obstruct views of the Bronx-Whitestone bridge toll plaza and the I-678 approaches to the toll plaza. However, this would not be a negative visual impact. The design of these buildings is intended to be consistent with the riverfront location of the site and with the study area in scale and materials, and are not expected to significantly disrupt the visual enjoyment of the site from the surrounding sidewalks and streets in the surrounding area. Therefore, the proposed project would have no significant adverse visual impacts.

### *VIEW FROM THE BRIDGE*

While viewers on the bridge may have only fleeting views of the site, the introduction of a landscaped and maintained golf course, waterfront park, and community park would be a substantial improvement compared with existing views of an undeveloped landfill site. The netting and removable dome associated with the driving range would be visible from the bridge, but would be consistent with other views of the golf course. Further, the new landscape would be in keeping with original plans for the site which included a golf course at the base of the bridge.

## CONCLUSION

Overall, the proposed project would represent a substantial visual improvement over the existing landfill site with its unkempt natural vegetation. Given the visual screening and buffers provided as part of the project, no adverse impacts to the visual or urban design character of the surrounding area are anticipated. ❖



*Ferry Point Park*

**View of Community Park at Dewey & Balcom**

*Figure C-11*

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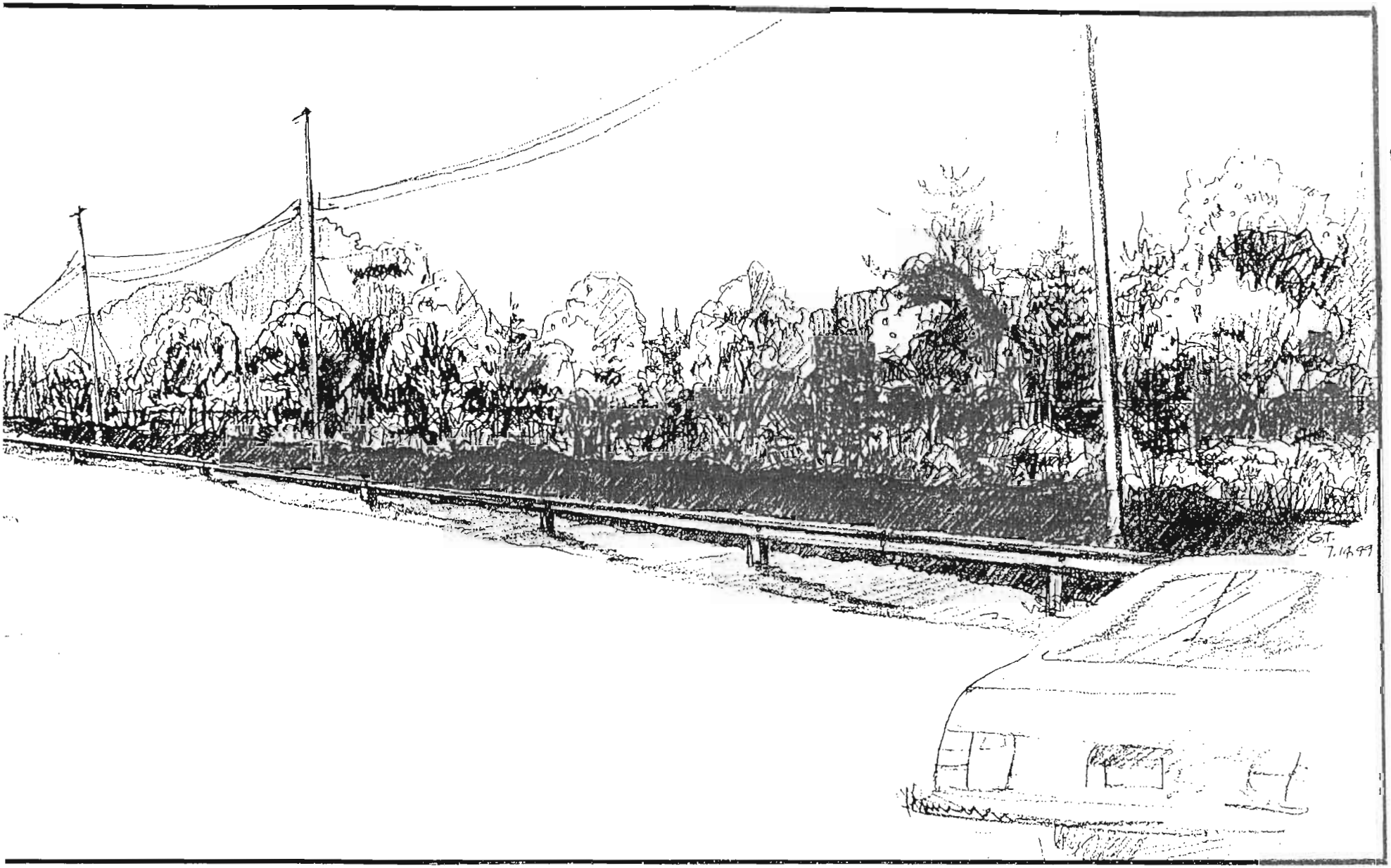


*Ferry Point Park*

**View of Enhanced Berm Along Miles**

*Figure C-12*

**Attachment D: Neighborhood Character**

## A. INTRODUCTION

The analysis of neighborhood character addresses the project's potential effects on the character of the surrounding neighborhood. The elements that determine neighborhood character vary depending on any given community, but generally include some or all of the following: land use and zoning, urban design and visual resources, traffic, and noise, as discussed below. The assessments in this attachment rely on the analyses of these issues prepared for other attachments to the Environmental Assessment Statement (EAS). As described below, the proposed action would change the character of the project site, but would not result in significant adverse impacts to neighborhood character.

## B. EXISTING CONDITIONS

The study area for neighborhood character is the same as that analyzed for land use, zoning, and public policy (Attachment B, "Land Use, Zoning, and Public Policy"). The ½-mile study area is bounded by Westchester Creek on the west; Lafayette Avenue on the north; East Tremont Avenue on the east; and the East River on the south.

### PROJECT SITE

As described in Attachments B and C, "Visual Resources," the project site is composed primarily of undeveloped park land, with the exception of an organic recycling and composting facility operated by the New York City Department of Parks and Recreation (DPR) at the northwestern corner of the site, and a ballfield and basketball court at the northeastern corner of the site. The organic recycling facility consists of a gray aluminum pole barn. Informal uses on the site include dirt bike trails and a model airplane field. There are two simple aluminum shelters in a fenced enclosure associated with the informal model airplane field. The organic recycling and composting facility and model airplane field uses can be accessed from the I-678 north- and southbound service roads; the ballfield and basketball court and dirt bike trail uses can be accessed from the eastern edge of the site via Balcom and Schley Avenues. The rest of the project site is generally covered with vegetation, and the rocky waterfront area at the southeastern edge of the site along the East River is strewn with debris. Portions of the site are surrounded by chain link fence.

### STUDY AREA

Surrounding the project site are the currently developed portion of Ferry Point Park and industrial, commercial, and residential uses (west of the Bronx-Whitestone Bridge), St. Raymond's Cemetery (to the north of the project site), and residential uses (to the east of the project site).

Today, the eastern portion of the study area consists of residential uses and local commercial activity. Overall, the study area includes a wide range of building types, densities, and heights; the structures nearest the project site are small-scale low residential buildings and low-rise

multi-family housing generally without long views. Larger and taller buildings in the area include the Randall-Balcom Houses, which are 6 stories high, and the Throggs Neck Houses, which are 8 to 9 stories high. These public housing complexes are located on large blocks near the northeastern portion of the site. South of Sampson Avenue, there are a variety of housing styles and types, including attached rowhouse buildings, larger peaked-roof houses, and smaller hipped-roof bungalows. These structures are generally 3 stories, with the single-family homes generally standing at 1 to 2 stories. The rowhouse buildings are generally in strips of 5 to 10 duplex or triplex units. Most residential units are set back from the curb with driveways and walkways, and some houses are separated by lawns and other open spaces. St. Raymond's Cemetery, provides a visual and physical barrier on the north side of the project site.

The elevated Bronx-Whitestone Bridge, a suspension bridge that bisects the park, forms a strong visual boundary between the eastern and western portions of Ferry Point Park. The two-way Ferry Point Park access road loops under the bridge, and connects the I-678 north- and southbound service roads. The western portion of the park is currently developed, and includes ballfields and picnic areas, along with a waterfront walking area. The western portion of the study area between the I-678 service roads and Westchester Creek contains predominantly warehousing/storage yard and heavy industrial uses. There are also residential and commercial uses in this area including single- and two-family detached houses, a hotel, and office buildings. This portion of the study area also contains some vacant lots. Warehousing and heavy industrial uses in this area are generally located to the west side of Brush Avenue. Land uses across Westchester Creek are similar to those on the east side of the creek, primarily including commercial, industrial, and warehousing uses, along with a number of overgrown vacant parcels. The buildings in this area generally range from 1 to 2 stories.

Traffic conditions in the area, as discussed in Attachment J, "Traffic," generally reflect the study area's uses and location near the Bronx-Whitestone Bridge, with connections to the Throgs Neck Bridge and the Cross-Bronx Expressway. Streets within the study area have a mixed character; east of the project site, lightly traveled local streets, including Balcom, Schley, and Miles Avenues serve the residential uses discussed above. East Tremont Avenue, a major roadway in the study area that provides access to and from the Throgs Neck Bridge, serves commercial development, including a drugstore, supermarket, and local restaurants and offices. At the northern portion of the study area, Lafayette Avenue provides access to the local residential streets located between East Tremont Avenue and the I-678 northbound service road. Brush Avenue, which is also lightly traveled, is a north-south roadway located at the western portion of the study area, and serves the primarily industrial uses along Westchester Creek. Brush Avenue also provides access between the Lafayette Avenue, the I-678 service roads, Bruckner Boulevard, and the Cross-Bronx Expressway.

As discussed in Attachment L, "Noise," the project site and its immediate environs are subject to frequent flyovers by aircrafts traveling to and from LaGuardia Airport. As a result, the entire study area experiences marginally unacceptable noise levels. However, the residential portion of the study area, east of the project site, experiences marginally acceptable noise levels that may be attributed to a combination of general background traffic levels in the area, as well as aircraft flyovers.

## C. THE FUTURE WITHOUT THE PROJECT

### PROJECT SITE

In the future without the proposed project, there would be no changes to existing uses on the project site.

### STUDY AREA

As described in Attachment B, "Land Use, Zoning, and Public Policy," additional residential units are currently under construction within the study area and will be completed by 2002, the analysis year for the project. However, this development is similar to existing residential uses east of the project site, and the overall character of the study area is not expected to change in the future without the proposed project. Additionally, overall background traffic growth at study area intersections would occur, but the character of traffic in the study area will remain the same. There would be no significant changes to noise levels in the area.

## D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would not cause significant adverse impacts in any of the following elements that make up the character of the neighborhood: land use and zoning, visual resources, traffic, or noise. The project would change the land use and visual character of the project site; bring new activity to the currently undeveloped portion of Ferry Point Park; and would increase traffic. Overall, the project would not change the neighborhood character of the immediate area by expanding a currently existing park use.

### PROJECT SITE

The project would change the land use and appearance of the site by replacing vacant and overgrown land with a landscaped, organized recreational use. The proposed regional recreation facility would result in three distinct sections of the park: a golf facility occupying the majority of the site; a waterfront park in the section of the site adjacent to the East River; and a community park near Balcom and Schley Avenues. Furthermore, the waterfront park is designed to reclaim the waterfront for public use. Overall, the project would result in the expansion of the existing park use, and would develop 7.0 acres of community park and 19.5 acres of waterfront park, in addition to a golf facility, restaurant, and fine dining/banquet uses. As part of the proposed project, two unbuilt and undeveloped streets—Emerson Avenue between Miles and Schley Avenues, and Schley Avenue between Buttrick and Emerson Avenues—would be demapped and remapped as park land, adding approximately 6 acres of new park land. The development of the project would connect the site to the more active section of Ferry Point Park west of the Bronx-Whitestone Bridge. The organic recycling and composting facility currently on the site would be relocated. Best efforts would be made to relocate the informal model airplane field.

Visually, the project consists primarily of landscaping and five moderately sized buildings, which would be seen from a radius of only a few blocks in most cases. The residential structures nearest to the project site are low-rise buildings generally without long views. The closest views of the proposed structures on the project site are from the blocks adjacent to the proposed fine dining/banquet facility and the facility manager's quarters along Emerson Avenue. Visual screening and buffers would be provided as part of the project, and landscaping would represent a visual improvement over the existing landfill site with its unkempt natural vegetation. Along

Emerson Avenue, the golf facility portion of the site where the clubhouse, fine dining/banquet facility, and maintenance building would also be located, would be buffered by a landscaped visual barrier most likely consisting of a berm and low wall on top of the berm. In addition, the fine dining/banquet facility is designed to include an 8- to 10-foot noise barrier with landscaping along Emerson Avenue. This barrier would be located behind the fine dining/banquet facility to minimize the effects of this facility on the adjacent community. This barrier would also reduce noise from any vehicle movements and truck deliveries or other service area events. Near the bridge at the western portion of the site, the driving range will be lighted for night use; the lighting associated with this use will be designed to accommodate area-specific lighting that is not intrusive to residents in the adjacent area. The driving range will include tees in a structure approximately 30 feet in height, and will be surrounded by netting approximately 50 to 100 feet in height. The driving range may also include a removable dome (approximately 120 feet in height) that would be utilized during the winter months. This netting and removable, temporary, winter season dome would be visible from the Bronx-Whitestone Bridge, and would be consistent with other views of the golf course. Views of the driving range's removable dome would obstruct views of the Bronx-Whitestone Bridge toll plaza and its approaches from the upper levels of some residences. Furthermore, landscaping associated with the park's border with the neighborhood would likely screen residences at lower levels from views of the driving range. The waterfront park, which would connect the currently developed portion of Ferry Point Park west of the Bronx-Whitestone Bridge, would be separated from the golf course by a ridge, and a barrier-free promenade would rim the water's edge. The existing community park at the northeastern portion of the project site would be transformed from an underdeveloped amenity to a viable center of community recreation and leisure, and would be accessible to residential areas in the eastern section of the study area. The existing ballfield and basketball court would be rebuilt at the northern end of the community park.

With the exception of the community park, all access to the proposed recreation facility would be from the west—vehicular, bicycle, and pedestrian access would be from the I-678 service roads under the Bronx-Whitestone Bridge. Vehicular access/egress point to the site would be from the southeastern portion of the I-678 north- and southbound service roads under the Bronx-Whitestone Bridge, which currently is a two-way roadway and would become a two-lane, one-way roadway (see Attachment J, "Transportation"). With the exception of the community park, the proposed recreation facility would be primarily a regional park. Visitors would enter the site at this location, pass by a stone gateway on the entrance road (the crescent road), and choose to either proceed north to the golf clubhouse area, or south to the community park and the boathouse grill, waterfront park, or fine dining/banquet facility. Access for emergency vehicles would be via Emerson Avenue. Parking would be provided at each of these areas to accommodate park users. Pedestrian connections would connect the proposed waterfront park with the existing Ferry Point Park located to the west of the bridge. In addition, pedestrians would be able to access the project site through the same entrance road as vehicles. Bicycle racks would be provided in the waterfront park.

Incremental noise associated with newly created park land and park activities, including grass maintenance and mowing operations, operation of the fine dining/banquet facility, and the new ballfield in the community park, is not expected to be significant.

## STUDY AREA

The project would complement the existing developed western portion of Ferry Point Park by connecting its waterfront portion to the proposed recreation facility that would include public restaurants and banquet facilities with water views as well as a public golf facility. The community park would serve residents to the east of the site, and would be accessed separately via Schley and Balcom Avenues. The proposed project would add recreation facilities and would have a positive impact relative to land use. The project would also be in keeping with Robert Moses's original plans for the site, which included a golf course at the base of the bridge. Overall, the landscaping and maintenance of the park's border with the neighborhood, in combination with the removal of the debris and unkempt vegetation, is expected to improve views of the site from nearby residences. Residents at many locations near the northeastern portion of the project site (north of Sampson Avenue) would have a bucolic lakeside setting with views looking toward the project site. South of Sampson Avenue, views would be primarily of the landscaped berm at the site's edge, which would define a well-manicured edge for Miles and Emerson Avenues. Views from the Bronx-Whitestone Bridge would include a landscaped and maintained golf course, waterfront park, and community park, which would be a substantial improvement compared with existing views of an undeveloped landfill site.

The proposed actions would add park users traveling through the study area and would therefore add some new vehicles to the area's streets. Additional traffic generated by the proposed project would not have a significant adverse impact on the local community, and planned improvements to the Ferry Point Park Access Road, the intersection of Lafayette Avenue and the I-678 service roads, and the intersection of Lafayette and East Tremont Avenues would facilitate traffic flows. These improvements include coordinating the signal at the I-678 northbound service road at Lafayette Avenue with the signal at the I-678 southbound service road at Lafayette Avenue, restriping the westbound approach at the I-678 southbound service road at Lafayette Avenue to include an exclusive left-turn lane and signal phase, and daylighting (restricting the use of up to three parking spaces) the northbound approach at the intersection of East Tremont and Lafayette Avenues during the weekday PM peak period. As noted in Attachment J, "Transportation," traffic generated by the project would not result in noticeable changes in noise levels in the study area.

Overall, no significant adverse impacts on neighborhood character from the proposed project would occur. ❖

**Attachment E:** **Natural Resources**

# *Attachment E*

# *Natural Resources*

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**30 September 1999**

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## *1.0 INTRODUCTION*

The purpose of this attachment is to describe the existing natural conditions on the eastern portion of Ferry Point Park, and the potential effects of the proposed public recreational facility on these resources. Recommended measures to ensure that potential adverse impacts are avoided are also discussed. The following sections describe: the methods used in the evaluations, the existing natural resources on the Ferry Point Park site, and the future conditions of the natural resources both with and without development of the proposed public recreational facility.

## *2.0 STUDY AREA*

The Ferry Point Park site, the study area, is located on approximately 220 acres owned by the City of New York in Bronx County, New York. It is bounded by the Bronx-Whitestone Bridge along Interstate Route 678 (Hutchinson River Parkway) to the west; Balcom, Miles, and Emerson Avenues to the east; St. Raymond's cemetery and Schley Avenue to the north; and the East River to the south. The Ferry Point Park site makes up the eastern portion of the 414-acre Ferry Point Park, which is split by the Bronx-Whitestone Bridge. This portion of the park was used to dispose municipal solid waste in the 1950's up through the early 1960's. The relatively low-quality ruderal (plant that is colonizing waste ground) communities found on the site are fairly typical of disturbed lands in this region of the state.

The western portion of Ferry Point Park consists of recreational playing fields, grassy areas and woodlands bounded by Westchester Creek to the west, the bridge to the east, the East River to the south and developed land to the north—will not be altered as part of this project. Only the eastern portion of the park will be developed as part of the proposed public recreation facility, and is the focus of this evaluation.

## *3.0 SUMMARY OF THE PROPOSED PROJECT*

Attachment A provides a detailed project description. This section provides a brief overview of the most salient project features. The Ferry Point Park project is a public recreation facility, consisting of an 18-hole comprehensive golf facility, boathouse grill/restaurant, fine dining/banquet facility, waterfront park, and community park. Parking areas will be provided for each of the facilities.

## 3.1 *Golf Facility*

The comprehensive golf facility will consist of a clubhouse, a driving range, tees, greens, fairways and rough, and cart paths, ponds, and vegetated out-of-play areas with native and ornamental grasses, and some trees. The course elevation will vary from 10 feet above sea level along the East River, to 40 feet above sea level at the interior of the site. Table 3.1 presents a breakdown of the acreages for the various components.

*Table 3.1* *Acreages for golf course components*

| Component | Acres |
|---|---|
| Tee Areas | 5.88 |
| Fairway | 36.6 |
| Rough | 71.3 |
| Bunkers | 3.43 |
| Greens | 4.52 |
| Waste Areas (grasses and other natural vegetation with some trees) | 1.48 |
| Lakes (four lakes) | 10.24 |
| Dry basins | 1.58 |
| Native Areas | 22.85 |

Impermeable areas total approximately 14.62 acres. They include parking lots, rooftops, cart paths, and roadways.

The golf course area will be cleared of existing vegetation. The lakes will be excavated first and graded to serve as sediment control basins during construction. To create the undulations in the golf course, between 300,000 and 500,000 cubic yards of dirt will be imported to the site. Attachment G provides a description of the fill material. Approximately 1 to 1.5 feet of fill will cover the golf course area, topped by 6 inches of clean soil. The waterfront park and community park, discussed below, will have 1.5 feet of soil over any fill material. The irrigation system will be installed at this time. Following the contouring and stabilization of the fill material, the clubhouse, boathouse grill/restaurant, fine dining/banquet facility, and two parks will be constructed.

## 3.2 *Waterfront Park*

The approximately 19.5-acre waterfront park will provide passive recreational opportunities such as walking, birdwatching, and picnicking, as well as the boathhouse grill/restaurant. It will include a waterside trail surrounded with low-growing natural vegetation that joins with a system of paths interwoven throughout the park. The interior of the park will be landscaped with natural vegetation associations. Benches and boulders will be scattered along the pathways to provide seating. Picnic tables will also be provided along with parking for approximately 120 vehicles.

A comfort station and refreshment stands will be provided in the middle of the park waterfront. The boathouse grill/restaurant will be located at the southwestern tip of the waterfront park. It will consist of the building housing the restaurant, parking for approximately 75 vehicles, bike racks, and stormwater management facilities.

### 3.3 *Community Park*

The approximately 7.0-acre community park will be located at the northeast corner of the site where Schley intersects with Balcom Avenue. It will provide active and passive recreational opportunities through its softball/baseball field, basketball court, tot lot for small children, tot lawn area, game tables, lawn area, shaded seating, sunning seating, lake-front seating, bridge crossings, botanical discovery path, gazebos, and an overlook next to the approximately 4.5-acre lake (part of the stormwater management system) immediately to the south of this park.

The pathway portion of the park next to the lake will be planted with trees. The botanical discovery path will be lined with native and ornamental grasses as it meanders along the lake's edge. A portion of the path to the lake will be tree-lined.

## 4.0 *SITE EVALUATION METHODS*

Site visits were made to the project area on the following dates:

- 18 and 19 May 1999 to delineate wetlands, initiate the natural resources inventory and meet with the surveyors;
- 16 June 1999 to complete the wetlands delineation, continue the natural resources inventory, and document woodland resources; and
- 22 June 1999 to complete the natural resources inventory and document woodland resources.
- 15 September 1999 to discuss a small area dominated by high marsh grasses along the East River with representatives from the State and City.

The following sections discuss the methods used to conduct the wetlands assessment, and the survey of vegetation communities, and terrestrial and aquatic animals.

### 4.1 *Wetlands*

In the State of New York, freshwater wetlands are under the jurisdiction of New York State Department of Environmental Conservation (DEC) and the U.S. Army Corps of Engineers (COE). In accordance with *The Freshwater Wetlands Act* (Article 24, Freshwater Wetlands), DEC limits its jurisdiction to wetlands 12.4 acres or larger. These wetlands are indicated on DEC freshwater

wetlands maps. DEC also regulates activities in tidal wetlands in accordance with The Tidal Wetlands Act (Article 25 of the Environmental Conservation Law). COE regulates the placement of dredged and fill materials in "Waters of the United States"; this includes streams, lakes, impoundments, intermittent drainageways and associated wetlands in accordance with Section 404 of the *Clean Water Act* and the placement of structures over, in, or on the banks of navigable waters in accordance with Section 10 of the *Rivers and Harbors Act of 1899*.

COE defines wetlands as:

> "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

The *U.S. Army Corps of Engineers Wetlands Delineation Manual of 1987 (Environmental Laboratory 1987)* is the preferred wetland delineation manual of both COE and DEC. In accordance with this manual, our scientists used existing soil, wetland, and topographic information, in conjunction with field investigations, to describe and delineate areas of the site under the jurisdiction of COE.

The delineation procedure presented in the *U.S. Army Corps of Engineers Wetlands Delineation Manual of 1987* involves a thorough investigation of vegetation, soil and hydrology. Based on this approach, an area is defined as a wetland if it exhibits, under normal circumstances, all of the following characteristics:

- The land supports a dominance of hydrophytic vegetation.
- The substrate is hydric soil.
- The soil/substrate is at least periodically saturated or inundated during a significant portion of the growing season.

A hydrophyte is any plant that has the ability to grow in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content and depleted soil oxygen levels. The U.S. Fish and Wildlife Service (USFWS) has prepared a list of wetland plant species for the Northeast Region, Region I (USFWS 1988). The plant species listed in this publication are classified based on their affinity for wetlands. Table 4.1 lists the wetland indicator classification assigned to each species.

*Table 4.1* ***Plant affinity for water condition***

| Classification | Percent Occurrence in Wetlands |
|---|---|
| Obligate (OBL) | >99 |
| Facultative Wetland (FACW) | 67-99 |
| Facultative (FAC) | 34-66 |
| Facultative Upland (FACU) | 1-33 |
| Non-wetland (UPL) | <1 |

A positive (+) or negative (-) symbol used in conjunction with one of the facultative indicator classes relates to a species preference to either the wetter or drier end of its indicator class. The positive sign indicates a preference to the wetter end. This wetland indicator classification was used for plant species found at the site. A designation of NI (no indicator) was indicated in the regional list for those species for which insufficient information was available to assign an indicator class. We assigned a designation of NL if a species was not present in the list. Plants not listed are presumed to be upland species (Environmental Laboratory 1987).

Hydric soils are very poorly drained, poorly drained, or somewhat poorly drained soils that have the seasonal high water table within 6 inches of the surface (Environmental Laboratory 1987). These soils are typically predominantly gray and mottled immediately below the "A" horizon and have thick, dark colored surface layers.

Areas that were not wetlands, but under State jurisdiction (i.e., streams, lakes, impoundments and intermittent drainageways), were also delineated. Positive indicators of wetland hydrology were noted whenever encountered. Any changes in the environment that may influence the hydrology of the area such as ditches or drainage systems were also noted.

Prior to initiation of its fieldwork, our scientists conducted a thorough review of available data sources such as the USFWS National Wetland Inventory maps, and site plans depicting topography. For the wetlands investigation, representative sampling points were established along the wetlands line. At each sampling point, we collected data regarding the vegetation, soil and hydrology to determine whether the area met the wetlands definition. This information will be provided to COE as part of the request for jurisdictional determination.

The limit of all areas determined to be regulated or possibly regulated by either COE or DEC were identified and flagged in the field. The flag locations were surveyed and the proposed wetland boundaries were included on the site plans. The limit of COE jurisdiction along the East River is indicated by the limit of the mean high water line.

## 4.2 *Vegetation Communities*

The vegetation communities were mapped and classified during all of the site visits. Our scientists traversed all portions of the site, described the vegetation observed, and then identified the various plant communities on a site map or aerial photograph. Plant species were recorded for each plant community. Once the woodland areas were identified, we counted the number of specimens with a diameter at breast height (dbh) greater than 6 inches.

## 4.3 *Wildlife*

Wildlife observations were recorded during all site visits. Direct observations (sightings) as well as indirect observations (calls, tracks and scat) were recorded, along with the vegetation community where the animal was observed. On the 16 June 1999 site visit, wildlife observations were initiated at sunrise to record bird activity. Aquatic species were recorded from visual observation of the intertidal area at low tide.

# 5.0 *EXISTING CONDITIONS*

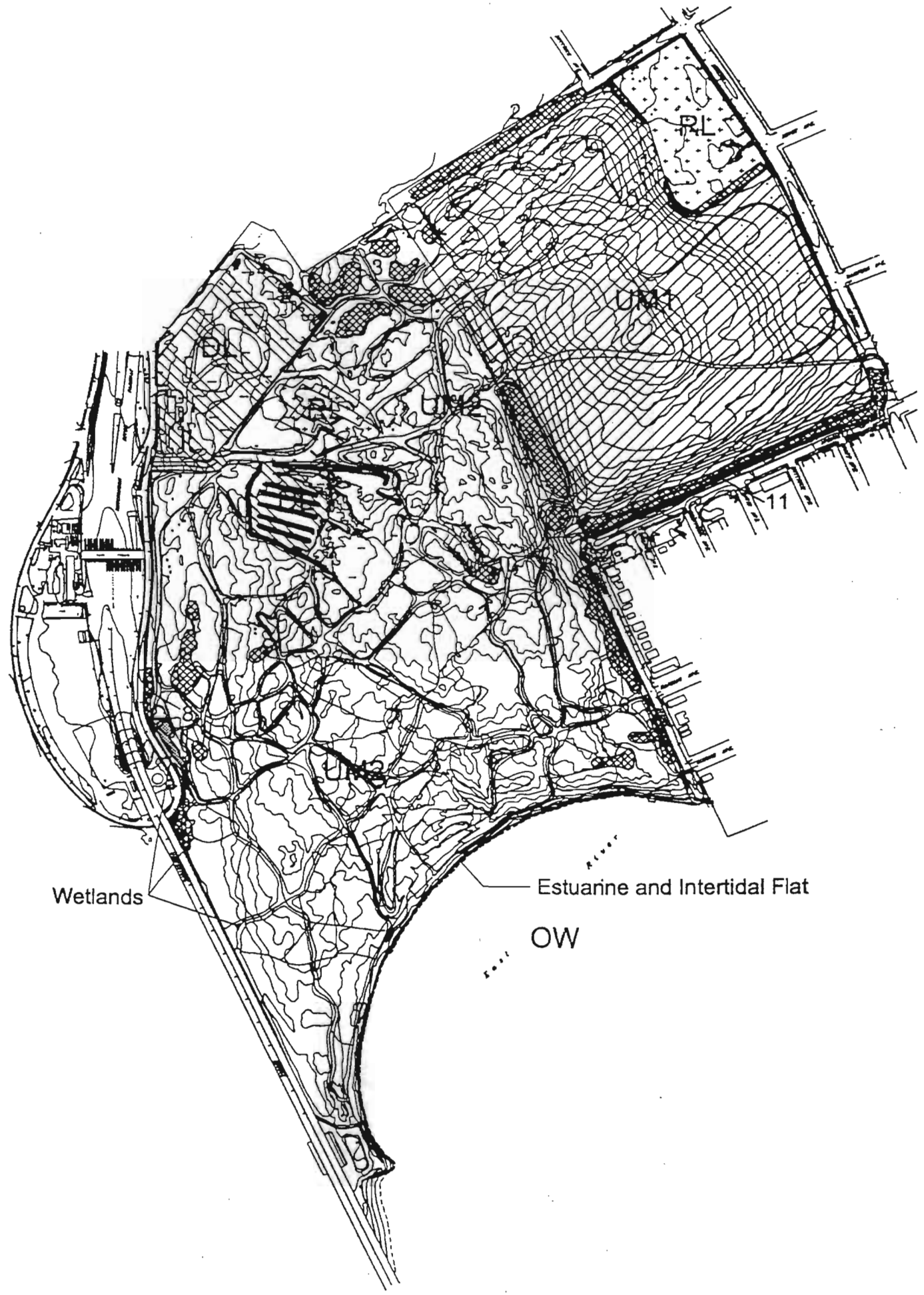
This section describes the existing vegetation communities including woodlands and wetlands, and wildlife observed or expected to occur on the site, as well as the aquatic resources of the East River in the vicinity of the Ferry Point Park site.

## 5.1 *Vegetation Communities*

In general, the two sides of the park support different vegetation communities. This assessment focused on the eastern portion of the park, the Ferry Point Park site, where the project has been proposed. The eastern portion of Ferry Point Park supports a mixture of common reed (*Phragmites australis*), clusters of trees (tree of heaven (*Ailanthus altissima*), black locust (*Robinia pseudoacacia*), willow (*Salix* sp.), cherry (*Prunus* spp), and mixed grasses growing on landfill. A detailed description of the existing plant communities is presented below. The western portion of the park will not be modified by the project—it consists of recreational fields, grassy areas, and scattered tree stands. The largest stand of trees is adjacent to the Bronx-Whitestone Bridge—it contains American beech and red maple and has a fairly well developed understory. Adjacent to Westchester Creek on the western border of this section, vegetation consists of numerous saplings, unpruned hornbeam, and high grasses and herbs. The western portion of the park provides active recreational (athletic fields) and passive recreational (walking and bird watching) opportunities (Urban Forest & Education Program 1994).

Appendix E1 lists the plant species observed in the project area and the community types where they were found. The Ferry Point Park site (Figure 5.1) has seven distinct categories of plant communities/land use: two types of

# Plant Communities and Landuse Categories for Ferry Point Park Public Recreational Facility




- Urban Meadow 1
- Urban Meadow 2
- Recreational Land
- Developed Land
- Woodland Areas
- Wetlands
- OW — Open Water

Figure 5.1

urban meadow, developed land, recreational land, urban woodland, emergent wetland, and estuarine intertidal flat. Most of the site is covered by the two urban meadow communities—differentiated by the composition of plant species. The species composition of the plant communities reflects the site's disturbed nature and urban setting. A small area (no greater than 12 by 8 feet) dominated by high marsh grasses occurs at the top or the revetment along the East River that DEC and the New York City Department of Parks and Recreation (DPR) have requested be preserved. The following sections describe the remaining plant communities found on the site.

### 5.1.1 *Urban Meadow 1 (Mixed Grasses)*

This urban meadow community occurs on the eastern portion of the site, and covers approximately 59 acres. A variety of pasture grasses and forbs dominate this community. Common grass species observed in this community type include: smooth brome grass (*Bromus inermis*), orchard grass (*Dactylis glomerata*), red fescue (*Festuca rubra*), Kentucky blue grass (*Poa pratense*) and downy cheese (*Bromus tectorum*). A few patches of common reed (*Phragmites australis*) are scattered through the meadow. A variety of forbs occur interspersed throughout this grassland community that include: daisy fleabane (*Erigeron annuus*), yarrow (*Achillea millefolium*), yellow sweet clover (*Melilotus officinale*), everlasting pea (*Lathyrus latifolius*), chicory (*Cichorium intybus*), ox-eye daisy (*Chyrsanthemum leucanthemum*), rough-fruited cinquefoil (*Potentilla recta*) and mugwort (*Artemisia vulgaris*). Woody plants such as tree of heaven (*Ailanthus altissima*), black locust (*Robinia pseudoacacia*) and staghorn sumac (*Rhus typhina*) are present in small patches along the periphery of this area. Other woody species identified in this area included rugose rose (*Rosa rugosa*) and tartarian honeysuckle (*Lonicera tartarica*)

The dominance of pasture grasses in this portion of the site and the absence of these species elsewhere, suggests a different history for this portion of the site. Based on the types of species identified in this area, it is likely that this area as once seeded with a pasture mix.

### 5.1.2 *Urban Meadow 2 (Common Reed/Mugwort Community)*

The second urban meadow (common reed/mugwort) plant community occupies approximately 119 acres in the western portion of the site. This community is a mosaic of areas dominated by either common reed or mugwort that are readily apparent in the field, but not easily distinguished on aerial photography.

In general, the common-reed-dominated areas occur mostly in the western-most portion of this community type. These areas are essentially dense, mono-specific stands of common reed with few other species. Other herbaceous species observed within stands of common reed include blackberry (*Rubus allegheniensis*) and mugwort. Additional species such as pineapple weed

(*Matricaria matricaroides*), downy cheese, ragweed (*Ambrosia artemisiifolia*), spiderwort (*Tradescantia virginiana*), path rush (*Juncus tenuis*), deptford pink (*Dianthus armeria*), and lamb's quarters (*Chenopodium album*), occur along the edges of the paths that dissect the common-reed-dominated areas.

The mugwort-dominated component of the Urban Meadow 2 community type occurs mostly in the eastern and northern portions of this mapping unit. It has a more diverse species composition than the common reed dominated areas. Other species identified in mugwort dominated areas include: ragweed, bull thistle (*Cirsium vulgaris*), rough-fruited cinquefoil, common milkweed (*Asclepias syriaca*), dogbane (*Apocynum* sp.), evening lychnis (*Lychnis alba*), seaside goldenrod (*Solidago sempervirens*), daisy fleabane, quack grass, curled dock (*Rumex crispus*) and field bindweed (*Convolvulus arvensis*).

Patches or individuals of staghorn sumac, tree-of-heaven, black locust or cottonwood (*Populus deltoides)* are also scattered through this area. Larger patches of woodland vegetation are described in subsequent sections.

### 5.1.3 *Developed Land*

The approximately 14-acre developed land, land use type, is assigned to areas where land use precludes the establishment of vegetation. These areas include the two New York City Department of Sanitation facilities—a composting facility and an organic recycling facility—in the northwest portion of the site, proximate to the tollbooths of the Bronx-Whitestone Bridge.

### 5.1.4 *Recreational Land*

This community type is assigned to two areas that are subjected to frequent mowing to facilitate recreational activities. The largest recreational area (approximately 6.6 acres) is located near the intersection of Schley Avenue and Balcom Avenue, and includes a softball field and a basketball court. The second recreational area (approximately 3.2 acres), an informal model airplane area, is used as an airfield for an organized group of radio-controlled model airplane enthusiasts. It is located to the south of St. Raymond's cemetery and adjacent to the New York City Department of Sanitation facilities. The area includes a macadam runway, a gravel runway, a gravel parking lot, and a pavilion.

Lawn grasses and a variety of weeds dominate the vegetation in the recreational areas. The species observed include: dandelion, English plantain (*Plantago lanceolata*), common plantain (*Plantago major*), white clover (*Trifolium repens*) and pineapple weed. Some woody vegetation is located in the recreational area with the ball field. A row of sycamore (*Platanus* sp.), basswood (*Tilia* sp.) and black locust occur along Balcom Avenue. Several willow oak (*Quercus phellos*), a red mulberry, and a gingko (*Gingko biloba*)

occur in the northwest corner of this area. The gingko is a multi-stemmed tree in which the cumulative diameter at breast height (dbh) of the three stems totals approximately 47 inches.

### 5.1.5 *Urban Woodland*

Wooded areas, comprised mostly of species typical of disturbed habitats, are scattered throughout the site. They cover approximately 12 acres in total. Each of the areas designated on Figure 5.1 as woodland possesses at least ten trees with a dbh greater than 6 inches. Scattered individual trees could not be accurately mapped on the site plan, but are included in the census of the trees with a dbh greater than 6 inches, as appropriate. The following sections describe each woodland area and the number of trees possessing a dbh greater than 6 inches.

*Woodland Area 1*

For the most part, this woodland area borders the western and southern edge of the recreational area in the northeast corner of the site. This narrow band of woodland consists almost entirely of cottonwood. In addition, there are several black locust, basswood, willow oak, red mulberry and a gingko present in the park. While not mapped, these individuals are included in the census. This woodland has 46 trees with a dbh greater than 6 inches.

*Woodland Area 2*

This area consists of widely scattered trees bordering an abandoned unimproved road adjacent to the cemetery. The 72 trees in this area are a mixture of cottonwood and black locust.

*Woodland Area 3*

The largest woodland area, area 3 is located in the western portion of the site, at the northeast corner of the New York City Department of Sanitation facilities. It consists of several distinct patches of woodland separated by urban meadow. Each distinct patch of woodland is dominated by either cottonwood, black locust, or tree-of-heaven. Approximately 204 trees with dbh in excess of 6 inches are found in this woodland.

*Woodland Area 4*

This woodland corridor is located between the Urban Meadow 1 (Mixed Grass) community and the Urban Meadow 2 (Common reed/Mugwort) community in the center of the site. Approximately 45 trees with a dbh greater than 6 inches are present in this woodland, which consists almost entirely of black locust with a single sassafras (*Sassafras albidum*). A large stand of staghorn sumac occurs at the eastern end.

*Woodland Area 5*

This area consists of a single species patch of tree-of-heaven that is located just north of where Miles Avenue intersects with Emerson Avenue. Approximately 23 trees have a dbh greater than 6 inches.

*Woodland Area 6*

This woodland is located along nearly the entire length of Emerson Avenue, south of where it intersects with Miles Avenue—it is the most species rich woodland on the site and has approximately 157 individuals with a dbh greater than 6 inches. The species observed in this woodland include: sweet cherry (*Prunus avium*), Norway maple (*Acer platanoides*), tree-of-heaven, black locust, black cherry (*Prunus serotina*), red mulberry, pin oak (*Quercus palustris*), white ash (*Fraxinus americana*), black willow (*Salix nigra*) and silver maple (*Acer saccharinum*). The fairly well developed understory includes Japanese honeysuckle (*Lonicera japonica*), poison ivy (*Toxicodendron radicans*), and grape (*Vitis* sp.). Japanese knotweed (*Polygonum cuspidatum*) is also present.

*Woodland Area 7*

This woodland area is consists of a single species stand of black locust located at the southeastern corner of the site between Emerson Avenue and the East River. There are 15 trees with a dbh greater than 6 inches and numerous individuals of smaller caliper within this woodland.

*Woodland Area 8*

This area consists of several distinct patches of woodland located in the western portion of the site, near the Bronx-Whitestone Bridge and U.S. Route I-678. The westernmost portion of the woodland has the greatest species diversity and includes black locust, red mulberry, American elm (*Ulmus americana*), cottonwood, basswood (*Tilia americana*), box elder (*Acer negundo*), tree-of-heaven, and hackberry (*Celtis occidentalis*). Most of the trees are growing on mounds of fill. Tree-of-heaven and cottonwood dominate the remainder of Woodland Area 8. A total of 105 trees with a dbh in excess of 6 inches occur in this woodland.

*Woodland Area 9*

This woodland is a monospecific stand of black locust surrounded by urban meadow and located northeast of Woodland Area 8. It has 22 trees with a dbh greater than 6 inches.

*Woodland Area 10*

Woodland Area 10 is located to the west of the intersection of Miles Avenue and Emerson Avenue, to the west of Woodland Area 5. The woodland is a single species stand of black locust of varying age. It has 27 individuals with a dbh greater than 6 inches.

*Woodland Area 11*

This woodland borders the drainage ditch adjacent to Miles Avenue. It is relatively dense in the eastern portion of the area, while the trees in the western portion of the area are more widely spaced. Cottonwood and black willow (*Salix nigra*) are the dominant species. There are 33 individuals with a dbh greater than 6 inches.

In addition to the trees included in the above areas, there are approximately 30 additional trees in either small groups or as individuals scattered throughout the site and numerous smaller diameter trees. Fewer than 30 trees on the site have a dbh of 20 inches or greater. Because many of these trees consisted of multiple trunks, the total diameter is not a good indication of maturity.

### 5.1.6 *Wetlands*

The following sections describe the two wetland categories identified at the Ferry Point Park Site, Intertidal Flat, and Emergent Wetlands.

*Estuarine Intertidal Flat*

This community type is assigned to the portion of the site subjected to the ebb and flow of the East River. The upper limit of this community is approximately the mean high tide line. This estuarine intertidal community is devoid of vascular plants, except for a very small patch of smooth cordgrass (*Spartina alterniflora*) proximate to the southern tip of Ferry Point. Brown algae (*Fucus* sp.) was observed covering the rocks along the entire shoreline of the site.

*Emergent Wetlands*

The limit of all areas determined to be regulated, or possibly regulated, by either COE or DEC were identified and the limits of each area marked in the field and subsequently surveyed. The limit of COE jurisdiction along the East River is the limit of the mean high water line. DEC freshwater wetlands maps do not indicate the presence of any freshwater wetlands on the site. Figure 5.1 indicates the proposed wetland boundaries.

The on-site freshwater wetlands are limited to three small isolated areas located in the northwestern corner of the site, that total approximately 11,815 square feet (0.27 acres). This portion of the site will be cleared, filled, and graded as part of the proposed project. The three wetland areas are palustrine emergent wetlands (PEM), according to the classification system in Cowardin et al. (1979). Near- monospecific stands of common reed, with some purple loosestrife, cover all three wetland areas. The hydrology of each of these wetland areas appears to be subject to flooding for long periods in the winter and spring, and periodic inundation throughout the remainder of the year. The soils in each wetland consist of fill material.

The drainage ditch adjacent to Miles Avenue was included in the delineation since it possesses many attributes typically associated with wetlands such as

hydrophytic vegetation and water. This area will probably not, however, fall under COE jurisdiction since COE does not typically regulate manmade ditches. A jurisdictional determination will be requested from the COE with regard to all of the delineated areas present on the site.

## 5.2 *Terrestrial Wildlife*

Appendix E2 lists the wildlife observed, or likely to occur, on the project site and the habitat types where they were found. Excluding the open water habitat of the river, there are seven distinct habitat types present on the site that correspond to the plant community/land use categories—two types of urban meadow, developed land, recreational land, urban woodland, emergent wetland, and estuarine intertidal flat. The two types of urban meadow provide the most extensive habitat types on the site. The habitats on the site reflect a history of disturbance typical of made land, or highly disturbed land, in an urban setting. As discussed in Section 5.1, monospecific stands of ruderal species such as common reed or mugwort dominate extensive portions of the site. Although most of the habitats identified on the site do not possess the habitat quality characteristics of a more pristine system, the site nevertheless supports a variety of wildlife species. The presence of a tidally influenced body of water, such as the East River, substantially increases the site's species richness potential.

Due to the uniformity of the plant communities covering extensive portions of the site, particularly the common reed dominated portion of the urban meadow community, and frequent intrusions by human activities, most of the wildlife species inhabiting the site tend to be habitat generalists. Species considered to be habitat generalists can adapt to varying environmental conditions and are relatively tolerant of human activity. Avian species commonly found in such urban meadows in the New York Metropolitan area include: mourning dove (*Zenaidea màcroura*), starling (*Sturnus vulgaris*), common crow (*Corvus brachyrhnches*), common grackle (*Quisculus quiscula*), rock dove (*Columba livia*), brown-headed cowbird (*Molotherus ater*), killdeer (*Charadrius vociferus*), song sparrow (*Melospiza melodia*), and American goldfinch (*Carduelis tristis*). During the site visits, ring-necked pheasant were observed throughout the urban meadowland communities. In the winter, these areas of the site may also be utilized by field sparrow (*Spizella pusilla*), tree sparrow (*Spizella arborea*) and dark-eyed junco (*Junco hyemalis*). Other winter visitors that could be reasonably expected to use this portion of the site are Canada goose (*Branta canadensis*) and northern harrier (*Circus cyaneus*). Mammals expected to inhabit the urban meadows include eastern cottontail (*Sylvilagus floridanus*) and various species of rodents.

Developed land and recreational land areas tend to be relatively unattractive to most wildlife species due to the frequent human activity and lack of cover. Therefore, they would support relatively small populations of wildlife. Most

of the species anticipated to use the developed portions of the site are habitat generalists or inquiline species (species that reside in the houses of others) that can adapt to a broad range of environmental conditions, and are tolerant of human activities. Inquiline species are typically found in direct association with man. Avian species that are typically found in habitats such as those found in the developed land, and, to a greater extent, in the recreational portions of the site, include: house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), starling (*Sturnus vulgaris*), rock dove (*Columba livia*), common crow (*Corvus brachyrhynchos*) and brown-headed cowbird (*Molothrus ater*). Mammals expected to utilize these areas include eastern cottontail, gray squirrel (*Sciurus carolinesis*), and various other species of rodents.

Urban woodland areas provide the greatest structural diversity on the site, and should also provide habitat for the greatest number of species. However, due to the relatively small size, young age, and urban setting of the woodlands, wildlife species richness is not anticipated to be high. Most of the woodlands appear to be relatively young transitional communities that possess features of a woodland, but retain other features more typical of fields. Most of the woodlands consist of patches of young trees and shrubs, surrounded by herbaceous vegetation. In addition, the relatively small area and narrowness of the woodlands on the site, would tend to exclude area and habitat specific species, particularly neo-tropical migrant birds that require interior forest habitats. The on-site woodlands provide suitable habitat for a variety of less sensitive generalist species of birds including mockingbird, common yellowthroat (*Geothlypis trichus*), bluejay (*Cyanocitta cristata*), yellow warbler (*Dendroica petechia*), catbird (*Dumetella corolinensis*), mourning dove, and song sparrow (*Melospiza melodia*). Taller trees overlooking the urban meadows also provide perches for raptors such as American kestrel (*Falco sparverius*). Mammals such as gray squirrel and eastern cottontail are typically found in similar woodlands; both were observed in this area during the site investigation.

As previously stated, the overall species richness of wildlife on the site is enhanced due to the presence of the East River and the intertidal habitat. The open water and estuarine intertidal flat habitat of the East River provide the habitat elements needed to support a species rich wildlife community. The estuarine intertidal flat provides suitable foraging habitat for a variety of birds including wading birds, gulls and waterfowl. Birds expected to be commonly encountered during the appropriate season include: Canada goose (*Branta canadensis*), great black backed gull (*Larus marinus*), herring gull (*Larus argentus*), ringed bill gull *(Larus delawarensis*), great blue heron (*Ardea herodias*), black crowned night heron (*Nycticorax nycticorax*), snowy egret (*Egretta thula*) and great egret (*Casmeroides albus*). Mammals that may utilize this area include: raccoon (*Procyon lotor*), Norway rat (*Rattus*

*norvegicus*), feral dogs and feral cats. The estuarine intertidal flat area may also be used by migratory shorebirds.

The open water of the East River provides suitable foraging and loafing habitat for a variety of waterfowl. The shallow water of the cove on the east side of Ferry Point would likely be used by migratory and overwintering waterfowl such as gadwall (*Anas strepera*), ring-necked duck (*Aythya collaris*), greater scaup (*Aythya marila*), and brant (*Branta bernicula*). Due to frequent human activity along the shoreline, nesting is anticipated to be limited. However, the presence of a mallard with young observed feeding along the shoreline in June of 1999 suggests that some nesting may be occurring near the site. Other birds expected to use the open water of the East River include double crested cormorant (*Phalacrocorax auritus*).

The freshwater emergent wetlands on the site are not extensive and are dominated by common reed. Because of the dominance of common reed, small size of the three wetlands, and isolation, the mammals and birds utilizing these wetlands are not anticipated to be substantially different than those found in the adjacent uplands. Due to the near absence of freshwater on the site, the presence of amphibians is likely to be limited to more terrestrial species such as Fowler's toad (*Bufo woodhousii*). Although, suitable habitat exists for this species, none were observed during the site investigation.

## 5.3 *Aquatic Resources*

The following sections provide an overview of the water quality, habitats, and biota found in the East River within the vicinity of the site. This information was derived from the existing literature.

### 5.3.1 *Setting*

The East River is essentially a tidal strait connecting New York Harbor with the western end of Long Island Sound. Its circulation and salinity structure is thus largely determined by conditions in the Harbor and Sound, and its fish, benthic and plankton communities are strongly influenced by the composition and abundance of these communities in adjacent waterbodies.

From a geomorphic perspective, it is convenient to divide the East River, which extends for a distance of 25.5 km (15.8 miles) from the Battery to Willets Point (just east of the Throgs Neck Bridge), into upper and lower sections. The demarcation between the upper and lower river is at Hell Gate, about 12.5 km (7.8 miles) above the Battery. The upper East River, where the Ferry Point Park site is located, is shallower and wider than the lower East River (Table 5.1). Bottom substrates in the lower section are characteristically hard and rocky while those in the upper East River are somewhat softer and smoother. While some limited cove habitat still exists in the upper East River, the shoreline in the lower East River is virtually entirely bulkheaded or riprapped. Current velocities are rapid in the East River—maximum velocities

in the lower river reach 5 knots. Current speeds in the upper river are not as great since it is wider, and more of the tidal prism of the East River is exchanged with the Harbor than with the Sound (Jay and Bowman 1975).

*Table 5.1* ***Dimensions of lower and upper sections of the East River.***

| Section of River | Surface Area (square kilometers) | Mean Depth Below MLW (meters) | Volume Below MLW (cubic meters) |
|---|---|---|---|
| Lower East River | 10.37 | 10.95 | 113.f X $10^6$ |
| Upper East River | 22.15 | 7.20 | 159.0 X $10^6$ |

Source: Jay and Bowman 1975.

The mean tidal range is considerable—approximately 1.3 meters at the Battery and increasing to 2.2 meters at Willets Point. The phase of the tide at Willets Point lags the Battery by about 3 hours. This phase difference (and the difference in resulting water elevations between the Battery and Willets Point) is chiefly responsible for the rapid tidal currents in this waterbody. Tidal excursion distances vary between 16 and 21 kilometers (9.9 to 13 miles) in the upper East River. A shipping channel in excess of 11 meters (36 feet) in depth is maintained along the entire length of the East River (Hazan and Sawyer 1983).

### 5.3.2 *Water Quality*

The primary inflow of freshwater to the East River is from the Hudson River, occurring at the Battery and the Harlem River. Other sources of freshwater are the sewage treatment plants that discharge effluent into the River. The fact that the East River is clearly polyhaline (18-30 parts per thousand (ppt)) suggests that the influence of saltwater intrusion originating from the ocean is considerable. The overall mean salinity at Willets Point is 25.2 ppt, compared to a mean salinity of 21.4 ppt at the Battery. In the upper East River, the estuarine circulation leads to a net transport of freshwater towards Long Island Sound and saltwater towards the Harbor. Vertical salinity stratification is almost non-existent in the lower East River, and is slightly greater in the upper region. In the vicinity of Willets Point, the difference between top-to-bottom salinity was estimated to range between 0.5 and 1.0 ppt (Hazen and Sawyer 1983).

The New York City Department of Environmental Protection (DEP) collects water quality monitoring data from 12 sites in the upper East River and Western Long Island Sound. These data suggest an increasing trend in dissolved oxygen (DO) in the water column between 1970 and 1998, in both surface and bottom waters (DEP 1999). DEC classifies the water use for the portion from Hell Gate to the Bronx-Whitestone Bridge as Class I—considered acceptable for secondary contact and recreation (e.g., fishing

and boating). These waters are required to maintain a DO concentration at or above 4.0 milligrams per liter (mg/L), and a monthly geometric mean of fecal coliforms less than or equal to 2000 cells/100 milliliters (mL). East of the Bronx-Whitestone Bridge, DEC classifies the water use as Class SB—considered acceptable for swimming and recreation. These waters are required to maintain a DO concentration of 5 mg/L, and a monthly geometric mean of fecal coliforms less than or equal to 200 cells/100 mL.

Dissolved oxygen is indicative of overall water quality in aquatic systems, and areas with extremely low DO are often avoided by finfish. Breakdown of algae and other organic compounds from various sources can deplete DO. Exposure to short periods of DO below 4.0 mg/L is generally not as stressful to organisms as prolonged exposure—periodic exposure to low DO occurs naturally, and estuarine organisms, in most cases, have adapted to these short periods of stress. DO concentrations in the East River follow a seasonal pattern: lowest during the summer, and highest during the late winter/early spring months when water temperature is coolest.

Although the trend in DO has greatly improved over time, and average summer DO values exceed the 4 mg/L standard for fishing, individual readings often fall below 4 mg/L during summer months at certain upper East River/Western Long Island Sound locations. Summer DO values that failed to comply with the DO standards appeared to be more prevalent in the area east of the Throgs Neck Bridge. A 1998 study conducted by the Interstate Sanitation Commission (ISC 1999) indicated that at a station just east of the Whitestone Bridge, the average summer surface DO was 4.5 mg/L, with the average bottom DO being slightly higher.

Harborwide, coliform bacteria concentrations have declined from 1989 to the present. Within the upper East River, this downward trend has measured over an order of magnitude over the past twenty years (DEP 1999). Fecal coliform concentrations in this region met standards suitable for bathing 90 percent of the time over the past decade. A trend analysis conducted on all New York Harbor stations, monitored in the summer, indicated widespread reductions in coliform concentrations between 1968 and 1993. Four stations sampled in the upper East River showed a significant downward trend in coliform concentration over time, and all were shown to be currently within compliance with their intended use classification. The declines in coliform concentrations from 1968 to 1988 are thought to be primarily in response to plant construction and upgrades; continued declines after 1989 are attributed to other New York City pollution control and abatement programs (Brosnan and O'Shea 1996).

Other water quality parameters such as nutrients (e.g., phosphorus, nitrogen) are routinely monitored as part of the New York Harbor Water Quality Survey. Nutrients are present in the East River year-round. However they are most important to aquatic plant growth during the spring/fall growing season.

(See Brosnan and O'Shea [1995] for nutrient data and trend analysis for certain months in the Harbor.)

There is concern over recent increases in chlorophyll *a* levels (indicative of eutrophic or nutrient enriched waters) that have been observed in the upper East River/ Western Long Island Sound study area (DEP 1999). However, the highest concentrations of chlorophyll have been observed in Western Long Island Sound, not the upper East River. Furthermore, in 1997 and 1998, mean summer chlorophyll levels in this region dropped to below 20 micrograms per liter (µg/L), marking only the second time since 1991 that levels dropped below 20 µg/L for two consecutive years. Steps currently being taken to reduce nitrogen discharges to the East River, as part of the Long Island Sound Study, are expected to reduce enrichment to these waters (DEP 1999).

### 5.3.3 *Characterization of Aquatic Biota*

The East River's hydrodynamics and estuarine character, coupled with the numerous municipal and industrial discharges that have operated there for many years, makes it a physically harsh environment—therefore, many of the species using the area are tolerant of highly variable conditions. The upper East River is used as a passageway for several anadromous and estuarine fishes, and as a temporary residence (seasonal) for a variety of marine species involved in more general coastal or shoreward movements. The following sections provide a brief description of the aquatic biota.

*Phytoplankton*

Phytoplankton are microscopic plants whose movements within the system are largely governed by prevailing tides and currents. Several species can obtain larger sizes as chains or in colonial forms. Light penetration, turbidity and nutrient concentrations are important factors in determining phytoplankton productivity and biomass. While nutrient concentrations in most areas of New York Harbor are very high, low light penetration has often precluded the occurrence of phytoplankton blooms.

Investigators have collected 77 phytoplankton genera, several of which were represented by a number of different species, from the East River. Diatoms are generally the most widely represented class of phytoplankton, accounting for over 90 percent of the different taxa collected in one survey (Hazen and Sawyer 1983). The green algae, *Nannochloris,* was, however, the most abundant single taxa. Brosnan and O'Shea (1995) identified 29 taxa of phytoplankton in a 1993 survey of New York Harbor. They noted that the diatom *Skeletonema costatum* and the green algae *Nannochlorus atomus* were the most abundant species at the monitored sites. The average summer cell counts in that year ranged from 6,300 to 97,000 cells/mL. Investigators have suggested that the overall composition and relative abundance of phytoplankton taxa is more heavily influenced by the influx from waters of the

Sound and New York Harbor, than by localized water quality conditions (Con Edison 1982).

*Macrophytes*

Macrophytes are plants that include submerged aquatic vegetation (SAV) and benthic algae. SAVs are rooted aquatic plants that are often found in shallow areas of estuaries—they are important for the nursery and refuge habitat they provide for fish. Benthic algae can be large multicellular algae that are important primary producers in the aquatic environment. They are often seen on rocks, jetties, pilings, and sandy or muddy bottoms. Since these organisms require sunlight as their primary energy, the limited light penetration of New York Harbor limits their distribution to shallow areas. Light penetration, turbidity and nutrient concentrations are all-important factors in determining SAV and benthic algae productivity and biomass.

None of the studies of the East River reviewed as part of this assessment reported the presence of SAVs in the lower East River. The extensively developed shoreline, swift currents and steeply sloped riverbanks make inhabitation by macrophytes unlikely. However, in the upper East River, there are a number of areas suitable for macrophyte habitat. One study reported common species including *Fucus*, *Ulva*, and *Enteromorpha* (Perlmutter 1971). On a recent site visit, *Fucus* was observed growing along the Ferry Point Park shoreline.

*Zooplankton*

Zooplankton are an integral component of aquatic food webs—they are primary grazers on phytoplankton and detrital material, and are themselves used by organisms of higher trophic levels as food. The higher level consumers of zooplankton typically include forage fish, such as bay anchovy, and early life stages of commercially and recreationally important species, such as striped bass and white perch. Predacious zooplankton species consume eggs and larvae, and can have a detrimental effect on striped bass and white perch.

Zooplankton studies conducted in New York Harbor and the East River found crustacean taxa to be the most prevalent in collected samples. The most dominant species include the copepods *Acatia tonsa, Acartia hudsonica, Eurytemora affinis*, and *Temora longicornis*, with each species being prevalent in certain seasons (Stepien et al. 1981, Londale and Cosper 1994, Perlmutter 1971, Lauer 1971, Hazen and Sawyer 1983). The data suggest that the copepods collected in the East River may be extensions of populations established in Long Island Sound and New York Harbor.

The macrozooplankton *Neomysis americana* (mysid shrimp) is also likely to occur in the vicinity of the site. Mysid shrimp have been found year round in the East River (Con Edison 1982, Malcolm Pirnie, Inc. 1982). Decapod larvae, including blue crab (*Callinectes sapidus*), and the crab *Ovalipes ocellatus,*

have been found in the East River (Con Edison 1982) and are likely to occur in the vicinity of the site.

*Benthic Invertebrates*

Invertebrate organisms that inhabit the river bottom sediments, and surfaces of submerged objects, such as rocks, pilings, or debris are commonly referred to as benthic invertebrates. These organisms are important to the energy flow of the ecosystem. They use detrital and suspended organic material as food sources, and in turn, are integral components of the diets of ecologically and commercially important fish and waterfowl species. Benthic invertebrates are also essential in promoting the exchange of nutrients between the sediment and water column.

A number of studies of the distribution and abundance of benthic invertebrates have been conducted in New York Harbor and the East River. A compilation of these studies (Coastal Environmental Services 1987) indicated that over 100 taxa had been identified for the East River, most of which were either crustaceans or polychaete worms. A more recent literature review identified over 180 benthic taxa in the Hudson River, East River, and upper New York Harbor (PBS&J 1998).

Hazen and Sawyer (1983) identified two separate but intermingled benthic invertebrate subcommunities based on sediment hardness in the East River. The hard substrate community was characterized by organisms that were either firmly attached to rocks and other hard objects (e.g., mussels or barnacles) or those that built or lived in tubes (e.g., the polychaete *Sabellaria vulgaris*). Other species of polychaetes and amphipods also occur on the hard bottom surfaces. Several species (e.g., the amphipod *Unicola*, the polychaete *Nereis*, and a few nematode species) have become adapted to the hard bottoms and rapid currents by living within the abandoned tubes of other species (Hazen and Sawyer 1985). The soft substrate community is characteristic of the more protected areas within the upper East River, where detritus, clay, silt and sand has been allowed to accumulate. Common soft substrate organisms observed include oligochaete worms, the soft shelled clam *Mya arenaria*, and a variety of flatworms, nemerteans, polychaetes and crustaceans. A recent field visit indicated hard clam, mussel, and horseshoe crab populations in the site vicinity.

None of the invertebrate populations in the East River are of commercial or recreational value. In accordance with Title 6, Part 41, Section 41.1 of the Codes, Rules and Regulations of the State of New York, commercial and recreational shellfishing (clams, oysters, mussels and scallops) is prohibited in the East River because of public health concerns. Although recreational crabbing is permitted, it is not extensively pursued.

*Fish*

The East River supports a large and diverse fish community consisting of marine, estuarine, anadromous, and catadromous species. Most species collected are either marine or anadromous. Although the East River supports only a few resident estuarine populations, many more species inhabit the area, for several weeks or months as part of seaward or coastal movements. A literature study identified 64 fish species collected in the East River and adjacent Little Neck Bay (Coastal Environmental Services 1987). A more recent literature compilation identified 70 species from lower Hudson and East Rivers, and upper New York Bay (PBS&J 1998). Appendix E3 presents a list of these fish species.

The marine species that would most likely occur in the study area include: winter flounder (*Pseudopleuronectes americanus*), bay anchovy (*Anchoa mitchilli*), weakfish (*Cynoscion regalis*), cunner (*Tautogolabrus adspersus*), Atlantic silverside (*Menidia menidia*), Atlantic menhaden (*Brevoortia tyrannus*), black sea bass (*Centropristis striata*), and spotted hake (*Urophycis regius*). The common estuarine species inhabiting the study region include mummichog (*Fundulus heteroclitus*), hogchoker (*Trinectes maculatus*) and white perch (*Morone americana*). These species migrate within the estuary and would occur in the East River during certain seasons. The mummichog and Atlantic silverside have been reported to occur in the study area in relatively large numbers. The ability of these two species to establish populations in the East River has been partially attributed to their ability to withstand low dissolved oxygen levels (Con Edison 1982).

Atlantic tomcod (*Microgadus tomcod*), striped bass (*Morone saxatilis*), alewife (*Alosa pseudoharengus*), and American shad (*Alosa sapidissima*) are the most common anadromous fish occurring in the region. These fish may be found in the upper East River on their way to the upstream Hudson River freshwater spawning grounds. They may also use the upper East River during fall and winter months as they migrate to sea via Long Island Sound. The collection of these species in the East River and areas such as Lawrence Point and Little Neck Bay supports this conclusion. On a recent site visit, a fisherman was observed with a striped bass collected from the Ferry Point shoreline. American eel (*Anguilla rostrata*) is the only catadromous (i.e. spawns in the ocean, migrates to freshwater) species to occur in the study area.

Although most of the species that reside in the study region do not spawn there, some spawning and larval development probably does occur in the upper East River. Data suggest that eggs reported in water column collections are those of bay anchovy, which has a wide geographic spawning range in marine and estuarine waters in warmer months. Clupeid larvae and winter flounder larvae have been recorded at the Astoria East River Power Plant and at New York Harbor stations. Eggs of some of the most abundant populations (e.g., mummichog, silverside, and winter flounder) are demersal and/or

adhesive and would not be expected to be well represented in water column collections.

Commercial fishing in the East River is restricted. Recreational fishing does occur, with the primary species of interest being striped bass, bluefish (*Pomatomus saltatrix*), scup (*Stenotomus chrysops*), spot (*Leiostomus xanthurus*), and American eel.

The New York State Department of Health (DOH) has issued a general health advisory that people eat no more than ½-pound of fish per week from the State's freshwaters, and some marine waters at the mouth of the Hudson River, which includes the East River to the Throgs Neck Bridge. The general advisory is to protect against eating large amounts of fish that have not been tested, or that may contain unidentified contaminants. DOH recommends that infants, children under age 15, and women of childbearing age, not consume fish from these areas. For the East River, DOH has issued advisories for Atlantic needlefish, bluefish, striped bass, and white perch because of potential PCB contamination. DOH recommends that no American eel be consumed because of potential PCB contamination (DOH 1998).

## 5.4 *Significant Habitat and Threatened or Endangered Species*

### 5.4.1 *Terrestrial Species*

The New York State Natural Heritage Program (NHP) maintains a database of rare plants and animals native to New York, as well as a listing of significant ecological communities within the state. DEC, Division of Fish, Wildlife and Marine Resources, Wildlife Resources Center, maintains the Natural Heritage Program files. A request for information on threatened or endangered species, other species of special concern, as well as special habitat areas in and within the vicinity of Ferry Point Park was submitted to NHP on 20 May 1999. NHP (Appendix E4, Mackey 1999) has no record of known occurrences of rare or state-listed animals and plants, or significant natural communities for the Ferry Point Park site.

NHP identified one significant habitat area near the site, a waterfowl wintering area that extends along the shoreline from the Bronx-Whitestone Bridge east to the Westchester County/Bronx County border.

The U.S. Department of the Interior, Fish and Wildlife Service (USFWS) is responsible for the management of federally listed, or proposed, rare, threatened or endangered species. A request for information on these species within the vicinity of the study area was submitted to the USFWS on 20 May 1999. The USFWS (Stilwell 1999, Appendix E4), reported that the peregrine falcon (*Falco peregrinus*), a formerly federally-listed, and State-listed endangered species, is known to breed in the vicinity of the proposed project. The USFWS delisted the peregrine falcon on 25 August 1999. According to

Barbara Loucks (1999), peregrine falcons are nesting at a distance greater than 1.5 miles from the eastern border of the site. The USFWS has requested that:

- the environmental documents associated with this project evaluate potential direct, indirect, and cumulative effects on the peregrine falcon or its habitat, and include appropriate measures, to protect this species and its habitat; and
- Final project plans and environmental documents be submitted to the Cortland, NY, USFWS office to determine the need for further consultation pursuant to Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 USC 1531 et seq.).

Except for the peregrine falcon, and occasional transient individuals, no other federally listed or proposed endangered or threatened species under USFWS jurisdiction are known to exist in the project impact area.

No peregrine falcons were observed during any of the site visits. One State-listed threatened species, a juvenile northern harrier (*Circus cyaneus*), was observed on the site during one of the site visits. Section 7.0 of this attachment discusses potential impacts to both of these species from the proposed project.

### 5.4.2 *Aquatic Species*

The federally and State-listed endangered shortnose sturgeon (*Acipenser brevirostrum*) is the only threatened or endangered fish species with the potential to occur in the vicinity of the Ferry Point Park site. On the basis of the information presented in Meylan and Sadove (1986), Gerle and Sadove (1996) and Morreale, et. al. (1992), four State-listed turtle species have the potential to occur in the vicinity of the site. These include the endangered leatherback sea turtle (*Dermochelys coriacea*), the endangered Kemp's ridley sea turtle (*Lepidochelys kempii*), the threatened loggerhead sea turtle (*Caretta caretta*), and the threatened green sea turtle (*Chelonia mydas*). Section 7.0 of this Attachment discusses potential impacts to these species from the proposed project.

## 6.0 *FUTURE CONDITIONS WITHOUT THE PROPOSED PROJECT*

Without the proposed project, the Ferry Point Park site will remain in its current condition. The existing terrestrial resources will generally remain unchanged, although there may be some changes in vegetation distribution due to natural succession. The area will probably continue to be used as a dumping ground for rubbish and debris, and as temporary shelter by the homeless. Should New York City conduct road improvement activities on Miles Avenue (along Woodland Area 11) adjacent to the eastern portion of the site, the amount of surface runoff draining to the ditch between the site and the road may be affected along with the vegetation lining the ditch. Road improvement

activities may also result in the loss of some of the vegetation on this part of the site. Widening of the road would probably necessitate piping of the ditched area, as part of the stormwater management plan.

With respect to aquatic resources, most current activities associated with the aquatic environment of the upper East River would be expected to continue unchanged from the existing conditions should Ferry Point Park not be developed as proposed. Non-point source runoff discharging to the river is not expected to differ substantially from the present in terms of quality and quantity. As there would be no large-scale actions proposed for the immediate area, water quality and the integrity of the biotic communities should remain intact.

Water quality in New York Harbor, including the upper East River, has been improving in recent years as evidenced by a decline in coliform bacteria, increases in DO concentrations, and decreases in floatable pollutants. Improvements in water quality have been attributed to a number of water pollution control actions, including the construction and upgrading of Water Pollution Control Plants (WPCPs), increased maintenance of sewage systems, increased capture and treatment of Combined Sewer Overflows (CSOs), and abatement of illegal discharges. The continuation of the City's water pollution control programs (e.g., the CSO Abatement, Floatables, Shoreline Survey, and Industrial Pretreatment Programs) should result in continued maintenance or improvement in overall water quality in the East River.

DEP will continue the Shoreline Survey Program, a physical shoreline inspection program, to identify damaged or improperly operating outfall locations as well as previously unknown or unidentified outfalls. Since 1989, this program has helped eliminate 1.5 million gallons per day of illegal discharges and has assisted in improving water quality in New York Harbor, including the upper East River.

The City's CSO Abatement Program will continue in the future. This program includes planning and implementing continued upgrades to WPCPs to provide the needed treatment capacity for increased capture of CSO effluent during storm events, thereby reducing the discharge of CSOs directly to the receiving waters. As part of the CSO Abatement Program, the City has implemented a Floatables Program to improve the capture of floatables and reduce their occurrence. It has been estimated that 95 percent of floatables (debris that floats on or below the water surface) originates from CSOs and storm sewers that convey street litter (DEP).

Floatables contribute to navigational interference, beach closings, and wildlife entanglement. A number of stationary booms, skimmers, and skimming vessels are in use and have noticeably improved the capture of floatables. Additionally, pilot studies are under way that include evaluation of swirl concentrators and pipe netting, as well as a successful pilot program that uses a capture tank and multi-net containment system to capture and remove floatables. Without the proposed project, it is expected that the future

upgrades and continuation of the various abatement programs will contribute to the overall improvement in water quality.

The municipal sewer and stormwater permitting program, administered by the New York City Industrial Pretreatment Program (IPP), will continue in the future. The program consists of intense screening of industrial discharges, monitoring and enforcement programs, and amendment of sewer use regulations. The overall intent is to monitor and control any additional flows or increased volumes to the WPCPs and CSOs, and to limit any factors that could potentially degrade water quality or the efficiency of the WPCPs. The program focus has been primarily on metals contamination and has resulted in an order of magnitude reduction in total metals contributions to wastewater between 1974 and 1995. The sewerage and stormwater permitting programs will continue to require industry and businesses to treat liquid wastes before they are discharged to the sewer systems, and will continue to be expanded in the future to include more industrial sources. Future efforts will target organic priority pollutants in wastewater discharges. As such, it can be expected that overall water quality will continue to improve in the future without the proposed project.

Aquatic communities including phytoplankton, benthic algae, zooplankton, benthic invertebrates and fish will continue to use the East River habitats much as they have in the past, and as they do now. The improvement in water quality observed in recent years should help maintain the stability of East River aquatic resources.

## *7.0 FUTURE CONDITIONS WITH THE PROPOSED PROJECT*

### *7.1 Potential Effects on Natural Resources*

This section describes potential changes to the existing natural resources based on the final site development plan, the turf management plan, and the plans for the waterfront and community parks.

#### *7.1.1 Vegetation Communities*

As with many development projects, much of the existing vegetation will be removed for the proposed public recreational facility. Because of the site's past use as a landfill, and its continued history of anthropogenic disturbance, no pristine native plant communities exist on the site—most of the site is dominated by invasive ruderal species that are typical of disturbed habitats. The area designated as the Urban Meadow 1 (mixed grass) community contains an unusual plant community for an urban setting, because it consists of grasses typically found in pastures. However, even this area is dominated by species that are not native to this region.

Although not pristine, the value of the ruderal communities found at Ferry Point must be assessed from an urban landscape perspective. These areas

provide a "green island" in an otherwise highly developed environment. Development of the site will require the removal of nearly all of the existing ruderal plant communities—they will be replaced with new plant communities that are typical of the more manicured landscapes of a golf course and urban park. Some of these new plant communities include a maritime grassland in the waterfront park along the East River, a 2.2-acre grassland habitat for an area along Schley Avenue, native grasses and trees associated with the golf course, and native and ornamental grasses and trees associated with the recreational area at the northeast corner of the site. In general, the concept is to create a naturally landscaped environment that is readily accessible to the general public. It is anticipated that grasses such as little blue stem (*Schizachyrium scoparium*), switch grass (*Panicum virgatum*) and Indian grass (*Sorgastrum nutans*) will be used in the grassland habitats.

Construction of the golf course, waterfront park, community park, and other structures included in the proposed action will, of necessity, require the removal of much of the existing vegetation in these areas, including approximately 350-400 trees with a dbh greater than 6 inches and numerous smaller diameter trees. Some of the woodlands along the periphery of the site, specifically Woodland Areas 2, 6, and possibly part of 11 will remain and be incorporated into the site design as buffer areas. Because these two woodlands contain large amounts of assorted debris and rubbish, they may be temporarily impacted during the removal of this material. Care will be taken to minimize damage to trees and other vegetation during removal of the debris and rubbish, and any ruts or other disturbance of the ground surface will be repaired. Other peripheral woodland areas will also be incorporated into the site design whenever feasible.

As part of the proposed action, a tree replacement program will be developed, in coordination with the licensee, to enhance existing woodlands communities on the site. At maturity, the new trees planted as part of the tree replacement program, and other vegetation planted as part of the proposed landscaping plan, will provide a greater diversity of plant communities than the ruderal plant communities currently existing on the site. Table 7.1 lists the vegetation proposed for the Ferry Point project as part of the landscaping plan.

The objective of this program is to first minimize the number of trees removed as a result of project development, and then to plant new trees selected with the goal of establishing a healthier and more diverse woodlands habitat. In planting of new trees, priority will be given to replacing trees onsite, followed by planting trees on the western portion of Ferry Point Park. With the planting of new trees, the tree planting program will ultimately result in higher quality vegetation communities and habitats than currently exist on the site.

### *7.1.2 Wetland*

Based on the current development plans proposed for the site, the three small, isolated wetland areas of low diversity will be filled. The total acreage of these

wetlands is 0.27 acres. The filling of these wetlands will be performed in accordance with Nationwide Permit No. 26 per a letter of authorization from COE. This permit allows for the filling of up to 0.33 acres of headwater or isolated wetlands.

### 7.1.3 *Terrestrial Biota*

As described in Section 5.2, excluding the open water habitat provided by the river, seven distinct habitat types were identified on site—two types of urban meadow, developed land, recreational land, urban woodland, emergent wetland, and estuarine intertidal flat. The urban meadow communities covered most of the site. Due to the disturbed nature of the site, the urban landscape in which the site is located, and the frequent intrusions of human activity, most of the species observed, or which may occur at the site, are habitat generalists or inquiline species. These species have adapted to a broad range of environmental conditions, and are tolerant of frequent human activities. None of these species represent a unique population that cannot be found elsewhere in the surrounding region.

As with many development projects, the removal of vegetation required for this project will result in an unavoidable loss of wildlife habitat. The development will result in the loss of nesting, den, loafing and feeding sites for various wildlife species. However, the wildlife using the portions of the site proposed for development tend to be common in the geographic region. These generalist species are broadly tolerant of changing environmental conditions and no long-term adverse impacts on these species (starling, mourning dove, house sparrow, and red-winged blackbird) are anticipated. The impact on the populations of many of the common generalist bird species that may inhabit the woodland areas such as mourning dove, blue jay and mockingbird, are anticipated to be short-term and transient, since some may relocate nearby in comparable areas (e.g., Soundview Park or Pugsley Creek Park), and since suitable replacement habitat for these species will become available as project landscaping matures. While many of the ring-necked pheasants will be affected by the construction of the proposed project, some that remain in the undisturbed areas of the site should be able to recolonize the altered portions of the site, where habitat is suitable. The maritime grassland proposed for the waterfront park and the grassland area to be constructed along Schley Avenue will provide suitable habitat for some of these displaced birds.

The American kestrel should continue to utilize the park for feeding or loafing. American kestrels use a variety of open to semi-open habitats such as farmland and urban habitats for nesting and foraging. Because kestrels nest in tree cavities and old woodpecker holes or cavities in banks and cliffs, as well as abandoned nests and nest boxes (Scott et al. 1977, Cade 1982, in Cooperrider et al. 1986), a nest box program for this species will be incorporated into

the final site plan to provide suitable nesting sites while the planted trees mature.

Smaller mammals will also be subjected to some degree of displacement as a result of habitat loss in the grassland areas, but are expected to repopulate the replanted areas.

While efforts will be made to preserve woodlands along the perimeter of the site, the proposed development will necessitate the removal of many, if not most, of the areas designated as woodland. Although most of the woodlands removed are relatively small and dominated by immature trees, these areas do possess some of the structural attributes needed to attract wildlife species. The loss of successional woodland will result in temporary losses to wildlife habitat. However, due to the relatively small size and fragmented nature of the woodlands, and the site's urban character, the wildlife inhabiting these areas are anticipated to be very common in the region. As previously stated, portions of these woodlands along the periphery of the site will be preserved as buffers. To compensate for the loss of trees, woody plants will be installed throughout the comprehensive golf facility, the waterfront park, and the community park. The establishment of woody vegetation will provide perching sites for birds. The incorporation of fruit and nut bearing trees and shrubs will also provide a source of food for mammals and birds. Therefore, it is concluded that impacts to wildlife species will be minimal, and in many cases, of a temporary nature.

As part of the redevelopment, four lakes/ponds and six vegetated dry detention basins are proposed. The creation of these water features will increase the diversity of habitat available to the wildlife of Ferry Point Park. To improve the aesthetic and wildlife elements of the proposed lakes/ponds, the vegetation around the ponds will be natural, including herbaceous, shrub and tree species, landscaped to provide occasional views of the water.

Another habitat on the site is the estuarine intertidal flat and the adjacent open waters of the East River. This area provides suitable habitat for nesting, loafing or feeding by a variety of birds. No development will occur within this riparian or tidal wetland habitats, therefore no adverse impacts are anticipated.

Potential impacts to both plants and wildlife communities could occur after site development, from indiscriminate, or excess use of harmful chemicals for golf course maintenance activities, resulting in uptake and potential bioaccumulation of these chemicals by plants and animals. The Integrated Golf Course Management Plan (IGCMP), as fully described in Attachment F and summarized in Section 7.3, incorporates measures to minimize pesticide use and avoid such impacts. The measures to reduce or avoid these risks are described in the IGCMP. This plan would eliminate any significant risks to plant and wildlife communities.

### 7.1.4 *Aquatic Biota*

The project should have no adverse impact to aquatic organisms inhabiting the East River. There are no project activities proposed along or in the East River that would directly affect organisms or their habitats. Activities associated with construction and maintenance of the golf course will occur away from the water, and will be separated from the East River by the public park. Pollutants in the form of suspended sediments, nutrients, pesticides, etc., that may be generated by golf course activities will be treated on-site, through a series of design BMPs, prior to any release of stormwater to the East River.

Modeling efforts (Attachment M) indicate that the stormwater management proposed for the project will ensure that stormwater discharges leaving the site will be of acceptable water quality. Furthermore, the IGCMP will ensure that the pesticides selected for use in this project will pose little risk to the aquatic biota. The rapid dispersion of these contaminants by the rather large East River current velocities will further minimize these risks.

The existing aquatic communities (phytoplankton, benthic algae, zooplankton, benthic invertebrates, and fish) will continue to use the East River habitats as they do now. As stated earlier, the water quality of the upper East River has improved significantly over the past 30 years. This improvement is a result of construction and upgrading of WPCPs, increased maintenance of sewage systems, increased capture and treatment of CSOs, and a variety of industrial pretreatment and abatement programs administered by DEP. Trends in dissolved oxygen and coliform bacteria concentrations are markedly improved. The improvement in water quality observed in recent years should help maintain the diversity and stability of the East River aquatic resources. It is therefore, extremely unlikely that project activities will have any adverse impacts on these resources.

### 7.1.5 *Significant Habitat and Threatened or Endangered Species*

Terrestrial Species

The peregrine falcon (State-listed endangered) and northern harrier (State-listed threatened) are the only two species of special concern known to occur on or adjacent to the project site.

The peregrine falcon is a medium-sized hawk with long pointed wings, that is one of the swiftest birds of prey. The crow-sized adults have slate blue-gray wings and backs barred with black, pale undersides, white faces with a black stripe on each cheek, and large, dark eyes. Although they live mostly along mountain ranges, river valleys and coastlines, some peregrines have accepted man-made structures such as skyscraper ledges, tall towers and bridges for breeding habitat in addition to the typical cliff ledge nesting habitat. Peregrines feed primarily on other birds—songbirds, shorebirds, and ducks, and starlings and pigeons in urban areas—striking and killing their prey in mid-air.

Although the peregrine falcon population reached an all-time low of 324 nesting pairs in North America, due to the negative impacts of DDT and its metabolites, the USFWS recovery plan resulted in an increase to 1593 nesting pairs in 1997. The peregrine falcon's recovery has been so successful that the USFWS removed it from the endangered species list on 25 August 1999.

The proposed public recreational facility will not affect the peregrine falcons located near or visiting the site. The project will not affect the current nesting site. In addition, it will not alter any aquatic habitats in the East River and therefore will not affect the presence of waterfowl, a common prey item for peregrine falcons. Once constructed, the golf course will provide sufficient habitat for the common urban species, starlings and pigeons, also consumed by the peregrine falcon. The Appendix to "Turf Management," Attachment F, describes the IGCMP's proposed measures to minimize potential impacts to the peregrine falcon's prey species, and to minimize potential toxicological impacts to this raptor.

During the wildlife survey, an immature male northern harrier (based the observation that the plumage of its underparts was distinctly darker than the white plumage of an adult bird) was observed feeding in the Urban Meadow 1 community. The northern harrier breeds and feed in grasslands and marshes. Its primary prey items include small mammals, reptiles or amphibians, and birds. The northern harrier is a common winter visitor to the New York metropolitan area. While nesting adults in the region are not common, nesting does occur on Long Island (Loucks 1999). The observation of one male juvenile northern harrier does not suggest that breeding is occurring on the site. Because the proposed Ferry Point Park project will not provide the large areas of grasslands or marshes that this species requires, the individual observed on the site may relocate elsewhere. However, since no signs of breeding were observed on the site during the four site visits, the existing northern harrier population in the vicinity of the site should not be adversely impacted.

Because the proposed project will not alter the existing waterfowl habitat adjacent to the site, the waterfowl wintering area identified by NHP will not be affected.

*Aquatic Species*

The project should have no adverse impacts to shortnose sturgeon. Shortnose sturgeon would not be expected to occur in the immediate vicinity of the project site—they prefer colder, deeper waters, and spawn, develop and overwinter well upriver in the Hudson. Fish that may pass through the portion of the East River near the site would be expected to use the deeper channel areas. Out of the 1000+ trawls taken in the Westway study in the Hudson and East River, only one shortnose sturgeon was collected, in the deep water habitat, near the Peekskill-Haverstraw section of the Hudson River (LMS 1983, Malcolm Pirnie 1984a and b). Long-term Hudson River monitoring

data, collected by the New York Utilities and others since the 1970's, have also indicated shortnose sturgeon inhabit deep water habitats, and occur in greatest abundance north of the Tappan Zee Bridge.

The project is also unlikely to have significant adverse impacts to any of the four listed species of turtles with the potential to occur in the vicinity of the site. Very few turtles would be expected to occur in the project area. New York turtles mostly inhabit Long Island Sound and Peconic and Southern Bays. They neither nest in the New York area, nor reside there year-round. With the exception of the leatherback, all individual turtles in New York waters are juveniles or subadults. They generally arrive in June and July and leave in October when colder temperatures force them to migrate south (Morreale and Standora 1995). Turtles that occur past November often become victims of cold stunning, which occurs on a regular basis (Meylan and Sadove 1986, Standora et al. 1989, Burke et al. 1990, Morreale, et. al. 1992).

Turtles leaving Long Island Sound for the winter usually do so by heading east to the Atlantic Ocean before turning south (Standora et al. 1990)—it is extremely unlikely that they would head west into East River, travel past Manhattan Island, and through New York Harbor on their southward migration. While it is possible that the loggerhead and even Kemp's ridley may occasionally reach the project area via New York Harbor, the leatherback and green turtle would not be expected to do so, due to the general lack of habitat for them in the East River. Given the paucity of sea turtles in the project area and vicinity, it is concluded that the Ferry Point project would have no adverse impact on these species.

The impacts to marine mammals are also not expected to be significant. These species are rarely observed from the project vicinity. Those that may occur in the area include the harbor seal, and possibly grey seal. Occasional sightings of porpoises in the Harbor are probably of individuals that are lost or unhealthy. Notable in the Summer of 1995 was the sighting of a manatee in the East River. The manatee, named Chessie by USFWS, was sighted traveling north into Long Island Sound (Brosnan and O'Shea 1995).

In summary, there should be no adverse impact to any aquatic threatened or endangered species inhabiting this region of the estuary. The reasons for this are as follows.

- There are no project activities proposed along or in the East River that would directly affect these organisms or their habitats.
- Aquatic threatened or endangered species are rarely encountered at the site, do not reside there for extended periods, and do not use the area for spawning or nursery grounds.
- Rapid flushing of the East River would disperse any contaminants that might leave the project site and be discharged into the East River.

## 7.2 *Measures to Minimize Adverse Effects During Construction*

Attachment A (Project Description), Attachment G (Hazardous Materials), Attachment F (Turf Management), and Attachment I (Infrastructure) provide information on proposed measures to minimize potential effects on natural resources during construction of the golf course and the two parks. Construction activities will abide by an approved erosion and sediment control plan and stormwater management plan to minimize the discharge of sediments to surface waters. The following measures are expected to be implemented during construction of the golf course to minimize potential impacts.

- Install protective fencing to define areas of existing vegetation that should not be disturbed.
- Establish designated sediment/erosion control infiltration areas to protect surface water features.
- Install temporary seeding or matting, silt fencing, hay bales, and filter fabric as necessary for erosion and sediment control until permanent vegetation is complete.
- Establish shoulders to direct surface runoff into the existing soils and undisturbed portions of the secondary roughs.
- Install fencing and silt barriers (filter fabric or straw bales) to identify construction circulation corridors through otherwise undisturbed areas within the golf course.
- Stabilize material not used as fill for topsoil, seeding and sodding.
- Designate construction equipment and employee entrances.
- Designate staging areas that minimally disturb existing vegetation for: employee parking, equipment parking, maintenance and fuel compound, storage of construction materials, and construction management offices and restrooms.
- Provide a list of equipment to be used on site throughout construction.
- Specify equipment to be used in removing trash and rubbish from the two woodlands that will be preserved, Woodland Area 2 and Woodland Area 6, that will minimize potential tree damage and disturbance of ground surface. All ruts will be restored and destroyed trees will be replaced with a suitable species, which will ultimately be of greater habitat value.
- Establish measures necessary to minimize dust emissions.
- During the initial phase of construction activities, if feasible, establish grassland habitat at the northern border of the golf course, south of the cemetery, to provide habitat for species such as ring-necked pheasant.
- Implement the tree replacement program described in Section 7.1.

- Ensure that contractors comply with regulations and any special requirements outlined in the Final Development Plan, including any special safety precautions that should be followed by workers during construction.

## 7.3 *Measures to Minimize Adverse Effects During Operation*

Attachment A (Project Description), Attachment G (Hazardous Materials), Attachment F (Turf Management) and Attachment I (Infrastructure) present detailed descriptions of measures that are expected to be implemented as part of the project design and operation. The following sections briefly describe these measures.

### 7.3.1 *Golf Course*

*Selection and Placement of Fill Material*

Attachment G describes the specifications for the fill material that will be transported to the site to create the comprehensive golf facility. The specifications for the fill material will meet the standards agreed to by DEC and the developer of the Ferry Point Park Project.

*Landscaping Plan*

A vegetative buffer with detention ponds will be planted between the golf facility and the waterfront park along the East River. This buffer will: enhance habitat and separate the golf course from the waterfront park, reduce floodplain erosion, enhance native shrub communities, and improve riparian habitat.

Within natural areas of the golf course, vegetation will be selected to complement the comprehensive golf facility while at the same time providing wildlife cover and forage. Trees will be planted where possible to compensate for those greater than 6-inch dbh lost to the development of the site. A few large diameter trees will be planted to provide kestrel perching sites. In coordination with DEC, kestrel nest boxes will be placed throughout the comprehensive golf facility at suitable locations.

*Creation of Lake and Vegetated Stormwater Detention Basins*

The four lakes (ponds) will be designed to meet stormwater management requirements, as well as to provide wildlife habitat. They will be vegetated along the edge to provide a diversity of natural plant cover including herbaceous, shrub and tree species, landscaped to provide occasional views of the water. The six detention basins proposed as part of the stormwater management system will be vegetated with wetlands plants suitable for areas experiencing periodic flooding, that will not interfere with the stormwater management function.

*Management Plan*

The IGCMP will adopt principles from *Golf & the Environment, Environmental Principles for Golf Courses (1996).* In addition to using low maintenance non-invasive turf-type grass, it will incorporate Best Management Practices (BMPs), including an integrated pest management (IPM) program to minimize potential effects on natural resources, as presented in the IPM Strategy and BMPs developed for the golf course (Attachment F).

The IPM is an interdisciplinary program that considers the merits of predominant pest control tactics and incorporates them into a single system to prevent unacceptable levels of pest damage. The control methods are designed not to eradicate pest populations, but to economically manage them while minimizing potential effects on people, the environment, and property. Pesticides are used in appropriate amounts, only after other measures of control have been considered and applied. The IPM focuses attention on monitoring soil nutrition so that specific fertilizers are applied during periods of maximum plant uptake. The objective of any IPM program is to reduce pest populations while keeping pesticide applications to a minimum (Erusha 1995).

In order to comply with the conditions outlined in the IGCMP, the Golf Course Superintendent and professional staff will be provided with the following resources:

- Expertise to make informed choices for managing and enhancing the vegetative buffers with native plants, and written BMPs that ensure wetland preservation and reduction of erosion.
- Access to consultants who will assist with the IPM program and maximize the results during the grow-in period.
- Availability of local ecologists to assist in making informed choices concerning native plants, opportunities for wetland creation, and habitat enhancement.
- Proper equipment and diagnostic tools for pest identification.
- Sufficient staff time to consistently monitor each management unit.

### 7.3.2 *Waterfront Park*

Landscaping Plan—Existing vegetation in the Waterfront Park will be removed, with the exception of a few trees, and replaced with indigenous vegetation to create a more diverse vegetation community. Kestrel nesting boxes and perching trees will be incorporated into the design where suitable.

### 7.3.3 *Community Park*

Landscaping Plan—Existing vegetation will be removed, with the exception of a few trees, and replaced with indigenous vegetation to create a more

diverse vegetation community. Kestrel nest boxes and perching trees will be incorporated into the design where suitable.

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## Table 7-1

LANDSCAPE PLANT LIST

**New Deciduous Shade Trees:**

| | |
|---|---|
| Celtis occidentalis | hackberry |
| Nyssa sylvatica | blackgum |
| Plantanus acerifolia | london plane |
| Populus alba 'Bolleava' | poplar |
| Populus tremuloides | quaking aspen |
| Prunus serotina | choke cherry |
| Quercus alba | white oak |
| Salix acerfolia | willow |
| Sassafras albidum | sassafras |
| Tilia americana | american linden |
| Ulmus parvifolia | chinese elm |

**New Evergreen Trees:**

| | |
|---|---|
| Cupressocyparis leylandii | leyland cypress |
| Juniperus virginiana | eastern red cedar |
| Picea pungens | colorado blue spruce |
| Pinus densiflora 'umbraculifera' | tanyosho pine |

**New Evergreen Buffer & Screening:**

| | |
|---|---|
| Abies concolor | white fir |
| Berberis thunbergii | japanese barberry |
| Cupressocyparis leylandii | leyland cypress |
| Ilex glabra | inkberry |
| Juniperus chinensis | juniper |
| Juniperus virginiana | eastern red cedar |
| Picea abies | norway spruce |
| Picea pungens | colorado blue spruce |

**New Seasonal Understory (Minor Trees):**

| | |
|---|---|
| Amalanchier arborea | downy serviceberry |
| Amalanchier canadensis | shadblow |
| Amalanchier grandiflora | |
| Crataegus crusgalli | cockspur hawthorne |
| Crataegus phaenopyrum | washington hawthorne |
| Elaeagnus angustifolia | russian olive |
| Elaeagnus umbellata | autumn olive |
| Prunus maritima | beach plum |
| Prunus x cistena | purpleleaf sand cherry |
| Rhus typhina | staghorn sumac |
| Vibernum spp. | virburnum |

**Native Deciduous Shrubs:**

| | |
|---|---|
| Amelanchier canadensis | shadblow (shrub form) |
| Aronia arbutifolia | red chokeberry |
| Aronia melanocarpa | black chokeberry |
| Clethra alnifolia | summersweet |
| Cytisus scoparius | scotch broom |
| Ilex glabra | inkberry |

| | |
|---|---|
| Kalmia latifolia | mountain laurel |
| Myrica pensylvanica | bayberry |
| Rhododendron nudiflorem | pinxter flower |
| Rhus copallina | sumac |
| Rosa nitida | |
| Rosa Rugosa | beach rose |
| Rosa virginiana | wild rose |
| Rubus allegheniensis | northern blackberry |
| Salix nigra | black willow |
| Viburnum spp. | viburnum |

**Ornamental Shrubs:**

| | |
|---|---|
| Ligustrum ovalifolium | california privet |
| Lonicera tatarica | tatarian honeysuckle |
| Potentilla spp. | potentilla |
| Syringa vulgaris | common lilac |
| Tamarix africana | african tamarisk |
| Juniperus spp. | juniperus |
| Pinus mugo | mugo pine |
| Lavendula | english lavender |
| Rhododendron spp. | Rhododendron |
| Spirea spp. | spirea |
| Paeonia spp. | chinese peony |

**Tall Native Grasses/ Herbaceous Perennials:**

| | |
|---|---|
| Andropogon gerardii | big blue stem/ beard grass |
| Calamagrostis arundinacea 'Karl Foerster' | feather reed grass |
| Calamagrostis arundinacea 'overdam' | feather reed grass |
| Miscanthus spp. | maiden grass |
| Panicum virgatum | switch grass |

**Medium Meadow Grasses/ Herbaceous Perennials:**

| | |
|---|---|
| Ammophila breviligulata | dune grass |
| Andropogon scoparius | little blue stem |
| Carex morrowii 'aurea-variegata' | varigated japanese sedge |
| Erianthus ravennae | pampas grass |
| Hydrangea macrophylla | 'blue lace cap' |
| Hydrangea quercifolia | oak leaved hydrangea |
| Ophiopogon japonicus | mondo grass |
| Pennisetum spp. | fountain grass |
| Perovskia atriplicifolia | russian sage |
| Phalaris arundinacea picta | ribbon grass |
| Rhubus allegheniensis | northern blackberry |
| Solidago odora | sweet goldenrod |

**Low Native Grasses:**

| | |
|---|---|
| Cumptonia peregrina | sweetfern |
| Festuca ovina glauca 'Eijah Bue' | blue fescue |
| Helictotrichon sempervirens | blue oat grass |
| Imperata cylindrica 'rubra' | japanese blood grass |
| Limonium carolinianum | sea lavender |
| Liatris spicata | gayfeather |
| Potentilla | cinquefoil |
| Rudbeckia | black-eyed Susan |
| Echinaea purpure 'Bright Star' | purple coneflower |
| Coreopsis | tickseed |

| | |
|---|---|
| Hemerocallis | daylilly |
| Eupatorium maculatum | Joe Pyeweed |
| Koeleria cristata | junegrass |
| Ophiopogon japonicus nanus | dwarf mondo grass |
| Sisyrinchium angustifolium | blue-eyed grass (iris family) |
| Stokesia laevis 'blue danube' | stokes aster |

**Ground Covers: Grasses/ Herbaceous Perennials:**

| | |
|---|---|
| Arctostaphylus ura-ursi | bearberry |
| Epigaea repans | trailing arbutus (wild strawberry) |
| Festuca ovina 'glauca' | blue fescue |
| Viola pedata | birds-foot violet |

**Emergents:**

| | |
|---|---|
| Distichlis spicata | spike grass |
| Limonium carolinianum | sea lavender |
| Sparina patens | salt meadow cordgrass |
| Spartina alterniflora | smooth cordgrass |
| Spartina cynosuroides | big cordgrass |
| Typha angustifolia | narrowleaf cattail |

**Beach Grass:**

| | |
|---|---|
| Ammophila breviliqulata | beach grass |
| Artemisia stellerana | beach wormwood |
| Lathyrus japonicus | beach pea |
| Solidago sempervirens | seaside goldenrod |
| Solidago odora | sweet goldenrod |
| Spartina spp. | cordgrass |

**Pond Borders:**

| | |
|---|---|
| Carex crinita | fringed sedge |
| Carex lurida | shallow sedge |
| Carex spp. | sedge |
| Hibiscus palustris | marshmallow |
| Iris veriscolor | blue flag iris |
| Juncus effusus | soft rush |
| Leersia oryzoides | rice cutgrass |
| Saggittaria latifolia | arrowood |
| Scirpus americanus | swordgrass |
| Typha augustifolia | narrow-leaved cattail |

*Appendix E1*

*Plant Species Observed on the Ferry Point Park Site*

## *APPENDIX E1 Plant Species Observed on the Ferry Point Park Site*

The following is a list of vascular plant species identified at the Ferry Point Park site, Bronx County, New York City, New York. The community type where each species was observed is provided. Key to community types: RL - Recreational Land, DL - Developed Land, EF - Estuarine Flat, W - Urban Woodland, UM1 - Urban Meadow 1 (mixed grass community), UM2 - Urban Meadow 2 (Common Reed/ Mugwort Community) and EW - Emergent Wetland.

| Species Name Scientific | Common | Community Type |
|---|---|---|
| *Aceraceae* | | |
| Acer rubrum | Red maple | W |
| Acer platanoides | Norway maple | W |
| Acer saccharinum | Silver maple | W |
| Acer negundo | Box elder | W |
| *Anacardiaceae* | | |
| Rhus typhina | Staghorn sumac | UM1, UM2 |
| Toxicodendron radicans | Poison ivy | W |
| *Apocynaceae* | | |
| Apocynum sp. | Dogbane | UM1, UM2 |
| *Asclepiadaceae* | | |
| Asclepias syriaca | Common milkweed | UM1 |
| *Asteraceae* | | |
| Ambrosia artemisiifolia | Common ragweed | UM1,UM2 |
| Achillea millefolium | Yarrow | UM1 |
| Artemesia vulgaris | Mugwort | UM2 |
| Baccharis halmifolia | Groundsel tree | UM2 |
| Coreopsis lanceolata | Lance lvd. coreopsis | UM1 |
| Crysanthemum leucanthemum | Ox-eye daisy | UM1 |
| Erigeron annuus | Daisy fleabane | UM1, UM2 |
| Rudbeckia hirta | Black-eyed susan | UM1 |
| Matricaria matricaroides | Pineapple weed | UM1, UM2 |
| Solidago sempervirens | Seaside goldenrod | UM1, UM2 |
| Taraxacum officinale | Common dandelion | RL |
| Eupatorium maculatum | Joe-pye-weed | UM2, EW |
| Centuarea sp. | Knapweed | UM1 |
| Chichorium intybus | Chickory | UM1 |
| Xanthium strumarium | Cocklebur | UM1 |
| *Balsaminaceae* | | |

*Appendix E1 Continued*

| Species Name Scientific | Common | Community Type |
|---|---|---|
| Impatiens capensis | Jewelweed | EW |
| *Brassicaceae* | | |
| Lepidium virginicum | Pepper grass | UM1 |
| *Caprifoliaceae* | | |
| Lonicera japonica | Japanese honeysuckle | W |
| Lonicera | Shrub honeysuckle | |
| Sambucus canadensis | Common elder | UW1 |
| *Caryophyllaceae* | | |
| Lychnis alba | Evening lychnis | UM1, UM2 |
| Dianthus armeria | Deptford pink | UM1 |
| *Celastraceae* | | |
| Celastrus orbiculatus | Oriental bittersweet | W |
| *Chenopodiaceae* | | |
| Chenopodium album | Lamb=s quarters | UM1 |
| *Commelinaceae* | | |
| Tradescantia virginiana | Spiderwort | UM2 |
| *Convolvulaceae* | | |
| Convolvulus arvensis | Field bindweed | UM1 |
| Ipomea sp. | Morning glory | UM2 |
| *Cyperaceae* | | |
| Cyperus | Yellow nut sedge | EW |
| Eleocharis sp. | Spike rush | EW |
| Scirpus tabernaemontanii | Soft stemmed bulrush | EW |
| *Fagaceae* | | |
| Quercus palustris | Pin oak | W |
| Quercus phellos | Willow oak | RL |
| *Gramineae* | | |
| Agropyron repens | Quack grass | UM1 |
| Bromus tectorum | Downy cheese | UM1, UM2 |
| Bromus inermis | Smooth brome grass | UM1 |
| Dactylis glomerata | Orchard grass | UM1 |
| Festuca rubra | Red fescue | UM1 |
| Hordeum jubatum | Squirreltail grass | UM1 |
| Anthoxanthum odoratum | Sweet vernal grass | UM2 |

| | | |
|---|---|---|
| Panicum virgatum | Switch grass | UM1 |
| Poa pratensis | Kentucky blue grass | UM1 |
| Phleum pratense | Timothy | UM1 |
| Phragmites australis | Common reed | UM1, UM2, W |
| Spartina alterniflora | Saltwater cordgrass | EF |
| *Hypericaceae* | | |
| Hypericum perforatum | St. John's-wort | UM2 |

*Appendix E1 Continued*

| Species Name Scientific | Common | Community Type |
|---|---|---|
| *Juncaceae* | | |
| Juncus effusus | Soft rush | EW |
| Lauraceae | | |
| Sassafras albidum | Sassafras | W |
| *Fabaceae* | | |
| Coronilla varia | Crown vetch | UM1 |
| Medicago sativa | Alfalfa | UM1 |
| Melilotus officinalis | Yellow sweet clover | UM1 |
| Lathyrus latifolius | Everlasting pea | UM1 |
| Robinia pseudoacacia | Black locust | W, UM2 |
| Trifolium repens | White clover | RL, |
| Trifolium pratense | Red clover | UM1 |
| Trifolium arvensis | Rabbit=s foot clover | RL, UM1 |
| Trifolium procumbens | Smaller hop clover | UM1 |
| *Labiatae* | | |
| Glecoma hederacea | Ground ivy | UM1 |
| *Liliaceae* | | |
| Allium vineale | Field garlic | UM1 |
| Hemerocallis fulva | Day lily | UM2 |
| *Lythtraceae* | | |
| Lythrum salicaria | Purple loosestrife | EW |
| *Moraceae* | | |
| Morus rubra | Red mulberry | W |
| *Oleaceae* | | |
| Fraxinus americana | White ash | W |
| *Onagraceae* | | |
| Oenothera biennis | Common evening-primrose | UM1, UM2 |
| *Phytolaccaceae* | | |
| Phytolacca americana | Common pokeweed | UM2, W |
| *Platanaceae* | | |
| Platanus sp. | Sycamore | RL |

*Appendix E1 Continued*

| Species Name Scientific | Common | Community Type |
|---|---|---|
| *Plantaginaceae* | | |
| Plantago lanceolata | English plantain | UM1, RL |
| Plantago major | Common plantain | UM1, RL |
| *Polygonaceae* | | |
| Polygonum cuspidatum | Japanese knotweed | UM1, UM2, W |
| Polygonum persicarea | Lady's thumb | EW |
| Rumex crispus | Curly dock | UM1, UM2 |
| *Rosaceae* | | |
| Prunus serotina | Black cherry | W |
| Prunus avium | Sweet cherry | W |
| Rosa multiflora | Multiflora rose | W |
| Rosa rugosa | Rugose rose | UM1 |
| Rubus alleghaniensis | Allegheny blackberry | UM1, UM2 |
| *Rubiaceae* | | |
| Galium sp. | Bedstraw | UM2, W |
| *Salicaceae* | | |
| Populus deltoides | Cottonwood | W, UM2 |
| Salix nigra | Black willow | W |
| *Scrophulariaceae* | | |
| Verbascum thapsus | Common mullein | UM1 |
| Verbascum blattaria | Moth mullein | UM1, UM2 |
| Linaria vulgaris | Butter & eggs | UM1 |
| *Simarubaceae* | | |
| Ailanthus altissima | Tree-of-Heaven | W, UM1, UM2 |
| *Solanaceae* | | |
| Datura stramonium | Jimson weed | UM2 |
| Solanum dulcamara | Nightshade | W |
| *Tiliaceae* | | |
| Tilia sp. | Basswood | W |
| *Ulmaceae* | | |
| Ulmus americana | American elm | W |
| *Vitaceae* | | |
| Parthencissus quinquefolia | Virginia creeper | W |
| Vitis sp. | Wild grape | W |

*Appendix E2*

*Wildlife Species Observed on the Ferry Point Park Site*

*Appendix E2 Continued*

| Species Name Scientific | Common | Habitat |
|---|---|---|
| *Raptors* | | |
| Cathartes aura | Turkey vulture | UM1, UM2 |
| Accipiter striatus | Sharp-shinned hawk | UM1, UM2 |
| Accipiter cooperii | Coopers hawk | UM1, UM2 |
| Circus cyaneus* | Northern harrier | UM1, UM2 |
| Buteo jamaicensis* | Red-tailed hawk | UM1, UM2 |
| Falco sparverius | American kestrel | UM1 |
| Falco peregrinus | Peregrine falcon | IS, UM1, UM2 |
| Otus asio | Eastern screech owl | W |
| Asio flammeus | Short eared owl | UM1, UM2 |
| *Fowl* | | |
| Phasianus colchicus | Ring-necked pheasant | UM1, UM2 |
| *Doves* | | |
| Zenaida macroura | Mourning dove | RL, DL, UM1, UM2 |
| Columba livia | Rock dove | RL, DL, IS, UM |
| *Nightjars* | | |
| Chordeiles minor | Nighthawk | UM1, UM2 |
| *Swifts* | | |
| Chaetura pelagica | Chimney swift | UM1, UM2 |
| *Woodpeckers* | | |
| Colaptes auratus* | Northern flicker | W, RL |
| Picoides pubescens* | Downy woodpecker | W |
| *Kingfishers* | | |
| Ceryle alcyon | Belted kingfisher | ET, OW |
| *Passerines* | | |
| Myiarchus crinitus | Great-crested flycatcher | W |
| Contopus virens | Eastern wood pewee | W |
| Empidonax trailii* | Willow flycatcher | UM1, UM2, W |
| Hirundo rustica* | Barn swallow | UM1, UM2, OW, RL |
| Tachycineta bicolor* | Tree swallow | UM1, UM2, OW, RL |
| Tyrannus tyrannus | Eastern kingbird | W, RL |
| Cyanocitta cristata* | Blue jay | RL, W, |
| Corvus brachyrhynchos* | American crow | UM1, UM2, OW, RL |
| Corvus ossifragus | Fish crow | UM1, UM2, OW, RL |

## *APPENDIX E2* *Wildlife Species Observed or Likely to Occur on the Ferry Point Site*

### *BIRDS*

The following is a list of birds that were either observed or may be possible visitors or residents of the Ferry Point Park site. Key to habitat types: RL - Recreational Land, DL - Developed Land, IS - Intertidal Rocky Shoreline, W - Urban Woodland, UM1 - Urban Meadow 1 (mixed grass community), UM2 - Urban Meadow 2 (Common reed/ Mugwort Community), OW -Open water and EW - Emergent Wetland. Species observed during the site inspection are marked with an asterisk.

| **Species Name** Scientific | Common | Habitat |
|---|---|---|
| *Cormorants* | | |
| Phalacrocorax auritus* | Double crested cormorant | OW |
| *Wading birds* | | |
| Ardea herodius | Great blue heron | IS |
| Nycticorax nycticorax* | Black crowned night heron | IS |
| Egretta thula* | Snowy egret | IS |
| Casmerodius albus* | Great egret | IS |
| Plegadis falcinellus* | Glossy ibis | IS |
| *Waterfowl* | | |
| Branta canadensis* | Canada goose | OW, IS |
| Branta bernicla | Brant | OW |
| Anas platyrhynchos* | Mallard | OW, IS |
| Anas rubripes | American black duck | OW, IS |
| Althya ferina | Canvasback | OW |
| Aythya collaris | Ring-necked duck | OW |
| Aythya marila | Greater scaup | OW |
| *Bucephala albeola* | Bufflehead | OW |
| *Shorebirds* | | |
| Charadrius vociferus | Killdeer | IS, RL, DL, UM1 |
| Scolopax minor* | American woodcock | EW, W |
| *Gulls* | | |
| Larus argentus* | Herring gull | OW |
| Larus marinus* | Great black-backed gull | OW |
| Larus delawarensis* | Ring-billed gull | OW |
| Larus atricca* | Laughing gull | OW |

*Appendix E2 Continued*

*MAMMALS*

The following is a list of mammals that were either observed or may be possible visitors or residents of the Ferry Point Park site. Key to habitat types: RL - Recreational Land, DL - Developed Land, IS - Intertidal Rocky Shoreline, W - Urban Woodland, UM1 - Urban Meadow 1 (mixed grass community), UM2 - Urban Meadow 2 (Common reed/ Mugwort Community), OW -Open water and EW - Emergent Wetland. Species observed during the site inspection are marked with an asterisk.

| Species Name Scientific | Common | Habitat |
|---|---|---|
| Blarina brevicanda | Short-tailed shrew | UM1, UM2,W, RL |
| Scalopus aquaticus | Eastern mole | UM1, UM2,W, RL |
| Myotis leibii | Eastern small-footed myotis | UM1, UM2,W, RL |
| Lasionycteris noctivagans | Silver-haired bat | UM1, UM2,W, RL, DL |
| Pipistrellus subflavus | Eastern pipistrelle | UM1, UM2,W, RL, DL |
| Eptesicus fuscus | Big brown bat | W, DL, RL, UM1, UM2 |
| Sylvilagus floridanus* | Eastern cottontail | UM1, UM2 |
| Tamias striatus | Eastern chipmunk | UM1, UM2 |
| Marmota monax | Woodchuck | W, UM2 |
| Sciurus carolinensis* | Eastern gray squirrel | UM1, UM2 |
| Peromyscus leucopus | White-footed mouse | UM1, UM2 |
| Peromyscus maniculatus | Deer mouse | UM1, UM2 |
| Microtus pennsylvanius | Meadow vole | UM1, UM2 |
| Procyon lotor | Raccoon | W, UM1, UM2 |
| Mephitis mephites | Striped skunk | W |
| Rattus norvegicus | Norway rat | W, DL |
| Mus musculus | House mouse | UM1, UM2 |
| Didelphis marsupaialis | Opossum | UM1, UM2, W |
| Felis domisticus | Feral cat | UM1, UM2, W, RL, DL |
| Canis domesticus | Feral dog | UM1, UM2, W, RL, DL |

*Appendix E2 Continued*

| Species Name Scientific | Common | Habitat |
|---|---|---|
| Carduelis tristis* | American goldfinch | UM1, UM2 |
| Carpodacus mexicanus | House finch | UM1, UM2, RL |
| Parus bicolor | Tufted titmouse | W |
| Parus atricapillus | Black capped chickadee | W, RL |
| Sitta carolinensis | White-breasted nuthatch | W, RL |
| Troglodytes aedon | House wren | W, RL |
| Turdus migratorius* | American robin | W, RL, UM1 |
| Dumetella caroliniensis* | Gray catbird | W |
| Mimus polyglottos* | Northern mockingbird | W, RL |
| Toxostoma rufum | Brown thrasher | W, UM1, UM2 |
| Sturnus vulgaris* | Starling | UM1, UM2, DL, RL |
| Vireo griseus | White-eyed vireo | W |
| Dendroica petechia* | Yellow warbler | W, UM1, UM2, |
| Geothlypis trichas* | Common yellowthroat | W, UM1, UM2, |
| Cardinalis cardinalis | Northern cardinal | W, UM1, UM2 |
| Passerina cyanea | Indigo bunting | W, UM1, UM2 |
| Pipilo erythrophthalmus | Rufous-sided towhee | W |
| Spizella passerina | Chipping sparrow | W, RL |
| Spizella pusilla | Field sparrow | UM1, UM2 |
| Melospiza melodia* | Song sparrow | UM1, UM2,W, RL |
| Zonotrichia albicollis | White throated sparrow | UM1, UM2,W, RL |
| Junco hyemalis | Dark-eyed junco | UM1, UM2,W, RL |
| Agelaius phoeniceus* | Red-winged blackbird | UM1, UM2,W, RL |
| Molothrus ater* | Brown-headed cowbird | UM1, UM2,W, RL |
| Quiscalus quiscula | Common grackle | UM1, UM2,W, RL |
| Passer domesticus* | House sparrow | UM1, UM2,W, RL, DL |

*Appendix E2 Continued*

*REPTILES AND AMPHIBIANS*

The following is a list of reptiles and amphibians that were either observed or may be possible visitors or residents of the Ferry Point Park site. Key to habitat types: RL - Recreational Land, DL - Developed Land, IS -Intertidal Rocky Shoreline, W - Urban Woodland, UM1 - Urban Meadow 1 (mixed grass community), UM2 - Urban Meadow 2 (Common reed/ Mugwort Community), OW -Open water and EW - Emergent Wetland. Species observed during the site inspection are marked with an asterisk..

| **Species Name** Scientific | Common | Habitat |
|---|---|---|
| *Turtles* | | |
| Melanoclemys terrapin | Diamond-backed terrapin | IS |
| *Frogs and Toads* | | |
| Bufo woodhousei | Fowler=s toad | UM1, UM2 |

*Appendix E3*

# *List of Fish Species Found in the Lower Hudson River, East River, and Upper New York Bay*

*APPENDIX E3* ***List of Fish Species Found in the lower Hudson River, East River, and Upper New York Bay 1982-1994***

| Common Name | Scientific Name |
|---|---|
| Atlantic sturgeon | Acipenser oxyrhynchus |
| American eel | Anguilla rostrata |
| Conger eel | Conger oceanicus |
| Blueback herring | Alosa aestivalis |
| Hickory shad | Alosa mediocris |
| Alewife | Alosa pseudoharengus |
| American shad | Alosa sapidissima |
| Atlantic menhaden | Brevoortia tyrannus |
| Atlantic herring | Clupea harengus |
| Gizzard shad | Dorosoma cepedianum |
| Bay anchovy | Anchoa mitchilli |
| Rainbow smelt | Osmerus mordax |
| Inshore lizardfish | Synodus foetens |
| Oyster toadfish | Opsanus tau |
| Fourbeard rockling | Enchelypous cimbrius |
| Silver hake | Merluccius bilinearis |
| Tomcod | Microgadus tomcod |
| Pollock | Pollachius virens |
| Spotted hake | Urophycis regius |
| Red hake | Urophycis chuss |
| Atlantic cod | Gadus morhua |
| Cusk eel | Lepophidium cervinum |
| Atlantic silversides | Menidia menidia |
| Threespine stickleback | Gasterosteus aculeatus |
| Lined seahorse | Hippocampus erectus |
| Northern pipefish | Syngnathus fuscus |
| Mummichog | Fundulus heteroclitus |
| Striped killifish | Fundulus majalis |
| Banded killifish | Fundulus diaphanus |
| Atlantic needlefish | Tylosurus marinus |
| Grubby | Myoxocephalus aenaeus |
| Longhorn sculpin | M. octodecimspinosus |
| Black sea bass | Centropristis striata |
| Short bigeye | Pseudopriacanthis altus |
| Grey snapper | Lutjanus griseus |
| White perch | Morone americana |
| Striped bass | Morone saxatilis |
| Bluegill | Lepomis macrochinus |
| Bluefish | Pomatomus saltatrix |
| Crevalle jack | Caranx hippos |
| Lookdown | Selene vomer |
| Rough scad | Trachurus lathami |
| Silver perch | Bairdiella chrysura |
| Weakfish | Cynoscion regalis |
| Spot | Leiostomus xanthurus |
| Northern kingfish | Menticirrhus saxatilis |

***Appendix E3 Continued***

| Common Name | Scientific Name |
|---|---|
| Scup | Stenotomus chrysops |
| Spotfin butterflyfish | Chaetodon ocellatus |
| Striped mullet | Mugil cephalus |
| White mullet | Mugil curema |
| Blackfish | Tautoga onitis |
| Cunner | Tautogolabrus adspersus |
| Rock gunnel | Pholis gunnellus |
| American sandlance | Ammodytes americanus |
| Butterfish | Peprilus triacanthus |
| Northern searobin | Prionotus carolinus |
| Striped searobin | Prionotus evolans |
| Smallmouth flounder | Etropus microstomus |
| Summer flounder | Paralichthys dentatus |
| Four-spot flounder | Paralichthys oblongus |
| Windowpane | Scophthalamus aquosus |
| Winter flounder | Pseudophleuronectes americanus |
| Hogchoker | Trinectes maculatus |
| Planehead filefish | Monocanthus hispidus |
| Northern puffer | Sphoeroides maculatus |
| Atlantic croaker | Micropogonias undulatus |
| Atlantic mackerel | Scomber scombrus |
| Atlantic moonfish | Selene setapinnis |
| Goosefish | Lophius americanus |
| White hake | Urophycis tenuis |
| Tautog | Tautoga onitis |

Sources: Woodhead (1990), EEA (1988), EA Engineering, Science & Technology (1990), Able et at. (1995)

*Appendix E4*

*Threatened or Endangered Species Correspondence*

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
Wildlife Resources Center – New York Natural Heritage Program
700 Troy-Schenectady Road, Latham, New York 12110-2400
Phone: (518) 783-3932 FAX: (518) 783-3916

John P. Cahill
Commissioner

May 27, 1999

RECEIVED
JUN 01 1999

Sandra Collins
P[illegible]S and J
4201 North View Drive, Suite 302
Bowie, MD 20716

Dear Ms. Collins:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to the proposed Public Golf Course on a portion of Ferry Point Park, area as indicated on the map you provided. Site is located in the Bronx, New York City.

Enclosed is a report of rare or state-listed animals and plants, of significant natural communities, and of other significants habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, of significant natural communities, and of other significant habitats. For information regarding regulated areas or permits that may be required under state law (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Teresa Mackey, Information Services
NY Natural Heritage Program

Encs.
Cc: Reg. 2, Wildlife Manager

SIGNIFICANT HABITATS

DATE : 05/26/99

| REPORT ID# | NAME OF AREA | TYPE OF AREA | COUNTY | TOWN OR CITY | QUADRANGLE | LATITUDE (DEG MIN SEC) | LONGITUDE |
|---|---|---|---|---|---|---|---|
| 03-001 | Whitestone Bridge to Bronx/West. Co. Line | Waterfowl Wintering Area | Bronx | Bronx - New York City | Flushing | 40 50 41 | 73 47 50 |

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
## DIVISION OF ENVIRONMENTAL PERMITS REGIONAL OFFICES

| REGION | COUNTIES | NAME | ADDRESS AND PHONE NO. |
|---|---|---|---|
| Region 1 | Nassau<br>Suffolk | Robert Greene<br>Permit Administrator | Loop Road, Bldg. 40<br>SUNY<br>Stony Brook, NY 11790-2356<br>(516) 444-0365 |
| Region 2 | New York City | George Danskin<br>Permit Administrator<br>Joe Pane | Hunters Point Plaza<br>4740 21st Street<br>Long Island City, NY 11101-5407<br>(718) 482-4997 |
| Region 3 | Dutchess<br>Orange<br>Putnam<br>Rockland, Sullivan<br>Ulster, Westchester | Margaret Duke<br>Permit Administrator | 21 South Putt Corners Road<br>New Paltz, NY 12561-1696<br>(914) 256-3059 |
| Region 4 | Albany<br>Columbia<br>Delaware<br>Greene, Montgomery, Otsego<br>Rensselaer, Schenectady, Schoharie | William J. Clarke<br>Permit Administrator | 1150 N. Westcott Road<br>Schenectady, NY 12306-2014<br>(518) 357-2234 |
| Region 5 | Clinton<br>Essex<br>Franklin<br>Fulton, Hamilton<br>Saratoga, Warren, Washington | Richard Wild<br>Permit Administrator | Route 86<br>Ray Brook, NY 12977<br>(518) 897-1234 |
| Region 6 | Herkimer<br>Jefferson<br>Lewis<br>Oneida, St. Lawrence | Randy Vaas<br>Permit Administrator | State Office Building<br>317 Washington Street<br>Watertown, NY 13601<br>(315) 785-2246 |
| Region 7 | Broome<br>Cayuga<br>Chenango<br>Cortland, Madison, Onondaga<br>Oswego, Tioga, Tompkins | Ralph Manna, Jr.<br>Permit Administrator | 615 Erie Blvd. West<br>Syracuse, NY 13204-2400<br>(315) 426-7439 |
| Region 8 | Chemung<br>Genesee<br>Livingston<br>Monroe, Ontario, Orleans<br>Schuyler, Seneca, Steuben<br>Wayne, Yates | Albert Butkas<br>Permit Administrator | 6274 East Avon-Lima Road<br>Avon, NY 14414<br>(716) 226-2466 |
| Region 9 | Allegany<br>Cattaraugus<br>Chautauqua<br>Erie, Niagara, Wyoming | Steven Doleski<br>Permit Administrator | 270 Michigan Avenue<br>Buffalo, NY 14203-2999<br>(716) 851-7165 |

# USERS GUIDE TO NY NATURAL HERITAGE DATA

New York Natural Heritage Program, 700 Troy-Schenectady Road, Latham NY 12110-2400 phone: (518) 783-3932

NATURAL HERITAGE PROGRAM: The Natural Heritage Program is an ongoing, systematic, scientific inventory whose goal is to compile and maint on the rare plants and animals native to New York State, and significant ecological communities. The data provided in the report facilitate sound pl conservation, and natural resource management and help to conserve the plants, animals and ecological communities that represent New York's natural h

DATA SENSITIVITY: The data provided in the report are ecologically sensitive and should be treated in a sensitive manner. The report is for your ir use and should not be released, distributed or incorporated in a public document without prior permission from the Natural Heritage Program.

NATURAL HERITAGE REPORTS (may contain any of the following types of data):

COUNTY NAME: County where the occurrence of a rare species or significant ecological community is located.

TOWN NAME: Town where the occurrence of a rare species or significant ecological community is located.

USGS 7 ½' TOPOGRAPHIC MAP: Name of 7.5 minute US Geological Survey (USGS) quadrangle map (scale 1:24,000).

LAT: Centrum latitude coordinate of the location of the occurrence. Caution: latitude & longitude must be used with PRECISION (e.g. the location occurrence with M (minute) precision is not precisely known & is thought to occur within a 1.5 mile radius of the latitude/longitude coordinate

LONG: Centrum longitude coordinate of the location of the occurrence. See also LAT above.

PRECISION: S - seconds: location known precisely. (within a 300' or 1-second radius of the latitude and longitude given.
M - minutes: location known only to within a 1.5 mile (1 minute) radius of the latitude and longitude given.
G - general: location known to within a 5 mile radius of the latitude and longitude given.

SIZE (acres): Approximate acres occupied by the rare species or significant ecological community at this location.

SCIENTIFIC NAME: Scientific name of the occurrence of a rare species or significant ecological community.

COMMON NAME: Common name of the occurrence of a rare species or significant ecological community.

ELEMENT TYPE: Type of element (i.e. plant, animal, significant ecological community, other, etc.)

LAST SEEN: Year rare species or significant ecological community last observed extant at this location.

EO RANK: Comparative evaluation summarizing the quality, condition, viability and defensibility of this occurrence. Use with LAST SEEN and PRECISI

A-E = Extant: A=excellent, B=good, C=marginal, D=poor, E=extant but with insufficient data to assign a rank of A - D.
F = Failed to find. Did not locate species, but habitat is still there and further field work is justified.
H = Historical. Historical occurrence without any recent field information.
X = Extirpated. Field/other data indicates element/habitat is destroyed and the element no longer exists at this location.
? = Unknown.
Blank = Not assigned.

NEW YORK STATE STATUS (animals): Categories of Endangered and Threatened species are defined in New York State Environmental Conservati Law section 11-0535. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.

E = Endangered Species: any species which meet one of the following criteria:
1) Any native species in imminent danger of extirpation or extinction in New York.
2) Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11

T = Threatened Species: any species which meet one of the following criteria:
1) Any native species likely to become an endangered species within the foreseeable future in NY.
2) Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of the Federal Regulations 50 CFR 17.11.

SC = Special Concern Species: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for the continued welfare in New York. Unlike the first two categories, species of special concern receive no additional legal protection under Environments Conservation Law section 11-0535 (Endangered and Threatened Species).

P = Protected Wildlife (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife

U = Unprotected (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit; however a license t take may be required.

G = Game (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.

NEW YORK STATE STATUS (plants): The following categories are defined in regulation 6NYCRR part 193.3 and apply to NYS Environmental Conservation Law section 9-1503.

(blank) = no state status

E = Endangered Species: listed species are those with:
1) 5 or fewer extant sites, or
2) fewer than 1,000 individuals, or
3) restricted to fewer than 4 U.S.G.S. 7 ½ minute topographical maps, or
4) species listed as endangered by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

T = Threatened: listed species are those with:
1) 6 to fewer than 20 extant sites, or
2) 1,000 to fewer than 3,000 individuals, or
3) restricted to not less than 4 or more than 7 U.S.G.S. 7 and ½ minute topographical maps, or
4) listed as threatened by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

R = Rare: listed species have:
1) 20 to 35 extant sites, or
2) 3,000 to 5,000 individuals statewide.

U = Unprotected

V = Exploitably vulnerable: listed species are likely to become threatened in the near future throughout all or a significant portion of their range within the state if causal factors continue unchecked.

NEW YORK STATE STATUS (communities): At this time there are no categories defined for communities.

continued on next page

FEDERAL STATUS (plants and animals): The categories of federal status are defined by the United States Department of the Interior as part of Endangered Species Act (see Code of Federal Regulations 50 CFR 17). The species listed under this law are enumerated in the Federal Register vol. 5 pp. 39526 - 39527.

(blank) = No Federal Endangered Species Act status.
LE = The taxon is formally listed as endangered.
LT = The taxon is formally listed as threatened.
LELT = The taxon is formally listed as endangered in part of its range and threatened in other parts.
PE = The taxon is proposed as endangered.
PT = The taxon is proposed as threatened.
C1 = Candidate, category 1 - There is sufficient information to list the taxon as endangered or threatened.
C2 = Candidate, category 2 - The taxon may be appropriate for listing but more data are needed.
3A = The taxon considered extinct by the U. S. Fish and Wildlife Service (USFWS).
3B = The taxon is no longer considered taxonomically distinct by the USFWS and thus is not appropriate for listing.
3C = The taxon has been shown to be more abundant, widespread, or better protected than previously thought and therefore not in need of official
* = The taxon is possibly extinct.
** = The taxon is thought to be extinct in the wild but extant in cultivation.
Additional codes:
(C2NL) = Heritage code indicating that the taxon is a candidate in some areas, not listed in other areas.
(E/SA) = Heritage code indicating that the taxon is endangered because of similarity of appearance to other endangered species or subspecies.

FEDERAL STATUS (ecological communities): At this time there are no federal status categories defined for ecological communities.

GLOBAL AND STATE RANKS (animals, plants, ecological communities and others): Each element has a global and state rank as determined by Natural Heritage Program. These ranks carry no legal weight. The global rank reflects the rarity of the element throughout the world and the state ran the rarity within New York State. Infraspecific taxa are also assigned a taxon rank to reflect the infraspecific taxon's rank throughout the world.

GLOBAL RANK:

G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or very few remaining acres, or miles of stream) or especially vu to extinction because of some factor of its biology.
G2 = Imperiled globally because of rarity (6 - 20 occurrences, or few remaining acres, or miles of stream) or very vulnerable to extinction throughout because of other factors.
G3 = Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted rang physiographic region), or vulnerable to extinction throughout its range because of other factors.
G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
GH = Historically known, with the expectation that it might be rediscovered.
GX = Species believed to be extinct.
GU = Status unknown.

STATE RANK:

S1 = Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vul in New York State.
S2 = Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York
S3 = Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.
S4 = Apparently secure in New York State.
S5 = Demonstrably secure in New York State.
SH = Historically known from New York State, but not seen in the past 15 years.
SX = Apparently extirpated from New York State.
SA = Accidental or casual in the state.
SE = Exotic, not native to New York State.
SP = Element potentially occurs in the state but there are no occurrences reported.
SR = Reported in the state but without persuasive documentation.
SU = Status unknown.
TAXON (T) RANK: The T-ranks (T1 - T5) are defined the same way the Global ranks (G1 - G5) are but the T-rank only refers to the rarity of the subsp taxon of the species as a whole.
T1 through T5 = See Global Rank definitions above.
Q = Indicates a question exists whether or not the taxon is a good taxonomic entity.
? = Indicates a question exists about the rank.

OFFICE USE: Information for use by the Natural Heritage Program.

SIGNIFICANT HABITAT DATABASE REPORTS (Use of this database is slowly being discontinued as the data is integrated into Heritage databas

REPORT ID: Significant habitat file code.
NAME OF AREA: Site name where the significant habitat is located.
TYPE OF AREA: Type of significant habitat.
COUNTY/TOWN OR CITY: County and town where the significant habitat is located.
QUADRANGLE: Name of the USGS 7.5 minute topographic map where the significant habitat is located.
LATITUDE: Latitude coordinate (degrees, minutes, seconds) for the location of the significant habitat.
LONGITUDE: Longitude coordinate for the location of the significant habitat.

U.S. FISH & WILDLIFE SERVICE

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, NY 13045

U.S. Department of the Interior 1849•1999

June 15, 1999

JUN 18 1999
USGS USD

Ms. Sandra L. Collins
Senior Scientist
PBS&J
4201 North View Drive, Suite 302
Bowie, MD 20716

Dear Ms. Collins:

This responds to your letter of May 20, 1999, requesting information on the presence of Federally listed or proposed endangered or threatened species in the vicinity of the proposed public golf course at Ferry Point Park in the City of New York, Bronx County, New York.

The peregrine falcon (*Falco peregrinus*) is a Federally listed endangered species known to breed in the vicinity of the proposed project. This project's environmental documents should, therefore, include an evaluation of the potential direct, indirect, and cumulative effects of specific project-related activities on the peregrine falcon or its habitat, and include appropriate measures, if necessary, to protect this species and its habitat. When specific plans are identified, the plans and the results of the evaluation should be provided to this office to determine the need for further consultation pursuant to Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

Except for the peregrine falcon, and occasional transient individuals, no other Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of Federally listed and proposed endangered and threatened species in New York is enclosed for your information.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the Endangered Species Act. This response does not preclude additional U.S. Fish and Wildlife Service (Service) comments under the Fish and Wildlife Coordination Act or other legislation.

This species is also listed as endangered by the New York State Department of Environmental Conservation (State). Project plans and the results of the evaluation discussed above should be coordinated with both this office and with the State. The State contact for the peregrine falcon is Mr. Peter Nye, Endangered Species Unit, Wildlife Resources Center, Delmar, NY 12054-9767 (telephone: [518] 439-7635).

Federally listed endangered and threatened marine species may be found near the project area. These species are under the jurisdiction of the National Marine Fisheries Service. You should contact Mr. Stanley Gorski, Habitat and Protected Resources Division, Area Coordinator, National Marine Fisheries Service, James J. Howard Marine Sciences Laboratory, 74 Magruder Road, Highlands, NJ 07732, for additional information (telephone: [908] 872-3037).

For additional information on fish and wildlife resources or State-listed species, we suggest you contact:

New York State Department
of Environmental Conservation
Region 2
47-40 21st Street
Long Island City, NY 11101
(718) 482-4900

New York State Department
of Environmental Conservation
Wildlife Resources Center - Information Services
New York Natural Heritage Program
700 Troy-Schenectady Road
Latham, NY 12110-2400
(518) 783-3932

National Wetlands Inventory (NWI) maps may or may not be available for the project area. However, while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes. Copies of specific NWI maps can be obtained from:

Cornell Institute for Resource Information Systems
302 Rice Hall
Cornell University
Ithaca, NY 14853
(607) 255-4864

Work in certain waters and wetlands of the United States may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without stipulations, or recommend denial of the permit depending upon the potential adverse impacts on fish and wildlife resources associated with project implementation. The need for a Corps permit may be determined by contacting Mr. Joseph Seebode, Chief, Regulatory Branch, U.S. Army Corps of Engineers, 26 Federal Plaza, New York, NY 10278 (telephone: [212] 264-3996).

If you require additional information please contact Michael Stoll at (607) 753-9334.

Sincerely,

Mark W. Clough

ACTING FOR

David A. Stilwell
Acting Field Supervisor

Enclosure

cc: NYSDEC, Long Island City, NY (Environmental Permits)
NYSDEC, Latham, NY
NYSDEC, Delmar, NY (Attn: P. Nye)
NMFS, Highlands, NJ (Attn: S. Gorski)
NMFS, Milford, CT (Attn: M. Ludwig)
EPA, Div. of Environmental Planning & Protection, New York, NY
COE, New York, NY

# FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES IN NEW YORK

| Common Name | Scientific Name | Status | Distribution |
|---|---|---|---|
| FISHES | | | |
| Sturgeon, shortnose* | *Acipenser brevirostrum* | E | Hudson River & other Atlantic coastal rivers |
| REPTILES | | | |
| Turtle, bog | *Clemmys muhlenbergii* | T | Albany, Columbia, Dutchess, Genesee, Orange, Oswego, Putnam, Seneca, Ulster, Wayne, and Westchester Counties |
| Turtle, green* | *Chelonia mydas* | T | Oceanic summer visitor coastal waters |
| Turtle, hawksbill* | *Eretmochelys imbricata* | E | Oceanic summer visitor coastal waters |
| Turtle, leatherback* | *Dermochelys coriacea* | E | Oceanic summer resident coastal waters |
| Turtle, loggerhead* | *Caretta caretta* | T | Oceanic summer resident coastal waters |
| Turtle, Atlantic ridley* | *Lepidochelys kempii* | E | Oceanic summer resident coastal waters |
| BIRDS | | | |
| Eagle, bald | *Haliaeetus leucocephalus* | T | Entire state |
| Falcon, peregrine | *Falco peregrinus* | E | Entire state - re-establishment to former breeding range in progress |
| Plover, piping | *Charadrius melodus* | E<br>T | Great Lakes Watershed<br>Remainder of coastal New York |
| Tern, roseate | *Sterna dougallii dougallii* | E | Southeastern coastal portions of state |
| MAMMALS | | | |
| Bat, Indiana | *Myotis sodalis* | E | Entire state |
| Cougar, eastern | *Felis concolor couguar* | E | Entire state - probably extinct |
| Whale, blue* | *Balaenoptera musculus* | E | Oceanic |
| Whale, finback* | *Balaenoptera physalus* | E | Oceanic |
| Whale, humpback* | *Megaptera novaeangliae* | E | Oceanic |
| Whale, right* | *Eubalaena glacialis* | E | Oceanic |
| Whale, sei* | *Balaenoptera borealis* | E | Oceanic |
| Whale, sperm* | *Physeter catodon* | E | Oceanic |
| MOLLUSKS | | | |
| Snail, Chittenango ovate amber | *Succinea chittenangoensis* | T | Madison County |
| Mussel, dwarf wedge | *Alasmidonta heterodon* | E | Orange County - lower Neversink River |

* Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service.



Region 5 11/04/97 2 pp

**Attachment F: Turf Management**

## A. INTRODUCTION

The New York City Department of Parks and Recreation (DPR) has proposed to develop a public recreation facility, which includes a comprehensive golf facility, at the eastern portion of Ferry Point Park in the Bronx. The site is approximately 220 acres, and the golf facility will occupy approximately 195.5 acres. The site is at the north end of the Bronx-Whitestone Bridge and is mostly undeveloped and is underused. However, it is mapped parkland, and prime waterfront property with spectacular views of the Bronx-Whitestone Bridge, the Throgs Neck Bridge, the East River, and Manhattan.

The proposed public recreation facility includes a Jack Nicklaus-designed 18-hole golf course, a state-of-the-art Golden Bear Golf Center (including a driving range, chipping area, putting greens, etc.), a clubhouse building, boathouse grill restaurant, fine dining/banquet facility, waterfront park, community park, and maintenance building. Environmental & Turf Services Inc. (ETS) has been retained to develop a turf management program that has the goal of not significantly adversely affecting the environment (i.e., the turf chemicals will not negatively impact water quality and/or ecology), and a risk assessment whose results will be used to improve the management and/or the course design. Risk assessment is the process of carefully integrating turf chemical toxicity information with site-specific data relevant to exposure to potentially sensitive organisms. Specifically, the objectives of this study are as follows:

- Develop a state-of-the-art Integrated Golf Course Management Plan (IGCMP) for the golf course (see appendix to this attachment);
- Complete a risk assessment to evaluate the potential impacts of the proposed turf chemicals on surface water quality and the environment; and
- Use the results of the risk assessment to incorporate improvements into the management plan and/or the site design to protect water quality. This is the risk management phase. The submitted plans have the flexibility to include any of the future recommendations deriving from the risk assessment.

## B. INTEGRATED GOLF COURSE MANAGEMENT PLAN (IGCMP)

The appendix to this attachment contains the proposed IGCMP. The IGCMP is based on the latest principles of integrated pest management (IPM). Its basic philosophy can be expressed as follows: one minimizes the need for pesticides by growing turf quickly and keeping it healthy; the general focus is on controlling pests rather than eradicating them; and there are a wide range of techniques that can be applied to prevent and minimize pest damage. Following are some key illustrations of this holistic approach toward IPM and the judicious use of pesticides.

First, the IGCMP establishes pest infestation thresholds for application of mechanical, biological, cultural, and chemical methods of pest control (e.g., insecticides are not recommended for control of Japanese beetle grubs in fairways until their density equals or exceeds 8/square foot).

Second, much of the course area will be planted with bluegrass and turf-type fescues. This grass mix should reduce the need for fungicides and—to a more limited extent—insecticides and herbicides relative to many other possible turf varieties.

Third, proper use of fertilizers can reduce the use of pesticides. The nutrient potassium, for example, is used to strengthen the cell walls of the bentgrass in greens and tees, thereby potentially reducing the turf's susceptibility to disease, and the need for pesticides.

The IGCMP identified 46 weeds, 25 diseases, and 16 insect turf pests that are known to occur naturally in the New York/New Jersey metropolitan area. However, only 16 of these pests have been identified as "key" pests. Thirty-five pesticides have been identified for possible use against these pests during the first 5 years of golf course operation in a "worst case" scenario. Twenty-one pesticides will likely be needed sometime during the first 5 years if the proposed IPM program is adequately effective, and the actual number of pesticides used in any one year will likely be less than 12. These lists include several commercially available organic-based products. New organic products demonstrated to be safe and effective on cool season turfgrasses will be incorporated into the program as they become available.

## C. RISK ASSESSMENT AND MANAGEMENT

The risk assessment work is a three step process: the site visit and the gathering of relevant data; the evaluation of potential risks using conservative (protective) methods; and the identification of measures to be implemented if the analysis results reveal contaminants with the potential for significant adverse environmental effects. The plan is described in more detail below.

The site visit included observation of the existing drainage patterns and vegetation covers. Soil was sampled and analyzed for parameters relevant to pesticide and water retention. Other data were gathered and evaluated (e.g., intense rainstorm recurrence data and pesticide sorption properties). Lifetime drinking water Health Advisory Levels and Maximum Allowable Concentrations for aquatic organisms are also calculated during this phase.

The second step is the risk assessment. The procedure to be used is called the "dilution calculations" that have been successfully used in several other states including golf course projects in Pebble Beach, California and Fairfield, Connecticut. For the stormwater runoff risk assessment, the project area watershed will be divided into seven drainage basins (see Attachment I, "Infrastructure," Section 6.0, "Drainage"). The runoff curve number approach will be used to estimate runoff volumes following 2-year, 24-hour, and 10 year-return, 24- hour rain events (3.2 and 5 inches, respectively). Pesticide losses ranging from 0.5 percent to 5.0 percent will be "mixed" into the runoff drainage into the East River after passing through a number of best management practices (BMPs), including wet ponds and storm water detention facilities designed into the golf course. Potential impacts on aquatic organisms and the environment will be assessed.

The potential for pesticides to leach to the subsurface and discharge in interflow above the soil cap will also be assessed. The Attenuation Factor method will be used to estimate the fraction of pesticide lost below the root zone. This mass estimate will be "mixed" with the projected stormwater runoff to assess the overall potential for significant adverse impacts on the East River.

Risk management is the final phase. Any potential turf chemical impacts on environmental quality will be addressed by modifying the draft management plan, and/or the golf course design, as appropriate. The following protective measures/design improvements will be considered for incorporation into the site plan as appropriate. Such measures include:

- Turf Management. Concern about a limited number of pesticides may be addressed by using alternative pesticides and/or by restricting application methods or areas. Concerns about a larger number of pesticides may be addressed by the establishment of special management zones. Any turf management recommendations will be incorporated into the final IGCMP (see the section following this introduction).

- Civil Engineering/Drainage Plan. A comprehensive drainage plan is being developed with wet and dry detention to polish the quality of stormwater runoff before it reaches the East River. Additional areas of the course have also been designated (e.g., areas around the tee complexes) that can be planted with naturalized vegetation and that would receive stormwater runoff if the risk assessment indicates the need.

  If necessary, runoff collected in the numerous shallow drains throughout the course may also be pumped to certain detention ponds to ensure longer treatment. The overall expected average holding times in these areas is approximately 2 days. There are three ways this relatively long detention time can help improve runoff water quality before discharge to the East River. It removes sediments and the nitrogen, phosphorus, and pesticides bound to the sediments, and provides a medium to encourage microbial degradation of pesticides.

  Other options being considered are construction of grassy swales and percolation areas. The latter are locations that would contain a greens-type mix with a vegetated surface. Runoff would be conducted onto the surface. ❖

# Ferry Point Park

# Integrated Golf Course Management Plan

Prepared By:

Environmental & Turf Services, Inc.
11141 Georgia Ave., Suite 208
Wheaton, MD 20902

June 20, 1999
Revised July 23, 1999

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Executive Summary

## i.1 Tasks and Focus

This document, the Ferry Point Park Integrated Golf Course Management Plan (IGCMP), is a guide for the maintenance and operation of the Ferry Point Park Golf Course, an 18-hole course proposed as part of a mixed recreational development on prime waterfront property in the Borough of the Bronx.

The IGCMP represents a commitment by Ferry Point Partners, its professional golf course staff and its owners, to follow Best Management Practices in order to maintain an environmentally sensitive golf course, with a focus on preserving water quality. It is a guide for maintenance and operations to be followed during "grow-in" and long-term maintenance of the golf course. The IGCMP should be utilized in concurrence with other documents regarding the design, grading and construction of the golf course and appropriate practices for reducing potential environmental impacts.

## i.2 Best Management Practices and Integrated Pest Management

The Best Management Practices (BMPs) and Integrated Pest Management (IPM) strategies described have been shown to greatly reduce the use of fertilizers and pesticides. The primary means of controlling pests is biological, through growing turf under conditions that allow it to withstand pest attacks without chemical intervention. Chemicals are employed only if other cultural practices have failed to provide adequate controls, and then in minimal amounts. Some fungus diseases are ubiquitous and form the exception, requiring routine seasonal treatment irrespective of damage.

The Best Management Practices and Integrated Pest Management strategies described herein have been used successfully by more than 70 golf courses in varying climates around the world to reduce chemical use. A number of strategies contribute to this result:

- Selection of appropriate grasses to create a healthy sod capable of combating most pest infestations through biological means without chemical intervention. The grass types proposed in this report offer excellent adaptability and hardiness and emulate existing vegetation currently found on the site. The turf-type fine fescues offer excellent flexibility for managing turfgrass pests and will perform extremely well under the climate encountered on coastal New York;

- Establishment of tolerance levels for most pests, as opposed to eradication. No action is taken unless an infestation exceeds a stipulated threshold;

- Reliance on environmental and mechanical controls. For example, avoiding aerifier holes during moth egg-laying season can deny entry to armyworm *(Pseudaletia unipuncta)* and black cutworm *(Agrotis ipsilon)* larvae. Avoidance of phosphorus and potassium deficiencies can prevent or minimize the occurrence of take-all patch *(Gaeumannomyces graminis)* fungus disease;

- Understanding pest life cycles so that chemicals are applied when they will have maximum efficacy with minimal applications;

- Spot application of chemicals only as necessary;

- Installation of computerized sprinkler systems managed to replace water only as it evaporates or is absorbed by plants. This is the single most important strategy for reducing water consumption and eliminating surface run-off and leaching of chemicals into groundwater flows, while preventing fungus infections associated with damp conditions. In practice, 80% efficiency in matching evapotranspiration is achievable with advanced irrigation systems.

- Reduction of turf areas requiring a high level of maintenance. The irrigated turfgrass areas in this IGCMP consist of 47 acres of greens, tees and fairways, 11 acres of lakes where water levels will need to be maintained, and 71.3 acres of roughs that will receive irrigation primarily during the grow-in period.

The IGCMP for Ferry Point Park Golf Course voluntarily goes beyond traditional regulatory compliance levels. The New York State Cooperative Extension Service and the New York State Department of Agriculture will be consulted periodically about biological, parasitic or predator controls that could further reduce the use of chemical treatment.

On the strength of these and many other BMPs, the proposed Ferry Point Park Golf Course, even with maximum anticipated chemical usage (the "worst case scenario"), is not expected to have a significant adverse impact on groundwater or surface water.

## i.3 The Environmental Principles for Golf Courses in the United States

The IGCMP describes a set of voluntary principles that seek to produce environmental excellence in golf course planning and siting, design, construction, maintenance and facility operations. This document recognizes that both the principles and guidelines deliver solid environmental and sustainable ecological approaches for the golf course. The guidelines assume the project will go beyond traditional regulatory compliance. Most significantly, the principles promote environmentally sound golf courses as quality golf courses.

The project agrees to abide by and implement the recommendations contained within this IGCMP. The owners are committed to following the principles attached because of the project's goals of maintaining environmental stewardship and quality. Ultimately, this will result in a much improved landscape, more public recreational opportunities, an estimated 345 permanent jobs, and revenues for the Borough of the Bronx .

## i.4 Turf Management

The IGCMP describes how IPM will be used during the grow-in, development, and management periods of the golf course. Existing golf course superintendents were queried about fertilizer and irrigation practices and pest-related problems relative to the differing grass types and micro-climates that exist in and near coastal New York. ETS has identified the key pests and/or specific turf related diseases, weeds, and insects that will occur naturally. The IGCMP identifies 46 weeds, 25 diseases, and

16 insect turf pests that are known to occur in the New York/New Jersey metropolitan area. Seventeen of these are identified as key pests (seven weeds, six diseases, and four insects). Thirty-five pesticides have been identified for possible use against these 87 pests in the first five years of golf course operation in a worst case pest infestation scenario but only 21 pesticides may be needed if the IPM program is reasonably effective. We expect these pests to be the more significant issues facing the project during the early stages of development and we have developed a more likely use scenario of turfgrass chemicals illustrated on Table 29 in section V of this attachment.

## i.5 Pesticide Spill and Response Plan

In the event that a minor pesticide spill or leak resulting from the hoses or nozzles of the turfgrass sprayer is discovered, the equipment will cease to operate immediately. All safety containment valves will be closed and the emergency spill prevention materials (absorbent cloth designed to capture liquid materials) will be utilized to absorb spilled concentrations of pesticides or fertilizers that remain on or near the turfgrass sprayer. In the event that a leak has been discovered within the sprayer or tank itself, an auxiliary tank will be used as a transfer station to collect the remaining concentrations of chemical or fertilizer. For all areas outside of the buffer zones, the amount of spilled material will be allowed to drain in the crown and thatch layers of turfgrass. For those areas inside sensitive zones, should such a spill occur, the golf course staff will apply activated charcoal and detoxifying absorbent materials to neutralize and stabilize the spill.

A written discharge response plan will be part of the training provided to each employee at the golf course. The plan will conform to all applicable sections as defined by law. A copy of this plan will be readily available. The Police and Fire Departments will be notified that this document has been completed. The local Fire Department will be provided with a current copy of all chemicals and pesticides stored in the pesticide storage area. The Material Safety Data Sheets (MSDS) will be provided for each compound in the storage area. In the case of minimal discharge, employees will have the necessary protective equipment and clothing readily available. All hazardous materials will be disposed of through a licensed hazardous waste disposal firm.

## i.6 Maintenance Facility

The maintenance and storage facility will conform to the appropriate City building codes for bulk storage and hazardous waste. The Fire Department will be supplied with a copy of the floorplan and will be provided a copy of the access security code. The facility will be landscaped and designed to conform and blend with the rest of the project. An all-weather access road shall serve the maintenance building and provide emergency and service vehicle access.

In addition to storing golf course equipment, maintenance facilities are designed, developed, and installed as comprehensive integrated systems offering safety in the storage and handling of fertilizer and pesticide materials. Modern golf course facilities prove themselves in several ways, such as increased employee safety, reduced insurance rate growth, eliminated or significantly reduced costs and liability of both storage and disposal of waste residue, and ease and affordability of maintenance. The facility's design will have a significant impact on efficiency, annual maintenance spending and, ultimately, the quality of the golf course.

## i.7 Water Replacement Strategy

Increased irrigation will be necessary during the germination period and to successfully assist with quality control during the reestablishment process. After the establishment period, the proposed grassing plan will allow for a reasonable reduction in supplemental irrigation and provide excellent playing surfaces even in areas grown under droughty conditions. The maximum usage or peak water demand during the grow-in period is estimated at 612,400 gallons/day (gpd). This use rate would only be achieved if all 18 holes are grown-in simultaneously. Once the turf is established, the maximum usage is estimated at 408,267 gpd. This number was derived using the methods that form the basis for Table 31. Irrigation water will be supplied by the New York City water system, as is the case with other New York City Parks Department facilities.

## i.8 Summary

The IGCMP was developed based on the philosophy that the growth and maintenance of healthy turf will minimize the need for pesticides. The IGCMP has been developed for the grow-in, development and management period of the golf course, and offers a maintenance and conservation program suitable for protecting the environmental resources of the project.

It is intended to fulfill several functions:

- Adopt the principles of Golf & The Environment, Environmental Principles for Golf Courses (1996), the first product of a continuous dialogue among environmental and industry leaders managed by the Center for Resource Management, and Golf Course Superintendents' Association of America;

- Illustrate how Best Management Practices (BMPs) can be used during the design, construction and maintenance of the golf course;

- Restrict the planting of inappropriate species on the site and identify applicable Best Management Practices (BMP's) or source controls as Pre-design for Natural Resources Inventory and Evaluation. This is a source control for water quality enhancement through the use of Best Management Practices;

- Understand the differences between managing fertile soils with turf-type grasses and infertile soil complexes with graminoids, native plants and woody species. Identify where and how landscape design elements of the project may be supplemented, modified and/or better-focused to increase wildlife and ecological benefits of the overall project;

- Detail the management techniques and frequency of maintenance required for each of the proposed turfgrass and landscape types;

- Demonstrate a detailed plan for operating and maintaining the Ferry Point Park Golf Course in a safe, effective, and environmentally responsible manner;

- Use natural resources efficiently. Offer site-specific recommendations to the golf course on methods of designing and growing-in the golf course to reduce the need for pesticides and to minimize the impacts of management;

- Present alternative methods using Best Management Practices (BMPs) that will customize the IGCMP near special management zones, thus, reducing traditional forms of turfgrass chemical control;

- Provide a source of information to the golf course superintendent regarding current pest prevention controls and establish base line pest thresholds in accordance with IPM principles;

- Educate the reader on the basic concepts of Integrated Pest Management (IPM) and explain how these concepts will be put into practice within the scope of an Integrated Golf Course Management Plan (IGCMP); and

- Document outstanding development and management practices. Promote the understanding that environmentally sound golf courses are quality golf courses.

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Chapter I

Project Overview and Site Description

## 1.1 Project Overview

The objective of the Ferry Point Park project is to transform an underutilized, potentially valuable parcel of property into a recreational development site for the residents of the Bronx Borough. The project proposes to rehabilitate a parcel of property along the East River which has reportedly been used as a sanitary landfill. Extreme caution is being utilized by the project development team to determine the potential hazards associated with the property and fill. Once the soil material is determined acceptable for building, the neglected site will receive a much needed face lift and become a world class public recreational urban park with a Jack Nicklaus design 18 hole golf course, state-of-the-art Golden Bear Golf Center driving range and teaching facility, and a white table cloth restaurant and catering facility, clubhouse, community waterfront park and community park.

This plan is designed to offer site-specific guidance to assist the golf course with a successful grow-in period and to provide sustainable long-term reductions in costs. Protocols are presented for managing existing, created and restored habitats. This document addresses potential risks to ground and surface water quality, and outlines feasible measures for reducing chemical use to levels which will not degrade water quality.

While aspects of the golf course design are conceptual pending final engineering design, the principles and obligations described in this IGCMP represent firm commitments. All final materials and procedures adopted, and final plans and construction drawings produced by the golf course architect and engineers will adhere to the principles presented herein.

This IGCMP adopts the principles from *Golf & The Environment, Environmental Principles for Golf Courses* (1996), the first product of a continuous dialogue among environmental and industry leaders (1995-present). *Golf and the Environment* is managed by the Center for Resource Management, and Golf Course Superintendents' Association of America.

## 1.2 Golf Course Description

The 18 hole golf course is being designed by Jack Nicklaus to accommodate players with varying skill levels. The site has striking views of the Whitestone and Throgs Neck bridges as well as the Manhattan skyline. In addition to architectural views, natural water and vegetation will be interspersed with the golf holes to produce a truly aesthetically pleasing experience for the players. The numerous views of Long Island Sound, the New York City skyline and natural habitats will be emphasized throughout the course in this challenging design. Vegetative buffers will be used to emphasize holes and provide a barrier to adjacent park uses.

Topography varies from low points along the East River and increases about 40 feet with gradual elevation changes. The par 72 course covers approximately 7000 yards from the championship tees and 5500 yards from the forward tees.

A site plan for the overall development is attached. This site plan shows irrigated turfgrass areas, and golf course amenities. Additional golf course details will be provided in the golf course routing plan figure.

## 1.3 Soils

On-site soil sampling was performed for the proposed project. For a more detailed discussion of site soil conditions, see Attachment G, "Hazardous Materials."

## 1.4 Water Use Issues

### 1.4.1 Water Supply and Storage Analysis

Increased irrigation will be necessary during the germination period and to successfully assist with quality control during the reestablishment process. After the establishment period, the proposed grassing plan will allow for a reasonable reduction in supplemental irrigation and provide excellent playing surfaces, even in areas grown under droughty conditions. The maximum usage or peak water demand during the grow-in period is estimated at 612,400 gallons/day (gpd). This use rate would only be achieved if all 18 holes are grown-in simultaneously. Once the turf is established, the maximum usage is estimated at 408,627 gpd. This number was derived using the methods that form the basis for Table 31.

### 1.4.2 Irritation System Specification and Capabilities

The golf course will install a computer controlled irrigation system to minimize over watering. The irrigation system will be a state-of-the-art (Toro® or RainBird® Maxi) linked to a DTN Weather Center Computer and Lightning Prediction System. The system will be engineered to water the entire golf course each night (unless raining) and to supply a minimum of 1" of water per week or as needed to meet turf demand.

The irrigation system will include an on-site weather station (in addition to remote wind, temperature and rain sensors) to track temperature, relative humidity, solar radiation, wind direction and speed, and precipitation. This data is read by the central computer, which computes local evapotranspiration and then adjusts the run time for each individually controlled sprinkler head to exactly match the evapotranspiration loss on a day-to-day basis. Soil moisture probes will be installed as needed to assure proper irrigation of various management areas.

The goal of computerized irrigation is to apply water at a rate which very closely matches evapotranspiration losses of the turf. By not adding water in excess of turf requirements, irrigation runoff or oversaturation and leaching can be avoided. In practice, 80% or higher efficiency in meeting this goal is achievable as opposed to 50% efficiency with conventional quick-couple systems.

The spacing of sprinklers will be designed to minimize surface runoff and avoid inadvertent drift. Field controls will be placed for maximum visibility. Valve-in-head sprinklers will be used with individual control wires linking each of the irrigation heads back to the field controllers. Heads on fairways and roughs can be paired at the controller on an average of two heads per station. Green and tee sprinkler heads will be operated individually. Greens will be irrigated with full and/or part-circle sprinkler heads to allow the superintendent to irrigate in a more efficient manner. This reduces disease potential and results in lower usage of pesticides. Quick coupler snap valves will be installed near native plant restoration areas to provide supplemental water during grow-in.

Irrigation will be limited to tees, greens, fairways, a portion of the driving range, and the primary roughs immediately adjacent to the fairways. Total irrigated area involves 47 acres of managed turf and 71.3 acres of rough. The final estimated water demand for the proposed irrigation uses is 45 million gallons per year.

### 1.4.3 Treated Wastewater

City water will be used for irrigation of the golf course. No reclaimed water will be used for irrigation.

## 1.5 Vegetation and Habitat

Native plant communities including riparian habitat and wetlands will be catalogued and mapped by regional biologists. No records or evidence of endangered, threatened, or sensitive plants have been found in the disturbed areas of the golf course as of this date.

Care has been taken in the design of the golf course to protect wetlands with significant setbacks. The golf course was arranged to improve upon the existing landscape, with significant views of the river, architectural structures and skyline. Wherever possible, the design will leave existing plant communities and vegetation in place and create roughs and buffers that require little or no supplemental water or fertilizer, and which are attractive in unmown conditions.

## 1.6 Wildlife

Designated wildlife habitats will not be altered by construction or normal maintenance. In addition, plant species have been chosen for the restored areas that will provide wildlife benefits such as cover or edible fruits and berries, and that create natural roosting and feeding grounds for birds outside the developed areas.

In order to assist the golf course maintenance department in addressing potential impacts from residential geese populations, we recommend considering the benefits of utilizing border collies to minimize damage that may result from uncontrolled populations. Border collies have proven to be the most efficient way in deterring geese without harm from grazing on the golf course.

## 1.7 Mitigation of Impacts During Construction

Ferry Point Park Golf Course will implement the following provisions prior to and during construction of the golf course:

- Install protective fencing and define areas of existing vegetation that should not be disturbed;
- Establish designated sediment/erosion control infiltration areas to protect surface water features (see drainage plan attached);
- Install temporary seeding or matting, silt fencing, hay bales, and filter fabric as necessary for erosion and sediment control until permanent vegetation is complete;
- Establish shoulders to direct surface runoff into the existing soils and undisturbed portions of the secondary roughs;
- Install fencing and silt barriers (filter fabric or straw bales) to identify construction circulation corridors through otherwise undisturbed areas within the golf course;
- Ensure that contractors comply with regulations and any special requirements outlined in the Final Development Plan;
- Stabilize material not used as fill for topsoil, seeding and sodding;
- Designate construction equipment and employee access entrance(s);
- Designate staging areas that minimally disturb existing vegetation for: employee parking, equipment parking, maintenance and fuel compound, storage of construction materials, (sand, gravel, irrigation materials, etc.), and construction management offices and restrooms; and
- Provide list of equipment to be used on site throughout construction.

## 1.8 Sediment and Erosion Controls

Sediment and erosion control systems will be described as part of the overall application. These drainage safeguards or biofilters are designed to protect water quality and will be engineered as part of a comprehensive erosion control plan. They are easily implemented, affordable and can provide effective filtration for drainage or leachate. Many of the recommendations by the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), can be adapted for turfgrass use (Bottcher and Baldwin, 1986). The NRCS defines these areas within the following categories:

Wet Biofilters:

*Regulated runoff impoundment* - Detention with associated filtration through plant material within the basin prior to discharge. This is used to reduce runoff quantity and nutrient and pesticide discharge.

Infiltration Adsorption Areas:

*Land Absorption Areas* - An adequate land absorption area is provided for drainage or runoff of turf and impervious surfaces so that soil and plants absorb nutrients. This is part of the drainage plan, contour plan and water quality protection strategy attached with this IGCMP.

*Subsurface Drainage* - Infiltrated surface water, primarily from greens, will be filtered through existing soils and vegetative material.

Dry Biofilters:

*Supplemental Buffer Planting Area* - Planting vegetation to stabilize the soil and reduce erosion and runoff.

*Grassed Outlets* - A natural or constructed outlet is maintained with vegetative cover in order to prevent soil erosion and filter nutrients. Dry ponds and golf course fairways serve in this capacity.

If runoff occurs, it will be directed away from sensitive areas (the East River, shallow groundwater areas, wetlands, etc.) and into areas where infiltration can occur. The golf course drainage will optimize the removal of runoff from the playing surfaces while not causing a drainage problem on hydrologically connected areas. Slopes will be maintained within an average of 3 to 6 percent to allow the golf course to be playable while maintaining positive drainage.

## 1.9 Drainage

Drainage and Routing Plan maps will be used to detail specific golf course construction and grading documents for the drainage management plan. The drainage management plan will include the topsoil management plan, temporary sediment and erosion control plans, site specific drainage plan typicals, cut and fill plans, and supplemental lake construction details.

## 1.10 Water Features

During the construction phase and as part of the golf course design, Ferry Point Park Golf Course will incorporate approximately 11 acres of lakes and water features into the course layout. Views of Long Island Sound and the city sky-line will be interspersed with lakes and vegetation. A public waterfront park will be developed along the East River frontage and viewable from different areas of the course (Ferry Point Park Partners, 1997).

## 1.11 Golf Course Design

The Ferry Point Park Golf Course and Driving Range will be designed by Jack Nicklaus. The golf course elevation varies from 10 feet above sea level along the East River to 40 feet above sea level at the interior of the site. The 18 hole, par 72 course will offer both accessible golf to novice players and a challenging course for more advanced players. It has been designed to test the skill of the player while

providing stunning views of the architectural structures in the area and the natural beauty of Long Island Sound.

## 1.12 Duration of Project

The Ferry Point Park Golf Course is expected to be built over approximately 30 months in conjunction with the waterfront park, restaurant and other facilities associated with the overall project.

Chapter II

Best Management Practices and Integrated Pest Management

The Integrated Pest Management Strategy was developed by Environmental & Turf Services, Inc. It includes specific tolerance levels for each pest and specific remedies, including types and quantities of all chemical and other mitigation measures to be taken.

Some aspects of the Best Management Practices followed at Ferry Point Park Golf Course and the Integrated Pest Management strategies described in this document may change over time as improved management strategies are developed and new chemical products become available with lower toxicity, greater specificity, less persistence or less mobility. In these cases, the philosophy and goals described in this chapter will govern the adoption of the new methods. No changes will be made in the chemicals presented unless approved by the appropriate state and local agencies.

## 2.1 Legal Requirement of Best Management Practices

In the late 1970's and early 1980's, the U.S. Environmental Protection Agency (EPA) began to recognize the impacts of non-point source pollution on environmental quality. Congress responded by enacting legislation that required implementation of Best Management Practices (BMPs) by States and specific industries throughout the country. As the resulting Clean Water Act (CWA) regulations evolved, the EPA established a set of processes or procedures intended to better address non-point sources of pollution. Non-point source (NPS) pollution was not defined within the CWA; the EPA subsequently adopted regulatory definitions of NPS pollution as contamination caused by diffuse sources that are not regulated as point sources. These sources are typically associated with agricultural or silvicultural activities, runoff from construction activities and/or urban runoff.

Non-point source pollution does not result from a discharge at a specific location such as a single pipe but generally arises from land runoff, precipitation, atmospheric deposition, or percolation (Environmental Law and Policy, 1994). The EPA Office of Water Regulations and Standards' list of primary NPS pollutants includes nutrients, chemical fertilizers and pesticides, man-enhanced sediments, suspended solids, bacteria and microbial pollutants, oil and salts from roadways, and runoff from industrial and commercial sites. Sedimentation and sediment transport of other pollutants has been documented by EPA as the main source of non-point source pollution in the continental United States (1987 Water Quality Act:Section 208 Revised).

The EPA originally required area-wide waste treatment plans (Sect. 208 CWA, 1972) which eventually resulted in the demand for the creation of Best Management Practices to address non-point source pollution. According to EPA's definition, a BMP can be a structural measure, a process-based measure, or a combination of the two. In CWA 319, the states were further required to include methods of identifying BMPs and the inclusion of proposed BMP measures to reduce NPS pollution in assessment reports.

This section added the requirement that BMPs address ground water impacts as well as surface water concerns. Since 1987, EPA has recognized BMPs as an integral component of pollution prevention plans regardless of the environmental media involved.

## 2.2 Integrated Pest Management (IPM)

Integrated Pest Management (IPM) is an interdisciplinary program that considers the merits of predominant pest control tactics and incorporates them into a single system to prevent unacceptable levels of pest damage. The control methods are designed not to eradicate pest populations, but to economically manage them while minimizing possible effects on people, property and the environment caused by the mitigation steps taken.

IPM is a decision-making process for pest prevention and control. It does not eliminate the use of pesticides; rather it limits their use to appropriate amounts and to occasions only after other measures of control have been considered and applied. IPM provides flexibility that enhances environmental and economic factors while reducing the reliance on chemical controls.

IPM focuses attention on conducting and monitoring soil nutrition, making it possible to apply specific fertilizers during periods of maximum plant uptake. Soils analyses and plant tissue sampling results are often compared with the irrigation water quality results, helping to minimize the potential for sodium build-up in soils. This practice helps to reduce reliance on synthetic fertilizers and establishes an effective program for choosing traditional and/or slow release organic fertilizer supplements with low burn or leaching potential.

The IPM system requires the monitoring of pest populations so that when pest pressure exceeds the action level, an appropriate treatment may be implemented. The treatment may be one of a variety of control measures and must be tailored for each tee, green, fairway and rough. This strategic method of pest management provides a form of risk reduction and environmental control.

IPM programs are innovative ways of decreasing management costs and obtaining a more balanced and effective means to control pests. They are secured by management combining new thought processes with existing turfgrass technology. An important point to remember is that an IPM program does not preclude pesticide use, but seeks to reduce dependency on pesticides. The objective of any IPM program is to reduce pest populations while keeping pesticide applications to a minimum (Erusha, 1995).

Effective IPM rests on four basic principles:

- Prevention seeks to keep pests from entering the crops in the first place, thus stopping the problems before they arise;
- Suppression attempts to reduce pests below the level at which they would be economically damaging;
- Tolerance strives to accept certain pests whose presence, however minimal, may prove beneficial; and
- Resistance stresses the effort to develop healthy, vigorous strains of crops that will be resistant to certain pests.

## 2.3 Formation of an IPM Business Plan for Ferry Point Park Golf Course

The golf course offers significant opportunities for managing various plant communities and will feature low maintenance and non-invasive turf-type grasses. The IGCMP has been developed to assist Ferry Point in managing the golf course in an environmentally responsible way. The plan establishes management programs for the finely managed turfgrass and outlines the qualities necessary for managing the riparian environments of the East River. The Golf Course Superintendent and professional staff will be provided with the following resources:

- Expertise to make informed choices for managing and enhancing the vegetative buffers with native plants, and written BMPs that ensure wetland preservation and reduction of river bank erosion;
- Access to consultants, including permaculturist and native plant specialists, who will assist with the IPM program and maximize the results during the grow-in period;
- Availability of local ecologists to help make informed choices concerning native plants and opportunities for wetland creation and riparian enhancement;
- Proper equipment and diagnostic tools for pest identification; and
- Sufficient staff time to consistently monitor each management unit (tee, green, fairway and rough).

## 2.4 Field Monitoring and Control Systems

Field monitoring systems will provide the basis for developing thresholds and determining if action will be necessary to control a pest. The monitoring system should be simple, accurate and part of the daily regimen for turfgrass management, requiring no more than two hours per day. Each member of the monitoring team must thoroughly understand the potential pest species, including its phenology or life cycle.

Before any organism can be identified as a pest, an understanding is necessary of the role that beneficial organisms play. For example, a secondary pathogen may be a pest under certain conditions but might also provide a beneficial role in other turfgrass situations. Examples include *anthracnose-Colletotrichum graminicola* and dollar spot- *Scierotinia homoeocarpa* fungus which may help to eliminate the grass pest *Poa annua* in Kentucky bluegrass turf, and the beneficial microscopic nematode *Steinernema carpocapsae* which attacks turfgrass larval insects.

The importance of the pest will be noted on a scouting form and include the biological, cultural, environmental and physical factors that affect the presence of the species. This documentation will aid in identifying areas prone to repeated outbreaks. For example, an excellent time to observe mycelium is prior to poling the dew from the playing surfaces. The visible detection of sclerotia is a good indication of the potential movement of the pathogen into the host biotic tissue.

Salt content, pH and nutrient levels must also be monitored and properly managed. Healthy turf can resist, outgrow and recover from some pest and disease pressures. For this reason, the observation team will

note any visual reduction in turfgrass quality. The information obtained by thorough turfgrass surface monitoring will provide site-specific history and quantify levels for disease, insect and weed occurrences.

Detailed point sampling (counting the number of insects) will measure the density of the pest population relative to the damage on the area of turfgrass. This information will be used to fine tune the pre-determined threshold action levels for each management unit such as tees or greens (for pest thresholds, see Chapter IV, Section 5).

Because pest presence is so weather dependent, observation of pest populations for several years is necessary to develop a useful history of pest occurrences. It is expected to require at least three years to develop a comprehensive base-line of pest occurrence and thresholds of allowable pest damage. This site specific data base will be correlated with accumulated weather data to create a customized predictive planning tool. To assist the golf course superintendent in developing pest management strategies, the golf course will call upon regional and national turfgrass specialists in Integrated Pest Management as necessary, including the offices of the New York State Cooperative Extension Service and the New York State Department of Agriculture.

## 2.5 The Role of the Golf Course Superintendent

The Golf Course Superintendent has overall responsibility for implementing the IPM and BMP plan developed for Ferry Point Park Golf Course. He or she will see that a step-by-step plan is followed for measuring infestations and applying the most reasonable means to deal with potential pests.

The Golf Course Superintendents Association of America (GCSAA) was founded to professionally prepare future generations of golf course superintendents. The organization has assumed an environmental leadership role by offering Environmental Management continuing education programs. Superintendents who successfully complete the study requirements in a specialization receive a certificate from GCSAA. Ferry Point Park Golf Course will require the golf course superintendent to achieve GCSAA certification and focus on continuing education with IPM standards. Fewer than 25% of all active GCSAA members achieve certification and this requirement is intended to assure that Ferry Point's golf course superintendent is among the top ranked professionals in the field.

The Golf Course Superintendent will be assisted by qualified professional staff as required to maintain the course and equipment. Those who handle chemicals will obtain all certifications required by state or federal regulations. Collectively the Superintendent and staff will be responsible for:

- Definition of thresholds and appropriate responses for each management unit such as greens, tees, fairways, roughs and landscaped areas;
- Information gathering for both reporting purposes and refinement of future treatment regimes;
- Monitoring;
- Record keeping; and
- Treatment evaluation.

## Chapter III

## Turf Management and Non-Turf Areas

Integrated Pest Management starts with preparation of the golf course soils and the selection of grass cultivars optimized for the site. The growth of turf that is disease and pest resistant requires proper seeding and maintenance during the critical grow-in period, and an on-going program of soil testing and plant nutrition designed to meet the minimum needs of the turf while avoiding excessive or ill-timed applications of chemicals that would promote leaching into the water table.

### 3.1 Soils

Soil composition is the starting point for IPM at Ferry Point. Properly structured soil supports healthy turf that can crowd out undesired weeds during grow-in and fend off pest attacks with minimal chemical intervention. Soil composition also greatly influences the risks of ground water contamination from the transport of nutrients and/or pesticides.

Soils are comprised of a wide variety of mineral and organic complexes. Organics derived from decomposition of plant and animal matter are generally classified as humic and fulvic acids, and humin, based on their water solubility in terms of pH (MacCarthy et al., 1990). Both the organic matter and mineral complexes in soils function in cation exchange (CEC), pH buffering, and water retention. Though the organic component seldom is greater than 6% by dry weight of the soil, it contributes the most to each of these functions. A typical mineral fraction will have a CEC of 0.05 to 0.3 mol $kg^{1}$ whereas the organic component will range from 1 to 2 mol $kg^{1}$, depending on the pH buffering.

These and other characteristics contribute to the benefits of organic matter in soils by providing slow-release sources of N, P, and K useful to plants and organisms, as well as buffering soil pH. Microbial activity and heat retention are improved with increasing levels of organic matter compounds. These benefits combine to create healthy root development through improved nutrient availability.

Water quality is enhanced by organics in soils which provide a mechanism of binding, water retention and microbial degradation. These characteristics minimize the risk of leaching (Stevenson and He, 1990). Research also supports the critical role of ambient humidity on the fate of organic pollutants (Chiou, 1990).

### 3.2 Turfgrass Selection

Greens, tees, and fairways are planted with grasses that meet the requirements of the game and that also lend themselves to being managed in an environmentally sensitive manner. These playing surfaces require a high level of maintenance because of the need for the turfgrass to resist and recover from damage incurred during play and from close and frequent mowing. It is important to establish appropriate turfgrass for each playing surface (greens, tees, fairways, roughs).

The following criteria were used for deciding the appropriate turfgrass species for Ferry Point Park Golf Course:

- Climatological and soil conditions of the site
- Desirability for golf in the playing & environmental setting
- Drought tolerance
- Resistance to disease and insects
- Resistance to annual grasses and weeds
- Establishment in sunny and shady environments
- Winter recovery and tolerance to snowmold conditions
- Compatibility with other grasses including forbs and sedges
- Irrigation water quality
- Availability of seed that is clean of harmful pests and grown in accordance with good turf growing practices
- Total dissolvable salts (TDS)
- Tolerance to high salt conditions

### 3.2.1. Turfgrass Options and Characteristics

The golf course will be seeded with the Princeville and PennLinks bentgrass on tees and greens. Bentgrass was chosen as the most resistant to disease, insects and mites. Fairways will consist of a mix of fescues and bluegrass. The turf-types depicted in this report will allow the playing surfaces of the golf course to be managed with programs designed to limit cultivar segregation and reduce the potential for non-natives to become invasive. We believe the turf-types chosen and the open space buffers provided by the primary and secondary turf-types will protect these environments.

Bentgrass (*Agrostis L.)* includes about 125 species, five of which are used as turfgrasses, including creeping bentgrass (*Agrostis palustris, A. stolonifera*), colonial bentgrass (*Agrostis capillaris*), dryland bentgrass (*Agrostis castellana*), velvet bentgrass (*Agrostis canina*), and Redtop (*Agrostis alba, A. gigantea*). All of these are used extensively in turfgrass with the exception of Redtop (Turgeon, 1991). Table 1 describes four potential varieties and the differences that exist with each turf-type listed. It is the intent of Ferry Point Park Golf Course to use the most highly advanced state-of-the-art grass types available and to establish these surfaces with certified seed only. The project will continue to monitor results of the nationwide testing program (NTEP) for turfgrass and will choose the most highly advanced turf-types for establishment and grow-in, including nursery sod production.

Table 1. Characteristics of Bentgrass Turfgrass

| TURFGRASS SPECIES | OPTIMAL MOWING HEIGHTS | WEAR TOLERANCE | CHARACTERISTICS |
|---|---|---|---|
| Creeping bentgrass | 1/8" to ½"<br><br>New cultivars are more upright and require less nitrogen fertilizer.<br><br>Best height for fairways is between 7/16" to 9/16". | Excellent<br><br>May be used as a monostand or blended.<br><br>New varieties are extremely aggressive against *Poa annua*. | Medium to dark green<br><br>Excellent playing characteristics and recovery potential. Responds quickly to cultural practices. |
| Colonial bentgrass<br><br>Introduced from Europe. Highland developed in US. | 0.3" to 0.8"<br><br>Tolerates close mowing heights.<br><br>Similar environmental adaptation as creeping red fescue. | Adapts well in temperate-oceanic climates. | Dark bluish color.<br><br>Adapts to infertile soils and drought conditions. |
| Velvet bentgrass<br><br>Developed in Rhode Island | 0.2"to 0.4"<br><br>Forms very dense turfgrass but high cultural maintenance. | Restricted to temperate-oceanic climates. | High maintenance, limited availability. |
| Redtop | 1.5" to 2"<br><br>Coarse-textured, may be used as a nurse crop. | Does not respond to fertilizer or irrigation practices. | Found in grasslands. |

The re-vegetation of the primary and secondary roughs using non-native fine-leafed fescues are ideally suited on sandy soils and areas grown under droughty conditions. During summer drought, the fine-leafed fescues, even in dormancy, provide an excellent lie for golf balls. Both chewings fescue and red fescue perform best under droughty, sandy soil conditions with minimal nitrogen fertilization levels (Beard, 1982). Most turfgrass species evolved and were introduced from the cool-humid areas around the North Sea in Eurasia. These species include the bentgrass, fescue, bluegrass and orchard grass (Hanson & Juska, 1969). Turfgrass species, like all living things, respond to the environment, each species having a definite tolerance limit for environmental factors. It is climate that largely determines whether a turf species is suitable to the site conditions, but soil factors within a given climatic zone determine the extent of adaptation for specific turfgrass (Ward, 1969). A substantial amount of turfgrass is grown on land that is subject to reconstruction, using soils not native to the site, recycled wastes, or other soil substitutes.

Kentucky Blue and Fescue Turfgrass

Kentucky bluegrass (*Poa pratensis L.)* is a cool-season turfgrass with excellent recovery and wear qualities suitable for climatic conditions along the New York shore. Kentucky bluegrass provides very good pest resistance, contains performance standards that work well under different management programs such as the round management proposed for Ferry Point Park.

The most important characteristic of Kentucky bluegrass is that it produces rhizomes (underground creeping stems). The rhizomes produce a tightly knit sod that binds soil and creates sufficient crown surface area to recuperate from wear and droughty conditions. Thus, with limited thatch build up and proper mowing heights, Kentucky bluegrass will become more tolerant of cold winters and will outperform ryegrass and fescue. Prior to 1970, few Kentucky bluegrass cultivars were adapted to the close mowing height required on golf course fairways. More recently, a number of improved cultivars have been released which can be used in blends for best overall performance (Beard, 1982). Cultivars adapted to moderate cultural intensities include A-20, Adelphi, Baron, Bonnieblue, Cheri, Eclipse, Enmundi, Glade, Majestic, Parade, Rugby and Victa.

There are over 100 different species of fescue grasses. However, only six are commonly used as turfgrass. These are divided into two sub generic types based on leaf texture:

- The coarse fescue (including *Festuca arundinaceae*-tall fescue, *Festuca elatior or pratensis*-meadow fescue); and

- The fine fescue *(Festuca rubrea, trichophylla*-creeping red fescue and slender creeping fescue), (*Festuca rubra commutata*-chewings fescue and *Festuca ovina longifolia, Festuca ovina*-hard fescue and sheep fescue). (Turgeon, 1991).

Many of these low maintenance varieties contain turfgrass endophytes which provide resistance to surface feeding insects (sod webworm, cutworms) and have been linked to improved stress and disease tolerance. Once established these varieties tolerate minimal applications of nitrogen fertility. Fine fescue creates high-quality turf when maintained between 1"-2". Characteristics of Kentucky bluegrass and six fescue turfgrass cultivars are depicted in Table 2. Only three of the varieties are recommended and have potential use for the Ferry Point Park Golf Course: creeping red, chewings, and hard.

Tall fescue is a coarse textured, bunch-type species that has adapted to a wide range of soil and climatic conditions. Tall fescue forms a turf of low shoot density and does not blend well with other cool season grasses including red fescue. Poor quality seed may be contaminated with seed of other hay and pasture species, such as orchard and timothy, and ryegrass (Hanson, et. al., 1969). This fescue has a very aggressive nature that performs better at higher heights of cut and often spreads into areas that were not originally planned for seed. More recent studies have revealed that tall fescue contains the toxic funguses ergotamine and ergovaline. These studies have shown that fungus-infected tall fescue can cause sickness and low conception rates in livestock, rabbits and other small animals. Meadow fescue was used to some extent in pastures that were seeded with poor quality lawn seed. They have little value as a turfgrass. The grass grows satisfactorily on dry, sandy, gravelly or rocky soils. There are no varieties in commercial production. Tall fescue grows in a mat-like structure and does not produce the kind of vegetative structure required by small animals such as songbirds, rabbits, field mice, etc.

Table 2. Characteristics of Kentucky Bluegrass and Fescue Turfgrass

| KENTUCKY BLUEGRASS | OPTIMAL MOWING HEIGHTS | WEAR TOLERANCE | CHARACTERISTICS |
|---|---|---|---|
| pH of 5.0 or higher<br><br>Introduced from Europe during the Colonial Period | New cultivars 0.75 to 1.5"<br><br>Optimum: 1" or higher for most | Most adaptable cool-season turfgrass<br><br>Excellent wear and cold weather hardiness | Research continues to improve both hardiness and pest tolerance<br><br>Numerous cultivars for blending |
| **FESCUE SPECIES** | **OPTIMAL MOWING HEIGHTS** | **WEAR TOLERANCE** | **CHARACTERISTICS** |
| Creeping red pH: 5.5-6.5<br><br>Introduced from Europe during the Colonial Period | 1.5 to 2"<br><br>New cultivars have been sought to improve close mowing tolerances.<br><br>Strong creepers: Durlawn, Novarubra, Ruby<br><br>Weak creepers: Polar and Dawson | Low to Moderate<br><br>Intolerant of wet conditions and high fertility | Pennlawn for close- mowing<br><br>Arctared excellent low temperature hardiness;<br><br>low temperature discoloration results in a distinct reddish color. |
| Chewings pH: 5.5-6.5<br><br>Introduced from Europe during the Colonial Period. First cultivated in New Zealand | .5" to 2"<br><br>Chewings tolerates more closer mowing heights.<br><br>Similar environmental adaptation as creeping red. | Noncreeping, bunch-type grass. | Barfalla, Highlight, Koket and Jade for close mowing.<br><br>Jamestown for resistance to Fusarium patch. |
| Hard pH: 5.0 -6.5<br>Introduced from Europe | 2"-3"<br><br>Less drought tolerant, but more tolerant of moist, fertile soils than sheep fescue. | Noncreeping, bunch-type grass similar to sheep fescue. | Low maintenance |
| Sheep pH: 4.0 -8.5<br>Indigenous in Northern Hemisphere | 2"-3"<br>Well-drained, droughty, sandy or gravelly acid soils of low fertility. | Noncreeping, bunch-type grass with stiff, bluish green leaves. | Very low maintenance,<br><br>Not adapted to intensive culture. |
| Tall pH: 4.7-8.5<br><br>Indigenous to Europe. Introduced to America 1800's. | 1.5"-4"<br>Adapts to a wide range of soil conditions. Heat and drought stress tolerant. | Low to moderate.<br><br>Irrigation for survival and optimum growing quality. | Many fine-leafed provide high-quality turf<br><br>Low to moderate |
| Meadow pH: 4.7-8.5<br>Introduced from Europe during the Colonial Period | Similar to Tall Fescue | Less persistent under drought and heat stresses | Found in grasslands |

Table 3 provides the proposed square footage for each playing surface on the golf course and proposes cultivars for each area of play.

Table 3. Turfgrass and Total Square Foot Estimates for Ferry Point Park

| Area/Use | Grass Type | Acreage | Square Footage |
|---|---|---|---|
| Tee Surface & Practice Tee | Princeville Creeping Bentgrass | 5.88 | 256,133 |
| Fairway Surface & Collars & Practice Range | 10% Shadow Chewings Fescue<br>15% Defiant Hard Fescue<br>25% Wildwood Kentucky Blue<br>25% Shamrock Kentucky Blue<br>25% Challenger Kentucky Blue | 36.60 | 1,594,296 |
| Greens Surface/Practice Green (Includes Aprons) | PennLinks Creeping Bent | 4.52 | 196,891 |
| Primary Roughs | 10% Shadmark Creeping Red Fescue<br>20% Shadow E Chewings Fescue<br>20% Merit Kentucky Blue<br>25% Shamrock Kentucky Blue<br>25% Baron Kentucky Blue | 50.30 | 2,191,068 |
| Secondary Roughs | 10% Shadmark Creeping Red Fescue<br>20% Shadow E Chewings Fescue<br>20% Merit Kentucky Blue<br>25% Shamrock Kentucky Blue<br>25% Baron Kentucky Blue | 21.00 | 914,760 |
| Native Areas | Fescues, Forbs, Maritime | 22.85 | 995,346 |
| | | | |
| Lakes | N/A | 11.62 | 506,167 |
| Dry Basins | | 0.85 | 37,026 |
| Waste Area | | 1.48 | 64,469 |
| Bunkers | | 3.43 | 149,411 |
| Cart Path | | | 29,937 Linear Feet |
| Maintenance Building | N/A | 1.50 | 65,340 |
| Total Irrigated Turfgrass | N/A | 118.3 | 5,153,148 |
| Total Property Acreage | N/A | 160.00 | 6,969,600 |

Table 4 lists the proposed cultivars of grasses in each area of play and the recommended seeding rates for the blended turfgrass mix. The fescue and the bluegrass proposed lists several potential available cultivars for use. Only seed certified for use in New York will be sown.

Table 4. Grassing Specifications

| Playing Surface | Turf Types | Recommended Seeding Rates |
|---|---|---|
| Tees | Princeville Creeping Bentgrass | 90 lbs./ac<br><br>4-5 lbs/1,000 $ft^2$ or 170 lbs./ac |
| Fairways | 10% Shadow Chewings Fescue<br>15% Defiant Hard Fescue<br>25% Wildwood Kentucky Blue<br>25% Shamrock Kentucky Blue<br>25% Challenger Kentucky Blue | 4-5 lbs/1,000 $ft^{2f}$ or 170 lbs./ac |
| Primary Roughs | 10% Shadmark Creeping Red Fescue<br>20% Shadow E Chewings Fescue<br>20% Merit Kentucky Blue<br>25% Shamrock Kentucky Blue<br>25% Baron Kentucky Blue | 4 lbs/1,000 $ft^2$<br>170 lbs./ac |
| Secondary Roughs | 10% Shadmark Creeping Red Fescue<br>20% Shadow E Chewings Fescue<br>20% Merit Kentucky Blue<br>25% Shamrock Kentucky Blue<br>25% Baron Kentucky Blue | 4 lbs/1,000 $ft^2$<br>170 lbs./ac |
| Native Areas | Fescue, Forbs/Maritime | 0.10-10.00 lbs/1000$ft^2$ |
| Putting Green | PennLinks Creeping Bentgrass | 90 lbs./ac |

Seed that is purchased shall be labeled in accordance with the United States Department of Agriculture and Regulations under the Federal Seed Act and Association of Official Seed Certification Agencies (AOSCA). The owner or owner's representative will have the right to reject any seed not meeting the design specifications.

## 3.3 Establishment of Playing Surfaces

The grasses for the specific playing areas summarized in the previous tables were chosen for their individual characteristics:

- **Tees and Greens.** Tee surface areas will be seeded with 100% Princeville Creeping bentgrass and greens will be re-established with PennLinks Creeping bentgrass.

- **Fairways.** Fairway re-establishment will consist of a blend of 10% Chewings fescue, 15% Defiant Hard fescue, 25% Wildwood Kentucky bluegrass, 25% Shamrock Kentucky bluegrass, and 25% Challenger Kentucky bluegrass.

- **Primary and Secondary Roughs.** These areas will be re-established with a blend of Creeping red and Chewings fescue (30%) and Merit, Shamrock and Baron Kentucky bluegrasses (70%).

- **Native Areas.** Natural areas altered by construction may be revegetated using local vegetation, depending upon plant quality and design considerations. Otherwise they will be re-established using a combination of native species mixed with other desirable plant communities to enhance the overall quality of the site for aesthetic and wildlife uses. Certain species will be propagated while others will be placed.

## 3.4 Soil Test Results and Plant Nutrient Recommendations

### 3.4.1 Added Nutrients During Pre-Plant or Grow-in

At Ferry Point Park, soil surface pH values are in the range of 7.7 - 8.0. Before seeding, additional site-specific soil tests will be performed to determine the appropriate amount of preplant nutrients. The amount of soil nutrients required assumes the material will be incorporated into the top 6" soil surface prior to seeding. Once the soils have been blended and/or graded, they will need additional tests in order to determine the appropriate amount of elemental sulfur, calcium or limestone.

The golf course will conduct a phosphorus saturation test on the soils after fine grading is complete in order to establish the amount of phosphate-phosphorus ($P_2O_5$) that should be applied within the soil prior to seeding. The intent will be to release 10 lbs/ac of available phosphorus. This will enhance cool season grass germination. The amount of preplant $P_2O_5$/ac will remain the same regardless of the tilled depth of the soils. Phosphorus is relatively immobile when applied to the surface of either soil or turf because it binds to aluminum and iron in the soil.

As with phosphorus, nitrogen is needed during the grow-in phase to help promote rapid turfgrass cover. An initial application of 1.5 lb of N/1,000 $ft^2$ with a 2-to-1 ratio of nitrogen to potassium is proposed. On soils with low organic matter, as much as 2 lbs of N/1000 $ft^2$/yr can be tied up in the soil organic fraction that will initially be unavailable to the plant (Petrovic, 1990). Therefore, more nitrogen must be applied in the grow-in phase than on established golf courses to aid in plant maturation and to compensate for loss (conversion to an unavailable form) to the soil. Frequent, lower rate applications of nitrogen containing fertilizers are important during the grow-in phase to provide optimal levels of plant-available nitrogen without losses to leaching.

In addition to soluble nitrogen, approximately 125 lbs/acre of a water insoluble nitrogen source (i.e., IBDU,) will be applied prior to seeding. This will provide an additional .75 lbs of nitrogen while the cotyledons are taking root. The aim is to allow a readily available source of nitrogen to be absorbed by the plants while they are rooting in order to gain establishment within the first 7-21 day period.

To stimulate rapid establishment and lateral movement of the fescue seedlings, fertilizer feedings should begin the third week following seeding. They should continue during the next 5-7 week period and be timed to match turf uptake capabilities. It is during this time that soils are typically deficient of materials necessary for adequate plant growth.

### 3.4.2 Fertilizing of Putting Green Surfaces

Specific finish grading plans and greens mix material specifications will be provided to the general contractor. All sand materials used in the construction of the greens profile will be sent to a certified USGA greensmix laboratory. Putting green surfaces shall be compacted and smoothed to meet the blending operations and design grades detailed in the construction documents.

The contractor will work 10 lbs/1000 square feet of 19-26-5 fertilizer (N-P-K ratio) into the top three inches of the putting green surfaces, thoroughly mixing by discing or rotovation. This material must be a fine particle, chemically homogeneous product having a minimum of 75 % of the total nitrogen derived from urea and methylene urea plus a minimum of 26% monoammonium phosphate or equal. No lime or sulfur shall be applied to putting surfaces unless directed by the Golf Course Superintendent after the approved greens mix has been tested for existing pH.

Before seeding, the contractor will apply and work into the top two inches of the greens mix, the following biostimulants and nitrogen fertilizers at the specified rate per thousand square feet of putting surface:

- 10 pounds of magnesium sulfate (epsom salts);
- 10 pounds of milorganite fertilizer;
- 11 pounds of POLY-S coated urea;
- 80 pounds of Sand Aid (see 4.7.2 Biostimulant/Stress Management Materials); and
- 20 pounds of Pro Turf STEP manufactured by O.M. Scott & Sons Co. (or an approved micro-nutrient supplement).

The golf course will conduct additional soil audits to evaluate the final soil profiles. The tests will reveal any additional soil nutrients necessary at preplant without exceeding the loading limits or cation exchange capacity of the existing soils. The soil tests will be performed prior to seeding to determine nutritional needs of nitrogen, phosphorus, potassium (N,P,K), base saturation, and extractable minors. These tests and amendments will be performed in order to obtain a soil pH range of 6.5-6.8 for all of the golf course tee, fairway, green, and primary rough playing surfaces.

Additional applications of soluble micro-nutrients (ProTurf STEP or other suitable micronutrients) may be required during establishment and maturation, and shall be applied by the contractor at the direction of the golf course consultant working directly with the golf course superintendent and the designer/architect.

Starting approximately four weeks after germination, fertilization should begin using weekly, alternate applications of Lesco green fertilizer and Lesco starter fertilizer. The minimum rate of application shall be one-half pound of nitrogen per one thousand square feet. This schedule should be seen as flexible and will be adjusted by Mr. David McIntosh of Golfturf and Jack Nicklaus Design, as deemed necessary.

### 3.4.3 Fertilizing Established Turf

Golf courses can be managed so that nitrates from fertilizers do not impact ground water supplies if they avoid over-watering and over-fertilization (Petrovic, 1990). Nearly 50% of the nitrogen fertilizer applied to turfgrass is assimilated by the plant. Much of the remaining fraction is stored in the soil and/or released to the atmosphere. Thus, there is a very limited amount of fertilizer nitrogen remaining that can be leached into ground water or transported as runoff into surface water. Leaf tissue analysis will be conducted annually during the peak growing season to determine the need for nitrogen. The implementation of a precision fertility program as part of the IPM plan helps minimize the risk of increasing nitrate/nitrogen concentrations in ground and surface water.

When research has shown nitrate leaching from turfgrass areas, it also reveals that fortunately, the leaching can be controlled by best management practices (e.g., Cohen, et al., 1990). Excessive leaching most often occurs when excessive amounts of highly water-soluble nutrients are used and/or highly water-soluble nitrogen sources (urea, ammonium nitrate, calcium nitrate, ammonium sulfate, or potassium nitrate) are applied at inappropriate times and rates. The problem is exacerbated when water soluble fertilizers are applied to turf in dormant or semi-dormant states, or when excessive irrigation or unexpected heavy rains follow fertilization. The course's management will avoid these conditions through leaf tissue analysis, timing of applications, and attention to weather forecasts.

Research into high sand content sites, such as golf greens, reveals that properly managed putting surface areas are not prone to heavy nitrate leaching. This is especially true with lower nitrogen application rates and increased use of slow release nitrogen sources. Slow release nitrogen sources require microbial activity or hydrolysis to convert the nitrogen to a form available to the plant. When soluble nitrogen sources are used, the potential for ground water contamination can be eliminated by matching applications to plant uptake. For example, a study done by Morton, et al., 1988 addressed the influence of irrigation and fertilization on nitrogen losses from turf on a sandy loam soil. The authors concluded normal fertilization and irrigation on a mix of cool-season turfgrasses resulted in nitrogen losses no different from the unfertilized controls. Another study (Snyder, et al., 1984) also observed that controlling irrigation reduces the potential for nitrate leaching to very low levels on sand based greens.

Timing fertilizer application to coincide with the period of active plant growth and nutrient uptake will optimize nitrate-absorption and reduce the amount of soluble nitrogen available for leaching. Slow-release fertilizers that do not release excessive nitrogen during heavy rain will be applied during the wet months. When evapotranspiration is closely matched by irrigation during seasonably wet months and periods of active plant growth, water soluble nitrogen can be applied at rates of up to 1.0 lb N/1000 $ft^2$/month without any significant accumulation or leaching. The Ferry Point Park Golf Course proposes soluble nitrogen application rates between .50-. 75 lb N/1000 $ft^2$ per application.

Table 5 projects the range of soluble and insoluble nitrate sources and illustrates recommended

application rates for each formulation. The proportion of highly soluble and slow-release nitrogen fertilizers used on the golf course will vary with management area and time of year. Roughly 50 to 60% of fertilizers applied to greens and tees will be in water soluble forms, while the remaining 40 to 50% will be of the slow-release variety. Typical application rates for greens and tees are approximately 1 lb N/1000 $ft^2$ per growing month.

A higher proportion of nitrogen applications (up to 65%) on fairways will be slow-release or delayed-release formulations. Total nitrogen added per year on fairways after grow-in will be approximately 2-3 lbs/1000 $ft^2$. To maximize utilization of the applied nitrogen sources, each application will be applied between .25 -.75 lbs/1000 $ft^2$. This will allow for a more precise controlled release application and reduce the risk of over fertilization.

Table 5. Nitrogen Fertilizer Annual Usage for Ferry Point Park Golf Course in Bronx, New York.

| I. GROUP (Greens/Tees) Water-Solubles[1] | Single Application | Maximum Yearly |
|---|---|---|
| 1. Lesco 16-32-16 | .10-.20 lb/N/1000 sq. ft. | |
| 2. Lesco Green-Flo 30-0-0 | .25-.50 lb/N/1000 sq. ft. | |
| 3. Lesco 30-0-17 | .10-.20 lb/N/1000 sq. ft. | Greens and Tees[2] |
| 4. Lesco 20-20-20 | .10-.20 lb/N/1000 sq. ft. | will receive |
| 5. Gro More12-62-0 | .10-.20 lb/N/1000 sq. ft. | 5-6 lbs/N/1000 sq. |
| 6. Gro More 20-5-30 | .10-.20 lb/N/1000 sq. ft. | ft./yr of water |
| 7. Gro Power 6-2-8 | .30-.75 lb/N/1000 sq. ft. | soluble products |
| 8. Plant Marvel 20-20-20 | .10-.20 lb/N/1000 sq. ft. | |
| 9. Urea 45-0-0 | .30-.75 lb/N/1000 sq. ft. | |
| 10. Scotts Fluid 20-5-30 | .10-.20 lb/N/1000 sq. ft. | |
| Slow Release (Primarily) | | |
| 1. Scotts 22-0-16 | .50-.75 lb/N/1000 sq. ft. | Greens and Tees |
| 2. Scotts 19-26-5 [3] | .50-.75 lb/N/1000 sq. ft. | will receive |
| 3. Scotts 15-0-30 | .50-.75 lb/N/1000 sq. ft. | 3-4 add'l lbs/N/ |
| 4. STEP (trace elements)[4] | .50-.75 lb/N/1000 sq. ft. | 1000 sq.ft./yr of |
| 5. Lesco 29-0-0 | .50-.75 lb/N/1000 sq. ft. | water insoluble |
| 6. Lesco 21-4-11 | .50-.75 lb/N/1000 sq. ft. | products |
| 7. Lesco 14-2-14 | .50-.75 lb/N/1000 sq. ft. | |
| 8. Lebanon 16-4-8 | .50-.75 lb/N/1000 sq. ft. | |
| 9. Agway 0-0-50 | 1- 2 lb/K/1000 sq. ft. | |
| 10. Alternative Nitrogen Sources[5] | varies, based on product | |
| II. GROUP (Fairways/Roughs) | | |
| Water-Solubles [1] | | |
| 1. Colt 45-T 40-0-15 | .25-.50 lb/N/1000 sq. ft. | |
| 2. Urea 45-0-0 | .50-.75 lb/N/1000 sq. ft. | Fairways and |
| 3. Calcium Nitrate 15-0-0 | .50-.75 lb/N/1000 sq. ft. | Roughs will |
| 4. Ammonium Nitrate 34-0-0 | .50-.75 lb/N/1000 sq. ft. | receive 3-4 lbs/ |
| 5. Turf Royal 21-7-14 | .50-.75 lb/N/1000 sq. ft. | N/1000 sq.ft./yr |
| 6. Lesco 33-0-17 | .50-.75 lb/N/1000 sq. ft. | of water-soluble |
| 7 Lesco 23-0-23 | .50-.75 lb/N/1000 sq. ft. | products[6] |
| 8. Ammonium Sulfate 21-0-0 | .50-.75 lb/N/1000 sq. ft. | |
| Slow Release (Primarily) | | |
| 1. Lesco 28-3-5 mini | .75-2.0 lb N/1000 sq. ft. | |
| 2. Lesco 35-0-0 mini | .75-2.0 lb N/1000 sq. ft. | Fairways and |
| 3. Lesco 24-3-12 mini | .75-2.0 lb N/1000 sq. ft. | Roughs will also |
| 4. Lesco 10-15-15 [3] | .75-2.0 lb N/1000 sq. ft. | receive 4-5 lbs |
| 5. Par Ex 28-3-8 | .75-2.0 lb N/1000 sq. ft. | N/1000 sq.ft./yr |
| 6. Scott 32-3-10 | .75-2.0 lb N/1000 sq. ft. | of water |
| 7. Scott 22-0-22 | .75-2.0 lb N/1000 sq. ft. | insoluble products[4] |
| 8. Alternative Nitrogen Sources[5] | varies, based on product | |

[1] -Formulations will be selected in accordance to field inspection, soil and tissue testing. The above rates include 1-3 lbs during grow-in.
[2] -Tees typically use 20-30% more (N) fertilizer than the greens.
[3] -Starter materials will be used during the first year of construction and for establishment of nursery grasses.
[4] -Trace elements will be added according to soil tests.
[5] -Refer to products on Table 6 for choice in Natural Organic Materials.
[6] -Roughs will receive 35-40% less (N) fertilizer than the fairways.
NOTE: Water-soluble products will be used during periods of active plant growth and during periods of less frequent rains.

3.4.4 Organic Fertilizers

One rapidly emerging field of alternatives is the use of "natural organic" fertilizers to reduce or suppress fungus disease. In laboratory, greenhouse and field studies, it has been shown that the natural organic fertilizers (Ringer®, Sustane®, and All Gro Compost®) can suppress disease development from 50% to 100% (Nelson, 1990). The suppression and the severity was noted on a wide range of diseases including ones projected on this site: brown patch, dollar spot and pythium root rot. These nitrogen sources were not found to leach from cool season golf greens.

Table 6 presents alternative nitrogen sources available and rates of application consistent with those recommended by each manufacturer.

**Table 6. Alternative Nitrogen Sources**

Slow Release Synthetic Material

| Trade name | Manufacturer | Analysis | Release | Formulation |
|---|---|---|---|---|
| Nutralene® | Nor-Am | 40-0-0 | 12-16 weeks | Methylene Urea |
| Once® | Grace Sierra | 24-6-11 | 5-6 months | Resin Coated & Soluble Nitrogen Sources |
| Polyon® | Pursell Ind. | 42-0-0 | 9-12 weeks | Osmotic Polymer Coated Urea |

Natural Organic Material

| | | | | |
|---|---|---|---|---|
| Nature Safe® | Griffen Ind. | 10-2-8 | 5-12 weeks | Hydrolyzed Feather meal |
| Resurge® | Quad Five | 7-7-7 | 12-16 weeks | Feather meal |
| Turf® | Ringer | 12-2-6 | 5-7 weeks | Feed grade animal protein |
| Sustane® | Sustane Corp. | 5-2-4 | 12-16 weeks | Turkey waste composted |

**Table 6 continued**

Recommended Rate of Application

| Product® | lbs.N/1,000 ft 2 | lbs. of Product/1,000 ft 2 | Total lbs./Acre |
|---|---|---|---|
| Nutralene® | 0.75 - 2.00 | 1.90 - 5.00 | 83 - 217 |
| Once® | 1.00 - 2.00 | 4.25 - 8.50 | 185 - 370 |
| Polyon® | 0.75 - 2.00 | 1.80 - 4.80 | 78 - 209 |
| Nature Safe® | 0.50 - 1.00 | 5.00 - 12.0 | 217 - 450 |
| Resurge® | 1.00 - 2.00 | 15.0 - 30.0 | 653 - 1,306 |
| Turf® | 1.00 - 2.00 | 8.50 - 17.0 | 370 - 740 |
| Sustane® | 1.00 - 2.00 | 20.0 - 40.0 | 871 - 1,742 |

Note: Natural organic materials manufactured from wastewater sewage sludge will not be used at the golf course because of potential contamination with heavy metals.

## 3.5 Non-Turf Areas

The secondary roughs or areas restored after construction will be re-vegetated with a mix of grassy species:

- 10% Shadmark Creeping Red fescue
- 20% Shadow E Chewings Fescue
- 20% Merit Kentucky Blue
- 25% Shamrock Kentucky Blue
- 25% Baron Kentucky Blue

### 3.5.1 Naturalized Restoration Plan

A vegetative buffer will enhance a section of the East River and its associated floodplain. This remedial planting plan for the buffer areas will be based on a variety of existing documents, field investigations, agency discussions, and topographic mapping. The enhanced vegetative buffer areas are designed to: 1) enhance habitat and add definition between the golf course and the river park area; 2) reduce floodplain erosion; 3) enhance native tree and shrub communities; 4) improve riparian habitat; and (5) discourage human access to the river outside defined trail areas.

Enhancement of the vegetative buffers of the East River side channels and portions of the floodplain is an important component of long term channel and floodplain stability. This is particularly true for areas that were previously cleared of vegetation or have been disturbed, modified, or altered from sanitation and dump activities.

Planting will include a combination of nursery stock and purchased horticultural material. Selection of the recommended tree and shrubs species within each zone will be based on native status within the general project area and nursery availability, as well as individual species hydrologic tolerances. The grassing and revegetation process will restore low maintenance, coastal native grasses and plants so that once established, they will flourish on their own with minimal human intervention. The species proposed for planting will be discussed in detail in the Habitat Restoration Plan.

## Chapter IV

## Integrated Pest Management for Ferry Point Golf Course

Proper detection and identification of insects and mites in turf, combined with pest tolerance thresholds, is the key to an Integrated Pest Management system that will produce optimum results with minimum undesirable side effects. Numerous IPM strategies have been perfected for this purpose. In an IPM program, the mere presence of an insect in turf is not a valid reason for taking steps for control. Rather, a thorough knowledge of the pest population is needed before the proper response can be formulated. Some potential pests will be more problematic than others. These are rated in a Pest Infestation Index in this chapter, and thresholds for action are provided for each of the anticipated pests.

### 4.1 Pest Sampling Guidelines

The golf course superintendent or a fully trained assistant will monitor each golf hole for indications of reduced turf quality. The superintendent will be responsible for the correct identification and documentation of any fungi, insects or weeds found, and will look first for environmental adjustments that might reduce or eliminate the pest. Improving ventilation, selective removal of vegetative growth, and physical removal of small pest populations are examples of steps to be taken before other intervention is considered. Soil, pH, nutrient content, sodium levels, temperature and moisture content will also be evaluated to determine if they could be contributing to the pest presence.

Samples of unidentified insects, weeds, nematodes or pathogens will be forwarded to a reputable laboratory for assistance in proper identification and procedural control. If the need arises to obtain and determine a control option, the assistance of an appropriate environmental firm, state agency, or New York extension service specialist will be sought.

#### 4.1.1 Visual Inspection

The old-fashioned technique of looking closely at the turf is still the most valuable. If, upon pulling up on the turf, it breaks off easily, the staff will look for the sawdust of billbugs. If frass (insect fecal pellets) are present, a disclosing solution can be used to determine if turf caterpillars are present.

If a pest is detected, it is important to know the extent of the problem. The transect method involves walking in a line across the affected turf, counting the number of damaged areas observed. Square foot samples are often useful if billbugs, mites or scales are suspected. A square-foot flap of turf is cut and the visible grubs in the soil are counted. Alternately, a standard golf course cup cutter may be used to take turf and soil samples. The cup cutter sample is multiplied by 10 to determine the number of insects per $ft^2$.

### 4.1.2 Disclosing Solutions

Many of the turf insects and mites defy easy detection by the human eye. Therefore, a disclosing solution of pyrethrum or soap is used. A disclosing solution of 1.0 oz. of household dish washing detergent (Joy® liquid is known not to cause turf damage) in two gallons of water is effective. The water is applied to a one-square yard area with a common garden sprinkling can. Within 3-5 minutes the caterpillars will come to the surface where they can be easily counted. Occasionally, billbug adults and other insects are also flushed out.

### 4.1.3 Trapping

Some of the turf infesting insects are attracted to lights or chemical attractants (pheromones) and can be easily monitored. Most of the cutworms, sod webworms and many of the night flying white grub adults can be collected in a light trap. Pheromone traps have been developed for the cutworms, sod webworms and armyworms. Other insects, such as billbugs, can be monitored by using simple pitfall traps placed along the side of turf areas.

**Light traps generally use an ultraviolet** (UV) bulb which is attractive to most night flying insects. By running a trap several nights a week and counting the cutworms, sod webworms or armyworm adults, an estimate can be made of when turf damage *could* occur. As an example, black cutworm adults are easily captured in a light trap and larvae can be expected on greens and tees about two weeks after peak adult catches.

**Pheromone traps are even more precise than light** traps because single species can be monitored. Pheromones exist for black cutworms and most of the armyworm complex. The numbers captured can be used in a manner similar to light trap counts.

**A Pitfall trap** used for monitoring billbugs is a 16 oz. cup buried in or next to turf with its rim level with the soil. Billbug adults fall into the trap and can be counted to monitor when activity begins. After two weeks of steady captures, it is time to sample for the larvae in the turf.

### 4.1.4 Disease Immunoassay Kits

Disease immunoassay kits may be used to aid in the identification of turfgrass disease. They may be used to detect and/or rule out the presence of a disease pathogen through positive indication. Currently, the kits are available for the following diseases: Brown patch, Dollar spot, and Pythium. The kits are used to assist in proper disease identification, to determine when it is *not* appropriate to apply a pesticide, and to reduce the potential for the wrong pesticide to be used because of misdiagnosis.

When fungus infestations are not readily identifiable by the golf course superintendent and his or her staff, samples will be sent to a laboratory for analysis. Chemical treatment will not occur until the fungus is properly identified so that the proper product is used. Laboratory results are usually available within 48 to 72 hours.

## 4.2 Environmental Monitoring

Since most pest activity is regulated by weather conditions, several methods have been developed which use weather monitoring to predict pest development. These methods (or models) suggest *when* activity will occur but not *how much* activity is present. When weather conditions are right, the staff is alerted to monitor for pests but other steps already described will be required to determine if pests are actually present in sufficient numbers to cause damage to the turf.

### 4.2.1 Degree-day Models

"Degree-days" provide a method of measuring the degree of maturity an organism has reached due to weather conditions. Insects and mites develop more rapidly as they get warmer. Below a certain temperature threshold, little or no development takes place. There are no degree-day models available for the insects and mites on the Ferry Point Park site. Degree-day models do exist for disease and pre-emergent weeds, however, and can be used to make predictions in conjunction with monitoring models established in the field.

Heating degree-days may be calculated manually if necessary (degree days={daytime high ($F^0$) -- daytime low ($F^0$)} divided by 2 - 50 $F^0$). If a positive number remains, add this to the previous total to amass cumulative degree days. If the total is a negative number, the cumulative degree day is zero since negative heating degree days are non-existent.

### 4.2.2 Plant Phenology

Plant phenology is nature's degree-day model. Since plant development is also dependent on temperature, associating plant activity with insect activity can improve timing of controls.

## 4.3 Anticipated Pests

Pest infestation information from existing golf courses in the New York and New Jersey metropolitan areas was used to determine potential pest problems for Ferry Point Park Golf Course. With input from these courses and other data taken from similar cool season regions of the United States, a list of known and probable weeds, insects and fungus problems that can be expected at the golf course has been compiled. By its nature, the list is not, and cannot be, complete but it provides an adequate starting point that can be adapted and modified through experience. Anticipated pest problems include 46 weed species, 25 turf diseases and 16 insects. However, only 17 key pests were identified and include 7 weeds, 6 diseases and 4 insects.

The pests of greatest concern to the greens and, to a lesser degree the tees, will be leaf contact pathogens. These pests can be identified by a combination of visual inspections and use of turf disease detection kits (Reveal® or Dipstick®).

The following represents a general overview of the pest problems that might be encountered at Ferry Point Park. Pests are divided into three groups: weeds, disease and insects.

### 4.3.1 Weed Occurrence

Turfgrass weeds at existing golf courses in the area are minor in occurrence due to traditional low mowing practices and dense turfgrass competition.

Weed problems associated with golf course turf are divided into two categories: grassy weeds (monocotyledons) and broadleaf weeds (dicotyledons). Mixed with other grassy plants, monocots will be allowed to flourish in the secondary roughs and areas left in a natural state. Handpicking or spot spray will be used in the primary roughs and fairways only. Table 7 is a list of annual monocotyledons turfgrass weeds anticipated and Table 8 is a list of perennial dicot broadleaf weeds. These grass weeds are the most likely to persist on cool season turfgrass in the Ferry Point Park area.

**Table 7. Pest Identification-Annual Grass Weeds**

| | |
|---|---|
| Annual bluegrass | *Poa annua* |
| Barnyardgrass | *Echinochloa crusgalli* |
| Dallisgrass | *Paspalum dilatatum* |
| Goosegrass | *Eleusine indica* |
| Green foxtail | *Setaria viridis* |
| Large crabgrass | *Digitaria sanguinalis* |
| Purple nutsedge | *Cyperus rotundus* |
| Purpletop | *Tridens flavus* |
| Quackgrass | *Agropyron repens* |
| Small crabgrass | *Digitaria ischaemum* |
| Timothy | *Phleum pratense* |
| Yellow foxtail | *Setaria lutescens* |
| Yellow nutsedge | *Cyperus esculentus L.* |

Table 8. Pest Identification-Perennial Broadleaf Weeds

| | |
|---|---|
| Black Medic | *Medicago lupulina* |
| Broad-leaved plantain | *Plantago major* |
| Common chickweed | *Stellaria media* |
| Common speedwell | *Veronica officinalis* |
| Clover | *Trifolium repens* |
| Curly Dock | *Rumex crispus L.* |
| Dandelion | *Taraxacum officinale* |
| Ground Ivy | *Glechoma hederacea* |
| Heal-all | *Prunella vulgaris* |
| Henbit | *Lamium amplexicaule* |
| Knapweed | *Centaurea maculosa* |
| Knotweed | *Polygonum aviculare* |
| Lambsquarter | *Chenopodium album* |
| Mallow | *Malua rotundifolia* |
| Mouse-ear chickweed | *Cerastium vulgatum* |
| Nodding spurge | *Euphorbia maculata* |
| Oxalis | *Oxalis stricta* |
| Pearlwort | *Sagina procumbens* |
| Plantain | *Plantago rugelii* |
| Poison Ivy | *Rhus radicans* |
| Poison Oak | *Toxicodendron diversilobum* |
| Purslane speedwell | *Veronica peregrina* |
| Prostrate spurge | *Euphorbia prostrata* |
| Prostrate pigweed | *Amaranthus blitoides* |
| Ragweed | *Ambrosia sp.* |
| Red clover | *Trifolium pratense* |
| Sheep sorrel | *Rumex acetosella* |
| Shepherd's purse | *Capsella Bursa-pastoris* |
| Spotted spurge | *Euphorbia supina* |
| Stitchwort | *Stellaria graminea* |
| Thistle | *Cirsium sp.* |
| Yarrow | *Achillea millefolium* |
| Yellow wood sorrel | *Oxalis europaea* |

### 4.3.2 Turfgrass Disease

There are six turfgrass diseases potentially posing a problem at Ferry Point Park Golf Course: brown patch, dollar spot, Fusarium patch, summer patch, take all patch and pythium blight. The potential for disease presence points out the need to implement a visual monitoring and sampling control program once sod, seed, and any hydromulching has been completed. Disease under cool, moist, wet conditions will probably remain the more persistent of pathogens to control once the golf course matures and the grow-in is complete. The cool season diseases and controls are presented in Table 9. The most likely turf diseases to be encountered at the Ferry Point Park Golf Course are presented in Table 10. The occurrence and severity will vary, depending on the time of year, weather conditions, fertility, and total dissolvable salts. Cultural practices that promote healthy turf will be employed to minimize weed occurrence.

TABLE 9. METHODS OF DISEASE CONTROL COOL SEASON TURFGRASS

| DISEASE | CULTURAL CONTROL | CHEMICAL CONTROL | RESISTANT SPECIES/VARIETIES |
|---|---|---|---|
| ANTHRACNOSE | Fertilize to maintain vigor, improve drainage aeration, and | Benomyl, chlorothalonil, mancozeb, propiconazole, triadimefon | Bentgrasses are less susceptible than annual bluegrass on putting greens. raise mowing height during periods of heat stress. |
| BROWN PATCH | Avoid excess N in summer, increase air circulation, avoid excessive watering. | Anilazine, benomyl, chlorothalonil, fenarimol, iprodione, mancozeb, propiconazole, thiophanates, thiram, vinclozolin. | Kentucky bluegrass are less susceptible to brown patch than other cool-season turfgrasses. |
| DOLLAR SPOT | Avoid N deficiency, maintain good soil moisture, remove guttation and dew from leaf surfaces, avoid night watering. | Anilazine, benomyl, chlorothalonil, fenarimol, iprodione, mancozeb, propiconazole, thiophanates, thiram, vinclozolin. | Resistant Kentucky bluegrass varieties include Adelphi, America, Aspen, Challenger, Eclipse, Escort, Nassau, Somerset, and Wabash. |
| FAIRY RING | Use clean fill during establishment irrigate, or mask symptoms with fertilizer or iron. | None effective, must fumigate with soil sterilant to eradicate the fungus (this will also kill grass). | No resistant species or varieties are available. |
| LEAF SPOT/ MELTING OUT | Avoid excessive N applications in early spring, mow 2" in height, avoid light, frequent irrigation. Do not use benomyl, thiophanates, triadimefon to control this disease. | Anilazine, chlorothalonil, iprodione, maneb, mancozeb, vinclozolin. | Resistant Kentucky bluegrass include: Adelphi, Bristol, Destiny, Eclipse, Enmundi, Glade, Ikone, Liberty, Majestic, Mona, P-104, Rugby, and Somerset. |
| NECROTIC RING SPOT | Manage turf for maximum root growth, irrigate to maintain good soil moisture, maintain mowing height at 2" or above. | Benomyl, fenarimol, propiconazole. | Perennial ryegrasses are resistant. |
| POWDERY MILDEW | Reduce shade and improve air circulation. | Benomyl, fenarimol, propiconazole, triadimefon, (fungicides usually not required). | Use grasses adapted to shaded areas such as fine fescues and rough bluegrasses. Resistant Kentucky bluegrass include: A-34, Glade Touchdown, & Eclipse. |
| PYTHIUM BLIGHT | Improve drainage, increase air circulation, avoid excess N, reduce irrigation. | Chloroneb, etridiazole, metalaxyl, Fosetyl-Al, propamocarb. | Kentucky bluegrass is less likely to be damaged by Pythium blight than other turfgrasses. |

TABLE 9. (cont'd). METHODS OF DISEASE CONTROL COOL-SEASON TURFGRASS

| DISEASE | CULTURAL CONTROL | CHEMICAL CONTROL | RESISTANT SPECIES/VARIETIES |
|---|---|---|---|
| PYTHIUM ROOT ROT | Increase drainage, aerate and reduce irrigation. | Fosetyl-Al, Subdue as drench. | Unknown |
| RED THREAD/PINK PATCH | Maintain adequate fertility of turf (especially N). | Anilazine, benomyl, chlorothalonil, iprodione, propiconazole, thiophanates, triadimefon, vinclozolin. | Resistant perennial ryegrasses include: Alliare, Commander, Delray, Manhattan II, Palmer, Pennant, Prelude, Regal, Regency, SR 4000, SR 4100, and Yorktown II. |
| RUST DISEASES | Avoid N deficiency and drought-stress (especially in late summer/early fall). | Maneb, mancozeb, fenarimol, propiconazole, triadimefon, (fungicides usually not required). | Some resistant Kentucky bluegrass include: Kenblue, Parade, Rugby, A-34, and Classic. |
| SLIME MOLDS | Remove spores by spraying water on leaves or brushing turf. | None required. | Not applicable since grasses are not infected. |
| SNOW MOLDS: GRAY SNOW MOLD | Avoid excess N in fall before grass goes dormant, mow until top growth ceases in fall, prevent accumulation | Fungicides should be applied in late fall before snow cover. Chloroneb, .fenarimol, iprodione. | Some Kentucky bluegrass include: Adelphi, Aspen, Enmundi, Plush, and Vantage. |
| PINK SNOW MOLD | (Same as gray snow mold) | Benomyl, fenarimol, iprodione, mancozeb, PCNB, thiophanates, thiram. | Most fine fescues and Kentucky bluegrass are moderately resistant to this disease. |
| STRIPE SMUT | Avoid excess N in early spring, avoid drought stress in early summer. | Apply fungicides in early spring or late fall, water-in for good root uptake. Fenarimol, propiconazole, vinclozolin. | Ryegrasses, tall fescues, and the fine fescues are less susceptible to this disease than Kentucky. |
| SUMMER PATCH | Avoid low mowing heights, reduce compaction, avoid over watering in summer, improve drainage. | Fenarimol, propiconazole, thiophanates, triadimefon. | Resistant Kentucky bluegrass include Adelphi, Enmundi, Sydsport, and Touchdown. |
| TAKE-ALL PATCH | Use acidifying fertilizers or sulfur to lower pH, avoid P and K deficiency | Sterol biosynthesis inhibitors may have some benefit if applied prior to root infection. | Annual bluegrass. |

Source: Dr. Peter Landschoot
Assistant Professor, Turfgrass Science,
Agronomy, PennState University
LANDSCAPE MANAGEMENT / JUNE 1991

Table 10. Pest Identification - Turfgrass Disease

| | |
|---|---|
| Algae[1] | *Cyanobacteria*-Blue-green algae |
| Anthracnose | *Colletotrichum graminicola* |
| Bacterial wilt | *Xanthomonas spp.* |
| Brown patch | *Rhizoctonia solani* |
| Copper spot | *Gloeocercospora sorghi* |
| Crown and root rot | *Bipolaris tetramera* |
| Dollar spot | *Lanzia spp.* |
| Downy mildew | *Sclerophthora macrospora* |
| Fairy ring | *Marasmius oreades* |
| Fusarium patch | *Fusarium nivalis* |
| Helminthosporium leaf spot | *Bipolaris sorokiniana* |
| Leaf rust | *Puccinia spp.* |
| Melting out | *Drechslera poae* |
| Moss[2] | *Bryophyta spp.* |
| Necrotic ring spot | *Leptosphaeria korrae* |
| Nematodes[3] | *Criconemoides, Meloidogyne, Helicotylenchus, Pratylenchus, spp.* |
| Pink patch | *Limonomyces roseipellis* |
| Powdery mildew | *Erysiphe graminis* |
| Pythium blights | *Pythium aphanidermatum*<br>*Pythium ultimum* |
| Red thread | *Laetisaria fuciformis* |
| Slime molds | *Physarum cinereum* |
| Snow molds | *Typhula incarnata, T.ishikariensis* |
| Summer patch | *Magnoporthe poae* |
| Take all patch | *Gaeumannomyces graminis* |
| White patch | *Melanotus phillipsii* |

Biotic Agents of Noninfectious Diseases

[1] Develops on the surface of overly wet soils.

[2] Small plants that overgrow and compete with turf when wetness, poor nutrition and soil conditions exist.

Nematode Diseases

[3] May be diverse and are dependent on the population of plant-parasitic and saprophytic density.

### 4.3.3 Turfgrass Insects

The Ferry Point Park Golf Course will experience minor outbreaks of turfgrass insects. Turfgrass insects are not considered major pests on turf in Bronx, New York. The most common insects are Black ataenius and white grubs. Black cutworms may remain fairly persistent in putting green surfaces. The proposed regrassing to newer cultivars of bentgrass includes varieties which provide resistance to surface feeding insects (e.g., sod webworm, cutworms).

A list of probable leaf and stem feeding insects are provided in Table 11. These are the more common turfgrass pathogens which have the ability to destroy healthy areas of turfgrass. Tolerable levels below threshold limits should pose no threat to the desirable playing quality of the golf course. Each insect will be monitored for baseline detection and an established threshold level will be developed.

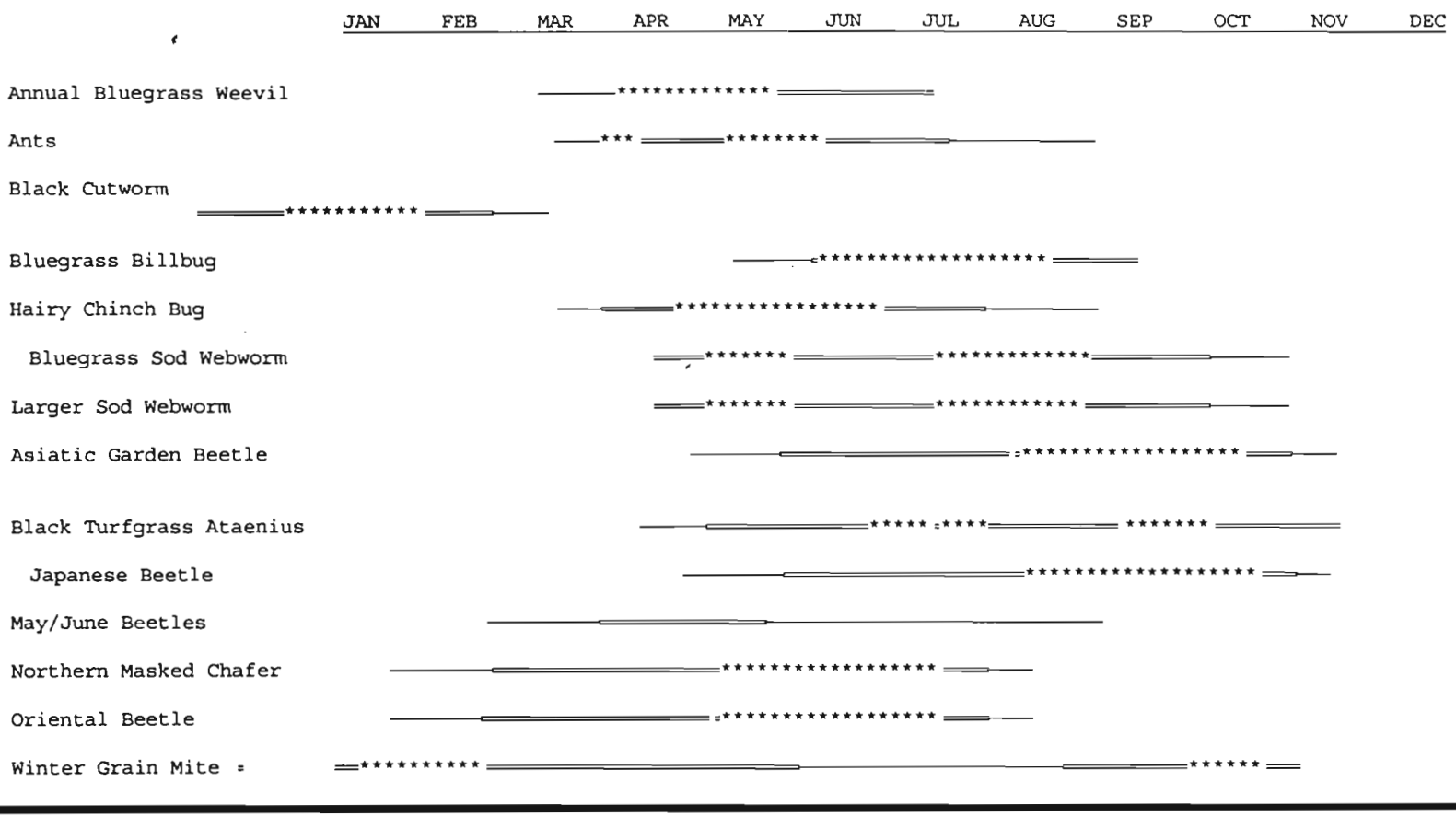
Table 12 provides a timeline of probable insect activity. Most turfgrass insect pests are cyclical and will typically require some form of treatment even under ideal environmental conditions. There has been a trend common among many golf course superintendents to monitor turfgrass quality and allow the insect to complete its natural life cycle. This concept has been more successful on warm-season grasses than on most cool-season turf.

We anticipate the range of activity to be possibly severe for only two insect pests. Of the two, black ataenious will be easier to detect and control. Generally, large populations of white grubs are necessary before noticeable symptoms of turfgrass decline are evident. Cutworms will be more persistent but will be the easiest to control with either parasitic nematodes or through a biorational approach using natural chemicals or Pheromones.

Table 11. Pest Identification - Turfgrass Insects

| Common Name | Pathogen | Scientific Name | Founder |
|---|---|---|---|
| Annual bluegrass weevil | weevil (beetle) | *Hyperodes anthracinus* | Dietz |
| Ants | ants | *Formicidae* | |
| Black cutworm | moth | *Agrotis ipsilon* | Hufnagel |
| Bluegrass billbug | weevil (beetle) | *Sphenophorus parvulus* | Gyllenhal |
| Hairy chinch bug | true bug | *Blissus leucopterus hirtus* | Montandon |
| Sod webworm | moths | *Pyralidae; Crambinae* | |
| Bluegrass sod webworm | moth/ caterpillar | *Parapediasia teterrella* | Zincken |
| Larger sod webworm | moth/ caterpillar | *Pediasia trisecta* | Walker |
| White grubs | grubs (beetles) | *Scarabaeidae* | |
| Asiatic garden beetle | grub | *Maladera castanea* | Arrow |
| Black turfgrass ataenius | grub | *Ataenius spretulus* | Haldeman |
| Japanese beetle | grub | *Popillia japonica* | Newman |
| May/June beetles | grub | *Phyllophaga spp.* | |
| Northern masked chafer | grub | *Cyclocephala borealis* | Arrow |
| Oriental beetle | grub | *Anomala orientalis* | Waterhouse |
| Winter grain mite | mite | *Penthaleus major* | Duges |

Table 12. Timeline Estimate of Insect Activity for Bronx, New York.




———— = possible occurrence, rarely at pest levels

═══════ = probable occurrence, occasionally at pest levels

********** = most commonly at pest levels

## 4.4. Location and Extent of Pest Infestation

In spite of being considered a monoculture, the turfgrass environment is actually quite complex and serves as host to a wide variety of organisms. The turf habitat carries a host of soil microbes involved with nutrient and material recycling. They provide the nutritional basis for soil, thatch, and foliar feeding animals. These herbivores in turn serve as "food" for secondary consumers known as predators and parasites.

There are only a few turfgrass organisms known to be potentially damaging as pathogens. These pathogens can be separated and identified as key, occasional, or potential pests. The extent and locality for each pest may be compared to the preliminary threshold levels along with the suggested methods of control. Although some level of control may be warranted, the object is to provide protection of beneficial turfgrass organisms as well. This may be accomplished by tolerating some level of natural pathogens. Allowing build-up of microorganisms and natural fauna will help to balance the network of non-pests in the turfgrass environment. These pests present little or no chance for injury and comprise a vast majority of the insects and mites found in turfgrass today.

Tables 13, 14, 15, and 16 list the pest problems anticipated on the Ferry Point Park Golf Course. They are listed in the order of weeds, disease, and insects. Each pest listed has been given a Pest Index code that determines the probability of impact. A corresponding Frequency Index to determine the degree of likelihood is also provided. Key pests have been ranked for bentgrass, bluegrass, and turf-type fine leaf fescue and are compared with historical pest problems reported from existing golf courses located in the New York/New Jersey metropolitan areas.

Table 13. Location and Extent of Pest Infestation

Pest Infestation Index

| a. Weeds - Monocotyledons | Pest Index | Location | Frequency Index |
|---|---|---|---|
| Annual bluegrass | **K** | T F G R | 5 |
| Barnyardgrass | P | F R | 3 |
| Dallisgrass | **K** | F R | 5 |
| Goosegrass | P | F R | 4 |
| Green foxtail | O | R | 2 |
| Large crabgrass | **K** | F R | 5 |
| Purple nutsedge | O | T F R | 2 |
| Purpletop | O | F R | 1 |
| Quackgrass | P | F R | 2 |
| Small crabgrass | P | T F R | 4 |
| Timothy | O | F R | 1 |
| Yellow foxtail | O | F R | 1 |
| Yellow nutsedge | P | F R | 4 |

Table 14. Location and Extent of Pest Infestation

| b. Weeds - Dicotyledons | Pest Index | Location | Frequency Index |
|---|---|---|---|
| Black medic | O | R | 3 |
| Broad-leaved plantain | **K** | T F R | 5 |
| Common chickweed | P | T F G R | 3 |
| Common speedwell | O | T F R | 3 |

Frequency of Severe Outbreaks: 1-Low.....5-High

Location Index: T=Tees F=Fairways G=Greens R=Roughs

Pest Index: **K**=Key Pest P=Potential Pest O=Occasional Pest

Table 14 (continued). Location and Extent of Pest Infestation

| | Pest Infestation Index | | |
|---|---|---|---|
| b. Weeds - Dicotyledons | Pest Index | Location | Frequency Index |
| Clover | K | T F G R | 5 |
| Curly dock | O | F R | 3 |
| Dandelion | P | T F R | 4 |
| Ground ivy | O | F R | 2 |
| Heal-all | O | F R | 2 |
| Henbit | O | F R | 1 |
| Knapweed | K | F R | 5 |
| Knotweed | P | T F R | 3 |
| Lambsquarter | P | F R | 2 |
| Mallow | P | F R | 3 |
| Mouse-ear chickweed | K | T F G R | 5 |
| Nodding spurge | O | T F R | 3 |
| Oxalis | O | F R | 2 |
| Pearlwort | P | T F G R | 2 |
| Plantain | P | F R | 4 |
| Poison ivy | P | R | 3 |
| Poison oak | P | R | 2 |
| Purslane speedwell | O | F R | 2 |
| Prostrate spurge | O | T F R | 3 |
| Prostrate pigweed | O | T F R | 2 |
| Ragweed | P | R | 4 |
| Red clover | P | T F R | 3 |
| Shepherd's purse | O | T F R | 3 |
| Sheep sorrel | P | F R | 3 |
| Spotted spurge | O | T F R | 2 |
| Stitchwort | O | F R | 2 |
| Thistle | O | F R | 3 |
| Yarrow | O | T F G R | 2 |
| Yellow wood sorrel | O | F R | 2 |

Frequency of Severe Outbreaks: 1-Low.....5-High
Location Index: T=Tees F=Fairways G=Greens R=Roughs
Pest Index: K=Key Pest P=Potential Pest O=Occasional Pest

Table 15. Location and Extent of Pest Infestation

Pest Infestation Index

| c. Disease | Pest Index | Location | Frequency Index |
|---|---|---|---|
| Algae [1] | K | T F G | 5 |
| Anthracnose | O | T F G | 2 |
| Bacterial wilt | P | F R | 2 |
| Brown patch | K | T F G R | 5 |
| Copper spot | O | T F G | 2 |
| Crown and root rot | P | T F G | 3 |
| Dollar spot | K | T F G | 5 |
| Downy mildew | O | T F R | 2 |
| Fairy ring | P | T F G | 4 |
| Fusarium patch | K | T F G R | 5 |
| Helminthosporium leaf spot | P | T F G R | 4 |
| Leaf rust | P | T F G | 3 |

Table 15 (continued). Location and Extent of Pest Infestation

Pest Infestation Index

| c. Disease | Pest Index | Location | Frequency Index |
|---|---|---|---|
| Melting out | P | T F G R | 3 |
| Moss[2] | O | T G | 2 |
| Necrotic ring spot | P | T F G | 4 |
| Nematodes[3] | O | T FG | 2 |
| Pink patch | O | T F G | 2 |
| Powdery mildew | O | T F G R | 2 |
| Pythium blights | **K** | T F G | 5 |
| Red thread | P | T F G R | 3 |
| Slime molds | O | T F G R | 2 |
| Snow molds | P | T F G R | 4 |
| Summer patch | **K** | T F G R | 5 |
| Take all patch | P | T F G R | 4 |
| White patch | O | T F R | 2 |

Frequency of Severe Outbreaks: 1-Low.....5-High
Location Index: T=Tees F=Fairways G=Greens R=Roughs
Pest Index: **K**=Key Pest P=Potential Pest O=Occasional Pest

Biotic Agents of Noninfectious Diseases

1 Develops on the surface of overly wet soils. Algae is not a turfgrass disease.

2 Small plants that overgrow and compete with turf when wetness, poor nutrition and soil conditions exist. Moss is not a turfgrass disease.

Nematode Diseases

3 May be diverse and are dependent on the population of plant-parasitic and saprophytic density.

Table 16. Location and Extent of Pest Infestation

| | Pest Infestation Index | | |
|---|---|---|---|
| d. Insects | Pest Index | Location | Frequency Index |
| Annual bluegrass weevil | P | T F G R | 4 |
| Ants | O | T F G R | 2 |
| Black cutworm | K | T G | 5 |
| Bluegrass billbug | P | F R | 3 |
| Hairy chinch bug | P | T F G R | 2 |
| Sod webworm | P | T G R | 3 |
| Bluegrass sod webworm | P | T F R | 3 |
| Larger sodwebworm | P | T F G | 3 |
| White grubs | K | T F G R | 5 |
| Asiatic garden beetle | P | T F G | 4 |
| Black turfgrass ataenius | K | T F G R | 5 |
| Japanese beetle | K | T F G R | 5 |
| May/June beetles | O | F R | 1 |
| Northern masked chafer | O | T F G R | 2 |
| Oriental beetle | P | T F G R | 3 |
| Winter grain mite | O | T F G | 1 |

Frequency of Severe Outbreaks: 1-Low.....5-High
Location Index: T=Tees F=Fairways G=Greens R=Roughs
Pest Index: K=Key Pest P=Potential Pest O=Occasional Pest

## 4.5 Pest Infestation Thresholds

There will be four major factors, excluding climate, that will determine the thresholds of the anticipated turfgrass pests. They include water quality, soil conditions, pH and the turfgrass species.

Close monitoring of turfgrass during the establishment or grow-in phase will track the existence of potential pathogens. It will be very important to note the baseline information when sufficient crown, leaf stem and thatch layers have developed. During this early stage, an evaluation of turf quality will be necessary. The evaluation should include a cross check for each Preliminary Threshold that has been established in the IGCMP. The evaluation of pest occupancy for the project site should also be completed, and the potential levels of anticipated pest outbreak established.

The Ferry Point Park Golf Course will maintain the greens as a consistent, weed-free turf that is of the highest playing quality, aesthetically appealing, and not impacted by the presence of deleterious pests. "Insect damage to the greens must also be at an absolute minimum but the greens need not be totally free of insects. Allowing limited damage (weeds or insect damage) does carry a risk that the above pathogen may spread which would force the use of a broader control." (Vittum, 1986). To produce high quality turf, it is not necessary to have absolute control over insects and weeds. For example, healthy turf can be sustained with as many as five white grubs per square foot if traffic (wear) is not excessive (Brandenburg, 1989).

A similar level of quality will be required for the tees. Rotation of tee markers is necessary to maintain turf recovery. Therefore, the entire tee must be in a playable condition. Fairways may have a slightly greater amount of pest damage than tees. In the roughs and natural areas outside the fairways, a lower level of maintenance activity, compared to the tees, greens, and fairways, is proposed for insects and fungi.

Once the level of acceptable impairment is defined and the corresponding level of management is instituted, a regular program of inspections is required. The golf course superintendent or assistant golf course superintendent will make daily inspections of the course. This frequency is essential to identify the type and presence of pests early and to keep damage to an insignificant level with the lowest level of response.

### 4.5.1 Preliminary Threshold Guidelines

Site-specific turf pest thresholds identify the standard of management and establish that BMPs are functioning within the golf course operation. Suggested action levels for different golf course areas are presented in this section.

The suggested thresholds and action levels presented will be refined as actual data from the golf course becomes available. Data collection will begin during the grow-in period as soon as sufficient crown, leaf stem and thatch layers have been developed. During this early stage, the level of pest occupancy for the site should be determined, so that future pest outbreaks can be recognized with a degree of confidence. This is an iterative process and it will take approximately three years of data to refine the preliminary threshold guidelines.

Historical pests and related patterns of existing golf courses are often a good indication of pest density and activity. Existing courses generally provide the turf agronomist the necessary confidence that certain levels of pests are natural and acceptable. To assume otherwise might be considered over-managing, disrupt the true causal agent, and lead to misdiagnosed turf problems.

Table 17 provides preliminary thresholds for weed grasses. Preliminary threshold guidelines have been established for the turfgrass pests anticipated to occur on each playing surface relative to the turfgrass cultivar. Grasses are easier to control in the lower heights of tees and greens. Simple hand removal will often prevent further spread of these grasses. Sedges are more difficult to identify and control and grow closer to the thatch canopy. Under well established turfgrass conditions, these pests should pose minimal problems.

Table 18 lists the probable broadleaf weeds and the recorded levels of density in bentgrass and fine leaf fescue turf. Research will be needed to verify that the levels presented are not only tolerable but obtainable when managing these grasses. Many dicot weeds can be easily removed by hand. For those broadleaves difficult to control in groups or clusters, spot treatment with a wick applicator utilizing a post emergent herbicide will provide excellent control.

Tables 19 and 20 present management techniques once preliminary threshold guidelines are reached for weeds.

Table 21 presents timing for management techniques once preliminary threshold guidelines are reached for turfgrass disease.

Table 22 presents threshold guidelines for insect occurrence. Currently, there are no established industry thresholds for insect and mite pests found on this site. The thresholds for insects and mites are established as a preliminary guide. Local experience will also play a role in the refinement of these threshold guidelines.

Table 17. Suggested Action Levels for Grass Weeds in Different Golf Course Areas in New York

| | Number of Weeds per 1,800 sq. ft. | | | |
|---|---|---|---|---|
| Weed Species | Tees | Greens | Fairways | Roughs |
| **Grasses** | | | | |
| Annual bluegrass | 10 | 1 | 10 | 20 |
| Barnyardgrass | 5 | 1 | 10 | 10 |
| Dallisgrass | 3 | 1 | 5 | 10 |
| Goosegrass | 5 | 1 | 10 | 20 |
| Green foxtail | 5 | 1 | 10 | 20 |
| Large crabgrass | 5 | 1 | 10 | 20 |
| Purpletop | 5 | 1 | 10 | 20 |
| Quackgrass | 5 | 1 | 10 | 20 |
| Small crabgrass | 1 | 1 | 5 | 10 |
| Timothy | 5 | 1 | 10 | 20 |
| Yellow foxtail | 5 | 1 | 10 | 20 |
| **Sedges** | | | | |
| Purple nutsedge | 5 | 1 | 10 | 50 |
| Yellow nutsedge | 5 | 1 | 10 | 50 |

Table 18. Suggested Action Levels for Broadleaf Weeds in Different Golf Course Areas in New York

| | Number of Weeds per 1,800 sq. ft. | | | |
|---|---|---|---|---|
| **Broadleaf** | | | | |
| Black medic | 5 | 1 | 20 | 50 |
| Broad-leaved plantain | 3 | 1 | 10 | 20 |
| Common chickweed | 3 | 1 | 10 | 20 |
| Common speedwell | 5 | 1 | 20 | 50 |
| Clover | 3 | 1 | 10 | 20 |
| Curly dock | 3 | 1 | 10 | 20 |
| Dandelion | 3 | 1 | 10 | 20 |

Note: This table was developed from suggested guidelines by the University of Hawaii and an IPM program written for Lihi Lani by Holtzmann et al., 1991. The IPM plan was later summarized and rewritten by ETS to include this methodology as a means to establish baseline weed threshold counts.

Table 18 (continued). Suggested Action Levels for Broadleaf Weeds in Different Golf Course Areas in NY

| Weed Species | Number of Weeds per 1,800 sq. ft. | | | |
|---|---|---|---|---|
| | Tees | Greens | Fairways | Roughs |
| **Broadleaf** | | | | |
| Ground ivy | 3 | 1 | 10 | 50 |
| Heal-all | 5 | 1 | 10 | 20 |
| Henbit | 5 | 1 | 10 | 20 |
| Knapweed | 1 | 1 | 2 | 5 |
| Knotweed | 5 | 1 | 10 | 20 |
| Lambsquarter | 3 | 1 | 10 | 20 |
| Mallow | 1 | 1 | 5 | 10 |
| Mouse-ear chickweed | 3 | 1 | 10 | 20 |
| Nodding spurge | 3 | 1 | 10 | 20 |
| Oxalis | 5 | 1 | 10 | 50 |
| Pearlwort | 1 | 1 | 5 | 10 |
| Plantain | 3 | 1 | 10 | 15 |
| Poison ivy | 1 | 1 | 1 | 5 |
| Poison oak | 1 | 1 | 1 | 5 |
| Purslane speedwell | 3 | 1 | 10 | 20 |
| Prostrate spurge | 3 | 1 | 10 | 20 |
| Prostrate pigweed | 3 | 1 | 10 | 20 |
| Ragweed | 1 | 1 | 1 | 2 |
| Red clover | 3 | 1 | 10 | 20 |
| Sheep sorrel | 3 | 1 | 15 | 30 |
| Shepherd's purse | 5 | 1 | 10 | 20 |
| Spotted spurge | 3 | 1 | 10 | 20 |
| Stitchwort | 5 | 1 | 10 | 20 |
| Thistle | 1 | 1 | 5 | 5 |
| Yarrow | 3 | 1 | 10 | 20 |
| Yellow wood sorrel | 1 | 1 | 5 | 20 |

Note: Broadleaves in fairway and roughs may be more tolerable and easier to control with higher thresholds counts. Higher levels are unacceptable on tees and greens. Thresholds are much lower for these surfaces but are easily removed by hand at these levels. This table was developed from suggested guidelines by the IPM program written for Lihi Lani by Holtzmann et al., 1991. The plan was later summarized and rewritten by ETS to include this methodology as a means to establish baseline weed threshold counts.

Table 19. Preliminary Threshold Guidelines - Turfgrass Weeds* (Monocotyledons)

| Pest | Area | Cultural Management | Chemical Control |
|---|---|---|---|
| Annual bluegrass | Tees/Greens<br>Fairways<br>Roughs | seed head control<br>seed head control<br>seed head control | post emergence<br>post emergence<br>post emergence |
| Barnyardgrass | Tees/Greens<br>Fairways<br>Roughs | seed head control<br>seed head control<br>seed head control | spot treat<br>spot treat<br>spot treat |
| Dallisgrass | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>mechanical removal<br>mechanical removal | spot treat<br>spot treat<br>spot treat |
| Goosegrass | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |
| Green foxtail | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |
| Large crabgrass | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |
| Purple nutsedge | Tees/Greens<br>Fairways<br>Roughs | preventive<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |
| Purpletop | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>preventive<br>preventive |
| Quackgrass | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |
| Small crabgrass | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |
| Timothy | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |
| Yellow foxtail | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |
| Yellow nutsedge | Tees/Greens<br>Fairways<br>Roughs | preventive<br>preventive<br>preventive | spot treat<br>spot treat<br>spot treat |

* Control of annual grass weeds on bentgrass or bluegrass tees and fairways are best obtained with the use of a preemergent herbicide. Under well established turfgrass conditions these pests should pose minimal problems.

Table 20. – Preliminary Threshold Guidelines -Turfgrass Weeds* (Dicotyledons)

| Pest | Area | Cultural Management | Chemical Control |
|---|---|---|---|
| Black medic | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Broad-leaved plantain | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Common chickweed | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Common speedwell | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Clover | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Curly Dock | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Dandelion | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Ground ivy | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Heal-all | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Henbit | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Knapweed | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Knotweed | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>mechanical removal<br>spot treat | mechanical removal<br>mechanical removal<br>spot treat |
| Lambsquarter | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Mallow | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |

Table 20 (continued). Preliminary Threshold Guidelines - Turfgrass Weeds* (Dicotyledons)

| Pest | Area | Cultural Management | Chemical Control |
|---|---|---|---|
| Mouse-ear chickweed | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Nodding spurge | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Oxalis | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Pearlwort | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Plantain | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Poison ivy & oak | Tees/Greens<br>Fairways<br>Roughs | N/A<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Purslane speedwell | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Prostrate spurge | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Prostrate pigweed | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Ragweed | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>mechanical removal<br>mechanical removal | mechanical removal<br>mechanical removal<br>spot treat |
| Red clover | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Sheep sorrel | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Shepherd's purse | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>mechanical removal<br>spot treat | spot treat<br>spot treat<br>spot treat |

* Many dicot weeds can be easily removed by hand. For those broadleaves difficult to control in groups or clusters, spot treatment with a wick applicator utilizing a post emergent herbicide will provide excellent control.

Table 20 (continued). Preliminary Threshold Guidelines - Turfgrass Weeds* (Dicotyledons)

| Pest | Area | Cultural Management | Chemical Control |
|---|---|---|---|
| Spotted spurge | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |
| Stitchwort | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>spot treat<br>spot treat |
| Thistle | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>mechanical removal<br>mechanical removal | mechanical removal<br>mechanical removal<br>spot treat |
| Yarrow | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | post emergence<br>spot treat<br>spot treat |
| Yellow wood sorrel | Tees/Greens<br>Fairways<br>Roughs | mechanical removal<br>spot treat<br>spot treat | spot treat<br>post emergence<br>post emergence |

* Many dicot weeds can be easily removed by hand. For those broadleaves difficult to control in groups or clusters, spot treatment with a wick applicator utilizing a post emergent herbicide will provide excellent control.

Table 21. Preliminary Threshold Guidelines - Turfgrass Disease*

| Pest | Area | Cultural Management | Chemical Control |
|---|---|---|---|
| Algae | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>24-48 hours<br>48-72 hours | spot treat<br>72 hours<br>120 hours |
| Anthracnose | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>48-72 hours<br>48-72 hours | spot treat<br>96 hours<br>96 hours |
| Bacterial wilt | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | 72 hours<br>96 hours<br>120 hours |
| Brown Patch | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>24-48 hours<br>48-72 hours | spot treat<br>72 hours<br>96 hours |
| Copper spot | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>24-48 hours<br>48-72 hours | spot treat<br>72 hours<br>96 hours |
| Crown and root rot | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>24-48 hours<br>48-72 hours | spot treat<br>72 hours<br>96 hours |
| Dollar spot | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | spot treat<br>72 hours<br>96 hours |
| Downy mildew | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | 72 hours<br>96 hours<br>120 hours |
| Fairy ring | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | 72 hours<br>96 hours<br>120 hours |
| Fusarium patch | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | spot treat<br>spot treat<br>96 hours |
| Helminthosporium leaf spot | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | spot treat<br>spot treat<br>96 hours |
| Leaf rust | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | spot treat<br>spot treat<br>96 hours |
| Melting out | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | spot treat<br>spot treat<br>spot treat |

Table 21. (continued) Preliminary Threshold Guidelines -Turfgrass Disease*

| Pest | Area | Cultural Management | Chemical Control |
|---|---|---|---|
| Moss | Tees/Greens<br>Fairways<br>Roughs | rake out<br>rake out<br>improve drainage | spot treat<br>spot treat<br>spot treat |
| Necrotic ring spot | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | spot treat<br>spot treat<br>96 hours |
| Nematodes | Tees/Greens<br>Fairways<br>Roughs | sample counts<br>sample counts<br>sample counts | needle> 200/100 cc Soil<br>lance> 200/100 cc Soil<br>stunt> 800/100 cc Soil<br>spiral> 3,000/100 cc<br>Soil ring> 3,000/100 cc Soil |
| Pink patch | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | spot treat<br>preventive<br>preventive |
| Powdery mildew | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>48-72 hours | spot treat<br>spot treat<br>spot treat |
| Pythium blights | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>upon detection<br>24-48 hours | preventive<br>24-48 hours<br>48-72 hours |
| Red thread | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>24-48 hours<br>120 hours | 72 hours<br>96 hours<br>spot treat |
| Slime molds | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>24-48 hours<br>48-72 hours | spot treat<br>spot treat<br>spot treat |
| Snow molds | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>upon detection<br>rake out | preventive<br>preventive<br>spot treat |
| Summer patch | Tees/Greens<br>Fairways<br>Roughs | 24-48 hours<br>48-72 hours<br>48-72 hours | spot treat<br>spot treat<br>spot treat |
| Take all patch | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>upon detection<br>upon detection | spot treat<br>spot treat<br>spot treat |
| White patch | Tees/Greens<br>Fairways<br>Roughs | upon detection<br>upon detection<br>upon detection | preventive<br>spot treat<br>spot treat |

* Currently there are no established industry standards for pest threshold guidelines. The following thresholds for insects, weeds and disease are established as a preliminary guide to assist the golf course superintendent in deciding when to choose the appropriate form of control. We fully expect that local experience will result in the refinement of these threshold guidelines. Hand removal of weeds in fairways and roughs can be accomplished by constructing a tool designed to remove the plant and taproot completely.

Table 22. Preliminary Threshold Guidelines - Turfgrass Insects

| Area | Pest | Insect Density<br>Cultural Controls | Curative Controls |
|---|---|---|---|
| Greens/Tees<br>Fairways<br>Roughs | Annual bluegrass weevil | 3-5/sq. ft.<br>5-8/sq. ft.<br>5-8/sq. ft. | 6/sq. ft.<br>8/sq. ft.<br>8/sq. ft. |
| Greens/Tees<br>Fairways<br>Roughs | Ant mounds | 1-2/$yd^2$<br>N/A<br>N/A | 3/$yd^2$<br>N/A<br>N/A |
| Greens/Tees<br>Fairways<br>Roughs | Black cutworm | 1-2/sq. ft.<br>2-3/sq. ft.<br>3-4/sq. ft. | 3/sq. ft.<br>4/sq. ft.<br>5/sq. ft. |
| Greens/Tees<br>Fairways<br>Roughs | Bluegrass billbug larvae | N/A<br>3-4/sq. ft.<br>4-8/sq. ft. | N/A<br>6/sq. ft.<br>10/sq. ft. |
| Greens/Tees<br>Fairways<br>Roughs | Hairy chinch bug | 10-15/sq. ft.<br>16-25/sq. ft.<br>26-30/sq. ft. | 12-16/sq. ft.<br>25-30/sq. ft.<br>30-35/sq. ft. |
| Greens/Tees<br>Fairways<br>Roughs | Sod webworms | 1-2/sq. ft.<br>3-4/sq. ft.<br>5-6/sq. ft. | 3/sq. ft.<br>5/sq. ft.<br>7/sq. ft. |
| Greens/Tees<br>Fairways<br>Roughs | Black turfgrass ataenius | 20-25/sq. ft.<br>30-35/sq. ft.<br>50-60/sq. ft. | 30/sq. ft.<br>40/sq. ft.<br>60/sq. ft. |
| Greens/Tees<br>Fairways<br>Roughs | Japanese beetle, Asiatic beetle, May/June beetles & other annual grubs | 3-4/sq. ft.<br>5-8/sq. ft.<br>8-10/sq. ft. | 4/sq. ft.<br>8/sq. ft.<br>10/sq. ft. |
| Greens/Tees<br>Fairways<br>Roughs | Winter grain mite | 30-40/sq. ft.<br>40-50/sq. ft.<br>N/A | 50/sq. ft.<br>60/sq. ft.<br>N/A |

### 4.5.2 Nematodes

High populations of certain species of nematodes may indicate that the root system is in danger or has already been debilitated to a significant extent. A simple count of nematodes, however, is not enough to make an informed determination of whether the threshold has been crossed and what, if any, action should be taken. The threshold levels which justify the implementation of control measures are dependent on the depth of the sample, the species of grasses present, depth of the root system, soil texture, symptoms and extent of damage, presence of other stresses to the turf; and potential contamination of the environment by the nematicide chosen if action is taken (Wick, 1994).

Nematode populations are estimated most accurately with a composite sample. A 3/4 to 1 inch diameter soil probe, or something similar, should be used to sample a depth of four inches throughout the site. This depth is a compromise but represents the population distribution of different species well.

*Distribution:* Nematodes are unequally distributed in the soil both vertically and horizontally. For example, if assays were done in a transect across a putting green, a series of high and low counts would result. Populations also vary according to the depth at which the sample was taken. A sample at a two-inch depth may have twice the concentration of stunt nematodes as a sample taken at four inches.

*Time of Year:* During winter months nematode populations decline. As the grass begins to resume growth in the spring, nematodes begin feeding on roots. The reproductive potential of the nematodes increases as the soil temperature rises.

*Assay Procedure:* It is not possible to extract all of the nematodes from the soil sample. The soil (at least ½ pint) should be placed in a container, such as a plastic bag, to prevent desiccation. The sample number should be clearly identified on the outside of the container as paper tags placed in contact with the soil quickly deteriorate. The sample should be refrigerated or delivered as soon as possible after collection.

At this time there is very little experimental data to establish threshold levels for nematodes in turfgrasses in this area. The numbers of nematodes per 100 cc of soil presented in the Table 23 are based on research from other states as well as from case-history information and survey results. They serve only as a guide.

Table 23. Threshold Levels for Nematodes in Turf

| Nematode | Number/100 cc Soil |
|---|---|
| Needle | > 200 |
| Lance | > 400 |
| Stunt | > 800 |
| Spiral | > 3000 |
| Ring | > 3000 |

Cyanobacteria and Chlorophyte microalgae in a Kalonite clay base (Turftech II) and a biological liquid inoculum (Precep/Nemastop) are preferred as alternative control measures when populations of nematodes indicate only one or more species have specific high threshold counts. These products biologically increase root zone mass and dispense an irritant within the root that dislodges feeding nematodes.

Nematicide should not be used where contamination of water may occur and should be used only in accordance with the label and local regulations.

## 4.6 Pest Control Strategies

Once a pest has been located through routine inspection (whether visual, or with aid from disclosing solutions, trapping or disease immunoassay kits) and found to exceed threshold levels, the golf course staff has the information necessary to take action. Even when the infestation is found to be significant, the first corrective action is to evaluate environmental corrections. These include:

- Maintaining balanced nutritional levels;
- Improving microclimates through subsurface drainage, aerification, and increasing air movement and sun penetration;
- Reducing cultural management stresses by limiting scalping of turf, keeping mower blades sharp, and adjusting or raising mowing heights when necessary; and
- Calibrating replacement of water in order to control the build-up of total dissolvable salts in soils and minimize leaching.

If environmental factors have been optimized but infestation(s) still exceed acceptable thresholds, an incremental approach is indicated, starting with measures that have the smallest overall impact on the environment. Simple ideas often achieve desirable results. Hand removal of weeds or spot application with a wick-type applicator are two examples of minimalist response. The golf course superintendent might reexamine fungicide management and develop new IPM strategies as needed to reduce disease pressure. New approaches might also assist in reducing fungicide resistance in turfgrass. Other approaches include maintaining insect populations within tolerable levels through the use of biologically synthesized insect and

mite controls, or establishing populations of natural enemies, including microbial endophytes, insect parasites and other predatory nematodes. Natural enemies such as birds, mammals, and amphibians can also be supported, often through simple means.

### 4.6.1 Biological and Organic Controls

The turfgrass environment usually contains a large number of beneficial biological micro-organisms, insects, mites and spiders. If these organisms are not destroyed by insecticides or other chemicals, they can often control the insects and mites which damage the turf. In some cases, these beneficial insects look like pests and inexperienced managers may actually apply a pesticide. Therefore, it is important that one learn to differentiate the "good" bugs from the "bad" bugs. A number of diseases that attack turf insects can also be useful. These biological controls often take longer to do the job and may provide a reduced level of control. This should be acceptable, however, because of the reduction in the use of pesticides and lack of harm to non-target insects.

The release of parasitic organisms without the proper agency approval is strictly prohibited. The golf course superintendent must obtain the necessary permits and/or authorizations as required by New York State and by the State Department of Agriculture before applying any experimental biological, parasite or predator defenses. The Department of Agriculture will also be consulted about known successes or failures with the use of these products for turfgrass control.

### 4.6.2 Common Predators and Parasites

Ferry Point Park Golf Course's IPM program is designed to preserve native insects that prey on pest populations. Unfortunately, most of these predators and parasites are very susceptible to many conventional pesticides. Caution must therefore be used when applying turf insecticides since these treatments can kill beneficial predators and lead to outbreaks of other pests.

On the Ferry Point site, earwigs, ground beetles, rove beetles and lady beetles are expected to be significant predators.

**Earwigs:** Earwigs nymphs and adults attack sod webworms and cutworms as well as a variety of other soft bodied insects. Earwigs require plant material or other cover in order to hide during the day and can be encouraged through provision of proper shelter.

**Ground Beetles and Rove Beetles:** These voracious predators feed on eggs and any insect they can subdue. Both adults and larvae are predators and are probably the most common natural control for caterpillars that attack turf. The primary means of encouraging beetles is through limiting insecticide applications or using spot treatments of insecticides in lieu of broadcast spraying. Recent studies indicate that these beetles rapidly reestablish into an area after pesticide usage if refuge sites are provided.

**Lady Beetles:** Lady beetles, like green lacewings, commonly inhabit trees and shrubs although they are occasionally found feeding on aphids and mites in turf. Releasing lady beetles is not recommended, however, since the commercially available species do not prefer turf habitat.

### 4.6.3 Common Pathogens

Most turf insect pests have natural diseases which periodically control their populations. A few of these pathogens require some special handling or application technique in order to be fully effective. It is imperative that the instructions for their use are carefully followed.

### 4.6.4 Insect Parasitic Nematodes

Microscopic nematodes which attack grubs have been recognized since the 1930s. Until recently, however, no one had identified an easy method to propagate or apply these parasites. Nematodes are now being produced in large quantities and several strains have been identified which will kill sod webworms and cutworms, billbugs, and the white grubs. These nematodes search out insects and enter their bodies through natural openings or by drilling through the cuticle. Once inside the body, the nematodes release a bacterium which kills the pest within hours. The nematodes then complete their development and produce new infective juvenile nematodes. Fortunately, these biological control agents only infect insects and will not harm the turf or other larger animals, including humans.

Exhibit® is a commercially available source of parasitic nematodes. It should be applied to the greens at a rate of 3.4 gallons per 1,000 square feet. As with all biological controls, care must be exercised to get the best results with parasitic nematodes. The active juveniles are very susceptible to drying and sunlight. Therefore, they should be applied to the turf with considerable water, preferably in the morning or evening and should be immediately soaked into the turf with a heavy irrigation. The strains selected must be the most active against the turf caterpillars, billbugs or white grubs.

## 4.7 Cultural Control Tactics in Turfgrass

Cultural control tactics involve modifying the environment so that it is less suitable for pests. Cultural practices range from the initial selection of the grass cultivar through thatch control, properly balanced soil chemistry, proper nutrient management and efficient water management. All of these elements serve to reduce the need for pesticides.

The cultural practices recommended for this golf course include the following:

- Proper pH and electrolytic balance of soils will be established and maintained to provide optimum growing conditions;
- Air circulation, water relationships, and exposure to sunlight will be analyzed during planning and construction, and improved in areas under stress during normal operations;
- Proper surface and subsurface drainage will be established to reduce excessive water from accumulating

on the playing surface or rootzone;

- Adequate tee and green size will be provided to accommodate traffic wear and reduce areas of compaction from use by the playing public;
- Irrigation water will be applied in an appropriate and timely manner;
- Misting by means of the irrigation system will be used to control the rate of evapotranspiration and heat stress;
- Soil amendments (gypsum, sulfur, sulfuric acid, etc.) will be applied to maintain soil structure and drainage; and
- The golf course management team will inspect the site daily to identify any potential pest problems.

### 4.7.1 Thatch

One cultural effort that will greatly improve the result of other strategies is the control of thatch. Thatch provides a hiding place for many pests. It maintains a humidity zone for sod webworms, cutworms, and chafer beetles, and is partially used as food by billbug larvae and grubs. Thatch also hinders the movement of pesticides or biological controls applied to control grubs. Control of thatch promotes better water movement to the turfgrass roots while allowing the soil to dry more effectively between waterings which eliminates or reduces the chances for the grass to act as a site for algae and fungi growth (Daar, 1982).

Thatch also has beneficial qualities. Some thatch on playing surfaces is desirable because of its cushioning and filtering effects. Its shade helps protect the soil. In addition, the proper amount of thatch enhances the biological active zone. This in turn will help to deactivate undesirable residual chemical and fertilizer products.

Dethatching, vertical mowing, sand topdressing, biologically active enhancers (described on the following page), grooming and brushing are the primary methods used to control and maintain the desired thatch level at Ferry Point Park Golf Course. Vertical mowers and/or groomers will be installed on green and tee mowing equipment allowing the course to be dethatched on a regularly scheduled basis. In addition, aeration of the surface soils will be used to reduce thatch by relieving compaction and helping in the exchange of gases and fluids to the turf. Aerification is a process of opening passageways from the surface of the turf cover through the soil and into the root zone. In turfgrass, it is the equivalent of cultivation (plowing/discing) in agriculture. Since golf courses are subject to traffic (walkers, carts tractors, etc.), the upper soil profile has a tendency to compact and create inadequate soil pore space. Often, this will restrict the passageway of air and water into the root zone.

### 4.7.2 Biostimulant/Stress Management

Biostimulant/stress management products will be considered for use within the Ferry Point Park GCMP on an as-needed basis. Many products are available. Some serve to increase the turfgrass plants' ability to resist disease pressures and environmental stress. Others will be useful for enhancement of soil

microbes and/or drainage. Reducing stress and activating beneficial soil microorganisms, in turn, serve to increase the turfgrass' ability to counter disease, weeds, and insects, reducing the need for pesticides.

The following materials are intended to provide stress-specific assistance in the management of turfgrass, and to assist the golf course superintendent in the reduction of pesticide usage. These alternative materials are particularly useful in the maintenance of high traffic areas such as tees and greens. As time progresses and the soil ages, the use of these modification materials may prove to be particularly beneficial for turfgrass hardiness.

**AquaTreat** is a balanced blend of selected natural bacteria, bacterial enzymes, nutrients and synergists developed specifically to enhance water quality. They use only non-living organic matter as food sources. They have not been genetically altered or manipulated in any manner. The cultures are completely safe, and will not harm humans, plants, animals, birds, or the environment. The product alleviates odors, digests sludge, and keeps water algae free. It is manufactured by TerraBiotics L.P.

**Bovamura** is a liquid organic manure fertilizer that promotes deep root development and encourages tillering. It may be used for root development on newly sodded areas. It supports the development of soil microorganisms and transforms nutrients to usable plant food. It is manufactured by the PBI Gordon Corporation.

**Bio.Trek 22G** with the active ingredient *Trichoderma Harzianum* is the first commercially available biological disease control agent for turfgrass in the United States. The product is registered and suitable as a partial substitute for some turfgrass fungicides. The product is produced by Wilbur-Ekkils in Fresno, California.

**Bio-Safe Organic 3 in 1** attacks insects by plugging their breathing tubes and causing asphyxiation. The product is registered for fleas, ticks, cockroaches, ants, scorpions, aphids, and beetles. The material is produced by American Weilness, Inc. in Carrollton, Georgia.

**Cruiser** is a bioinsecticide containing the host seeking *Heterorhabditis bacteriophora (Hb)* nematodes for effective control of Japanese beetle larvae and other white grubs in turf and flower beds. The product is produced by Ecogen, Inc.

**Eco Soil Systems, Inc.** produces a bioject golf course program for disease management, plant growth enhancement, sodium reduction and nematode suppression. The Bioject BioReactor is rented on an annual basis to inject large quantities of beneficial microbes directly into the golf course irrigation system. A developed strain of *Pseudomonas aureofaceans* plays an important role in the reduction of fungal diseases.

**Tx-1** plays an important role in the reduction of fungal disease. *Azospirillum brasilense* microorganisms are used to incorporate $N_2$ and release ammonia ($NH_4$) and nitrate ($NO_3$). The presence of *Azospirillum* provides for healthier turf through nitrogen fixation, production of plant growth regulators, and colonization on the rhizoplane.

**Epoleon** is an organic deodorizer and neutralizer. This product stabilizes compounds so they are not re-released into the atmosphere. It is manufactured by the Epoleon Corporation of America.

**Essential** contains a high percentage of carbon-rich organic materials and humic acid. The product contains intermediate metabolites, metabolites, simple sugars, peptides, amino acids, enzymes and amides, humate, lignin, organic chealates and cellulose fiber, all found in the natural stages of organic matter decomposition. The product is manufactured by Growth Products®.

**Green-Releaf** produces a group of natural microbes that form a symbiotic relationship with plant roots. Plant performance is enhanced by facilitating the uptake of nutrients and water while simultaneously aiding in pathogen defense. The products assist with reducing traditional fungicide applications.

**GroZone** is a calcined clay soil conditioner for the root zone. The material retains moisture to minimize stress from prolonged droughts and reduces watering requirements. It helps to increase nutrient retention, prevent compaction and creates a strong environment for healthy roots. It is manufactured by the American Colloid Company.

**Isolite** porous ceramic is a root zone modification material designed to improve water conservation and increase capillary porosity. It provides a low cation exchange capacity that will not tie up nutrients and helps to leach salts. It is typically used as a soil amendment during construction or aerification. It is manufactured by the Innova Corporation, an affiliate of Sumitomo Corporation of America.

**Netlon mesh** element may be used to increase macro-pores. The mesh is used to increase strength and provide increased stability on slopes. The filaments also open continuous pore space and may be a potential amendment that may be rototilled into the soil. It is manufactured by Netlon, Ltd. England.

**NoburN** is an organic wetting agent that loosens compacted soils. It helps to alleviate localized dry spots and hydrophobic conditions but does not have to be watered in, unlike synthetic wetting agent materials. It is derived from the desert Yucca plant and is manufactured by Roots Inc.

**Organica, Inc.** produces plant growth activators, insect control agents, humic acids, insecticidal soaps and seaweed and kelp activators. The products are designed to assist turfgrass managers with alternative control agents. The company furnishes substantial information on product evaluation and field trials, with evaluations and test results for agricultural and greenhouse pests. The company is actively seeking expansion within the turfgrass industry and has been working in California for specific pest controls in agriculture and related food crop activity.

**PanaSea and PanaSea Plus** utilize liquefied sea plant extract to stimulate root growth and aid in the reduction of thatch. Natural growth hormones (cytokinin) work to make the turfgrass more resistant to stress. The product works to speed release of the lemma during seed germination. It is manufactured by Emerald Isle Ltd.

**P2** is a synthetic polymer which acts as a water absorbent and retention material. This can be used to help raise the waterholding capacity and help lower the bulk density of the soil. It is distributed by Broadleaf Industries.

**Pro²/Oxygen Plus** provides oxygen to control stress encountered with anaerobic soils. There are several

groups of anaerobic microorganisms which are pathogenic in plants. These organisms thrive in the absence of oxygen. The release of oxygen into the soil environment is a practical method for control. It is manufactured by Plant Research Laboratories.

**Profile** is a ceramic product engineered to solve and prevent soil problems. Profile increases water retention and nutrient holding because of the capillary pores and the cation exchange capacity. The product improves root zones by adding water, nutrient, and air holding capacity. It is designed to be used during construction, after aerification or to improve topdressing blends.

**Sand-Aid** is a natural organic sea plant soil conditioner. It may be used to decrease nutrient leaching and increase fertilizer efficiency. It may be incorporated into the soil mix of new green construction or applied as a topdressing constituent. It is also manufactured by Emerald Isle Ltd.

**Spectrum** is a mix of 24 species of live beneficial micro-organisms containing beneficial acids and amino acids that assist with reducing toxicity levels in soil and allow the plant to create greater resistance to pathogens and pests. The product is produced by Tainio Technology & Technique, Inc. in Cheney, Washington. The company produces a series of biological soil amendment and turf care products.

**Turftech II** utilizes nitrogen fixing bacteria (cyanobacteria) and may contribute as much as one pound of nitrogen per 1,000 square feet over a 60 day period. It may help to suppress disease causing fungi and bacteria and reduce the need to apply additional forms of nitrogen. Normal phosphorous and potassium is still required. It is manufactured by Soil Technologies Corporation.

While each of the products above offers important contributions to biostimulation and stress management, they are useful only within an overall testing and conditioning program. Soil, plant tissue and water quality will be tested at least twice a year to obtain an ongoing evaluation of the nutrient and electrolytic balance. Testing will also provide answers on sodium content, pH, etc. of the soil which will guide the maintenance staff on the use of soil enhancements.

For example, the presence of a pH imbalance can make nutrient supplies unavailable through chemical insolubility or fixation. When this condition is found, the proper answer may be to address the pH level rather than to increase nutrients. Similarly, adequate nitrogen is needed to produce rapid enough growth to recover from traffic associated with play. Too much nitrogen, on the other hand, can increase thatch and create thin cell walls resulting in susceptibility to certain fungus. In the spring and fall, higher quantities of phosphorous are needed to increase root depth and mass. Higher potassium is needed in the summer to increase cell wall thickness. Too little nitrogen, potassium, phosphorous, micronutrients, etc., can lead to disease. All of these factors influence the selection of soil enhancements just as they determine the choice of fertilizers or other management chemicals.

## 4.8 Mechanical Control Program

Mechanical controls are often the most easily instituted and followed techniques for improving the turfgrass environment. Suggested mechanical controls include the use of some or all of the following types of equipment and practices:

- Core aerification
- Shatter-Core aerification (shallow and deep tine with solid tines)
- High pressure water injection aerification
- Spiking/Slicing
- Dethatching (heavy thatch removal)
- Vertical mowing (light thatch removal)
- Grooming
- Brushing
- Proper mowing heights
- Proper mower blade sharpening
- Proper equipment repair

Poor turfgrass growth is often due to imbalances in water, carbon dioxide and oxygen exchanges. Aerification typically remedies this.

Appropriate aerification can alleviate compaction and alter soil bulk density which inhibits root development. Historically, shatter core aerification has been used when persistent compaction problems warranted deeper aerification. With shatter core aerification, the presence of soil/sand on the canopy of the leaf surface must be minimized. The recent advent of high pressure water injection provides an increased safety margin for aerification on greens and tees during summer months. Comparative field testing is currently underway to determine the benefits derived when choosing this form of aerification. One minor disadvantage from hydro-injection aerification is the disturbance of lower profile particle fines or sand or gravel displaced onto the putting green surface. While no form of aerification is trouble free, the machine currently produced by the Toro or Cushman/Ryan Corporation allows aerification to be completed with the least amount of disturbance to the playing surface.

Aerification should be performed in the late spring (April-June), and again in the early fall (September-October) to manage routine problems. This timing is important. If aerification is performed too late in the summer, it can cause heat related stress, resulting in slow recovery which can encourage weed infestation and insect pest pressure. Summer aerification with traditional core aerifiers will increase direct sun exposure along with elevated evapotranspiration values. This may result in desiccation, turf damage, and a plant more susceptible to disease or pest invasion.

Consistent mowing heights and proper bedknife adjustments must be maintained throughout the growing season. No more than one third of the leaf blade should be routinely removed in any single mowing. Alternate mowing equipment will be used during periods of excessive soil wetness to maintain these consistent mowing heights. Mowing frequency will increase during the spring, generally following 7-21 days after fertilizer applications. During cooler conditions and hot and dry periods, mowing frequency may decrease. Mowing frequency will also be reduced during inclement weather to keep mechanical damage to a minimum.

Clippings will not be accumulated adjacent to play areas. This policy will minimize cross contamination of grasses near wetlands and encourage composting of the turfgrass clippings.

The commercial turfgrass equipment purchased for the golf course will be certified to meet the American National Standard Institute's (ANSI) voluntary safety specifications, B71.4-1984 and applicable regulations based thereon. Mowers will be adjusted, sharpened and inspected according to the manufacturer's specification in order to provide optimum cutting performance. The use of Wiehle rollers may be included on equipment used to mow tees, fairways, and greens. This will aid in the control of excessive thatch and promote underground shoots or tillers of the seeded bentgrass. Solid rollers should be used during the grow-in period. All turfgrass will be maintained at a cutting height which produces an optimum playing surface.

The range of heights listed in Table 24 are typically maintained for Kentucky bluegrass, fescue and bentgrass surfaces. A range of optimum heights has been provided to adjust for periods of dormancy and stress.

Table 24. Turfgrass Maintenance for Ferry Point Park Golf Course

| Area | HEIGHT OF CUT | MOWING FREQUENCY | (X) WEEKLY |
|---|---|---|---|
| TEES | 3/8"-5/8" (for bentgrass) (9.53 - 15.88 mm)<br><br>3/4"-1" (for bluegrass) (19.05 - 25.40 mm) | M W TH F | (3-4) with baskets |
| FAIRWAYS | 3/4"-1" (19.05 - 25.40 mm) | M T TH F | (3-4) with baskets |
| GREENS | 7/64"-7/32" (2.78 - 5.56 mm) | (M) T W TH F S S | (6-7) with baskets |
| ROUGH | 1.50"-3.00" (38.10 - 76.20 mm) | M T (W) TH F | (1-2) no baskets use vacuum rotary decks |

It is recommended that Ferry Point Park Golf Course consider the use of electric mowers where they are deemed practical. These newly introduced machines provide operator comfort, improvements in air quality and noise abatement. The Ransome E-Plex is now available for maintaining greens and tee mowing. The Smithco company provides an electric trap rake for projects that are located near residential or urban areas addressing noise abatement issues. Most major turfgrass companies provide electric transportation vehicles for golf course employees including golf carts and golf shuttles convertible for such use.

A variety of mowing equipment will be used to prevent matting, compaction and/or frequency marks. Equipment used to mow tees will be low compaction, light-weight mowers. They will be provided with optional grooming attachments, five to eight blade reels, and grass catchers. A combination of triplex mowers and lightweight five-gang mowers will be used on fairways. High frequency, eight to eleven blade cutting units with hydraulically driven reels will be used to maintain the fairway playing surface. Walk-behind mowers

causes less compaction, improve the quality of cut, and reduce turfgrass stress when compared with continual use of triplex mowers. Clean up passes around the edge of the green will be altered to allow upright growth and prevent what is known as tracking. Two types of mowers (reel-type and rotary) will be used to maintain roughs and general use turf. Ground driven or hydraulic reel mowers will be used to maintain areas adjacent to the secondary roughs. Areas adjacent to bunkers, greens, and tees may require the use of a hydraulic rotary or reel driven mower. The mowers selected will provide a uniform cut with a minimum of wear and compaction damage. They will maintain quality playing conditions and remove a maximum one third of the total leaf blade during each mowing.

The most critical part of the mechanical control section of this IGCMP is proper mowing height adjustment and mower cutting quality. Mowers must be maintained so that leaf blades are cut and not torn off. Mower blades must be sharp. Lacerated leaf ends will increase the possibility of pathogen invasion. Extensive irregular separation of leaf tissue gradually increases a process known as chlorosis. Proper mowing heights are also paramount to the management of healthy turf. Table 25 establishes reel adjustment and the minimum frequency schedule to follow prior to mowing. With the advent of variable clip control reels and reverse reel backlapping features installed on the latest hydraulic lightweight mowers, the following schedule should be part of the normal mechanical and maintenance mowing operations.

Table 25. Turfgrass Mower Reel Adjustment and Tuning Frequency

| Mowers | Periodic Adjustments | Minimum Backlapping | Minimum Grinding |
|---|---|---|---|
| Greens | Daily | As Needed | As Needed |
| Tees | Daily | As Needed | As Needed |
| Fairways | Daily | As Needed | As Needed |
| Roughs | Daily | As Needed | As Needed |

## 4.9 Summary of Cultural/Mechanical Controls

The following will be used as interrelated cultural practices:

- Mechanical spiker will be used to promote root growth, reduce the incidence of water puddling, and provide beneficial oxygen to the crown area;
- Vertical mowers will be used to control excessive areas of thatch (more than 1" or 2.5 cm on fairways/roughs; more than 3/8" or 1.25 cm on tees; more than 1/4" or 1 cm on greens);
- Brushes will be used to provide upright shoot growth and prevent matting;
- Coring machines or an aerifier will be used to eliminate compacted soils and prepare the site for topdressing or overseeding;

- High pressure water injection aerifier will be used in periods of stress or when the practice may help reduce the need to apply a pesticide;

- Mechanical renovator on fairways and roughs will be used to control excessive thatch. Seeding or sodding will be used as a preventive means to control unwanted species of weeds wherever possible;

- Topdressing will be applied periodically to all tees and greens, depending on the growth and thatch conditions of the respective areas. Wear patterns (divots) on tees will be topdressed and seeded. Markers will be moved daily to allow sufficient time for the surfaces to recover. This practice will help to eliminate the establishment of weeds that are the result of continual wear;

- Greens will be topdressed as deemed necessary by the golf course superintendent. The rate of top-dressing will be directly proportional to the need to control thatch or achieve smoothness;

- Topdressing material will be of the same material as indicated in the original specification plan for new construction of golf course greens. The use of identical sand as supplied for original construction is preferred. The lack of an organic matter is permissible as long as the material is of the same particle size distribution; and

- Topdressing will be used to level playing surfaces, improve root structure when coring, and to control thatch and protect new seedlings. Spot topdressing will be the practice for those areas in fairways with exposed native soils.

## Chapter V

## Chemical Controls and Handling at Ferry Point Park Golf Course

The need for pesticides, in most cases, is the direct result of failures from other control measures. However, imbalances may occur from time to time which require the use of chemicals to manage turf pests. Also, some pests and diseases are expected to require the use of fungicides and herbicides, and perhaps insecticides as well, regardless of the success of other control measures. Snow molds *(Typhula incarnata; T ishikariensis)* fusarium blight *(Fusarium spp.)* and pythium blights *(Pythium sphanidermatum; P. ultimum)* are all fungus diseases that require preventative applications of fungicides.

### 5.1 Risk Mitigation

The golf course is designed to ensure that surface runoff will not directly discharge to adjacent surface waters even under intense storm conditions. There will be no direct drainage path to the East River or other surface water features from either the golf course or the lakes. To ensure groundwater protection, infiltration below greens and tees will be filtered through peat/sand filter systems before it reaches the water table.

### 5.2 Methods of Selecting Chemicals

Chemical controls include herbicides, fungicides, insecticides and miticides. Modern pesticides have changed dramatically in recent years and special care must be taken to get the maximum efficacy out of them. At Ferry Point Park Golf Course, only pesticides with short residual activity periods (those which decompose rapidly) have been recommended. Insecticidal soaps and parasitic nematodes are recommended for insect and mite control.

Implementation schedules describing various levels of management are provided in Tables 26 and 27. Table 28 quantifies the specific chemical usage and the probable number of acres to be treated. The chemicals, rates, areas of application, and the pest treated are described as probable worst case situations. A more reasonable set of assumptions for pesticide usage implementing successful IPM is discussed in Section 4 of this chapter: "Anticipated Reduction of Pesticide Use with IPM."

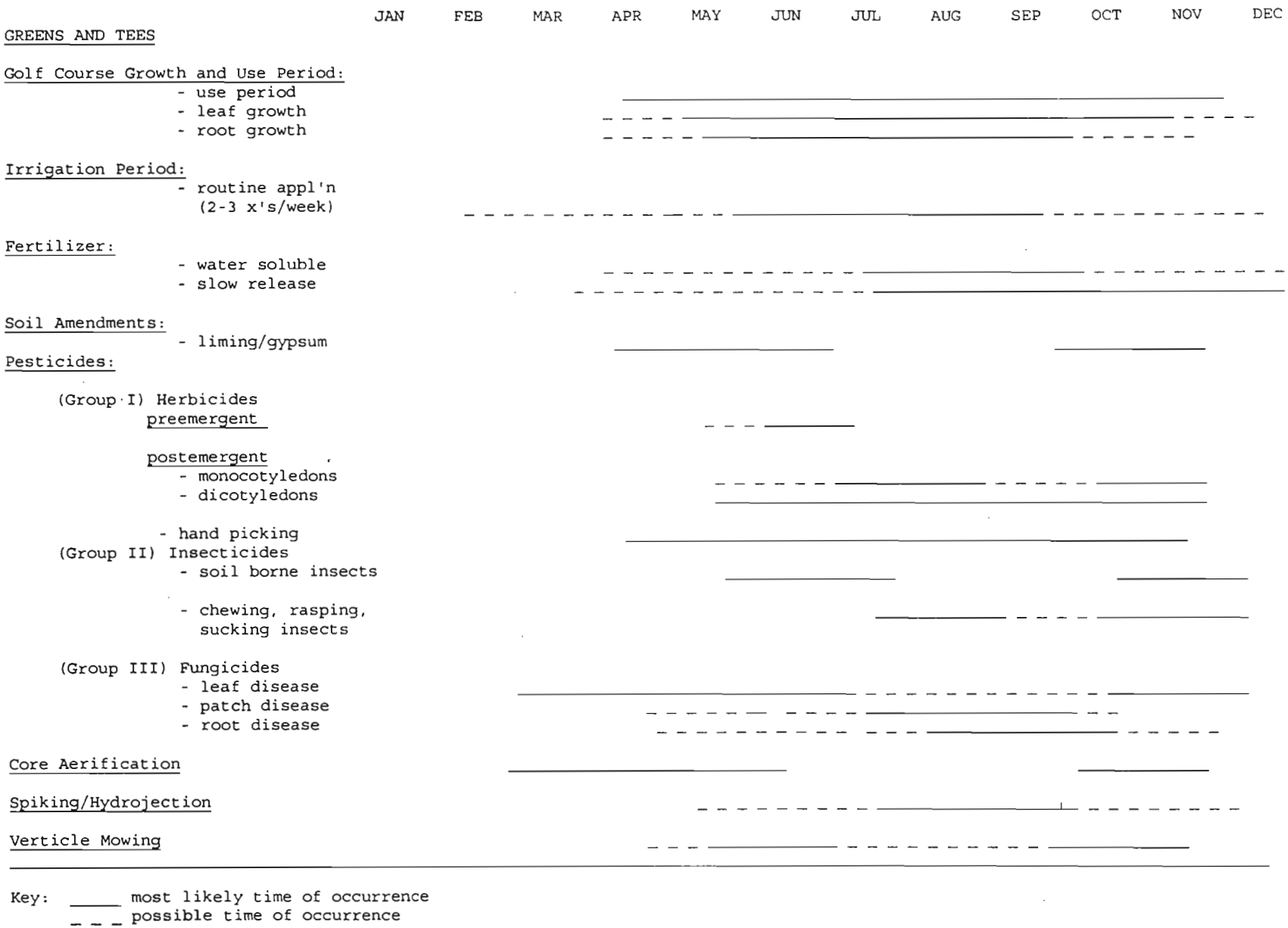
The selection process for each pesticide was based on chemical effectiveness, registration for use in New York, and regional experience. Environmental safety considerations were also important in selecting chemicals for this plan. Sources used to obtain product information include: scientific literature, industry periodicals, environmental fate data, EPA pesticide registration standards, and manufacturers' literature (including technical reports, material safety data sheets, product labels and fact sheets, and communications with manufacturers'representatives). Pertinent information was first taken from primary and secondary scientific literature. The data from current literature and EPA reports were given preference over data provided by manufacturers.

## 5.3 Weather Stations & Computer Models

In addition to the proposed scouting activities, the Ferry Point Park Golf Course will install a weather, news and chemical information system such as the DTN Weather Center System or other similar models. The computer model system software will be integrated into the proposed state-of-the-art turfgrass irrigation system mainframe and will be designed to collect site specific information relative to turfgrass pests and to create an internal database for chemical and nutrient applications.

Table 26. Implementation Schedules for Ferry Point Park Golf Course

LEVEL OF MANAGEMENT: "High Maintenance"




Key: _____ most likely time of occurrence
_ _ _ possible time of occurrence

Table 27. Implementation Schedules for Ferry Point Park Golf Course

LEVEL OF MANAGEMENT: "Medium Maintenance"

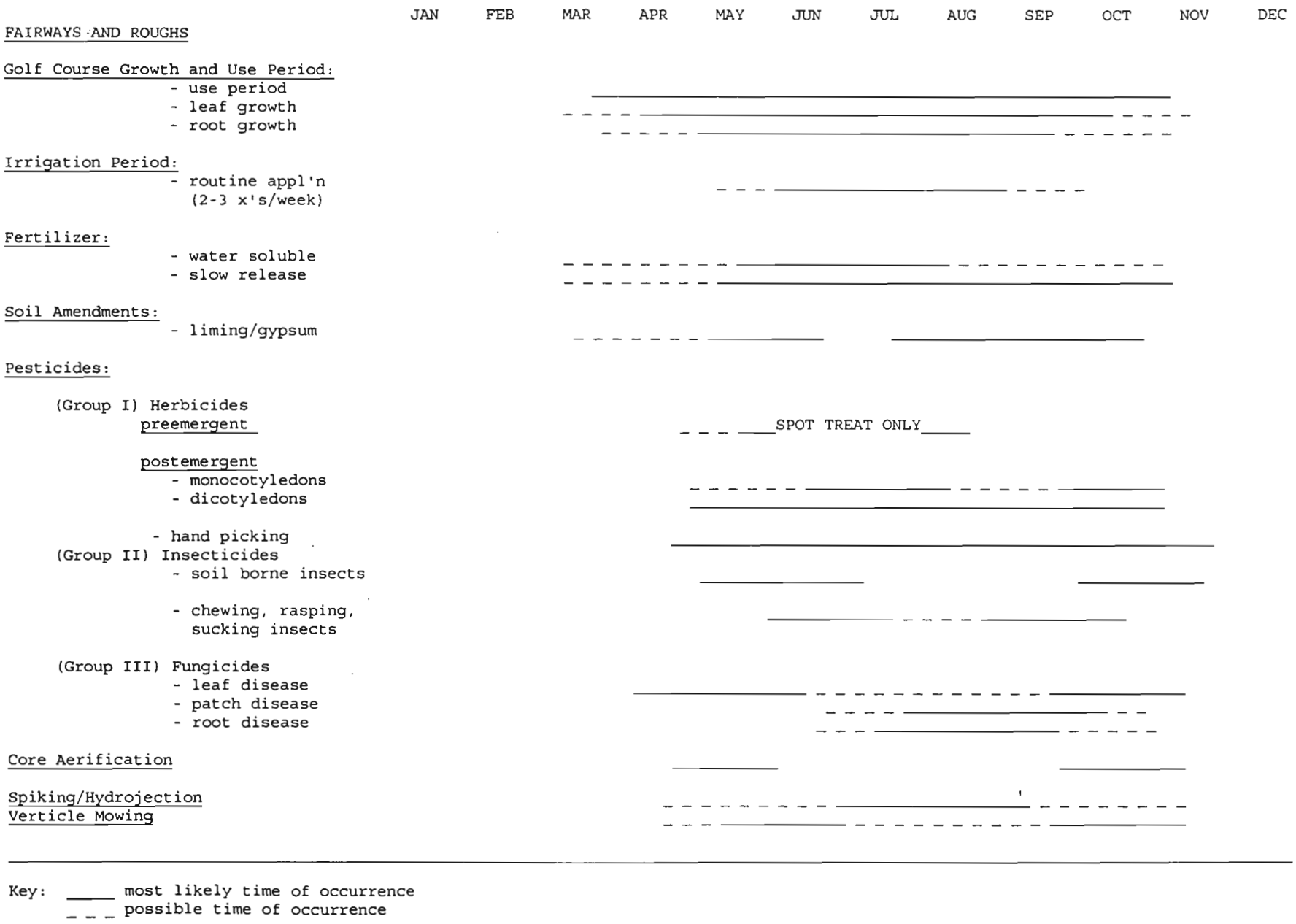


Table 28. Projected Maximum Pesticide Use for Ferry Point Park Golf Course During the First Five Years of Operation.

I. Herbicides (Tees/Fairways/Roughs)

| Common Name | Trade Name | Recommended Rate/App. lb a.i./Ac | Projected No of Apps/Yr (Maximum) lb a.i./Ac | Projected Maxiumum Total a.i./Ac/Yr | Maximum Acres Treated | Areas Treated |
|---|---|---|---|---|---|---|
| Glufosinate-ammonium | Finale® | 0.031 | 2 x's/yr | 0.062 | 10.00 | spot treat |
| Dithiopyr | Dimension® | 0.50 | 1 x's/yr | 0.50 | 50.00 | F R |
| Fenoxaprop-ethyl | Acclaim® EC | 0.032 | 2 x's/yr | 0.064 | 50.00 | F R |
| Pendimethalin | Scotts 60® (wdg) | 1.50 | 1 x's/yr | 1.50 | 40.00 | T F |
| Siduron | Tupersan®, O.M. Scott® | 3.00 | 1 x's/yr | 3.00 | 40.00 | T F |
| 2-4-D | W.A. Cleary's®, ISK Turf Care® | 1.00 | 2 x's/yr | 2.00 | 35.00 | T F R |
| | Trimec Classic® | 1.23 | 1 x's/yr | 1.23 | 35.00 | T F R |
| MCPP | Trimec Classic® | 0.65 | 1 x's/yr | 0.65 | 35.00 | T F R |
| | W. A. Cleary's®, ISK Turf Care® | 0.48 | 2 x's/yr | 0.96 | 35.00 | T F R |
| Dicamba | Trimec Classic® | 0.12 | 1 x's/yr | 0.12 | 35.00 | T F R |
| | Banvel® | 0.50 | 1 x's/yr | 0.50 | 11.50 | T G |

II. Insecticides (Tees/Greens/Fairways/Roughs)

| | | | | | | |
|---|---|---|---|---|---|---|
| Azadirachtin | Turplex® Scott's (Neem) | 0.70 | 2 x's/yr | 1.40 | 11.50 | T G |
| *Bacillus thuringiensis* | Bio-bit® | 0.25 | 3 x's/yr | 0.75 | 50.00 | F R |
| Chlorpyrifos | Dursban® (wsp) | 1.00 | 1 x's/yr | 1.00 | 5.00 | G |
| Cyfluthrin | Tempo® | 0.25 | 1 x's/yr | 0.25 | 11.50 | T G |
| Halofenozide [1] | Mach 2® | 1.50 | 2 x's/yr | 3.00 | 35.00 | T F G |
| Imidacloprid | Merit 75® (wsp) | 0.30 | 2 x's/yr | 0.60 | 35.00 | T F G |
| Parasitic Nematodes [2] | Exhibit® | 1B/Ac | 2 x's/yr | 2B/Ac | 5.00 | G |
| Spinosad [3] | Conserve® | 0.50 | 1 x's/yr | 0.50 | 35.00 | T F G |
| Potassium Salts of Fatty Acids | M-Pede® | 1.35 | 2 x's/yr | 2.70 | 48.00 | F |

**Note: These products have been selected and are projected at rates consistent with our "worst case philosophy." These rates were used to calculate dilution for leaching and runoff. Recommendations on these application rates will be addressed in the Water Quality Risk Assessment section WSP = water soluble packets. WDG = water dispersible granule.**

[1] Newly approved EPA registration
[2] Applied at 150 gal/ac or 3.4 gal/1,000 ft$^2$.
[3] Newly approved EPA registration

Table 28 Projected Maximum Pesticide Usage For Ferry Point Park Golf Course (Continued)

III. Fungicides (Tees/Fairways/Roughs)

| Common Name | Trade Name | Recommended Rate/App. lb a.i./Ac | Projected No of Apps/Yr (Maximum) lb a.i./Ac | Projected Maxiumum Total a.i./Ac/Yr | Maximum Acres Treated | Areas Treated |
|---|---|---|---|---|---|---|
| Azoxystrobin Technical | Heritage® 50 WG | 5.00 | 2 x's/yr | 10.00 | 50.00 | T F G R |
| Chloroneb | Scotts Fungicide IX®, Terraclor 75% WP® | 8.15 | 1 x's/yr | 8.15 | 35.00 | T F G |
| Etridiazole | Koban® 30, Terrazole® | 11.44 | 1 x's/yr | 11.44 | 35.00 | T F G |
| Fenarimol | Rubigan® | 1.36 | 2 x's/yr | 2.72 | 35.00 | T F G |
| Flutolanil | ProStar® 50 WP | 8.00 | 2 x's/yr | 16.00 | 35.00 | T F G |
| Fosetyl-AL | Aliette (wsp) | 17.42 | 1 x's/yr | 17.42 | 11.50 | T G |
| Iprodione | Chipco® 26019 FLO | 2.72 | 4 x's/yr | 10.88 | 50.00 | T F G R |
| Myclobutanil | Eagle® | 0.65 | 2 x's/yr | 1.30 | 35.00 | T F G |
| PCNB | Scotts FFII, Turfcide® 10% | 21.34 | 1 x's/yr | 21.34 | 11.50 | T G |
| Propamocarb | Banol® | 8.16 | 1 x's/yr | 8.16 | 11.50 | T G |
| Propiconazole | Banner® | 1.10 | 3 x's/yr | 3.30 | 50.00 | T F G R |
| Thiophanate-methyl | Cleary's® 3336 (wsp) | 2.72 | 4 x's/yr | 10.88 | 35.00 | T F G |
| Trichoderma Harzianum | Bio-Trek 22 G® | 0.75 | 3 x's/yr | 2.25 | 48.00 | F |
| Triadimefon | Bayleton® 25 (wsp) | 5.50 | 3 x's/yr | 16.50 | 50.00 | T F G R |
| Vinclozolin | Curlan® | 3.00 | 2 x's/yr | 6.00 | 50.00 | T F G R |

IV. Growth Regulators (Fairways, Greens)

| | | | | | | |
|---|---|---|---|---|---|---|
| Cimectacarb | Primo® | 0.25 | 2 x's/yr | 0.25 | 48.00 | F |
| Fluprimidol | Cutless 50W® | 1.00 | 1 x's/yr | 1.00 | 35.00 | T F G |
| Paclobutrazol | Scotts TGR® | 0.53 | 1 x's/yr | 0.53 | 50.00 | F R |

**Note: These products have been selected and are projected at rates consistent with our "worst case philosophy." These rates were used to calculate dilution for leaching and runoff. Recommendations on these application rates will be addressed in the Water Quality Risk Assessment section. WSP = water soluble packets. WDG = water dispersible granule. The outlined quantities on Table 28 reflect as much as 50% more chemical product than what is actually anticipated during rou maintenance. The turf chemicals listed represent the potential pesticides that will be used over a 5 year period.**

[1] Newly approved EPA registration
[2] Applied at 150 gal/ac or 3.4 gal/1,000 ft².
[3] Newly approved EPA registration

## 5.4 Other Factors Relative to Chemical Use

### 5.4.1 Influence of Thatch

Matted thatch can become dry and difficult to wet, in some cases causing the surface irrigation to run off. Ferry Point Park Golf Course will use cultural methods to prevent excessive thatch development.

### 5.4.2 Enhanced Degredation

Certain pesticides do not seem to work as well as they originally did. At first, people theorized that the pests had become resistant. Laboratory tests, however, have found that resistance is not a factor. Rather, it appears that most of the modern pesticides are broken down naturally by soil microbes, bacteria and simple fungi which have learned to break down these pesticides and use the by-products as a food source. This problem is called "enhanced degradation." It also appears that microbes may be able to degrade several pesticides after adapting to a particular one, a phenomenon known as "cross degradation."

Enhanced degradation seems to occur most commonly when the same pesticide is used repeatedly, especially during the same season. Reduced use of chemicals through IPM may mitigate the problem. Whenever feasible, the golf course will avoid repeated use of the same chemicals in an effort to limit enhanced degradation. Research by manufacturers and experiences at other golf courses will also be monitored for strategies to minimize this problem.

### 5.4.3 Irrigation

Irrigation after applications of insecticides or miticides to turf is very important to the success or failure of control. Though one must follow the instructions on the current label of the product used, there are some generalizations which can be made. Most surface insecticides designed to control chinch bugs, mites, and sod webworms should be on the leaf surface or in the top layers of thatch. Therefore, applications of insecticides or miticides made to control these pests should *not* be watered in.

Most soil insecticides for control of white grubs or billbugs need to get as far into the thatch layer as possible. Therefore, after application of insecticides for these pests, water will be applied until the top one inch of soil under the thatch layer has been wetted.

Granular formulations are common in turf management and these must be rained on or irrigated before the pesticide becomes active. Granular formulations are often preferred where irrigation is not possible because the active pesticide will remain longer, or at least until a rain activates the granule.

### 5.4.4 pH

Several insecticides and miticides are very sensitive to high or low pH levels. Therefore, knowledge of the pH range of the pesticide is essential. Before mixing, the tank water pH should be adjusted.

### 5.4.5 Timing

As with all pesticide control measures, timing is a critical issue. Most of the modern insecticides and miticides have short residual lives and need to be applied when the pests are in a susceptible stage. For example, the hyperodes or turfgrass weevil has a relatively short window for successful control lasting less than two weeks.

### 5.4.6 Pest Resistance

Several turfgrass insects have been identified with resistance to insecticides. Fortunately, most of this resistance occurred with the use of the older chlorinated hydrocarbon insecticides such as chlordane and dieldrin. However, some insects have demonstrated some resistance to the organophosphate insecticides. Therefore, the Ferry Point Park Golf Course will use a pesticide only when needed and if possible, not use the same product more than once in a season, or from season to season.

## 5.5 Anticipated Reduction of Pesticide Use with IPM

It is not unrealistic to assume that IPM will achieve pesticide reduction. Evidence gathered from existing golf courses using IPM shows that successful implementation of IPM programs does significantly reduce reliance on turfgrass pesticides. It is unrealistic, however, to assume that IPM, even with improvements over time and customization to meet the specific needs at Ferry Point Park Golf Course, will ever fully eliminate the need for pesticides.

Table 29 illustrates the decreased level of pesticide use anticipated on the golf course once the IGCMP has had an opportunity to succeed. A comparison with Table 28 "Projected Maximum Pesticide Usage for Ferry Point Park Golf Course shows large reductions in potential pesticides used during the first five years of operation. Reductions in anticipated usage of pesticides arise from reduced frequency of application, reduced quantities of active ingredients required per acre, and reductions in the management areas and maximum acres treated.

Table 29. Projected Pesticide Use with an Effective IPM Program

I. Herbicides (Tees/Fairways/Roughs)

| Common Name | Trade Name | Recommended Rate/App. lb a.i./Ac | Projected No of Apps/Yr (Maximum) lb a.i./Ac | Projected Maxiumum Total a.i./Ac/Yr | Maximum Acres Treated | Areas Treated |
|---|---|---|---|---|---|---|
| Glufosinate-ammonium | Finale® | 0.031 | 2 x's/yr | 0.062 | 10.00 | spot treat |
| Dithiopyr | Dimension® | 0.50 | 1 x's/yr | 0.50 | 50.00 | F R |
| 2-4-D | W. A. Cleary's®, ISK Turf Care® | 1.00 | 2 x's/yr | 2.00 | 35.00 | F R |
| | Trimec Classic® | 1.23 | 1 x's/yr | 1.23 | 35.00 | T F R |
| MCPP | Trimec Classic® | 0.65 | 1 x's/yr | 0.65 | 35.00 | T F R |
| | W. A. Cleary's®, ISK Turf Care® | 0.48 | 2 x's/yr | 0.96 | 35.00 | T F R |
| Dicamba | Trimec Classic® | 0.12 | 1 x's/yr | 0.12 | 35.00 | T F R |
| | Banvel® | 0.50 | 1 x's/yr | 0.50 | 11.50 | T G |

II. Insecticides (Tees/Greens/Fairways/Roughs)

| | | | | | | |
|---|---|---|---|---|---|---|
| Azadirachtin | Turplex® Scott's (Neem) | 0.70 | 2 x's/yr | 1.40 | 11.50 | T G |
| *Bacillus thuringiensis* | Bio-bit® | 0.25 | 3 x's/yr | 0.75 | 50.00 | F R |
| Halofenozide [1] | Mach 2® | 1.50 | 2 x's/yr | 3.00 | 35.00 | T F G |
| Parasitic Nematodes [2] | Exhibit® | 1B/Ac | 2 x's/yr | 2B/Ac | 5.00 | G |
| Spinosad [3] | Conserve® | 0.50 | 1 x's/yr | 0.50 | 35.00 | T F G |
| Potassium Salts of Fatty Acids | M-Pede® | 1.35 | 2 x's/yr | 2.70 | 48.00 | F |

III. Fungicides (Tees/Fairways/Roughs)

| | | | | | | |
|---|---|---|---|---|---|---|
| Azoxystrobin Technical | Heritage® 50 WG | 5.00 | 2 x's/yr | 10.00 | 50.00 | T F G R |
| Chloroneb | Scotts Fungicide IX®, Terraclor 75% WP® | 8.15 | 1 x's/yr | 8.15 | 35.00 | T F G |
| Iprodione | Chipco® 26019 FLO | 2.72 | 4 x's/yr | 10.88 | 50.00 | T F G R |
| Myclobutanil | Eagle® | 0.65 | 2 x's/yr | 1.30 | 35.00 | T F G |
| PCNB | Scotts FFII, Turfcide® 10% | 21.34 | 1 x's/yr | 21.34 | 11.50 | T G |
| Propiconazole | Banner® | 1.10 | 3 x's/yr | 3.30 | 50.00 | T F G R |
| Thiophanate-methyl | Cleary's® 3336 (wsp) | 2.72 | 4 x's/yr | 10.88 | 35.00 | T F G |
| Trichoderma Harzianum | Bio-Trek 22 G® | 0.75 | 3 x's/yr | 2.25 | 48.00 | F |

IV. Growth Regulators (Fairways, Greens)

| | | | | | | |
|---|---|---|---|---|---|---|
| Cimectacarb | Primo® | 0.25 | 2 x's/yr | 0.25 | 48.00 | F |
| Fluprimidol | Cutless 50W® | 1.00 | 1 x's/yr | 1.00 | 35.00 | T F G |

**Note: These products have been selected and are projected at rates consistent with our "worst case philosophy." These rates were used to calculate dilution for leaching and runoff. Recommendations on these application rates will be addressed in the Water Quality Risk Assessment. WSP = water soluble packets. WDG = water dispersible granule. The outlined quantities on Table 28 reflect as much as 50% more chemical product than what is actually anticipated during routine maintenance. The turf chemicals listed represent the potential pesticides that will be used over a 5 year period.**

[1] Newly approved EPA registration
[2] Applied at 150 gal/ac or 3.4 gal/1,000 ft².
[3] Newly approved EPA registration

## 5.6 Pesticide Use and Storage

The golf course superintendent will be responsible for the administration of the following policies:

- The pest will be properly identified through use, as appropriate, of disease, insect and weed identification guides and diagnostic kits;
- The SUNY Extension Service will be consulted for additional BMPs and/or acceptable and approved IPM approaches;
- The golf course superintendent will identify and document occasions when the agreed upon threshold limit of pest activity has been exceeded;
- Environmental conditions will be reviewed and altered as a preferred option, when available, to reduce pest impact (i.e. reduce shade);
- Cultural controls appropriate to the turf related problem will be used to reduce impact (i.e. fertilizers, leaching of salts, removal of mycelium, etc.);
- Mechanical practices (aerifying, spiking, verticutting, etc.) will be considered to help reduce and improve turf under stress;
- A pesticide application will only be made when there is no alternative measure for control;
- The application of a pesticide will be made under the direction of a certified, licensed applicator;
- The golf course superintendent will be licensed in the proper New York State Department of Agriculture Pesticide Control categories;
- All pesticide applications will be made in accordance with label specifications;
- Material safety data sheets (MSDSs) on all products will be readily available for all personnel and a Hazard Communication Program will be prepared for employees at Ferry Point Park Golf Course;
- Applications will not be made in winds in excess of 10 mph;
- The applicator will adhere to all label specifications for loading, mixing and applying the compound. Protective clothing as specified by the label will be worn by the applicator;
- Liquid application of a pesticide will be made using a low pressure boom type sprayer with a boom height adjusted to minimize drift; and
- Notification of the application of a golf course pesticide will be made in accordance with New York State posting and notification procedures.

### 5.6.1 Spray Equipment

When practical, an ultra low-volume backpack sprayer will be used for spot applications. Low volume application of mist sized spray particles reduces the amount of water and pesticide required, reducing both drying and re-entry times. Ultra low-volume sprayers work well for many broadleaf herbicides that are applied at low dosage and mix easily in water. Pesticides applied as a wetable powder and/or at high applications may not work well in this type of sprayer. Pests that are slightly above threshold levels, but not excessive in population, will be treated with a proportioned droplet or a "wick type" spot applicator. A push-type grounds sprayer called Wheelie, Model #WS-480, with a 6 gallon tank designed for spot treatment applications or in areas less than 6,500 square feet may also be effective at the Ferry Point Park Golf Course.

For larger applications, a dedicated spray system will be used. The system will include a state-of-the-art flow meter with clogged-nozzle indicators and individual electric shut off capability. Enclosed cabs with electric isolation switches will allow instant on/off controls to target precise areas for spraying. The use of a "Windfoil" applicator with spray drift shields will substantially reduce aerosol drift.

Many nozzle sizes are available to control droplet size. These nozzles are generally 200 microns in diameter and must be matched to the gallons-per-minute and pressure rating of the pump control system. Nozzle calibration kits are available for these state-of-the-art sprayers.

To reduce the potential for drift, nozzle screens (50-100 mesh) should be installed to filter foreign material. Nozzles spaced 18" apart should be adjusted to apply material evenly. They should be of sufficient angle so as not to allow the spray material to drift from its target. Four nozzles generally offer the best drift control: extended-range flat spray tip, wide-angle full-cone spray tip, wide-angle flat-spray tip, and a wide-angle hollow-cone spray tip. Electrically controlled droplet applicator nozzles are also available.

State-of-the-art technology should never take the place of simple performance check calibration. The golf course superintendent should calibrate each nozzle size available for use and record the total number of gallons applied. The daily use reports on file in the superintendent's office should include verification that the appropriate amount of active ingredient was applied. These rates must comply with state regulatory procedures and be applied according to label restrictions.

### 5.6.2 Pesticide Containment and Handling

A pesticide containment pad will be constructed to control possible spills and pollution. The containment pad will be designed to meet the Department of Agriculture's provisions for Bulk Storage of Toxic or Hazardous Materials, or other applicable standards. The containment pad will be sufficient to intercept leaks and spills of pesticides that may occur in the dispensing area. The pad will comply with all City and New York State Department of Environmental Conservation codes.

Applicators will receive the appropriate training and will be knowledgeable in the compliance levels set forth within the Golf Course Management Plan. The following standards will be used as procedure for all pesticide applications:

1) The spray equipment will be filled with water from a back siphon-protected hose outlet. The spray tank should initially be filled to within 75% of its holding capacity. The compound chosen for use is then added to the water in the spray tank. Following mixing as specified on the label, the spray apparatus may be topped-off to achieve the proper ratio of diluted material.

2) All packaging materials will be triple-rinsed, with the rinse water poured into the spray tank to reduce the hazardous material entering the waste stream with the empty packaging. Water soluble and water-carried granule products allowing this type of rinsing are designated in Tables 28 and 29 by the term WSP (water soluble packets). All empty packaging will be stored either inside or adjacent to the pesticide containment building in its original shipping cartons until disposal.

3) Upon completion of the spray application, the equipment will be returned to the pesticide containment area and filled with water to within 25-50% of the tank holding capacity. The diluted rinsate is then applied in the areas designated as primary rough. Rinsate may be sprayed immediately adjacent to each hole where an application of a pesticide was applied. The rinsate will be applied with the same ground speed as the actual application. No rinsate will be applied in any areas deemed environmentally sensitive or having potential for surface runoff to such areas. Secondary rinsate or spillage will be collected in the above ground storage tanks for later spray application into the safe rough areas. All rinsate material should be applied to the target site on the same day as the initial application to avoid phytotoxicity.

The area fire station will be provided with a current copy of all chemicals and pesticides stored in the pesticide storage area. The Material Safety Data Sheets (MSDS) will be provided for each compound in the storage area. In the case of minimal discharge, employees will have the necessary protective equipment and clothing readily available and comply with the Pesticide Spill and Response Plan.

All hazardous materials will be disposed of through a licensed hazardous waste disposal firm. Discharge from dry bulk materials stored within the pesticide storage facility will be recovered by the use of a broom and dust pan used solely for the purpose of recovery of these materials. Any material that is not contaminated and suitable for use will be repackaged with an original label affixed to the new packaging. It will be used when the appropriate need arises and for its intended purpose and will not be disposed of unless contaminated.

Employees who apply pesticides at Ferry Point Park Golf Course will be state certified under the pesticide applicator program. Annual usage forms will be submitted to the Department as required and a record of pesticide usage will be kept for at least seven years. Newly proposed federal programs regarding labels, worker protection standards and reentry measures will be implemented when they are adopted by the New York State Department of Agriculture.

## 5.7 Pesticide Spill and Response Plan

A spill response plan will be activated for spills or leaks of management chemicals used on the golf course. This plan will comply with applicable federal, state and city laws. Major provisions of the proposed accidental spill response plan are the following:

Accidental Spill Response Procedure

The following information and materials must be in place and an inventory of these items posted in the chemical storage area:

1 Telephone numbers for emergency assistance, including local law enforcement and fire departments;

2 Sturdy gloves, footwear and aprons that are chemical-resistant to most pesticides (such as foil-laminate gear), and protective eye wear;

3 An appropriate respirator, if any of the spill materials require such during handling activities or for spill cleanup (reference Material Safety Data Sheets on file for each product used);

4 Containment "snakes" or booms to confine the leak or spill to a small area;

5 Absorbent materials, such as spill pillows, absorbent clay, dry peat moss or sawdust to soak up liquid spills;

6 Seeping compound to keep dry spills from drifting or wafting during clean up;

7 A shovel, broom and dustpan made from non-sparking and non-reactive materials;

8 Heavy duty detergent;

9 A fire extinguisher rated for all types of fires;

10 Any other spill clean-up items specified on the labels of any products used; and

11 A sturdy plastic container with tightly closing lid that will hold the volume of material from the largest pesticide container being handled.

Spill Response

1 **Reporting the Spill:** As soon as possible after a spill has been identified, the golf course superintendent will be notified and have responsibility for reporting all spills to the list of responsible parties, the City Emergency Agency responsible for rapid response, and the City's Hazardous Substance Information Office. The following will be reported:

Name and phone number of reporting party
Time and location of spill
Identity and quantity of material released
Status of clean-up and containment

2 **Controlling the Spill:** On-site responders will (a) protect themselves with appropriate protective closing and eye-wear; (b) stop the source of the spill; (c) protect others by warning them of the spill; and (d) stay at the site until the spill is cleaned up.

3 **Containing the Spill:** On-site responders shall (a) confine the spill as quickly as possible; (b) protect water sources and water resources; (c) absorb liquids with absorbent material; and (d) cover dry materials to prevent them from becoming airborne or solubilized.

4 **Cleaning Up the Spill:** On-site responders shall (a) clean up the spill; (b) decontaminate the spill site; (c) neutralize the spill site; (d) decontaminate equipment; and (e) decontaminate themselves.

## 5.8 Proposed Clubhouse and Maintenance Facility

The facility will contain an office, shop building, equipment storage facility, soil and trash bins, equipment wash bays, and above ground fuel storage. The maintenance building will be used for golf course equipment storage and other maintenance operations as well as the safe storage and clean-up of fertilizers, pesticides and other materials, subject to the conditions described in the next section. Sufficient parking will be available for the golf course maintenance employees.

The proposed clubhouse, maintenance and storage facility will conform to the appropriate City building codes for bulk storage of hazardous waste. The local fire station will be supplied a copy of the floorplan and will be provided a copy of the access security code. The facility will be landscaped and designed to blend with the rest of the project. An all-weather access road shall serve the maintenance building and provide emergency and service vehicle access.

Modern golf course facilities prove themselves in several ways, including increased employee safety; reduced insurance rate growth; eliminated or significantly reduced costs and liability of both storage and disposal of waste residue; and ease and affordability of maintenance (Haskett, 1995). The facility's design will have a significant impact on efficiency, annual maintenance spending and, ultimately, the quality of the golf course.

To ensure that operational efficiency and regulatory compliance are achieved, course designers, structural architects and the owners should make an effort to bring the golf course superintendent into the facility design process at its earliest stages. The superintendent is uniquely qualified to lead the team that designs the facility. By tapping the superintendent's expertise in the early stages, the ownership can obtain a more realistic understanding of the functions of a modern maintenance facility--and thereby avoid many of the oversights that often lead to inefficient operations or expensive remodeling.

A more detailed breakdown of proposed square footage requirements is presented in Table 30.

Modern 18-hole golf course maintenance facilities average 4,000-6,500 square feet and require approximately 1.5 acres for circulation. This golf course will install an Enviro-Drain® or equivalent system in the maintenance facility. The fuel island and wash apron will be designed with independent containment filters for fueling equipment and washing turfgrass equipment. A carport roof or canopy will be attached to the station to protect the system from rainfall and/or snow melt. The filter system dislodges phytotoxic contaminants such as grass clippings, oil, grease, and chemicals from the wash water system and provides a secondary back-up that guards against accidental spills. The system also filters residual concentrations of turfgrass chemicals and non-phytotoxic materials such as fertilizers. A back-up overflow system is normally installed to collect potential spills and divert the rinsate onto the wash pad apron and/or collection system. This will reduce the potential for inadvertent pesticide exposure and drift.

Ferry Point Park will install a recycle washwater system for the turfgrass equipment washpad area where the potential concentration of hazardous waste on a daily basis is highest. The recycling wash water system will be capable of capturing grass clippings, oil and grease, and trace organics.

Table 30. Ferry Point Park Proposed Maintenance Facility Program

| **1. Office & Conference Area** | **Square Feet** | **Square Meters** | **Comments** |
|---|---|---|---|
| Secretary/Reception | 200 | 18.58 | |
| General Office | 170 | 15.79 | |
| Superintendent Office | 325 | 30.20 | |
| Computer Room | 170 | 15.79 | |
| Men's Restroom w/ shower | 145 | 13.47 | |
| Women's Restroom w/ shower | 145 | 13.47 | |
| Lockers | 150 | 13.94 | |
| Break Room | 360 | 33.46 | |
| Conference Room | 150 | 13.94 | Includes part storage |
| Assistant Superintendent's Office | 156 | 14.50 | |
| **Subtotal** | **1,971** | **183.14** | |
| **2. Shop/Equipment Storage Area** | **Square Feet** | **Square Meters** | **Comments** |
| Equipment Storage | 4,800 | 446.10 | Large, small equipment Fertilizer & Seed Storage |
| Grinding, Equipment Tech | 300 | 27.88 | |
| Parts | 156 | 14.50 | |
| Repair Shop/Lift Area | 1,080 | 100.37 | |
| Oil Storage | 100 | 9.29 | |
| Chemical Storage | 100 | 9.29 | Located in self-contained structure outside |
| **Subtotal** | **6,536** | **607.43** | |
| **Total of Subtotals** | **8,507** | **790.57** | |
| 10% Circulation, Electrical, Mechanical Walls | 850.7 | 79.06 | |
| **TOTAL** | **9,357.7** | **869.63** | |
| **3. Nursery/Storage/Wash Area (Exterior)** | **Square Feet** | **Square Meters** | **Comments** |
| Turfgrass Nursery | 6,000 | 557.62 | |
| Soil Bins | 1,024 | 95.17 | 4@ 16 x 16 |
| Equipment Washing | 200 | 18.58 | |
| Unloading Dock | 800 | 74.35 | |
| Trash Enclosure | 400 | 37.17 | |
| **Subtotal** | **8,424** | **782.89** | |

Note: This table may be revised according to the final Golden Bear specifications for golf course maintenance facilities.

## 5.9 Pesticide Storage Facility

A separate, stand-alone pesticide storage structure of adequate size will be installed at the end furthermost from offices, break room, mechanic area, and employee eating areas. The structure will be placed in the equipment parking and storage area and will be located next to the fuel island and wash pad apron. A back-up overflow system will be installed to collect potential spills and divert the rinsate onto the wash pad apron and collection system. This will reduce the potential for inadvertent pesticide exposure. The structure will meet and/or exceed the State of New York's requirements for pesticide storage and will easily integrate into the golf course maintenance floorplan.

Four companies specialize in golf course prefabricated pesticide storage units.

Perma Lock Inc.
P.O. Box 770357
Houston, TX 77215-0357
800-288-8873

RGF Environmental Systems, Inc.
3875 Fiscal Court
West Palm Beach, FL 33404
407-848-1826

Safety Storage, Inc.
2301 Bert Drive
Hollister, CA 95023
617-598-8906

Safety Strategy, Inc.
P.O. Box 1579
Manchester, MA 01944
203-651-7522

The pesticide storage building should provide adequate ventilation actuated by an external, explosion-proof light/fan switch. The switch should be protected from vandalism and covered for security. An instruction placard indicating proper entrance and lock-out procedures should be placed in the doorway entrance. The locality of the exhaust fan must be positioned so that vapors will be released to the outside of the building.

The facility will be designated and posted as a pesticide storage area (as required by law), with a list of all chemicals contained in storage on file in the superintendent's office. One copy of this list should be provided to the Fire Station. Additional copies should be located in the clubhouse or in an appropriate file located away from the pesticide storage structure.

Strict discharge limits have been set by EPA for oil, greases, solvents, fuels, grinding compounds, heavy metals, detergents, insecticides, fungicides, herbicides, and nitrates. Simply washing these materials down the drain, into the ground or into a waterway is neither legal nor environmentally responsible. Recycling systems for wash water are designed as closed looped systems and address direct discharge into a sewer or water quality basin. The wash water system functions by utilizing a three-step process:

- Grass clippings are removed from the washwater to minimize the release of hydrocarbons, including potential fertilizer and pesticide residues.
- The washwater is recycled continuously while physically removing oil and solid particles. This process prepares the water for filtration.
- The washwater is filtered with carbon packs prior to discharge into the waste stream.

## 5.10 Storage Facility Check List

The following operating procedures are recommended for the pesticide storage facility:

- The building will be secured and locked at all times;
- An additional key will be placed in the administrative office and in the office of the golf course superintendent in case of emergency;
- Materials will be stored on shelves located high enough to permit cleaning of the floor. No material should be stored above 6 ft from the ground;
- All materials will have legible labels attached. Materials whose packaging has been damaged must be in containers clearly marked and labeled;
- Plastic secondary containers are used to store liquids shipped in quantities of 1 gallon or more for protection against spillage;
- A plastic trash barrel with lid will be located inside the storage facility for cleanup;
- The golf course maintenance department will be trained in the operating procedures regarding this building;
- Appropriate protective clothing and equipment will be provided for use by those who handle pesticides;
- Absorbent materials designed to contain accidental spills will be available within the pesticide storage facility;
- Disposal of pesticide containers shall comply with the instructions on the labeling and other state and federal regulations. Empty containers will not be allowed to accumulate or be stored within this building;
- The building will be inspected at least monthly by the golf course superintendent and a record of each inspection recorded in the records for pesticide use; and
- Obsolete, excess, and mixtures of pesticides shall be disposed of by a licensed hazardous waste firm or according to the statutes and regulations established by New York state law.

## 5.11 Fuel Storage and Waste Oil Dispensing

The maintenance facility will contain a 500 gallon storage tank for gasoline and a 500 gallon storage tank for diesel fuel. Both tanks will be dual walled above ground tanks with monitoring leak detection systems and vehicle barriers for accident prevention. The sump and concrete pad will be designed with a carport roof to protect the tanks from rainfall and snowmelt. The tanks shall consist of a UL listed primary tank, a high density polyethylene secondary compartment, and a six inch reinforced concrete encasement. The concrete vault which provides thermal and corrosion protection can be poured on location or shipped precast. The tanks installed will conform to the Uniform Fire Code and NFPA.30 regulations for above ground tanks. The tanks will be designed to meet or exceed the above ground regulatory storage requirements in the state of New York.

The appropriate signs indicating No Smoking with Fuel Safety Warnings will also be installed. A 250 gallon waste oil and solvent storage tank will be installed at the golf course maintenance facility.

## Chapter VI

## Water Demand and Analysis

### 6.1 Water Replacement Strategy

Irrigation water will be applied to the tees, greens, fairways, and primary and secondary roughs. The project is committed to conserving water and using water resources in an efficient and effective manner. Supplemental irrigation will be necessary during the grow-in period of the golf course and to assist with the restoration of the disturbed areas, including tree and shrub planting projects.

Increased irrigation will be necessary during the germination period to successfully assist with quality control of the naturalized restoration plan. After the establishment period, the proposed grassing plan will allow for a reasonable reduction in supplemental irrigation and provide excellent playing surfaces, even in areas grown under droughty conditions. The maximum usage or peak water demand during the first year of grow-in is estimated at 476,119 - 612,400 gallons/day (gpd).

### 6.2 Water Demand, Supply and Storage Analysis

The replenishment of soil moisture as it is extracted and the leaching of salts that accumulate are vital to the creation of a sound root environment. The amount of water required for leaching is directly proportional to evapotranspiration and the potential concentration of salts in the irrigation water. This is inversely proportional to the salinity tolerance of the turf and explains why evapotranspiration should always be used as the main factor when determining total irrigation water requirements.

The water supply for the golf course will be New York City municipal water, as is the case with other New York City Parks Department facilities.

Table 31 characterizes the average daily water demand, supply and storage analysis for Ferry Point Park Golf Course. For maximum efficiency, irrigation of the turfgrass is proposed during the months of March through November. An analysis of natural rainfall and evapotranspiration has been performed and an estimate of daily and yearly usage has been completed. The figures represent the total water needs for turfgrass in this climate, on average, including rainfall and irrigation sources. The demand averages reflect the projected average daily usage of irrigation water for the golf course during and after the grow-in period. However, both the initial request for peak water demand and the average water demand analysis presented reflect accurate golf course irrigation and water needs. This table represents less than or equal to 140 acres of established turfgrass grown under normal growing conditions using 408,267 gpd with a peak average daily demand of 612,400 gpd during grow-in.

## 6.3 Irrigation Water Quality

An irrigation suitability and water quality analysis will be performed to determine water quality pH, total dissolvable solids, chlorides, bicarbonates, electrical conductivity (ECw) and the sodium adsorption ratio (SAR). During the first year of operation, quarterly testing of the soils prior to preplant and after the grow-in period should be conducted to maintain adequate levels of soil calcium, magnesium and potassium. Modification of the soil pH will be directly proportional to the levels of calcium in soil and the amount of applied irrigation water.

## 6.4 Water System Specification and Capabilities

The golf course will install an automatic irrigation system designed to achieve maximum distribution and uniformity of coverage. The system will be engineered to water the entire golf course each night and apply a minimum of 1" of water per week without over watering. The spacing of sprinklers will be designed to minimize surface runoff and avoid inadvertent drift. Field controls will be placed for maximum visibility. Valve-in-head sprinklers will be used with individual control wires installed for each of the irrigation heads back to the field controllers. Heads on fairways and roughs can be paired at the controller on an average of two heads per station. Green and tee sprinkler heads will be operated individually. Greens will be irrigated with full and/or part-circle sprinkler heads to allow the superintendent to irrigate in a more efficient manner. This reduces disease potential and results in lower usage of pesticides. Quick coupler snap valves will be necessary near the naturalized plant restoration areas in order to provide supplemental water for grow-in purposes.

ETS also recommends the installation of an irrigation water injection system to assist with applying gypsum or acidifying materials designed to manage the level of sodium in soils. The Bioject® and/or EcoSoils Solution System® are easily adapted to the irrigation system and allow for maximum distribution of sodium leaching materials in the least amount of time. The injection system should be included as an optional add-on in the irrigation design bid package.

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## Glossary of Terms

**abiotic** – Non-living substance, at one time may have been living.

**aerification** -- A mechanical process used to facilitate soil air/water relationships of the turf without destroying the integrity of the sod.

**a.i.**-- Active ingredient. Chemical agent in the product primarily responsible Ibr the pesticidal effects. Percentage of a. i. is shown on the pesticide label.

**annual** -- Plant that completes its life cycle from seed in one year or season.

**annual bluegrass segregation** -- The introduction of annual bluegrass *(Poa annua)* that has invaded and persistently remains a major component of irrigated turf. Annual bluegrass becomes the dominant species under these conditions and the IPM program is altered to meet the requirements of this species.

**apron** -- Fairway area immediately surrounding the collar of the green. Second cut. (see collar).

**acervuli** -- Plural of acervulus, a microscopic, black structure, embedded in plant tissue, on which fungal spores are produced.

**bacteria** -- Microscopic, single celled organisms having a cell wall but lacking an organized nucleus and incapable of making their own food. All plant pathogenic bacteria can live saprophytically.

**biennial** -- Plant that completes its life cycle from seed in two years or seasons. First year it produces a vegetative plant and stores food; the second year or season it produces flowers and seed.

**biocoenosis** – A community of animal and plant life.

**biotic** -- Living substances.

**blight** - Affecting a large portion of the leaves or the whole plant.

**broadcast application** -- Application over the whole area.

**broadleaf weed** -- Common term for plants in the dicotyledon group (dandelion, plantain, spurge, etc.).

**broad spectrum pesticide** -- Pesticide which is effective against several pests (in contrast with a specific pesticide which controls primarily one pest).

**brushing** -- A mechanical process to aid in grain control whereby horizontal stems are lifted so that they may be cut by the mower.

**causal agent** -- An infectious (viruses, mycoplasmas, bacteria, fungi, and nematodes) or noninfectious (mechanical, temperature, water, gases, pollutants, light) biotic substance which is involved in causing plant damage.

**chlorophyll** -- Green pigment found in structures called chloroplast in plant leaves. Chlorophyll is the material which enables plants to carry out photosynthesis. chlorosis –A process by which plant tissue loses its normal green color and gradually becomes yellowed.

**clippings** -- Leaves, stems and stolons cut off by mowing.]

**collar** -- Area between the putting area and the apron.

**curative pesticide** -- A pesticide that can inhibit or eradicate a disease-causing organism after it has become established in the plant or animal.

**fixation** -- state of being fixed.

**innoxious** -- harmless.

**insolubility** -- incapable of being dissolved.

**insecticide** -- Any chemical used to manage (control) insects.

**internode** -- Part of a stem which lies between two successive nodes.

**irrigation** -- Applying water to turf.

**landing area** -- Part of the fairway where tee shots usually land.

**lapping, mower** -- Part of the process of sharpening a reel mower.

**layering, soil** -- Undesirable stratification of different textured material in the soil.

**localized dry spot** -- Area of the soil which resists wetting,.

**mat** -- See thatch.

**microflora** -- Plants invisible to the naked eye, such as diatoms and algae.

**monocotyledon** -- Botanical group in which monocotyledon (one cotyledon or seed leaf) plants are placed. Leaves are usually longer than broad. Leaf veins are parallel.

**mycelium** (a) --Thread-like body of the fungus generally invisible except during periods of luxuriant growth.

**narrow leaf**-- Common term for plants in the monocot group (all grasses, sedges, etc.)

**necrosis** -- Irreversible decline, death of the tissue. Usually yellow to tan or gray, then brown or black.

**nematode** -- Microscopic round worm which mainly infects the roots of plants. Most plant parasitic nematodes need to feed on a plant in order to get food required for reproduction.

**node** --A stem joint capable of producing buds, leaves and/or roots.

**noninfectious** --Incapable of entering a living plant and causing disease.

**nonselective** – Herbicide which kills plants irrespective of species. Not selective for controlling weeds without injury to turf

**nursery,** turf-- Place where replacement sod or vegetative planting material is grown for Planting elsewhere.

**obligate parasite** -- An organism incapable of completing its life cycle outside a specific host plant.

**osmosis** - The process by which Liquid passes through a semipermeable membrane from a lower concentration to a higher concentration.

**overseedi**
in the wintertime.

**pallete --A** composite grouping or collection of plants that are typically planted to emulate native plant life or habitat.

**panicle** -- Many branched flower head with flowers at the end of each branch. Common in grasses such as annual bluegrass.

**parasite** --Any living organism which is capable of deriving its nutrition from another living organism but may not necessarily cause disease in the host organism. pathogen --Any parasite capable of causing a disease.

**pesticide** --A generic name given to a chemical capable of controlling insects, pathogens and/or weeds.

**perched wa**
textured soil and an underlying coarse texture. The
continuity of water films is disrupted, slowed, or stopped altogether.

**pheromones** - Chemicals produced by insects and other animals to communicate with and influence the behavior of other animals of the same species. (note: Most pheromones used today in pest management are synthetic and are used to monitor insect populations.)

**phenology** -- The scientific study of the changes in biological organisms that
coincide with the yearly seasons, such as the timing of plant emergence and the progression of the fall tree colors from north to south.

**photosynthesis** -- Process by which plants containing chlorophyll are capable of Producing their own Ibod (carbohydrates) from carbon dioxide and water in the

**physiological** - The functioning of plant processes dependent on biochemical actions.

**poling** - Using a limber pole to remove the dew from leaves of grass.

**postemergence** – After germination and emergence from the soil.

**prostrate** -- Growth habit of tendency to lie flat on the ground.

**reel mower** -- Mower that cuts turfgrass by means of a series of curved, rotating blades which pull the grass into a stationary bedknife and cut the grass in a manner similar to a scissor.

**renovation** -- Improving a turf without completely destroying the turf characteristics. May or may not include planting new seed or vegetative material into an existing

**residue** -- That which remains.

**rhizome** -- Below ground stem with nodes and internodes capable of producing a new plant at each of the stem nodes.

**rosette** --A tuft or cluster of closely crowded leaves arising from a very short stem. Caused by the dwarf or compaction of the internodes.

**rotary mower** -- A mower that cuts the grass by means of a single blade, mounted parallel to the surface of the turf and sharpened on each end. The blade revolves at a high rate of speed in a horizontal plane and cuts the leaves of the grass by impact action.

**rough** -- Part of the golf course which borders the tee, fairway and greens. Usually mowed at a higher level and maintained less intensively than other parts of the golf course. Does not usually come into play.

**scald**-- Injury to turf caused by standing water.

**scalping** -- Excessive removal of the green portion of the turf plant, leaving brown stubble exposed.

**sclerotia** - Propagules composed of hardened masses of mycelium which aid the fungus in surviving periods of adversity. Golden brown to black in color and spherical to irregular in shape. Can be the size of a cabbage seed to microscopic.

**selective** -- Type of herbicide which will control one plant species without injury to another. Usually indicates that herbicide will kill weeds without injuring certain species of turfgrasses. Excessive rates of application may reduce or eliminate the selectivity.

**semidormant** -- Turf which is in a quiescent stage because temperatures are below the optimum for normal growth.

**senescent** -- Plant tissue declining after reaching maturity. Old age.

**sheepfooting** -- A method of compacting soil in putting green construction. This may be performed by the use of human feet or mechanically by a soil compactor.

**slicing** -- Method of cultivation or aerification in which a blade cuts through the turf intermittently, perpendicular to the surface.

**sod** --Plug, squares or strips of turf which has some adhering soil. Usually produced in a large controlled area.

**sodic soils** -- May develop as a result of irrigation. The soil solution contains ouly small amounts of calcium and magnesium, but larger quantities of sodium. In some cases potassium salts may also be present.

**soil applied pesticide** -- Pesticide which is applied to the soil where it has its activity. Some may be taken up by root and translocated to other parts of the plants.

**spiking**-- Method of cultivation in which a solid tine or pointed blade penetrates the turf and soil.

**sporulate** -- Process by which a fungus produces spores.

**spot spraying** -- Application of a pesticide to small areas. Contrasted to broadcast application.

**sprig** -- a generic term Ibr a vegetative planting material. May include stems, leaves, roots, stolons, rhizomes, etc.

**sprigging**-- Establishing turf by means of planting sprigs or stolons

**stimpmeter** -- A device to measure the speed of putting greens.

**stringlining** -- The art leveling a soil surface with a marked line using a line with string or the use of a piece of square lumber shuffled across the surface.

**stolon** -- Above ground stem which spreads laterally at the soil surface producing new plants at the nodes.

**suboxidation** -- A condition in which soil oxygen is severely limited. surfactant --Material which reduces the surface tension of a liquid (such as water) and improves the spreading of the liquid on a surface. Usually used with pesticides applied to the foliage to improve coverage.

**syringing** -- Applying a small amount of water, usually in the Ibrm of fine droplets, to cool the plant, prevent wilt, or remove dew.

**systemic** -- Pesticide which is absorbed into a plant through the leaves andlor roots and translocated throughout the plant.

**thatch** --A layer consisting partially of undecomposed organic matter, between the crown of the plant and the soil surface andlor below the soil surface.

**transition zone** -- An irregular east-west zone consistent with isothermal lines between warm season grasses are well adapted. Both may be grown in this zone.

**translocation** -- Movement of materials within the plant from point of entry to other areas, such as leaves to roots or roots to leaves.

**vascular system** -- Conducting or transport avenues in plant tissue, such as veins in leaves.

**vertical mowing** -- Use of a mechanical device with vertical cutting blades to manage grain and thatch.

**verticutting** -- Using a vertical mower.

**viruses** -- Submicroscopic entities consisting of a nucleic acid and a protein sheath. All viruses are obligate parasites as they can only multiply in living plant cells.

**warm season turfgrasses** -- Species of turfgrass which are adapted to the warmer subtropical and tropical regions of the world. Members of the subfamilies Panicoideae and Eragrostideae. On golf courses in warm regions of the world, primarily bentgrasses (Cynodon spp.).

**weak pathogen** -- Organism not capable of infecting vigorously growing tissue. It generally attacks tissue under a biological stress from abiotic or biotic causes. Often referred to as a "secondary pathogen", as it usually attacks tissue previously infected by a primary pathogen.

**wetting agent** -- See surfactant.

**wilt** -- Drooping of turfgrass leaves due to loss of turgor under moisture stress. Wilt may be due to acute and/or chronic lack of soil moisture, a dysfunction of the root system such as from a root rot, excessive salts in the soil water, or from suboxidation which limits the uptake of water as oxygen is essential for the process of water uptake.

**Attachment G: Hazardous Materials**

# REPORT

# ENVIRONMENTAL ASSESSMENT STATEMENT ATTACHMENT G HAZARDOUS MATERIALS

## FERRY POINT PARK
## BRONX, NEW YORK

*Prepared by*

**TRC Environmental Corporation**
Windsor, Connecticut

September 30,1999

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## 1.0 INTRODUCTION

TRC Environmental Corporation (TRC) conducted a series of field investigations to assess environmental conditions at the eastern portion of the New York City Department of Parks and Recreation (DPR) Ferry Point Park. Because of the site history of use as a municipal solid waste landfill in the 1950's and 1960's environmental conditions were evaluated to assess current conditions and the potential for significant adverse health impacts under current plans for development of the site as a public recreational facility. In general, the environmental evaluation was conducted in accordance with guidance provided by the City Environmental Quality Review (CEQR) Technical Manual. Specifically, TRC evaluated conditions relative to Chapter 3, Section J: Hazardous Materials.

Three phases of field investigations were conducted, as outlined below:

- A test pit investigation was conducted to determine the thickness of existing soil cover materials and to generally characterize the types of solid waste present in the subsurface;
- A landfill gas investigation was conducted to assess the nature and extent of landfill gas occurrence, including the presence and/or distribution of landfill gas at the surface and in the subsurface of the landfill; and
- A subsurface drilling investigation was conducted to assess the physical and chemical characteristics of subsurface materials, especially in areas of proposed excavation and/or development.

### 1.1 Project Objectives

The objective of the field exploration programs was to provide sufficient data to assess the presence of and potential impacts from hazardous or contaminated materials associated with past landfilling activities on the site on the proposed development of the site.

### 1.2 Report Organization

Section 1.0 provides an introduction to the project and defines project objectives. Section 2.0 provides detailed background information on the environmental setting and conditions at the site, including existing conditions, site history, and surrounding land use. Section 3.0 describes the nature and findings of the environmental investigations conducted

at the site, including the test pits, landfill gas and subsurface investigations. Lastly, Section 4.0 provides information on the potential human health and environmental impacts for both the construction and operational phases of the proposed project, based on the information provided by the site explorations.



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## 2.0 BACKGROUND INFORMATION

### 2.1 Study Area Existing Conditions

The study area consists of a portion of Ferry Point Park located under and immediately east of the Whitestone Bridge and the Hutchinson River Parkway (U.S. Interstate Route 678) as indicated on Figure 1. The Ferry Point Park site is a former landfill owned by the City of New York and currently administered by DPR. The site is bounded by Schley Avenue and St. Raymond's Cemetery to the north; Balcom, Miles, and Emerson Avenues to the east; the East River to the south, and the I-678 northbound and southbound service roads and the western portion of Ferry Point Park to the west. Available topography for the site shows that its current elevations vary from about 10 to 40 feet above mean sea level, with gentle slopes.

The landfill parcel may be described as consisting of two sections, which can be differentiated in part by topography/landform, and by vegetation. The eastern section is approximately 70 acres in size, has a covering of low grasses and a few small trees (estimated to be 5 to 10 years old), and varies in elevation from approximately 3 to slightly over 40 feet above the National Geodetic Vertical Datum of 1929 (NGVD) (based on the United States Geological Survey (USGS) 7.5 Minute Flushing Quadrangle, photorevised 1979). The western portion of the landfill, which slopes down to the East River waterfront, is approximately 140 acres in size and covered with tall (6-foot) heavy grasses and vegetation with a few trees (larger than those observed on the eastern section). The western portion of the landfill varies in elevation from sea level to slightly over 40 feet NGVD. Both sections of the landfill are criss-crossed by informal unpaved dirt-bike trails.

In general, the majority of the site is currently inactive. However, DPR operates an organic recycling facility in a fenced-in area along the western side of the landfill, and a composting operation which is located along the access road on the west side of the landfill. An informal model airplane runway and sitting area is located east of the DPR operation. Other existing land uses for the site appear to consist of the use of dirt bikes and four-wheel-drive vehicles on informally developed trails that criss-cross the site. Other than these areas of current activity, the remainder of the site is covered with vegetation that was either planted

or has developed naturally over the past 15 to 20 years. During the course of the field activities, light use of the site for walking and motorbiking was also observed. Existing site conditions are illustrated on a 1991 aerial photograph provided as Figure 2.

Proposed golf course facilities, including a waterfront park, clubhouse, restaurant and catering facilities, associated maintenance facilities, and community park, are schematically depicted on a 1991 aerial photograph of the property as illustrated on Figure 3.

The southern portion of the landfill abuts the East River along a rip-rap-covered shoreline and a cemetery is located to the north of the western portion of the landfill. Land use to the north, east, and south of the eastern portion of the landfill is residential. A small playground abuts a portion of the northeastern-most corner of the landfill.

## 2.2 Site History

The site was in operation as a landfill from before 1951 to the 1960's. The landfill reportedly accepted municipal solid waste during its operating period (telephone conversation with Mr. P. Gleason of the New York City Department of Sanitation on July 30, 1998), and was closed and covered in the mid-1960's, with additional closure operations conducted more recently (1980's).

Site use is depicted in historic aerial photographs from the years 1951, 1954, 1959, 1962, 1982, and 1991. This series of aerial photographs spans practically the entire operational period of the landfill, from its initial operations to the present, and provides substantial information about the site's development. Annotated aerial photographs from each of the above referenced years are provided as Figures 4 through 9. The following observations are made:

- The 1951 aerial photograph, provided as Figure 4, depicts a relatively small area of municipal landfill in the northwestern portion of the project site. Elements observed on the photograph include an area of municipal waste disposal, active landfill face, dark colored areas indicative of wet areas, and mounded construction debris. The most evident feature on the 1951 aerial photograph is the reduced size of the active landfill area compared to the future landfill boundary.

- The 1954 aerial photograph, provided as Figure 5, shows the landfill in a transition state. The limits of the 1951 landfill are still evident, but several earthen berms are present within the water to the south and east. These berms define limits of future landfilling. In particular, an apparent dewatering barrier is visible in the central portion of the site with active landfilling occurring to the east. Additional features evident include areas of mounded construction debris, mounds of waste material, and several areas that may represent stockpiles of cover soil.

- The 1959 aerial photograph, provided as Figure 6, shows the landfill boundary to the south approximating the final extent of filling. The areas outlined by berms in the 1954 aerial photograph are now filled in and a vehicle and equipment storage area is visible along the southeastern portion of the site. Numerous sanitation trucks are visible hauling refuse to the active working face of the landfill, and dark areas, indicative of wet low-lying zones are present in the southern portion of the site. Piles of waste and/or cover materials are also visible.

- The 1962 aerial photograph, provided as Figure 7, shows the approximate final extent of landfilling at the property. The dark areas to the south are now absent, likely indicating the placement of additional fill to the south since the 1959 aerial photograph. This photograph shows active use of the majority of the easternmost portion of the property, as indicated by several landfill lifts. A baseball field and support area are now present in the far northeastern portion of the property. Mounds of waste material and several areas of soil cover material are also shown.

- The 1982 aerial photograph, provided as Figure 8, shows the site in its approximate current condition. Vegetation has developed over a large part of the property and numerous trails are visible. Several informal dirt bike trails are evident, as is a "T" shaped paved area presently used as a model airplane landing strip. Along the northern portion of the property, mounds of construction debris and a small area of active landfill is visible.

- The 1991 aerial photograph, provided as Figure 9, shows further growth and development of site vegetation. The paved strip area is still visible, as are the construction debris in the northern portion of the site. However, the previous extent of landfill activity in the northern portion of the site is greatly reduced. Several dirt bike tracks, including at least some portions of the dirt bike tracks shown on the 1982 aerial photograph, are visible. The baseball field and support area in the far northeastern portion of the site are no longer present. However, another baseball field and a basketball court are present to the south.

In summary, aerial photographs from 1951, 1954, 1959, 1962, 1982, and 1991 provide a basis for the following general conclusions regarding the nature of historic operations at the site.

- Historical aerial photographs dating back to 1951 indicate that the fill appears to have been placed in upland areas (possibly previously filled areas) and in areas formerly submerged by the East River and associated inlets.

- In general, the landfilling activities appear to have followed a planned sequence with respect to the geometry of the ultimate site boundaries and utilized internal separations as landfilling progressed.

- The majority of landfilling activity occurred in the late 1950's to the early 1960's, thereby indicating the majority of waste materials to be on the order of 40 to 50 years old. Vegetation has been established over for the site for on the order of 15 to 20 years.

## 2.3 Previous Explorations

Historic information from 10 borings drilled in the vicinity of the DPR organic recycling facility and northwest of the model airplane area in November-December 1990 indicated fill thicknesses of 14 to 23 feet (W. M Walsh Co., Inc., "Boring Location Plan and Logs," dated January 10, 1991, Contract No. C.N.Y.C.-1989). The fill thickness appeared to increase from the borings at the northern edge of the property (14 to 16 feet) to the southwest (22 to 23 feet). The fill was described as 'misc. fill, shot rock'. Underlying the fill at the locations at the northern edge of the property was a layer of gray silt or, depending on location, a ½- to 1-foot layer of meadow mat underlain by gray silt. Each of the borings encountered gray fine to medium sand at a depth of 19 to 23 feet below grade.

## 3.0 SOILS ASSESSMENT

### 3.1 Introduction

TRC conducted three separate field investigation programs to:

- assess the general nature and approximate thickness of cover soils;
- assess the nature and extent of landfill gas occurrence; and
- assess the chemical characteristics of materials present within the landfill in areas of proposed excavation and/or development.

TRC conducted soil boring and soil sampling activities in accordance with a project specific quality control plan. This plan was developed to ensure that sampling and analysis activities provided reliable and representative results. The quality assurance/quality control (QA/QC) program addressed the maintenance of sample integrity from sample collection in the field to analysis in the laboratory. Additionally, TRC personnel followed a Health and Safety Plan (HASP) during field explorations at the sites which described the nature of wastes or contamination suspected and present at the site, the site access and work zones, and the initial level of personnel protection and monitoring anticipated during site investigation activities.

### 3.2 Cover Soil and Preliminary Waste Characterization

TRC completed 38 test pits (TP-01 through TP-38) at various locations across the site between July 21 and 27, 1998 to assess the thickness of landfill cover material and visually characterize the fill/waste materials. The locations of site test pits are shown on Figure 10.

The test pit excavation program was conducted using a track-mounted excavator with an approximate 15-foot reach. The thickness and characteristics of the cover material and fill/waste material, the depth to ground water, and total depth of the excavation were recorded on a test pit log. Test pits were conducted under Permit Number X-12-98NFC issued by DPR. The test pits were located using a Global Positioning System (GPS) receiver. A summary of individual test pit observations is provided as Table 1. The following is a brief summary of findings from the test pit program (TRC, July 1998).

- The excavation program identified municipal wastes at most locations along with varying amounts of wood and metal. The test pit observations indicated that the waste characteristics varied at different locations.

- Depths to ground water varied, based on location, from 3 to over 13 feet below grade.

- The cover material generally consisted of light brown silt and sand with varying minor amounts of brick, rock, metal, and other debris. Inspection of the surface of the landfill indicated the widespread presence of metal, rock, and brick in the cover material and on top of the landfill.

- The thickness of the cover material varied with location across the landfill. The cover material on the western portion of the landfill (test pits TP-1 through TP-14, TP-25, TP-26, TP-28, TP-32, TP-33, TP-37, and TP-38) varied in thickness from non-existent to 6 feet. Of those test pits on the western portion of the landfill, test pits TP-2, TP-37, and TP-38 encountered 5 to 6 feet of cover material. Cover thicknesses in most of the other test pits on the western portion of the landfill averaged approximately 2 feet in thickness. Two test pits along a sloped area approximately located between the western and eastern sections of the landfill (TP-15 and TP-27) encountered 8 and 5 feet of cover material, respectively, above wastes or the water table. Fill was not encountered in test pit TP-27 to the depth excavated (9.5 feet below grade). In general, the wastes observed beneath the western portion of the landfill were dark colored and contained wood, metal, glass, plastic, tires, auto parts, cloth, and other household wastes. A noticeable odor was emitted when the fill was uncovered in many locations. A section of newspaper uncovered in one of the test pits was dated 1959. In some areas, such as test pit TP-26 along the southwestern side of the landfill, construction materials (wood sheets) were identified.

- The cover material on the eastern portion of the landfill (test pits TP-17 through TP-21, TP-23, TP-24, TP-29, TP-30, TP-31, TP-34, and TP-35) varied in thickness from 3 to 7 feet, averaging approximately 4 to 5 feet in thickness. Fill was not encountered in two test pits along the edges of the eastern portion of the landfill (TP-16 and TP-22), where 3 and 11.5 feet, respectively, of relatively waste-free materials were encountered above the water table. The wastes observed beneath the eastern portion of the landfill were similar to those observed in the western portion of the landfill (i.e., containing wood, metal, glass), but in general, contained less household wastes and odors were noticeably less or not apparent. A newspaper uncovered in one of the test pits indicated a date of 1951. These wastes demonstrated comparatively lower odor and generally lesser amounts of

identifiable household wastes as compared to the wastes below the western portion of the landfill, possibly due to age.

Based on the observations made during the test pitting operations, it is estimated that approximately 100,000 cubic yards of excess cover material are present in areas of the site (e.g., areas to be developed as lakes) which would be available for use in contouring the golf course. Any waste materials excavated in the course of construction, such as during the installation of building foundations or utilities, would be disposed of off site in compliance with applicable laws.

## 3.2 Landfill Gas Evaluation

The two principal gases generated in a landfill are carbon dioxide ($CO_2$) and methane ($CH_4$). Carbon dioxide is generated in greater quantities by aerobic decomposition early in the landfill life, while methane production increases due to anaerobic decomposition during the later stages of landfill life. Based on the age of the Ferry Point Park landfill, it is considered to be in the methane generation stage. Additionally, landfill gas generation is strongly correlated with the age of the waste/fill materials, where the gas generation rate drops as the buried waste ages. Due to the fact that the age of the waste materials at the Ferry Point Park site is approaching 30 to 50 years, the landfill gas generation rate is declining.

The greatest concern associated with typical landfill gas is the potential for the methane component to cause flammable or explosive conditions. Methane is lighter than air and will rise until it meets an impermeable barrier. It will then deflect laterally until a vent is found or it will collect in confined spaces. When methane is present at 5 to 15 percent by volume in the air, explosive conditions are possible.

A landfill gas evaluation was conducted to characterize the nature of landfill gas occurrence and to assess the potential for adverse effects of methane gas on the proposed golf course facilities. These objectives were accomplished through the performance of a soil gas survey that included the analysis of landfill gas samples collected at various locations across the site on April 15 and 16, 1999. Monitoring was conducted both at the surface of the landfill (i.e., ambient air monitoring) and in subsurface borings. The locations of soil gas

survey points are shown on Figure 11. The locations of soil gas survey points were located using a Global Positioning System (GPS) receiver.

The soil gas survey was conducted by drilling small-diameter borings at 31 locations (GP-01 through GP-31) on the landfill. Within each borehole, 3/8-inch tubing was placed to a depth of 3 feet. The bottom 1-foot section of the tubing was perforated. The annulus around the tubing was sealed with molding clay. Sampling was conducted directly via the tubing using a Landtec GA-90 Landfill Gas Analyzer (LGA). At each soil gas point, the percentages of methane ($CH_4$), carbon dioxide ($CO_2$) and oxygen ($O_2$) were measured directly by the LGA. Due to variations in the landfill cap thickness, it could not be confirmed that the sample collection depth of 2 to 3 feet totally penetrated the existing cap at each sampling location. Ambient air monitoring in the immediate vicinity of the soil gas survey points was also conducted to determine if landfill gas was detectable at the surface of the landfill.

Methane was not detected in the ambient air during the landfill gas survey, even when measurements were collected at the surface immediately adjacent to the soil gas survey points. These results indicate that the existing cover soils are successful in preventing detectable discharges of landfill gas to the air; therefore, under existing, undisturbed cover conditions, no impacts to the breathing zone are detectable. The development of the site, as discussed in more detail in Section 4.3.1, will result in the presence of an even thicker cover layer over the site, further minimizing the potential for methane to be a problem on the surface of the site.

The results of the landfill gas survey subsurface measurements are presented in Table 2 and subsurface methane concentrations are plotted by survey point location on Figure 11. The concentrations of methane detected at a depth of 2 to 3 feet below the surface of the landfill ranged from non-detectable to as high as 76%, which are not atypical of a landfill of this size and age. The majority of the subsurface methane detections occurred in the central portion of the site. Section 4.0, below, discusses the measures to be utilized during construction and operation to ensure that methane concentrations will not pose a health and/or safety problem for workers or park users.

In addition to the data generated during the soil gas survey, test pits excavated during the borrow potential evaluation were also screened for organic vapors. The test pit screening provides additional information on the subsurface generation of landfill gases. In most cases, the screening was performed using a flame ionization detector (FID) and, in some cases, a photoionization detector (PID). The FID is sensitive to a wide range of organic vapors, including methane. The PID responds to organic vapors other than methane (aromatic hydrocarbons but not chlorinated hydrocarbons) with an ionization potential less than or equal to 10.2 millivolts.

PID measurements were collected at 20 test pit locations; no positive readings were detected. In addition, FID measurements were collected at 27 test pits. In general, organic vapor concentrations based on FID measurements were higher in the western portion of the landfill, with FID readings ranging up to 0.7%, as compared to the eastern portion of the landfill. This corresponds with the more frequent occurrence of odors in the test pits on the western landfill (although methane is odorless, the detection of odors indicates that landfill gases are being emitted). Although FID readings were generally lower in the eastern portion of the landfill, the highest FID reading of >1% was noted in test pit TP-17 in the eastern portion of the landfill. Given the absence of positive PID readings, all or most of the FID responses are believed to be due to methane.

## 3.3 Soil Quality Assessment

### 3.3.1 Objectives and Evaluation Criteria

A soil boring program was conducted to obtain representative samples of site fill/waste materials for chemical analysis in areas of proposed excavation and development (e.g., in areas of proposed buildings and lakes). Secondarily, the borings were also useful in gathering information on:

- The thickness of the cover material;
- The thickness of the fill/waste materials;
- Subsurface soil/fill geotechnical properties; and
- Landfill gases.

These objectives were accomplished through the performance of a soil boring program which included the installation of 16 soil borings (B-1 through B-15, including B-11Alt) at various locations across the site between June 2 and 8, 1999. Soil borings were installed at the site in the vicinity of the proposed clubhouse facilities, restaurant and catering facilities, maintenance facilities, and lakes. The locations of soil borings are shown on Figure 12.

The results of the soil boring program are presented below, followed by discussions of the chemical analyses of soil cover and waste materials. The evaluation of the soil cover and waste material chemical data was conducted to determine whether the concentrations of chemicals in the cover or waste materials pose a risk to park users or workers.

To evaluate the potential human health risks associated with exposures to soil and/or waste materials, technical information prepared by the New York State Department of Environmental Conservation (DEC) and U.S. Environmental Protection Agency (USEPA) for the purposes of screening/evaluating soil was used in the absence of any Federal or New York State 'standards' for evaluating chemical concentrations in in-place soils. The sources of this information are outlined below:

1) DEC's Technical and Administrative Guidance Memorandum HWR-94-4046 (TAGM 4046)
TAGM 4046 provides a basis for determining soil cleanup levels at inactive hazardous waste sites. This document considers both the possibility of contaminants leaching from soils to ground water and direct exposure to soils. The Recommended Soil Cleanup Objectives (RSCOs) presented in the document are based on both of these considerations. Based on the fact that the site is an inactive landfill site with no ground water monitoring requirements, only health-based criteria presented in TAGM 4046 are used in the evaluation of soil and waste results herein. The TAGM 4046 risk-based exposure criteria for soil are developed based on a residential exposure scenario using USEPA's Health Effects Assessment Summary Table (HEAST). Since TAGM 4046 does not include risk-based criteria for heavy metals (the RSCOs in TAGM 4046 are based on site-specific, Eastern USA or New York State soil background levels and not on risk-based criteria), TAGM 4046 inorganic criteria are not considered in the evaluation provided herein. However, for reference purposes, supplemental tables have been included in Appendix A which compare soil and waste sample data to RSCOs and Eastern USA or New York State soil background levels from TAGM 4046.

2) USEPA Region III's Risk-Based Concentration Table (RBCT) (USEPA Region III, 4/12/99) includes criteria based on exposures to soil under 'industrial' exposure conditions. These criteria are useful in evaluating potential direct exposures to soils by workers. This document considers toxicological data from USEPA sources such as HEAST, IRIS and other sources.

3) TAGM 4046 also presents maximum values for groups of contaminants including total volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and pesticides and individual SVOCs (referenced to the States of Washington and Michigan).

4) For certain inorganics (e.g., lead, mercury and cyanide), risk-based criteria are not available under the USEPA Region III's RBCT. For these constituents, risk-based criteria based on direct exposures to soil under commercial/industrial exposure conditions developed under the Connecticut Remediation Standard Regulations (RSRs) (RCSA 22a-133k-1) are used for data evaluation purposes.

It is important to note that this analysis is not as rigorous as a risk assessment, which would consider the possible synergistic effects of the detected analytes. This analysis does, however, serve to identify areas where mitigative measures may be necessary during construction.

Another consideration in the evaluation of soil and waste sample results is that experience indicates that some analytes (specifically lead and polynuclear aromatic hydrocarbons (PAHs) are common in urban areas, and using state-wide averages of the occurrence of metals, do not fully consider the typical concentrations found in urban fill materials. Therefore, consideration of the prevalence of these compounds in urban areas may be appropriate in evaluating the results of the soil cover and waste material samples.

### 3.3.2 Field Investigation and Observations

Soil borings were advanced using hollow-stem auger drilling techniques to depths ranging between 12 and 52 feet below ground surface. In general, soil borings were advanced to a depth of approximately 10 feet beyond the depth of observed fill/waste material. Soil samples were typically collected continuously from ground surface to boring termination

using a 2-inch diameter split spoon sampler advanced using standard penetration test methods defined in ASTM 1586-84. In many cases, the presence of waste materials resulted in little or no recovery. The samples were screened for organic vapors using a PID. Lower explosive limit measurements were also made inside the auger during drilling. Following completion, each boring was backfilled with auger cuttings consistent with the DEC Technical and Administrative Guidance memorandum (TAGM) Disposal of Drill-Cuttings.

Borings B-1 through B-4 were drilled in the western portion of the site, in the area of the proposed clubhouse and waterfront facilities. Boring B-1 was advanced approximately 5 feet below observed fill/waste materials while boring B-2 did not completely penetrate the fill/waste unit and, due to poor recoveries, was terminated at a total depth of 20 feet below ground surface. Depths to ground water in this area ranged from 8 to 9 feet below ground surface. The soil borings encountered a surficial soil cover unit, underlain by a fill/waste material, which was in turn underlain by a soil fill unit. The surficial soil cover was approximately 2 feet thick and was composed either of a dark brown sand or sand and silt material with rounded gravel or crushed rock or a yellowish sand with variable quantities of clay, asphalt and organic (humus) material. The fill/waste material was observed to be composed of a orange-brown to black coarse sand and silt material with variable quantities of wood and glass fragments, metal shards, plastic and paper. This unit ranged in thickness from approximately 8 feet in boring B-1 to 16 feet in boring B-4. The soil fill material underlying the waste/fill unit was composed of grey medium stiff clay or yellow fine to coarse sand and silt. This unit was encountered at depths ranging from 10 to 18 feet below ground surface.

Borings B-5 through B-9 were drilled in the southeastern portion of the site, in the area of the proposed catering facility, maintenance facility and lake. Drilling at B-8 was halted at a depth of 14 feet. Depths to ground water in this area ranged from 5 to 18 feet below ground surface. The soil borings encountered a surficial soil cover unit, underlain by a fill/waste material, which was in turn underlain by soil fill unit. The surficial soil cover ranged from approximately 1 to 6 feet thick and typically consisted of a dark brown silt, consistent with that observed in the western portion of the site. Boring B-9 exhibited a

yellowish silt with traces of sand and mica as the cover material. The fill/waste material was observed to consist of dark brown to black silt with waste materials including ceramic, glass, brick and rock fragments, decomposed newspaper, plastic, nylon and ash materials. The fill/waste unit ranged in thickness between approximately 10 to 14 feet, with the exception of soil boring B-9 in which the fill/waste unit was observed to be approximately 30 feet thick. The soil fill material underlying the waste/fill unit was composed of a yellowish silty sand similar to that encountered in the western portion of the site with the exception of boring B-9, where layers of brown-black sand and light grey silty clay were identified.

Borings B-10, B-12, B-14 and B-15 were drilled in the remaining lake construction areas, in the northern and eastern portions of the site. Depths to ground water in these two areas ranged from 11 to 15 feet below ground surface and 9 to 11 feet below ground surface, respectively. The soil borings encountered a surficial soil cover unit, underlain by a fill/waste material, which was in turn underlain by soil fill unit. The surficial soil cover ranged from approximately 2 to 9 feet thick and typically consisted of a dark brown silt, consistent with that observed in the other portions of the site. The fill/waste material was observed to consist of silt ranging in color from yellow to black with waste materials including glass, brick and rock fragments, newspaper, plastic, nylon, wood and asphalt materials. At boring B-14, much of the fill was described as a black matrix of pulverized coal mixed with other waste materials. The fill/waste units ranged in thickness between approximately 16 to 18 feet in the northern lake area and 10 to 13 feet in the eastern lake area. The soil fill material underlying the waste/fill units in both areas was composed of a grey clay or silt material. The borings in the northern lake area also exhibited lenses of yellow or black sand.

The remaining three borings, B-11, B-11Alt and B-13, were located within the central fill area. Drilling at boring location B-11 was halted at a depth of 12 feet and drilling was re-started at boring location B-11Alt. Depths to ground water at these locations ranged from 8 to 10 feet below the ground surface. A surficial soil cover unit was encountered only at boring B-13. All borings exhibited a fill/waste material, which was in turn underlain by soil fill unit. The surficial soil cover at B-13 consisted of dark brown silt with fine sand and some organic (humus) material. The fill/waste material in borings B-11 and B-11Alt was observed

to consist of a black matrix of sand, wood, rock and glass fragments, metal, plastic, wood, paper and other waste materials. The fill/waste material in boring B-13 consisted of dark brown to black silt with sand, glass, rock and brick fragments, wood and plastic film. The fill/waste units ranged in thickness between approximately 12 to 30 feet. The soil fill material underlying the waste/fill units in was composed of a dark grey clay with little silt.

A single sample of waste/fill material was retained from each boring for chemical analysis, typically from the interval which exhibited the highest PID reading. In some cases, due to poor recovery, sufficient sample was not collected to support the performance of all chemical analyses (e.g., at boring B-2, the sampled interval provided sufficient sample volume to support analysis for volatiles only) or the samples submitted for analysis were collected from different depths within the boring (e.g., at boring B-12, the sample for volatile analysis was collected from the 6- to 8-foot interval while the sample for the remaining analyses was collected from the 18- to 22-foot interval). The waste samples were identified using a system where the boring number is followed by the split spoon interval from which the sample was collected. For example, sample B1-3 was collected from the third split spoon (i.e., from the 4- to 6-foot interval) from boring B-1.

In addition to the waste/fill material samples, a single cover soil sample was retained from each of the investigation areas for laboratory analysis. Cover soil samples were collected from borings B-2, B-7, B-8, B-10, B-11, B-13, and B-14. The samples were typically collected from the 0- to 2-foot interval, with the exception of the sample collected at boring B-14, which was collected from the 2- to 4-foot interval. The cover soil samples were identified using the same system described above for the waste material samples.

With the exception of the portion of the sample to be analyzed for VOCs, each of the soil samples selected for chemical analysis was homogenized in a decontaminated stainless steel bowl prior to transfer to laboratory-supplied sample containers. The fraction of the sample analyzed for VOCs was collected directly from the split spoon soil sample using EPA Method 5035 sampling techniques to minimize the loss of volatile compounds. Each of the samples was analyzed by York Analytical Laboratories, Inc. of Stamford, Connecticut for the

full Target Compound List (TCL) and Target Analyte List (TAL) of chemical constituents. Analytical parameters included:

- TCL VOCs by EPA Method 8260,
- TCL SVOCs by EPA Method 8270,
- TCL Pesticides/PCBs by EPA Methods 8081/8082, and
- TAL Inorganics by EPA Methods 6010 and 7471.

### 3.3.3 Soil Cover Characterization

The results of the chemical analysis of soil cover materials are presented in Table 3, where the results are compared to risk-based criteria (see Section 3.3.1 for a description of the evaluation criteria used herein). Only those constituents which were detected in at least one soil cover sample are listed in the tables; all other analytes were not detected.

The existing soil cover materials exhibit measurable concentrations of VOCs, SVOCs, pesticides, PCBs and metals. VOCs detected in the cover samples included aromatic and chlorinated hydrocarbons, while SVOCs detected in the cover soil samples included phenols, PAHs and phthalates. The pesticides detected in the cover samples included trace amounts (below standard detection levels) of DDE, DDD, DDT and chlordane.

When soil cover results are compared to risk-based criteria, as presented in Table 3, SVOCs and arsenic are the only contaminants detected at levels exceeding the risk-based criteria. The only SVOCs detected at levels exceeding health-based TAGM 4046 criteria were benzo(a)anthracene, benzo(a)pyrene, and dibenz(a,h)-anthracene, all PAHs. Exceedances of these PAH TAGM 4046 criteria were detected at five of seven cover sample locations. Benzo(a)pyrene was the only constituent detected at levels exceeding the EPA Region III RBCT industrial soil criteria, also at five of seven cover sample locations. As noted previously, PAHs are commonly elevated in samples of urban fill materials. Arsenic was detected in only one sample at a level exceeding the EPA Region III RBCT industrial soil criteria. It was detected at a level of 9.1 ppm, which is within the reported range of 3 to 12 ppm for arsenic in New York State background samples (TAGM 4046).

The expectation is that no cover materials will be removed from the site, although on-site movement is expected during construction.

Based on the testing to date and with the exception of PAHs and arsenic, the soil cover does not contain chemicals at concentrations which would be expected to pose a hazard to workers. However, based on the detection of exceedances of risk-based criteria for PAHs and arsenic, preparation of and compliance with a health and safety plan and any associated monitoring requirements will be necessary during construction and utility and maintenance work to ensure the protection of workers during activities requiring exposures to or disturbance of existing cover materials. As discussed in Section 4.2.1, the existing cover materials will be further covered with shaping materials (either excess cover material excavated from other portions of the site or imported materials), as well as final cover layer/topsoil, during development. These cover materials will isolate park users from the subsurface materials.

### 3.3.4 Waste Material Characterization

The results of the chemical analysis of waste materials are presented in Table 4, where the results are compared to risk-based criteria (see Section 3.3.1 for a description of the evaluation criteria used herein). Only those constituents which were detected in at least one waste material sample are listed in the tables; all other analytes were not detected.

The waste materials exhibit VOCs, SVOCs, pesticides, PCBs and metals. VOCs detected in the waste samples included aromatic and chlorinated hydrocarbons, while SVOCs detected in the waste soil samples included phenols, PAHs and phthalates. The pesticides detected in the waste samples included DDE, DDD, and DDT.

Table 4 presents a comparison of waste material results to risk-based criteria. SVOCs, PCBs, arsenic and lead are the only contaminants detected at levels exceeding the risk-based criteria. Exceedances of the TAGM 4046 risk-based criteria for benzo(a)anthracene were detected in 10 waste samples while exceedances of the TAGM 4046 risk-based criteria for benzo(a)pyrene were detected in 12 waste samples. Dibenzofuran, 2-methylnaphthalene, phenanthrene, chrysene, benzo(b)fluoranthene, and benzo(k)fluoranthene were each detected in a single sample at levels exceeding the 50 ppm individual SVOC limit established under TAGM. The total SVOC level in sample B5-6 also exceeded the TAGM 4046 total SVOC



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standard of 500 ppm. The only SVOCs detected at levels exceeding the EPA Region III RBCT were benzo(a)anthracene (in one sample), benzo(b)fluoranthene (in one sample) and benzo(a)pyrene (in three samples). As noted previously, PAHs are commonly elevated in samples of urban fill materials.

The EPA Region III RBCT industrial soil criterion for the PCB Aroclor 1260 of 2.9 ppm and the TAGM total PCB criterion of 10 ppm were exceeded by one waste sample, where PCBs were detected at a level of 18 ppm. This is below the 50 ppm threshold above which the soils would be considered hazardous.

The EPA Region III RBCT industrial soil criterion for arsenic was exceeded in six waste samples. The Connecticut industrial/commercial risk-based soil criterion for lead was exceeded in three waste samples.

Some excavation of waste materials on site will occur during construction of building foundations, utility installations, and the like. Excavated waste materials will be disposed of off site in accordance with applicable laws.

Based on the testing to date and the detection of exceedances of risk-based criteria for PAHs, PCBs, arsenic and lead, compliance with a health and safety plan and any associated monitoring requirements will be maintained during construction and utility and maintenance work to ensure the protection of workers during activities requiring exposures to or disturbance of waste materials. The cover material (shaping materials and final cover/topsoil) to be placed over the landfill surface will isolate park users from the subsurface waste materials (see Section 4.2.1 for a description of the shaping and final cover materials).

## 4.0 IMPACT ASSESSMENT

The impact assessment examines measures that will be utilized during and after construction of the proposed project to ensure that workers and park users are not exposed to harmful or hazardous materials.

### 4.1 Conditions during Construction

Construction will include activities such as:

1) the removal of excess cover materials from some portions of the site (e.g., areas where lakes will be constructed);

2) the excavation of waste materials from limited areas of the site (e.g., areas where buildings will be constructed and where utilities and drainage lines will be located);

3) management, including TCLP testing if necessary, of any excavated wastes for subsequent off site disposal; and

4) the placement of shaping materials (consisting of excess cover materials moved from other areas of the site and materials imported to the site) and topsoil over the surface of the site to contour the site for the golf course and other park facilities.

During construction, an air monitoring program will be implemented to monitor for the potential presence of dust and methane in and downwind of the work areas, especially during trenching and disturbances of the existing soil cover and/or waste materials. A health and safety plan will be developed and submitted to the New York City Department of Environmental Protection (DEP) for it's approval. That plan will define worker safety training and monitoring procedures, personal protective equipment, air monitoring equipment, action levels and appropriate mitigative and protective measures. The health and safety plan will focus on potential exposures to landfill gas as well as to those constituents detected at levels exceeding risk-based criteria in the soil cover and waste material, as described in Sections 3.3.3 and 3.3.4 and will require continuous monitoring during groundbreaking activities. If action levels established in the health and safety plan are

exceeded, construction activities will be temporarily halted. As necessary, gas venting, dust control, or other mitigative measures will be implemented prior to the reinitiation of the construction activities. A sample Health and Safety Plan outline is presented in Appendix B. All temporary construction facilities will also be monitored for and protected against potential methane buildup.

If extensive reworking of the existing waste materials is required, odor control or excavation limitations (based on wind speed and direction) will be implemented at locations where odors are detected during construction.

To construct the lakes on existing landfill material and minimize water leakage losses, an impermeable liner system that can withstand settlement will be constructed. The liner system will likely consist of a clean sand bedding layer, a non-woven geotextile cushion, an impermeable geomembrane liner, an upper non-woven geotextile cushion and a surface cover layer of fine crushed stone.

If DPR or any licensee proposes to make any significant revisions in the site plans that would result in significant new or additional excavation, then DEP would be consulted and it's approval sought prior to proceeding with any such excavation.

## 4.2 Post-Construction Conditions

Post-construction conditions will be greatly dictated by the physical and chemical nature of the final cover material which will be present over the golf course and parkland areas as well as by landfill gas control systems built into the confined space areas and structures. Another consideration in maintaining safe post-construction facilities at a landfill site is the differential settlement which may occur. Each of these factors is discussed in the following subsections.

### 4.2.1 Cover Materials

Cover materials will consist of two layers: 1) a shaping layer and 2) a final cover or topsoil layer. Details on the requirements for the cover materials in the golf course and parkland areas are provided in the following paragraphs.

The shaping material layer in both the public parks and golf course will consist of existing excess cover materials moved from other areas of the site, such as the proposed lakes and areas of excess cover (greater than 2 feet), and imported uncontaminated construction and demolition (C&D) materials. The materials to be imported for the shaping layer will meet the 6NYCRR Part 360-7 regulations pertaining to uncontaminated construction and demolition debris which is exempt from permit requirements. It is estimated that a total of approximately 500,000 to 600,000 cubic yards of fill will be used as the shaping layer to contour the golf course. Of this fill material, approximately 400,000 to 500,000 cubic yards will be imported to the project site, and the remainder (approximately 100,000 cubic yards) will be excess cover materials from the lakes and other areas on the project site.

The shaping material will be overlain by a final cover layer/topsoil layer consisting of uncontaminated soil materials imported from non-industrial sites which meet background levels. (Background levels will be determined in concert with and subject to the approval of DEP.) The final cover/topsoil layer will require the importation of approximately 200,000 cubic yards of materials to the site. The final cover/topsoil layer will be 12 to 24 inches thick in the two public parks. However, in all cases a minimum of 24 inches of cover meeting such background levels would be placed or retained for the two public parks. A minimum of 12 inches of material meeting such background levels would be placed or retained in the golf course, excluding the rough waste (out-of-bound) area. In the rough waste areas of the golf course, a minimum of 6 inches of material meeting such background would be placed or retained.

### 4.2.2 Landfill Gas Control Systems

The greatest potential for post-construction human health impacts is associated with the vertical and lateral subsurface migration of landfill gas and its subsequent collection in structure-confined spaces and buildings that could, if not properly vented, produce explosive conditions and other health and nuisance impacts. Gas venting through soil cover in open areas of the golf courses will not present explosive, health, or other nuisance impacts that affect user or worker safety.

The golf course and its ancillary facilities will incorporate features, especially with respect to confined space areas and structures, to ensure the safety of site users. Such features include landfill gas interception and venting systems below buildings. High-permeability passive and/or active landfill gas control systems to direct landfill gas away from buildings to controlled release points in areas where user safety is not affected. Other buried structures such as piping systems, manholes, handholes, and vaults require confined space warning markers. A safety plan and training, which will be submitted for approval to DEP, will be implemented to protect workers during both construction and operation.

The design of the golf course has taken into account the potential for landfill gas migration along utility pipes, trench bedding and backfill. Periodic low permeability soil plugs limit gas migration in pipe trenches, especially in the vicinity of buildings, manholes, handholes and vaults. The potential for landfill gas migration through cracks in electrical conduit, storm drain piping and sewer piping exists. Gas migrating through conduit and piping can travel to catch basins, drain inlets, manholes and handholes. Conduit seals in electrical conduit will be installed at handholes and building penetrations to prevent gas migration into these areas. Where feasible, building interior floor drains will be avoided. If building interior floor drains are required, they will include water traps to prevent gas intrusion into the building.

Outside storm drain catch basins and drain inlets have the potential for landfill gas to collect, unless appropriately designed and managed. While the potential for an errant match or lit cigarette to ignite methane inside a catch basin or drain inlets is low, measures will be taken to prevent such occurrences from happening. Where site conditions require storm drain inlets and catch basins, the choice of piping and inlet materials is important. Buried storm drain pipe will be butt fusion welded high density polyethylene (HDPE) pipe that eliminates the potential for joint leakage and provides maximum flexibility due to settlement and live loading. Catch basin and drain inlets are also available in HDPE, making them compatible with the piping material and able to form tight joint connections. Other similar high strength, high flexibility and low leakage piping and inlet systems may be employed, based on engineering considerations and contractor bids. The pipe penetrations

into catch basins or drain inlets will have downturned elbows or hood devices to create a water trap which submerges the pipe end and prevents gas migration into the structure. The golf course irrigation system will be designed to maintain these water levels at all times.

In areas where structures are built, landfill gas venting and appropriate monitoring systems will be provided. Venting systems can consist of passive vents, continuous mechanical venting, or intermittent mechanical venting controlled by a methane monitor. The selection of the venting system will be made during the final building design, based on site-specific gas conditions and details of the structures' design, though it is expected that the clubhouse, boathouse grill, fine dining/banquet facility, structures on the driving range, and managers residence will all utilize active venting systems. A preliminary analysis of venting requirements is presented below.

In order to establish an estimate of the venting requirements for building sub-slab areas, an analysis of the potential methane generation rate at the site was performed. There are no precise methods for estimating the rate at which methane will be generated from the existing waste material underlying the site. Methane generation can vary due to many factors such as waste composition, age, moisture, density and temperature. Daily barometric pressure changes can also affect daily release rates for stored gas within the waste. The recommended method for methane generation estimation is to calculate a rate based upon an accepted formula and apply a factor of safety to account for the variability in gas generation. The method selected for methane generation analysis for this project was selected from the United States Environmental Protection Agency Publication AP-42 Fifth Edition dated January 1995 and entitled "Compilation of Air Pollutant Emission Factors." Equation (1) contained in Section 2.4.4.1 of AP-42 was used. The equation takes into account the age of the waste, the waste acceptance rate during active life and several constants for methane generation potential and rate constant based on conditions at this site.

The methane generation rate calculation is presented in Appendix C. The test borings at the site indicate a maximum waste thickness of 37 feet which was used to conservatively estimate the maximum waste acceptance rate. A waste density of 1,000 lbs per cubic yard was also used to calculate the acceptance rate. Waste deposition was based on the time

period from 1952 to 1962. The methane generation potential constant was set at 125 cubic meters of methane per megagram of refuse and the methane generation constant was set at 0.04 per year. The AP-42 method, which estimates the methane generation rate per square foot of landfill surface area, derived a current generation rate for methane of 0.00004 cubic feet per minute (cfm) of gas per square foot of surface area.

The lower explosive limit (LEL) for methane gas is 5% concentration in air. In order to maintain a safe gas concentration in the air beneath a structure, it is recommended that the methane concentration be maintained at less than 20% of LEL, which translates to a 1% concentration of methane in air. Therefore at a gas generation rate of 0.00004 cfm per sq. ft. of surface area for this site, there would have to be an air exchange rate of at least 0.004 cfm of air per square foot of building surface area to stay below the 1% level. A factor of safety of 2 on the air flow rate is recommended to account for variability and uncertainties in generation rate. The site would therefore require the venting of building sub-slabs at a rate of at least 0.008 cfm of air per square foot. As an example, a building measuring 50 feet by 100 feet (5,000 square feet) would require a blower capacity of at least 40 cfm.

Sub-slab venting systems will be designed with dual blowers at the full air flow capacity to ensure continuous operation and provide additional capacity if needed to handle short term fluctuations in gas generation and gas venting from the waste below.

An alarm system will be installed to alert occupants of a problem before any explosive conditions occur in all structures where methane could collect. Automated monitoring of methane will be provided on the gas venting system and in the building space in potential critical areas where gas has potential to accumulate. The gas sensors will be connected to a central building alarm to alert the site operators of the need to check the venting system operation and monitoring system calibration. Sensors within any interior building space are recommended to be set at a concentration of 10% of LEL for methane and venting system sensors are recommended to be set at 20% of LEL. Routine explosive gas sensor calibration and alarm system testing will be performed to ensure continued safe use of the buildings.

The venting system will prevent the buildup of methane gas concentrations. In addition, during construction, site workers and contractors will be trained and educated in proper procedures regarding landfill gas issues. This training will be part of a site landfill gas Health and Safety Plan that will be utilized during the construction phase. The Health and Safety Plan will also address health and safety issues and their management during site operation. A sample Health and Safety Plan outline is presented in Appendix B.

The effect of landfill gas venting through the vegetative support soil layer over the golf course is anticipated to have limited and isolated overall impact to the health of the turf grasses. The age of the waste material at this site will result in generally lower production rates for landfill gas than a younger landfill having more readily decomposable waste. After 20 years of waste decomposition, only the least decomposable organic waste material remains, which accounts for approximately 30 percent of the total landfill gas produced over the life of the landfill. The decomposition of this material occurs much more slowly, resulting in significantly lower gas production rates in the later years of a landfill. The importance of the gas production rate is that it has a direct impact on the landfill gas concentrations in the shallow vegetative soil cover root zone. At lower production rates, the gas concentrations remain fairly low if the soil does not have the excessive silt and/or clay content that can trap gas within the root zone.

The potential for landfill gas to migrate to the surface and effect vegetation on the fairways is currently being addressed through additional landfill gas sampling focusing on the occurrence of methane in the root zone of the grasses used for the fairways, the top 6 inches of soil. This data will be used to determine if venting of methane in areas other than buildings, greens, water features, and other paved areas is necessary. If this venting is necessary, it will be provided.

For the greens, to prevent contact of landfill gas within the turf root zone, where necessary, the vegetative support and drainage layer of the greens be constructed above an impermeable barrier layer that has a permeable gas venting layer beneath the barrier layer. Gas beneath the barrier layer will be vented by passive means that may include the installation of gravel perforated piping within the gas vent layer to enhance the collection of

gas. The discharge of gas will be via a passive vent that is a safe distance and height from site users. The barrier layer may consist of an impermeable membrane material commonly used in landfill covers or a very low permeability layer of soil that has sufficient clay content and thickness to minimize gas migration to the turf root zone. The need for these measures and details will be evaluated on a green-by-green basis during the final design phase of the project.

Several pond areas will be constructed on the site. The ponds will have impermeable membrane liner systems to retain the water with minimal leakage. Water from the ponds will be available for irrigation of the site. Because landfill gas may collect beneath the pond liners, a gas venting layer will be placed beneath them. The gas venting layer also serves as a suitable cushion for the pond liner. Passive gas collection and venting of the pond liners will be addressed in the same manner as the greens to ensure safety.

As part of the final design process, details of the landfill gas control systems to be utilized will be submitted to DEP for their approval. DEP will provide comments and any recommendations for improvements of the proposed systems in a timely manner (i.e., with 10 days) so that construction can proceed without delays.

### 4.2.3 Differential Settlement

Continuing settlement of landfill waste material across the site requires additional measures to protect building structures, buried utilities and paved areas. Differential settlement in landfills is difficult to control due to extremely variable waste properties and past waste placement practices. Pile- or drilled-pier-supported structures are typically required at landfill construction sites. The design of the foundation support systems requires a complete geotechnical field investigation and testing program. While the support of the buildings on piles or drilled piers eliminates the building settlement, it creates potential differential settlement problems where utility lines enter the buildings and at walkway entries. Fill around the buildings will continue to settle, while the building is fixed. Special measures must be implemented to allow fill settlement without damaging utility lines and settling walkways at entries.

Drainage problems can also be created around structures due to settlement. Adequate surface grades will be provided to account for settlement and minimize potential ponding of surface runoff. Extra storm drain inlets provided around the building foundations also enhance drainage. Paved driveways and parking areas will be designed with adequate slopes to prevent ponding in areas where differential settlement occurs. In addition, the installation of geogrid or geonetting may be required beneath paved areas to reduce the effects of differential settlement on pavement deterioration. Gas venting of large paved areas is not required, especially if frequent vegetated buffer strips are provided.

Buried utility lines will be designed with materials that can withstand forces imposed on the piping systems due to differential settlement and have sufficient flexure to prevent failure or joint separation. Couplings that are designed to deflect due to settlement will be employed. Flexure couplings at pipe penetrations into buildings, structures, manholes and vaults can accommodate the effects of settling. Piping systems requiring slopes to drain by gravity flow, such as sanitary and storm sewers, will be designed with steeper grades than required to allow for settlement and prevent low spots.

### 4.2.4 Hydrologic Conditions

Existing conditions at the site consist of small paved areas, with most of the site covered by tall grasses. Existing cover materials range in thickness but average approximately 2 feet thick over the site. They typically consist of sands and silts. The existing cover material and topography of the majority of the site do not appear to have been designed to limit infiltration of precipitation or to encourage runoff.

An analysis of the effects of irrigation on infiltration due to the development of the site as a golf course was prepared by JWE Engineering (see Appendix D). That analysis indicates two major factors which will affect the infiltration of water through the golf course: the increase in the impervious surface area and the controlled application of irrigation water.

The site development will result in approximately 26 acres of impervious area, a significant increase over the current conditions. Runoff collection associated with these areas and much of the other golf course areas which will also be connected to drainage systems,

will reduce infiltration related to rainfall events. Rainfall will be collected in detention facilities, and excess rainfall will be discharged from the site via a drainage system.

The proposed irrigation system will utilize sophisticated equipment to monitor water needs and control water application. In addition, the additional shaping materials and final cover materials added to the site will provide additional moisture retention capacity above the waste layer. When the golf course is constructed the final cover/topsoil placed over the golf course will likely increase evapotranspiration by supporting a uniform layer of vegetation and will also be graded to encourage runoff.

Based on the considerations described in the preceding paragraphs, irrigation activities are unlikely to increase infiltration.

**TABLE 1**
**SUMMARY OF TEST PIT OBSERVATIONS**
**FERRY POINT PARK SITE, BRONX, NEW YORK**

| Test Pit Number | Total Depth (ftbg) | Depth to Ground Water (ftbg) | Cover Thickness (ft) | Waste Description | Comments (FID*, other observations) |
|---|---|---|---|---|---|
| **Western Portion** | | | | | |
| TP-1 | 12 | 10 | 2 | Wood, metal, glass, newspaper; black | 0.7% |
| TP-2 | 12 | 10 | 6 | Wood, metal, glass, newspaper, tires; black | 0.03% |
| TP-3 | 11.5 | none | 3.5 | Wood, metal, glass, soil, brick/rock, possible ash; black | 0.009% |
| TP-4 | 12.5 | none | 2.5 | Wood, metal, glass, soil, brick/rock | 0.009% |
| TP-5 | 12.5 | none | 1.5 | Metal, glass, soil, municipal waste, possible ash; black | 0.03% |
| TP-6 | 11 | 11 | 2 | Wood, metal, glass, municipal solid waste; black | 0.01% |
| TP-7 | 12 | none | 3.5 | Wood, glass, plastic, metal, municipal solid waste; black | 0.0025% |
| TP-8 | 12 | none | 1.5 | Wood, metal, glass, municipal solid waste; black | Odor, 0.28% |
| TP-9 | 15 | 11.5 | 2.5 | Wood, metal, municipal solid waste; black | Odor, 0.06% |
| TP-10 | 13 | none | 2 | Wood, metal, glass, municipal solid waste; black | 0.3% |
| TP-11 | 13 | 10 | 2.5 | Wood, metal, glass, municipal solid waste; black | 0.8% |
| TP-12 | 12.5 | none | 1.5 | Wood, metal, mattress springs, municipal solid waste; black | 0.008% |
| TP-13 | 12 | none | 2 | Wood, metal (auto parts), possible ash, municipal solid waste; black/gray | Odor, 0.5% |
| TP-14 | 12 | none | 1.5 | Metal, glass, municipal solid waste, organics; black | Odor, 0.3% |
| TP-15 | 11 | 8 | 8 | Wood, metal, glass, municipal solid waste; black, possibly oily | 0.0015% |
| TP-25 | 11 | 7 | 2 | Wood, metal, glass, plastic | Little or no waste below 7 ft |
| TP-26 | 9 | 7 | 2 | Wood, rubber, glass, soil | |
| TP-27 | 9.5 | 5 | -- | No waste encountered | 0.0005% |
| TP-28 | 11 | 9.5 | 3.5 | Wood, metal, glass, brick, plastic, possible ash | |
| TP-32 | 11 | none | 0 | Brick, soil | |
| TP-33 | 12 | 11 | 2.5 | Wood, metal, brick, soil | |
| TP-36 | 11.5 | 10 | 2 | Metal, glass, possible ash | 0.0015% |
| TP-37 | 11 | 6.5 | 5.5 | Wood, glass, plastic, metal (auto parts); black, possibly oily | Some odor |

**TABLE 1**
**SUMMARY OF TEST PIT OBSERVATIONS**
**FERRY POINT PARK SITE, BRONX, NEW YORK**

| Test Pit Number | Total Depth (ftbg) | Depth to Ground Water (ftbg) | Cover Thickness (ft) | Waste Description | Comments (FID*, other observations) |
|---|---|---|---|---|---|
| TP-38 | 13 | 12 | 5 | Metal, glass, plastic, wood, soil | Some debris in cover; possible native material below 10 ft |
| **Eastern Portion** | | | | | |
| TP-16 | 5 | 3 | -- | No wastes encountered | 0.0004% |
| TP-17 | 10 | none | 5 | Wood, insulation, tires, brick, car battery | Some metal debris in cover, >1% |
| TP-18 | 13 | none | 5 | Tires, metal, glass, newspaper | 0.003% |
| TP-19 | 6 | 5 | 4 | Glass, metal, shoes, wire, cans; black | 0.002% |
| TP-20 | 13.5 | 10.5 | 5 | Glass, wood, metal, soil | 0.0007% |
| TP-21 | 12 | none | 4 | Wood, metal, glass, soil; black-brown | 0.0015% |
| TP-22 | 12 | 11.5 | -- | No significant wastes encountered | Brick debris in cover, 0.008% |
| TP-23 | 13 | none | 5 | Black ash, metal, glass, wire; appears to be burned/incinerated | 0.01% |
| TP-24 | 8 | none | 4 | Metal, auto parts, glass | 0.006% |
| TP-29 | 11 | none | 4 | Glass, wood, tires, metal, soil | |
| TP-30 | 11.5 | none | 5 | Metal, brick, wood, tile, water heater, soil | |
| TP-31 | 10 | none | 3 | Metal, glass, wood, concrete | |
| TP-34 | 12 | none | 5 | Wood, metal, municipal solid waste, soil | |
| TP-35 | 12 | none | 7 | Wood, metal | 0.0008% |

ftbg= feet below grade

* Comments include FID readings; highest reading at each location (filtered or unfiltered) is presented in percent.

TABLE 2
LANDFILL GAS DATA

Ferry Point Park, Bronx, New York

| Survey Point | Approx. Cover Depth (ft)* | Landtec G-90 Landfill Gas Analyzer D: CH4 (%) | CO2 (%) | O2 (%) |
|---|---|---|---|---|
| GP-01 | 3 | 0.0 | 0.0 | 20.3 |
| GP-02 | 3 | 0.0 | 2.3 | 17.7 |
| GP-03 | 4 | 1.9 | 0.5 | 19.2 |
| GP-04 | -- | 0.0 | 0.0 | 21.0 |
| GP-05 | -- | 76.0 | 13 | 0 |
| GP-06 | 5 | 2 | 0 | 20 |
| GP-07 | 4 | 0 | 1 | 20 |
| GP-08 | 3 | 0.0 | 0 | 21 |
| GP-09 | 7 | 6 | 1.0 | 18 |
| GP-10 | -- | 0.0 | 0 | 21 |
| GP-11 | 4 | 0.0 | 0 | 20 |
| GP-12 | 5 | 0.0 | 0 | 20 |
| GP-13 | 4 | 0.0 | 0 | 21 |
| GP-14 | 8 | 0.0 | 0 | 20 |
| GP-15 | 2 | 27 | 9 | 0.0 |
| GP-16 | 2 | 0 | 1 | 21 |
| GP-17 | 6 | 1 | 13 | 5.0 |
| GP-18 | 4 | 0.0 | 0 | 20.0 |
| GP-19 | 2 | 1 | 15 | 3 |
| GP-20 | 3 | 1 | 13 | 5 |
| GP-21 | 2 | 21 | 18 | 1 |
| GP-22 | 8 | 1.0 | 1 | 20 |
| GP-23 | -- | 48 | 23 | 0.0 |
| GP-24 | 3 | 17 | 12 | 9 |
| GP-25 | -- | NR | NR | NR |
| GP-26 | -- | 37 | 19 | 0.0 |
| GP-27 | 2 | 36 | 18 | 1 |
| GP-28 | 2 | 12 | 8 | 12 |
| GP-29 | 2 | 39 | 15 | 0.0 |
| GP-30 | 4 | 33 | 17 | 0.0 |
| GP-31 | -- | 48 | 22.0 | 0.0 |

NR = No Reading
* Soil cover depth based on measurements made at adjacent test pit or soil boring locations. If there was no nearby test pit or soil boring location, no value is provided.

**TABLE 3**
**COMPARISON OF CONTAMINANTS DETECTED IN EXISTING COVER MATERIAL TO RISK-BASED CRITERIA**
**FERRY POINT PARK, BRONX, NEW YORK**

| Parameter | B2-Cover 0' - 2' | B7-2 - Cover 2' - 4' | B8-1-Cover 0' - 2' | B10-1-Cover 0' - 2' | B11-1-Cover 0' - 2' | B11-1 - Dup 0' - 2' | B13-1-Cover 0' - 2' | B14-2-Cove 2' - 4' | Field Blank | Trip Blank | TAGM Health-Based Criteria (ppb) | EPA Region III RBCT (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TCL VOCs (ppb)** | | | | | | | | | | | | |
| Methylene chloride | 500 B | 900 B | 470 B | 480 B | 490 B | 550 B | 360 B | 400 B | 430 B | 480 B | 9,300 | 760,000 |
| Acetone | 1,400 B | 3,800 B | 860 B | 960 B | 1,000 B | 1,100 B | 1,000 B | 1,300 B | 690 B | 720 B | 8,000,000 | 200,000,000 |
| Chloroform | 200 | 200 | 32 J | 39 J | 35 J | 30 J | 130 | 130 | | | 114,000 | 940,000 |
| 2-Butanone | | 140 J | | | | | | 270 | | | 4,000,000 | N/A |
| Benzene | | | | 50 J | | 31 J | | | | | 24,000 | 200,000 |
| Tetrachloroethene | | 650 | | | | | | | | | 14,000 | 110,000 |
| Toluene | 36 J | 46 J | | 92 J | 47 J | 59 J | 63 J | 37 J | | | 20,000,000 | 410,000,000 |
| Chlorobenzene | | | | | | 72 J | | | | | 2,000,000 | 41,000,000 |
| Ethylbenzene | | | | 40 J | 26 J | 43 J | | | | | 8,000,000 | 200,000,000 |
| Xylene (total) | | 24 J | | 290 J | 50 J | 68 J | | 18 J | | | 200,000,000 | 4,100,000,000 |
| **TOTAL VOCs*** | 236 | 1,060 | 32 | 511 | 158 | 303 | 193 | 455 | | | 10,000 | |
| **TCL SVOCs (ppb)** | | | | | | | | | NA | NA | | |
| 2-Methylphenol | | | 110 J | | | | | | | | 50,000 | 100000000 |
| 4-Methylphenol | | | | 68 J | | | | | | | 4,000,000 | 10,000,000 |
| Isophorone | | | | | | | | 140 J | | | 1,707,000 | 6,000,000 |
| Naphthalene | | 74 J | 2,200 J | 780 J | 960 J | 350 J | 340 J | 120 J | | | 300,000 | 41,000,000 |
| 4-Chloro-3-methylphenol | | | | | | | | 15 J | | | 50,000 | N/A |
| 2-Methylnaphthalene | | 29 J | 330 J | 390 J | 140 J | 120 J | 360 J | 85 J | | | 50,000 | N/A |
| 2-Chloronaphthalene | | | | 69 J | | | | | | | 50,000 | N/A |
| Dimethylphthalate | | | | | | | | 110 J | | | 80,000,000 | 20,000,000,000 |
| Acenaphthylene | | | | 2,000 J | | | 44 J | 20 J | | | 50,000 | N/A |
| Acenaphthene | | 6 J | 160 J | 330 J | 92 J | 94 J | 110 J | 110 J | | | 5,000,000 | 120,000,000 |
| 4-Nitrophenol | | | | | | | | 140 J | | | 50,000 | 16,000,000 |
| Dibenzofuran | | | 76 J | 700 J | 42 J | 47 J | 87 J | 100 J | | | 50,000 | 8,200,000 |
| Diethylphthalate | | 29 J | | 150 J | | | | 110 J | | | 60,000,000 | 1,600,000,000 |
| Fluorene | | | 900 J | 1,100 J | | | 230 J | 150 J | | | 3,000,000 | 82,000,000 |
| Pentachlorophenol | | | | 230 J | | | | 35 J | | | 2,000,000 | 48,000 |
| Phenanthrene | 29 J | 38 J | 1,600 J | 4,500 J | 960 J | 970 J | 1,700 | 1,600 | | | 50,000 | N/A |
| Anthracene | 7 J | | 390 J | 1,400 J | 190 J | 230 J | 440 J | 370 J | | | 20,000,000 | 610,000,000 |
| Di-n-butylphthalate | 31 J | 76 J | 130 J | 180 J | | | 41 J | 51 J | | | 8,000,000 | N/A |
| Fluoranthene | 61 J | 63 J | 2,600 J | 9,700 | 1,300 J | 1,700 J | 2,200 | 1,900 | | | 3,000,000 | 82,000,000 |
| Pyrene | 78 J | 99 J | 2,800 J | 9,100 | 1,600 J | 2,100 J | 2,200 | 2,700 | | | 2,000,000 | 61,000,000 |
| Butylbenzylphthalate | | 840 | | | | 190 J | 65 J | 60 J | | | 20,000,000 | 410,000,000 |
| Benzo(a)anthracene | 50 J | 71 J | **1,400** J | **4,600** J | **800** J | **1,000** J | **1,100** | **1,000** | | | 224 | 7,800 |
| Chrysene | 47 J | 65 J | 1,500 J | 4,800 J | 950 J | 1,300 J | 1,100 | 980 | | | 50,000 | 780,000 |
| bis(2-Ethylhexyl)phthal | 37 J | 590 J | 270 J | 490 J | 1,200 J | 1,300 J | 300 J | 160 J | | | 50,000 | 410,000 |
| Di-n-octylphthalate | | | | 130 J | | | | | | | 2,000,000 | N/A |
| Benzo(b)fluoranthene | 46 J | | 1,200 J | 4,800 J | 540 J | 990 J | 820 | 1,000 | | | 50,000 | 7,800 |
| Benzo(k)fluoranthene | 25 J | 39 J | 1,400 J | 5,100 J | 660 J | 1,200 J | 740 | 850 | | | 50,000 | 78,000 |
| Benzo(a)pyrene | | | **1,300** J | **4,900** J | **760** J | **1,100** J | **890** | **920** | | | 61 | 780 |
| Indeno(1,2,3-cd)pyrene | | | | 3,200 J | | | 680 J | 1,100 | | | 50,000 | 7,800 |
| Dibenz(a,h)anthracene | | | | **820** J | | | **260** J | | | | 14 | 780 |
| Benzo(g,h,i)perylene | | | | 3,000 J | | | 630 J | 1,200 | | | 50,000 | N/A |
| **TOTAL SVOCs** | 411 | 2019 | 18,366 | 62,537 | 10,194 | 12,691 | 14,337 | 15,026 | | | 500,000 | |

B = Detected in blank sample
J = Estimated
**BOLD** = criterion exceeded
NA = Not Analyzed
N/A = Not Available
ND = Not Detected

Only TAGM health-based criteria are listed. Where health-based criteria for individual SVOCs are not available under TAGM, the 50 ppm TAGM limit for individual SVOCs is used.

* Due to the presence of methylene chloride and acetone in the blank samples, the reported concentrations of these compounds in the soil cover samples are considered to be attributable to laboratory contamination and are not included in the Total VOC values

**TABLE 3 (Continued)**
**COMPARISON OF CONTAMINANTS DETECTED IN EXISTING COVER MATERIAL TO RISK-BASED CRITERIA**
**FERRY POINT PARK, BRONX, NEW YORK**

| Parameter | B2-Cover 0' - 2' | B7-2 - Cover 2' - 4' | B8-1-Cover 0' - 2' | B10-1-Cover 0' - 2' | B11-1-Cover 0' - 2' | B11-1 - Dup 0' - 2' | B13-1-Cover 0' - 2' | B14-2-Cover 2' - 4' | Field Blank | Trip Blank | TAGM Health-Based Criteria (ppb) | EPA Region III RBCT (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TCL Pesticides/PCBs** | ALL ND | | ALL ND | ALL ND | | ALL ND | ALL ND | | NA | NA | | |
| 4,4'-DDE | | 32 J | | | | | | | | | 2,100 | 17,000 |
| 4,4'-DDD | | 26 J | | | | | | | | | 2,900 | 24,000 |
| 4,4'-DDT | | 22 J | | | | | | | | | 2,100 | 17,000 |
| alpha-Chlordane | | | | | | | | 15 J | | | 540 | 16,000 |
| gamma-Chlordane | | | | | | | | 15 J | | | 540 | 16,000 |
| **TOTAL PESTICIDES** | | 80 | | | | | | 30 | | | 10,000 | |
| PCB Aroclor-1248 | | | | | 720 | | | | | | | 2,900 |
| **TOTAL PCBs** | | | | | 720 | | | | | | 1,000 | |
| **TAL Metals (ppm)** | | | | | | | | | NA | NA | | (ppm) |
| Aluminum | 10,600 | 11,700 | 8,840 | 1,870 | 6,290 | 4,960 | 8,270 | 7,980 | | | | 2,000,000 |
| Arsenic | 2 | 9 | 1 | | | | 3 | 2 | | | | 4 |
| Barium | 99 | 901 | 175 | 16 | 319 | 235 | 90 | 108 | | | | 140,000 |
| Cadmium | | 17 | 1 | | | 1 | | | | | | 2,000** |
| Calcium | 1,270 | 29,200 | 37,000 | 79,400 | 32,100 | 36,200 | 5,500 | 6,660 | | | | N/A |
| Chromium | 44 | 77 | 22 | 6 | 20 | 15 | 20 | 19 | | | | 6,100*** |
| Cobalt | 12 | 14 | 9 | 2 | 8 | 6 | 6 | 7 | | | | 150,000 |
| Copper | 34 | 1,340 | 189 | 17 | 100 | 49 | 29 | 38 | | | | 82,000 |
| Iron | 16,800 | 176,000 | 21,500 | 6,140 | 24,400 | 27,000 | 14,300 | 15,600 | | | | 610,000 |
| Lead | 14 | 927 | 227 | 32 | 252 | 143 | 64 | 147 | | | | 1,000 |
| Magnesium | 4,600 | 2,280 | 23,600 | 41,100 | 13,800 | 15,130 | 2,830 | 3,430 | | | | N/A |
| Manganese | 346 | 1,250 | 266 | 113 | 286 | 258 | 265 | 316 | | | | 290,000** |
| Nickel | 70 | 126 | 31 | 3 | 23 | 19 | 22 | 22 | | | | 41,000 |
| Potassium | 2,490 | 1,270 | 1,120 | 677 | 1,660 | 1,350 | 996 | 881 | | | | N/A |
| Selenium | 5 | 52 | | | | | 3 | 3 | | | | 10,000 |
| Silver | | 2 | | | | | | | | | | 10,000 |
| Sodium | | 2,570 | 800 | 714 | 591 | 683 | 229 | 185 | | | | N/A |
| Vanadium | 34 | 91 | 25 | 18 | 27 | 27 | 22 | 29 | | | | 14,000 |
| Zinc | 58 | 2,370 | 921 | 28 | 193 | 226 | 107 | 135 | | | | 610,000 |
| Mercury | 0 | | 0 | | 0 | | 0 | | | | | 610 |
| Cyanide, Total | | 7 | | | | | | | | | | 41,000 |

B = Detected in blank sample
J = Estimated
**BOLD** = criterion exceeded
NA = Not Analyzed
N/A = Not Available
ND = Not Detected
Only TAGM health-based criteria are listed.
In the absence of EPA Region III RBCT values for lead, mercury and zinc, Connecticut risk-based Remediation Standard Regulation values based on industrial/commercial direct contact exposures are used.

TABLE 4
COMPARISON OF CONTAMINANTS DETECTED IN WASTE MATERIALS TO RISK-BASED CRITERIA
FERRY POINT PARK, BRONX, NEW YORK

| Parameter | B1-3 4' - 6' | B2-2 4' - 6' | B3-6 8' - 10' | B4-6 10' - 12' | B5-6 10' - 12' | B6-9 16' - 18' | B7-6 10' - 12' | B8-7 12' - 14' | B9-6 10' - 12' | TAGM Health-Based Criteria (ppb) | EPA Region III RBCT (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **TCL VOCs (ppb)** | | | | | | | | | | | |
| Vinyl chloride | | | | | | | | | 74 J | N/A | 3,000 |
| Methylene chloride | 720 B | 2,100 B | 920 B | 850 B | 470 B | 600 B | 1,000 B | 750 B | 560 B | 9,300 | 760,000 |
| Acetone | 3,100 B | 7,900 B | 3,500 B | 3,600 B | 1,600 B | 1,800 B | 4,200 B | 1,800 B | 1,600 B | 8,000,000 | 200,000,000 |
| 1,2-Dichloroethylene (total) | | | 370 | 75 J | | | | | | 2,000,000 | 18,000,000 |
| Chloroform | 110 | 270 | 130 | 150 | 170 | 120 | 190 | 41 J | 120 | 114,000 | 940,000 |
| 2-Butanone | | | 190 J | 780 | 350 | 130 J | 180 J | | 370 | 4,000,000 | N/A |
| Trichloroethylene | | | 230 | 49 J | | | | 44 J | | 64,000 | 520,000 |
| Benzene | 36 J | 96 J | 70 J | 300 | | 110 | 77 J | 76 J | 67 J | 24,000 | 200,000 |
| Tetrachloroethene | | | 640 | | | 60 J | | 66 J | 29 J | 14,000 | 110,000 |
| Toluene | 41 J | 140 | 170 | 1,200 | 970 | 130 | 150 | 200 | 140 | 20,000,000 | 410,000,000 |
| Chlorobenzene | | 300 | 300 | 460 | | | 410 | 800 | | 2,000,000 | 41,000,000 |
| Ethylbenzene | | | 55 J | 180 | 1,400 | 110 | 58 J | 220 | 42 J | 8,000,000 | 200,000,000 |
| Styrene | | | | | 250 | | | | | N/A | 410,000,000 |
| Xylene (total) | | 83 J | 210 | 650 | 2,900 | 200 | 190 | 330 | 130 | 200,000,000 | 4,100,000,000 |
| **TOTAL VOCS*** | 187 | 889 | 2,365 | 3,844 | 6,040 | 860 | 1,255 | 1,777 | 972 | 10,000 | |
| **TCL SVOCs (ppb)** | | NA | | | | | | | | | |
| 2-Chlorophenol | | | 20 J | | | | | | | 400,000 | 10,000,000 |
| 1,4-Dichlorobenzen | 160 J | | | | | | | | | N/A | 240,000 |
| 1,2-Dichlorobenzene | | | | | | 50 J | | | | N/A | 180,000,000 |
| 4-Methylphenol | 14 J | | 30 J | 82 J | | | 20 J | 290 J | 22 J | 4,000,000 | 10,000,000 |
| 2,4-Dimethylphenol | 11 J | | | | | | | | | N/A | 41,000,000 |
| Naphthalene | 700 J | | 210 J | 430 J | 250,000 | 230 J | 210 J | 1,300 J | 180 J | 300,000 | 41,000,000 |
| 4-Chloro-3-methylphenol | | | 24 J | 9 J | | | | | | 50,000 | N/A |
| 2-Methylnaphthaler | 140 J | | 140 J | 140 J | 250,000 | 120 J | 92 J | 580 J | 120 J | 50,000 | N/A |
| Acenaphthylene | | | 10 J | 31 J | 11,000 J | 20 J | 16 J | | 21 J | 50,000 | N/A |
| Acenaphthene | 68 J | | 160 J | 140 J | 63,000 J | 94 J | 150 J | 440 J | 120 J | 5,000,000 | 120,000,000 |
| Dibenzofuran | 47 J | | 97 J | 110 J | 60,000 J | 47 J | 60 J | 290 J | 83 J | 50,000 | 8,200,000 |
| Diethylphthalate | 27 J | | 26 J | 11 J | | 42 J | | 370 J | 28 J | 60,000,000 | 1,600,000,000 |
| Fluorene | 63 J | | 200 J | 230 J | 160,000 | 70 J | | 760 J | 190 J | 3,000,000 | 82,000,000 |
| N-nitrosodiphenylamine | | | | | | | | 300 J | | N/A | 1,200,000 |
| Pentachlorophenol | | | 42 J | | | | | | | 2,000,000 | 48,000 |
| Phenanthrene | 170 J | | 1,100 | 1,300 | 550,000 | 450 J | 960 J | 4,000 J | 1,400 | 50,000 | N/A |
| Anthracene | 30 J | | 260 J | 230 J | 120,000 | 110 J | 280 J | 910 J | 300 J | 20,000,000 | 610,000,000 |
| Di-n-butylphthalate | 66 J | | 130 J | 46 J | | 130 J | 66 J | 1,100 J | 120 J | 8,000,000 | N//A |
| Fluoranthene | 360 J | | 1,300 | 1,300 | 220,000 | 520 J | 1,400 | 4,400 J | 2,000 | 3,000,000 | 82,000,000 |
| Pyrene | 170 J | | 1,200 | 1,500 | 620,000 | 760 J | 1,900 | 4,500 J | 3,000 | 2,000,000 | 61,000,000 |
| Butylbenzylphthalat | 18 J | | 130 J | | | | | 1,400 J | | 20,000,000 | 410,000,000 |
| Benzo(a)anthracen | 70 J | | 570 J | 690 J | 130,000 | 260 J | 630 J | 2,000 J | 1,200 | 224 | 7,800 |
| Chrysene | 88 J | | 620 J | 790 J | 120,000 | 270 J | 580 J | 2,000 J | 1,300 | 50,000 | 780,000 |
| bis(2-Ethylhexyl)ph | 200 J | | 20,000 | 1,900 | | 310 J | 12,000 | 24,000 | 440 J | 50,000 | 410,000 |
| Di-n-octylphthalate | | | 48 J | 18 J | | | | 660 J | | 2,000,000 | N/A |
| Benzo(b)fluoranthe | 53 J | | 420 J | 530 J | 68,000 J | 240 J | 470 J | 1,500 J | 1,100 | 50,000 | 7,800 |
| Benzo(k)fluoranthe | 50 J | | 400 J | 520 J | 69,000 J | 180 J | 490 J | 1,500 J | 1,100 | 50,000 | 78,000 |
| Benzo(a)pyrene | 55 J | | 450 J | 590 J | 92,000 J | 260 J | 340 J | 1,200 J | 1,000 | 61 | 780 |
| Indeno(1,2,3-cd)pyrene | | | 360 J | 410 J | | | | | 1,000 | 50,000 | 7,800 |
| Benzo(g,h,i)perylene | | | | 380 J | | | | | | 50,000 | N/A |
| **TOTAL SVOCs** | 2,560 | | 27,947 | 11,387 | 2,783,000 | 4,163 | 19,664 | 53,500 | 14,724 | 500,000 | |
| **TCL Pesticides/PCBs (ppb)** | | NA | ALL ND | | | | | | | | |
| 4,4'-DDE | | | | 20 J | | | 11 J | 88 | | 2,100 | 17000 |
| 4,4'-DDD | | | | 37 J | | | 67 | 360 | | 2,900 | 24,000 |
| 4,4'-DDT | | | | 35 J | | | 17 J | 53 | | 2,100 | 17,000 |
| **TOTAL PESTICIDES** | | | | 92 | | | 95 | 501 | | 10,000 | |
| PCB Aroclor-1242 | 870 | | | | | | | | | | 2,900 |
| PCB Aroclor-1260 | | | | | | 18,000 | | | | | 2,900 |
| **TOTAL PCBs** | | | | | | | | | | 10,000 | |
| **TAL Metals (ppm)** | | NA | | | | | | | | | (ppm) |
| Aluminum | 6,390 | | 10,600 | 6,590 | 6,670 | 7,740 | 8,210 | 7,580 | 7,470 | | 2,000,000 |
| Arsenic | | | 6 | 16 | 8 | | | | 3 | | 4 |
| Barium | 173 | | 334 | 261 | 768 | 1,020 | 105 | 854 | 135 | | 140,000 |
| Cadmium | 2 | | 2 | 3 | | 9 | | 4 | 1 | | 2,000** |
| Calcium | 5,440 | | 36,000 | 22,700 | 13,800 | 37,200 | 4,110 | 45,800 | 18,700 | | N/A |
| Chromium | 72 | | 38 | 24 | 16 | 68 | 30 | 82 | 25 | | 6,100*** |
| Cobalt | 9 | | 10 | 6 | 6 | 19 | 9 | 11 | 8 | | 150,000 |
| Copper | 2,620 | | 205 | 68 | 89 | 970 | 41 | 266 | 90 | | 82,000 |
| Iron | 29,600 | | 43,500 | 17,200 | 16,500 | 216,000 | 26,800 | 79,700 | 28,800 | | 610,000 |
| Lead | 448 | | 673 | 289 | 287 | 1,200 | 85 | 1,030 | 461 | | 1,000 |
| Magnesium | 3,010 | | 21,600 | 3,200 | 2,940 | 2,850 | 3,360 | 5,900 | 3,290 | | N/A |
| Manganese | 597 | | 434 | 169 | 151 | 1,200 | 418 | 655 | 314 | | 290,000** |
| Nickel | 49 | | 52 | 24 | 23 | 156 | 32 | 109 | 32 | | 41,000 |
| Potassium | 1,440 | | 3,160 | 2,110 | 1,060 | 1,020 | 1,750 | 830 | 1,080 | | N/A |
| Selenium | 5 | | 2 | 13 | 4 | 37 | 7 | | 2 | | 10,000 |
| Silver | | | | | | 19 | | 13 | | | 10,000 |
| Sodium | 611 | | 607 | 947 | 537 | 2,590 | 333 | 1,800 | 484 | | N/A |
| Vanadium | 33 | | 41 | 20 | 23 | 78 | 30 | 55.2 | 40 | | 14,000 |
| Zinc | 568 | | 462 | 375 | 189 | 1,880 | 98 | 1,350 | 367 | | 610,000 |
| Mercury | | | 1 | 0 | | 1 | 1 | 1 | 0 | | 610 |
| Cyanide, Total | | | | | | 3 | | | | | 41,000 |

B = Detected in blank sample
J = Estimated
BOLD = exceeds screening leve
NA = Not Analyzed
ND = Not Detected
N/A = Not Available

* Due to the presence of methylene chloride and acetone in the blank samples, the reported concentrations of these compounds in the soil cover samples are considered to be attributable to laboratory contamination and are not included in the Total VOC values.

Only TAGM health-based criteria are listed. Where health-based criteria for individual SVOCs are not available under TAGM, the 50 ppm TAGM limit for individual SVOCs is used. In the absence of EPA Region III RBCT values for lead, mercury and zinc, Connecticut risk-based Remediation Standard Regulation values based on industrial/commercial direct contact exposures are used.

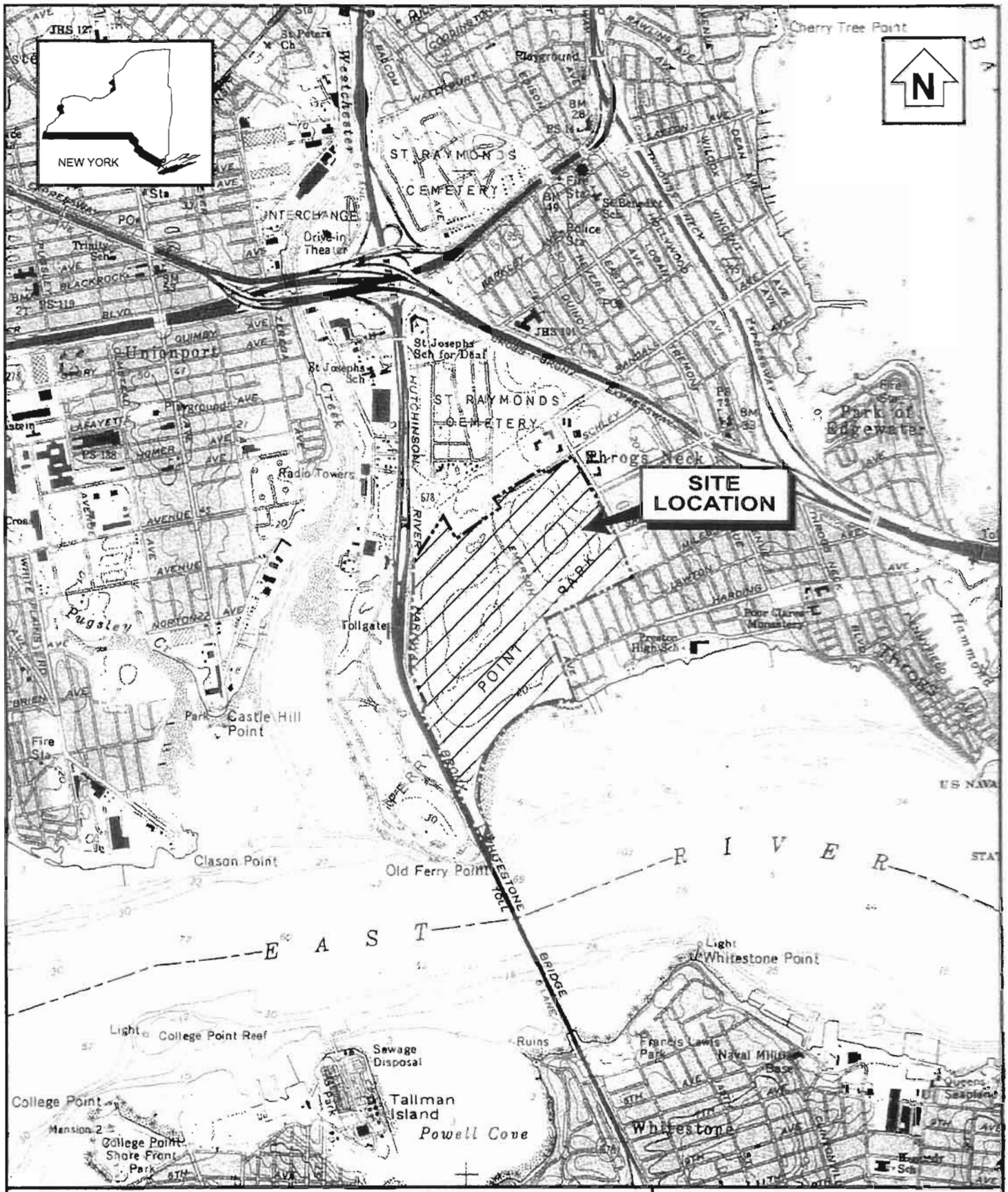
TABLE 4 (Continued)
COMPARISON OF CONTAMINANTS DETECTED IN WASTE MATERIALS TO RISK-BASED CRITERIA
FERRY POINT PARK, BRONX, NEW YORK

| | B10-3 4' - 6' | B11-6 10' - 12' | B12-4 6' - 8' | B12-10+11 18' - 22' | B13-10 20' - 22' | B14-8 12' - 14' | B15-7 12' - 14' | Field Blank | Trip Blank | TAGM RSCO (ppb) | EPA Region III RBCT (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **TCL VOCs (ppb)** | | | | NA | | | | | | | |
| Vinyl chloride | | | | | | | | | | N/A | 3,000 |
| Methylene chloride | 450 B | 560 B | 400 B | | 600 B | 950 B | 500 B | 430 B | 480 B | 9,300 | 760,000 |
| Acetone | 930 B | 1,400 B | 960 B | | 1,800 B | 3,400 B | 2,100 B | 690 B | 720 B | 8,000,000 | 200,000,000 |
| 1,2-Dichloroethylene (total) | | | | | | | | | | 2,000,000 | 18,000,000 |
| Chloroform | 32 J | 31 J | 29 J | | 150 | 350 | 170 | | | 114,000 | 940,000 |
| 2-Butanone | | | | | 320 | 140 J | 1,000 | | | 4,000,000 | N/A |
| Trichloroethylene | | | | | | | | | | 64,000 | 520,000 |
| Benzene | 29 J | 31 J | | | 45 J | 70 J | | | | 24,000 | 200,000 |
| Tetrachloroethene | | | | | | | | | | 14,000 | 110,000 |
| Toluene | 69 J | 86 J | 33 J | | 99 J | 130 | 140 | | | 20,000,000 | 410,000,000 |
| Chlorobenzene | | 130 | | | 40 J | 500 | | | | 2,000,000 | 41,000,000 |
| Ethylbenzene | 27 J | | | | 71 J | | | | | 8,000,000 | 200,000,000 |
| Styrene | 25 J | | | | | | | | | N/A | 410,000,000 |
| Xylene (total) | 85 J | 48 J | 26 J | | 290 | 200 | 250 | | | 200,000,000 | 4,100,000,000 |
| **TOTAL VOCS** | 267 | 326 | 88 | | 1,015 | 1,390 | 1,560 | | | 10,000 | |
| **TCL SVOCs (ppb)** | | | NA | | | | | NA | NA | | |
| 4-Methylphenol | | 280 J | | | 16 J | 46 J | 100 J | | | 4,000,000 | 10,000,000 |
| Naphthalene | 270 J | 2,200 | | 6,400 J | 170 J | 290 J | 1,400 | | | 300,000 | 41,000,000 |
| 2-Methylnaphthaler | 88 J | 330 J | | 1,400 J | 110 J | 120 J | 230 J | | | 50,000 | N/A |
| Acenaphthylene | 870 J | | | | 17 J | 14 J | 22 J | | | 50,000 | N/A |
| Acenaphthene | 120 J | 750 J | | 100 J | 92 J | 36 J | 50 J | | | 5,000,000 | 120,000,000 |
| Dibenzofuran | 160 J | 340 J | | 51 J | 75 J | 30 J | 31 J | | | 50,000 | 8,200,000 |
| Diethylphthalate | | | | | 28 J | 32 J | | | | 60,000,000 | 1,600,000,000 |
| Fluorene | 300 J | 900 J | | | 170 J | 54 J | 69 J | | | 3,000,000 | 82,000,000 |
| Phenanthrene | 1,500 J | 5,100 J | | 480 J | 770 J | 300 J | 270 J | | | 50,000 | N/A |
| Anthracene | 490 J | 1,300 J | | 95 J | 130 J | 48 J | | | | 20,000,000 | 610,000,000 |
| Di-n-butylphthalate | 150 J | | | 220 J | 350 J | 130 J | 89 J | | | 8,000,000 | N/A |
| Fluoranthene | 4,200 J | 5,400 J | | 480 J | 560 J | 330 J | 250 J | | | 3,000,000 | 82,000,000 |
| Pyrene | 4,700 J | 5,600 J | | 510 J | 620 J | 430 J | 450 J | | | 2,000,000 | 61,000,000 |
| Butylbenzylphthalate | | 190 J | | | | | | | | 20,000,000 | 410,000,000 |
| Benzo(a)anthracen | **2,200** J | **2,500** J | | 200 J | **290** J | 170 J | 200 J | | | 224 | 7,800 |
| Chrysene | 2,300 J | 2,700 J | | 230 J | 360 J | 230 J | 260 J | | | 50,000 | 780,000 |
| bis(2-Ethylhexyl)ph | 580 J | 1,300 J | | 2,000 J | 660 J | 550 J | 13,000 | | | 50,000 | 410,000 |
| Di-n-octylphthalate | | | | | 32 J | | | | | 2,000,000 | N/A |
| Benzo(b)fluoranthe | 2,700 | 2,000 J | | | 330 J | 150 J | 220 J | | | 50,000 | 7,800 |
| Benzo(k)fluoranthe | 2,200 J | 2,400 J | | | 210 J | 150 J | 150 J | | | 50,000 | 78,000 |
| Benzo(a)pyrene | **2,700** J | **1,600** J | | | **190** J | **170** J | **180** J | | | 61 | 780 |
| Indeno(1,2,3-cd)pyr | 1,500 J | | | | | | | | | 50,000 | 7,800 |
| **TOTAL SVOCs** | 27,028 | 34,890 | | 12,166 | 5,180 | 3,280 | 16,971 | | | 500,000 | |
| **TCL Pesticides/PCBs (ppb)** | | | NA | | | | | NA | NA | | |
| 4,4'-DDE | 11 J | 23 J | | | | | 15 J | | | 2,100 | 17000 |
| 4,4'-DDD | 26 J | 41 | | | | | 22 J | | | 2,900 | 24,000 |
| 4,4'-DDT | 7 J | 13 J | | | | | 2 J | | | 2,100 | 17,000 |
| **TOTAL PESTICIDE** | 44 | 77 | | | | | 39 | | | 10,000 | |
| **TOTAL PCBs** | | | | | | | | | | 10,000 | |
| **TAL Metals (ppm)** | | | NA | | | | | NA | NA | | (ppm) |
| Aluminum | 4,220 | 7,590 | | 3,940 | 3,490 | 5,820 | 6,810 | | | | 2,000,000 |
| Arsenic | | 3 | | **10** | **13** | | **36** | | | | 4 |
| Barium | 28 | 797 | | 506 | 219 | 23 | 511 | | | | 140,000 |
| Cadmium | | 2 | | 2 | 2 | | 2 | | | | 2,000** |
| Calcium | 44,500 | 10,500 | | 13,400 | 18,300 | 2,610 | 12,700 | | | | N/A |
| Chromium | 15 | 39 | | 29 | 39 | 18 | 33 | | | | 6,100*** |
| Cobalt | 5 | 8 | | 6 | 11 | 5 | 10 | | | | 150,000 |
| Copper | 45 | 138 | | 69 | 212 | 24 | 244 | | | | 82,000 |
| Iron | 26,100 | 25,100 | | 52,800 | 71,800 | 32,400 | 73,800 | | | | 610,000 |
| Lead | 46 | **1,160** | | 52 | 233 | 15 | 459 | | | | 1,000 |
| Magnesium | 21,300 | 3,870 | | 2,410 | 1,780 | 4,270 | 1,880 | | | | N/A |
| Manganese | 228 | 250 | | 361 | 408 | 175 | 625 | | | | 290,000** |
| Nickel | 16 | 37 | | 34 | 57 | 27 | 55 | | | | 41,000 |
| Potassium | 654 | 1,300 | | 606 | 602 | 1,970 | 917 | | | | N/A |
| Selenium | | | | | | 8 | 26 | | | | 10,000 |
| Silver | | | | | | | | | | | 10,000 |
| Sodium | 811 | 711 | | 1,260 | 798 | 7,240 | 1,160 | | | | N/A |
| Vanadium | 34 | 40 | | 21 | 30 | 33 | 88 | | | | 14,000 |
| Zinc | 76 | 546 | | 593 | 346 | 73 | 663 | | | | 610,000 |
| Mercury | | 0 | | 0 | 0 | 1 | 1 | | | | 610 |
| Cyanide, Total | | | | | | | | | | | 41,000 |

B = Detected in blank sample NA = Not Analyzed
J = Estimated ND = Not Detected
BOLD = exceeds screening leve N/A = Not Available

* Due to the presence of methylene chloride and acetone in the blank samples, the reported concentrations of these compounds in the soil cover samples are considered to be attributable to laboratory contamination and are not included in the Total VOC values.

Only TAGM health-based criteria are listed. Where health-based criteria for individual SVOCs are not available under TAGM, the 50 ppm TAGM limit for individual SVOCs is used. In the absence of EPA Region III RBCT values for lead, mercury and zinc, Connecticut risk-based Remediation Standard Regulation values based on industrial/commercial direct contact exposures are used.




0 2000
SCALE FEET

0 1
SCALE MILE

1:24000

BASE CREATED WITH TOPO™ © 1996 WILDFLOWERS PRODUCTIONS, www.topo.com
FLUSHING, NY 7.5' USGS TOPOGRAPHIC MAP

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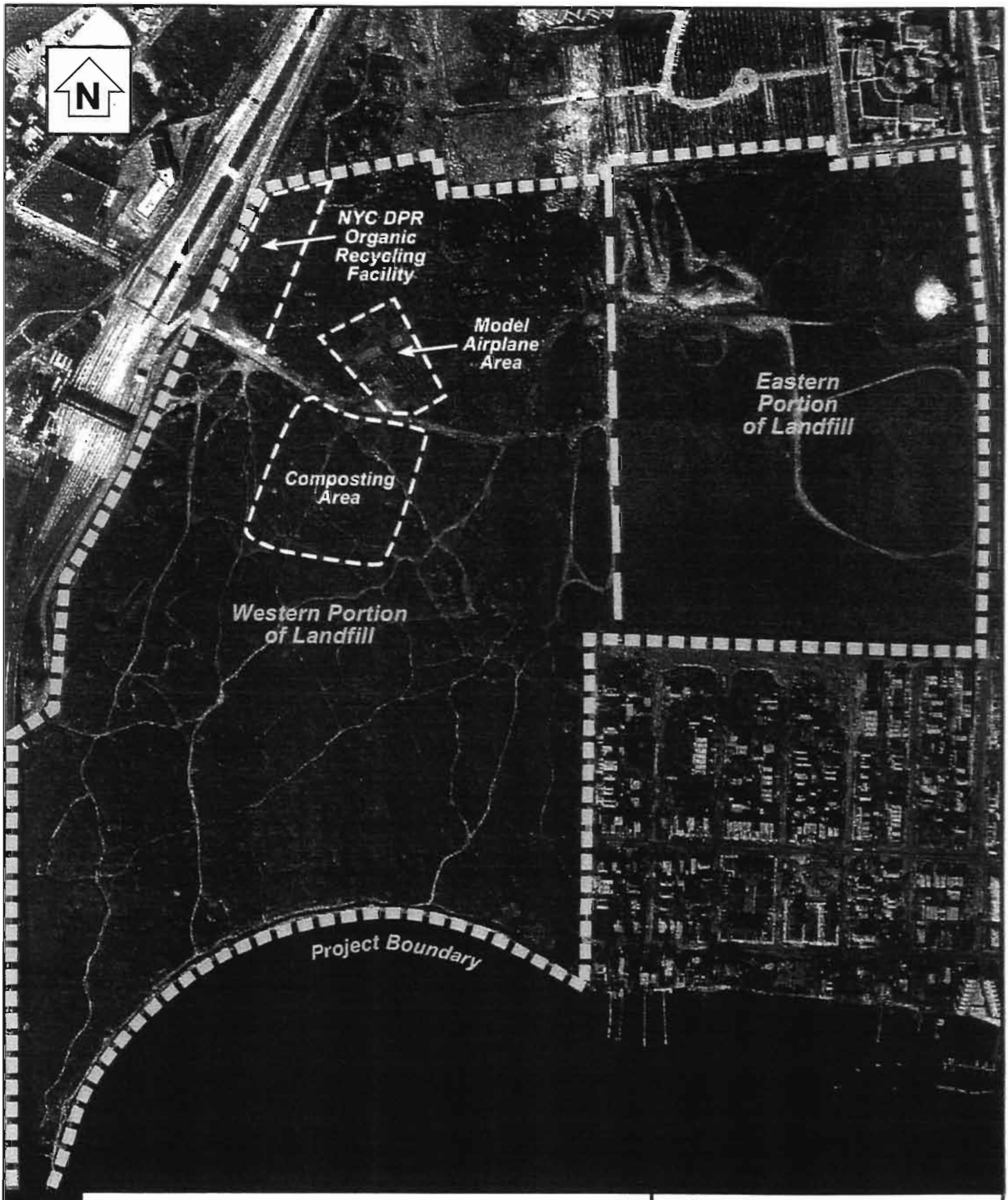
(860) 289-8631

FERRY POINT PARK
BRONX, NEW YORK

**FIGURE 1.**
**SITE LOCATION MAP**

**Date:** 7/99 | **Project No.** 25800




KEY

0 1000
APPROXIMATE SCALE FEET

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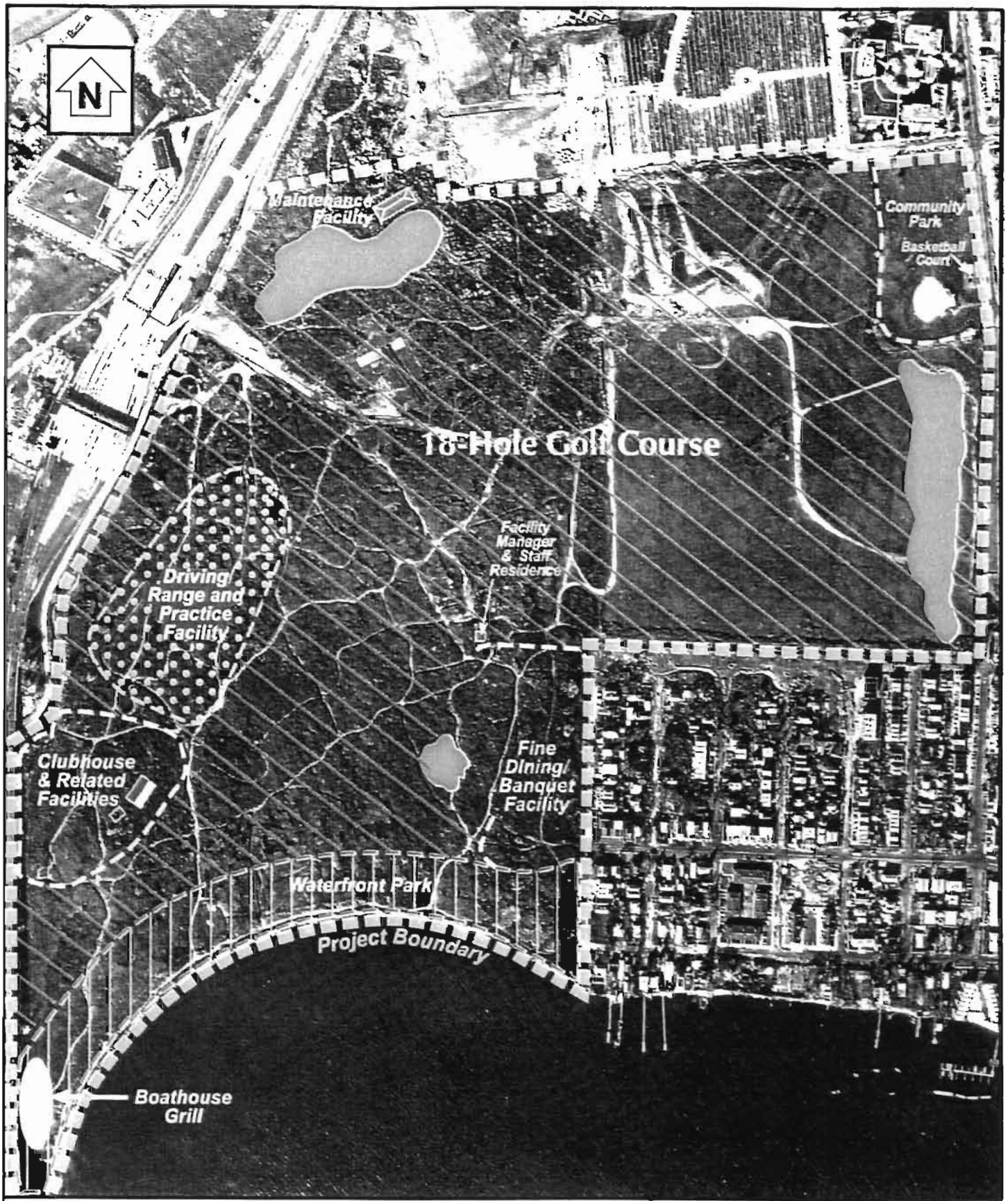
FERRY POINT PARK
BRONX, NEW YORK

**FIGURE 2.**
**EXISTING CONDITIONS MAP**
**1991 BASE PHOTOGRAPH**

**Date:** 7/99 **Project No.** 25800




0 1000
APPROXIMATE SCALE FEET

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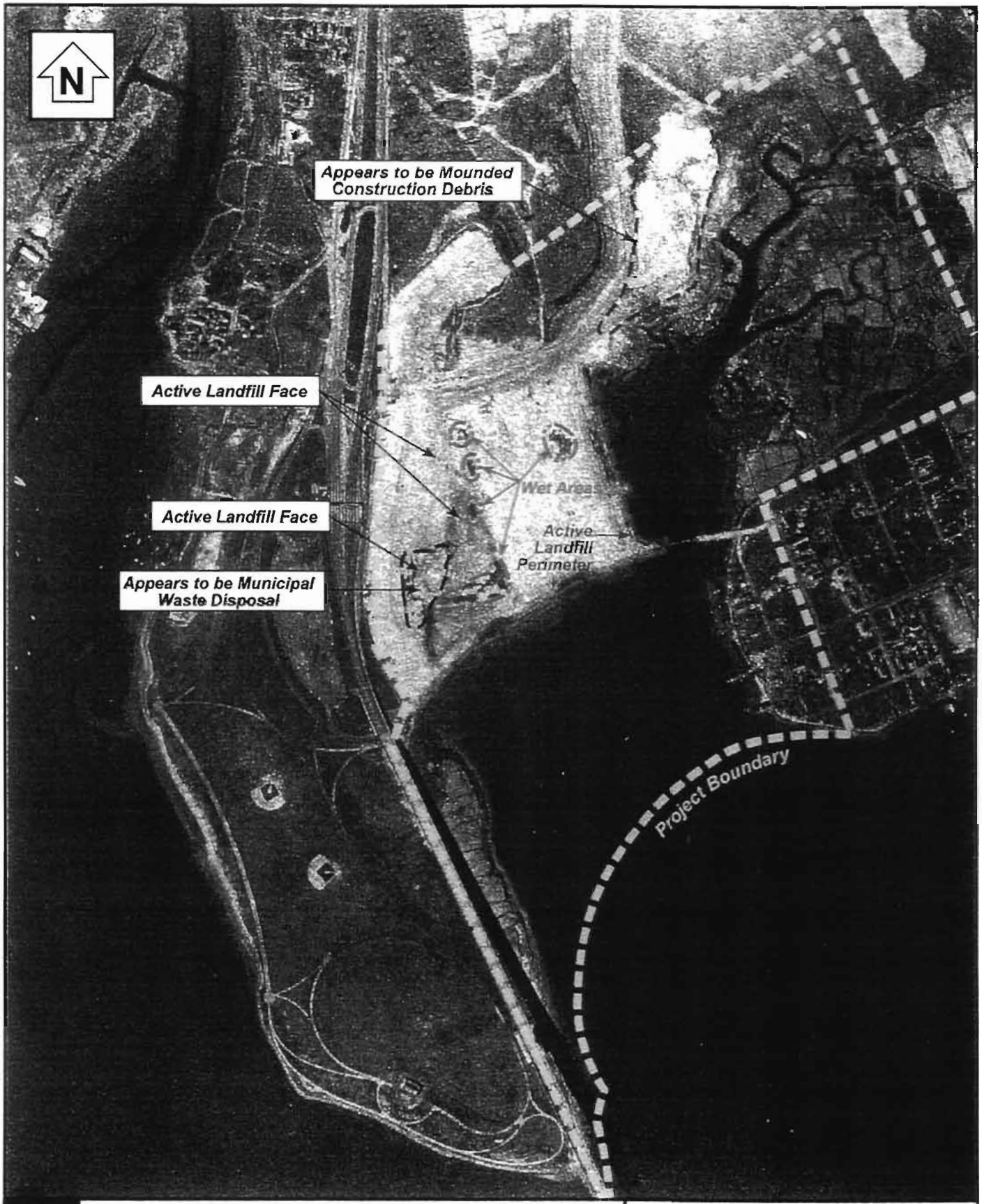
**FERRY POINT PARK**
BRONX, NEW YORK

**FIGURE 3.**
**PROPOSED GOLF COURSE FACILITIES**

Date: 9/99 | Project No. 25800

PROPFEAT.FH8




KEY

0 1000
APPROXIMATE SCALE FT

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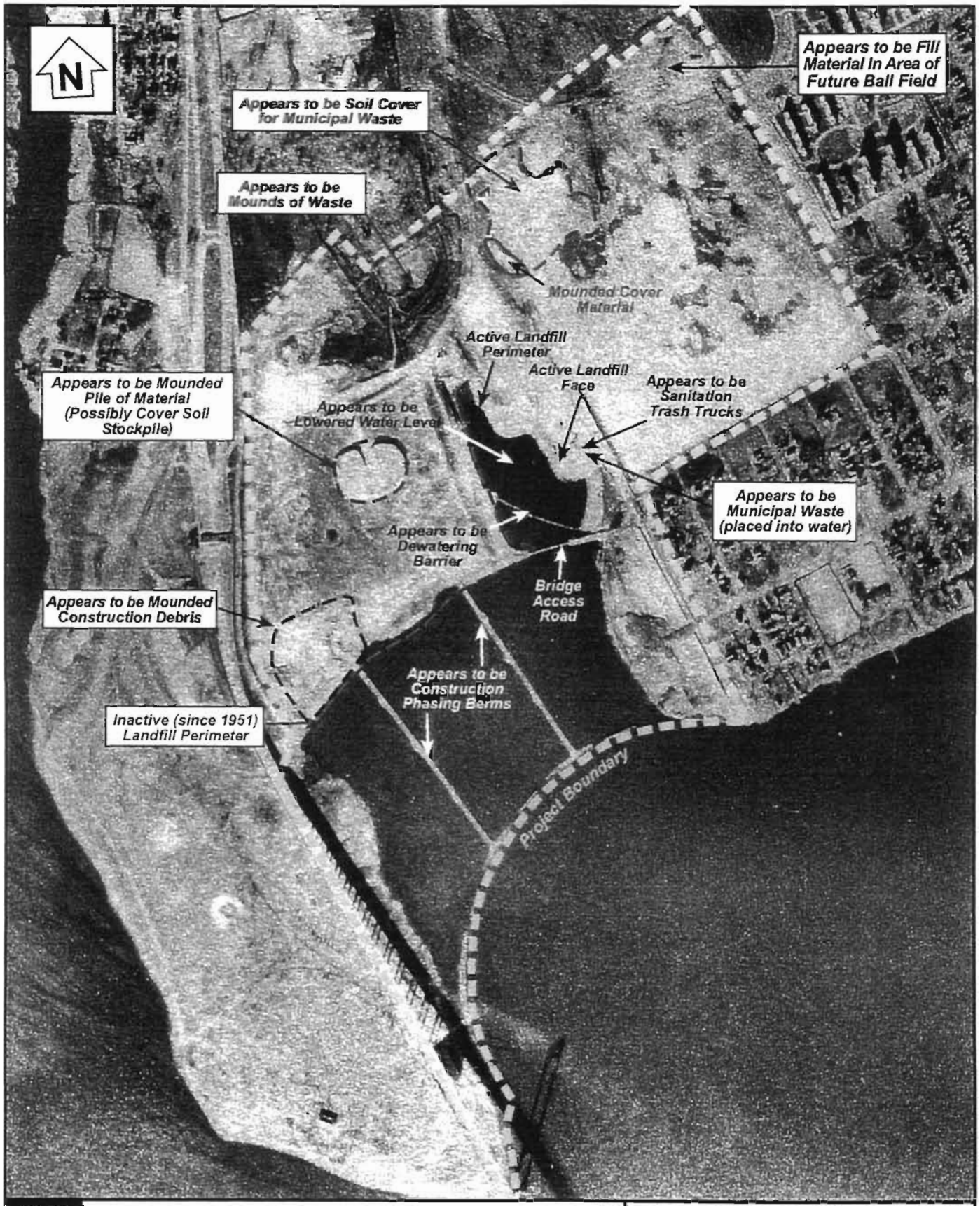
FERRY POINT LANDFILL
BRONX, NEW YORK

**FIGURE 4.**
**1951 AERIAL PHOTOGRAPH**

Date: 7/99 | Project No. 25800




**KEY**

0 1000
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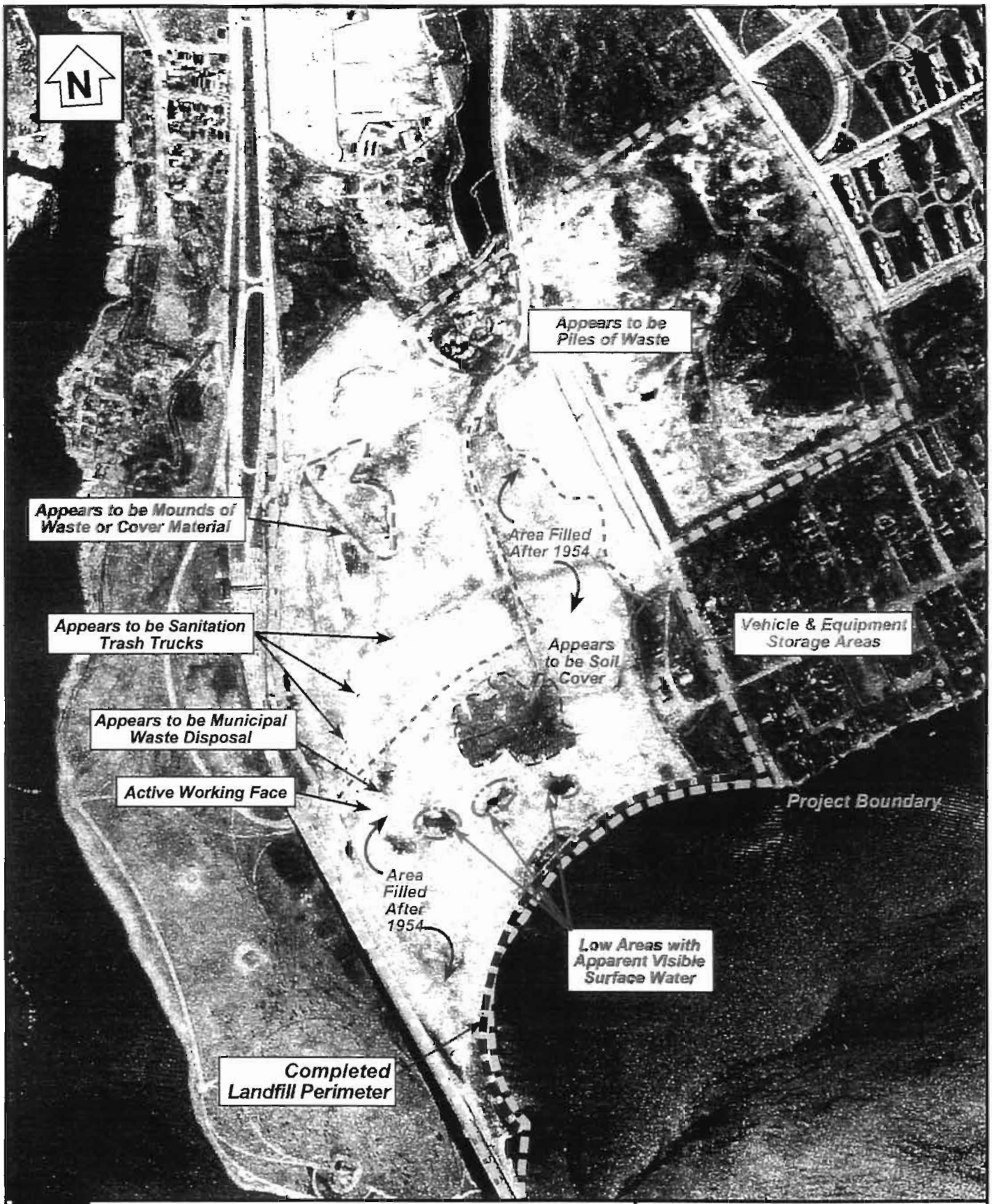
FERRY POINT LANDFILL
BRONX, NEW YORK

**FIGURE 5.**
**1954 AERIAL PHOTOGRAPH**

Date: 7/99 | Project No. 25800




KEY

0 1000
APPROXIMATE SCALE FT

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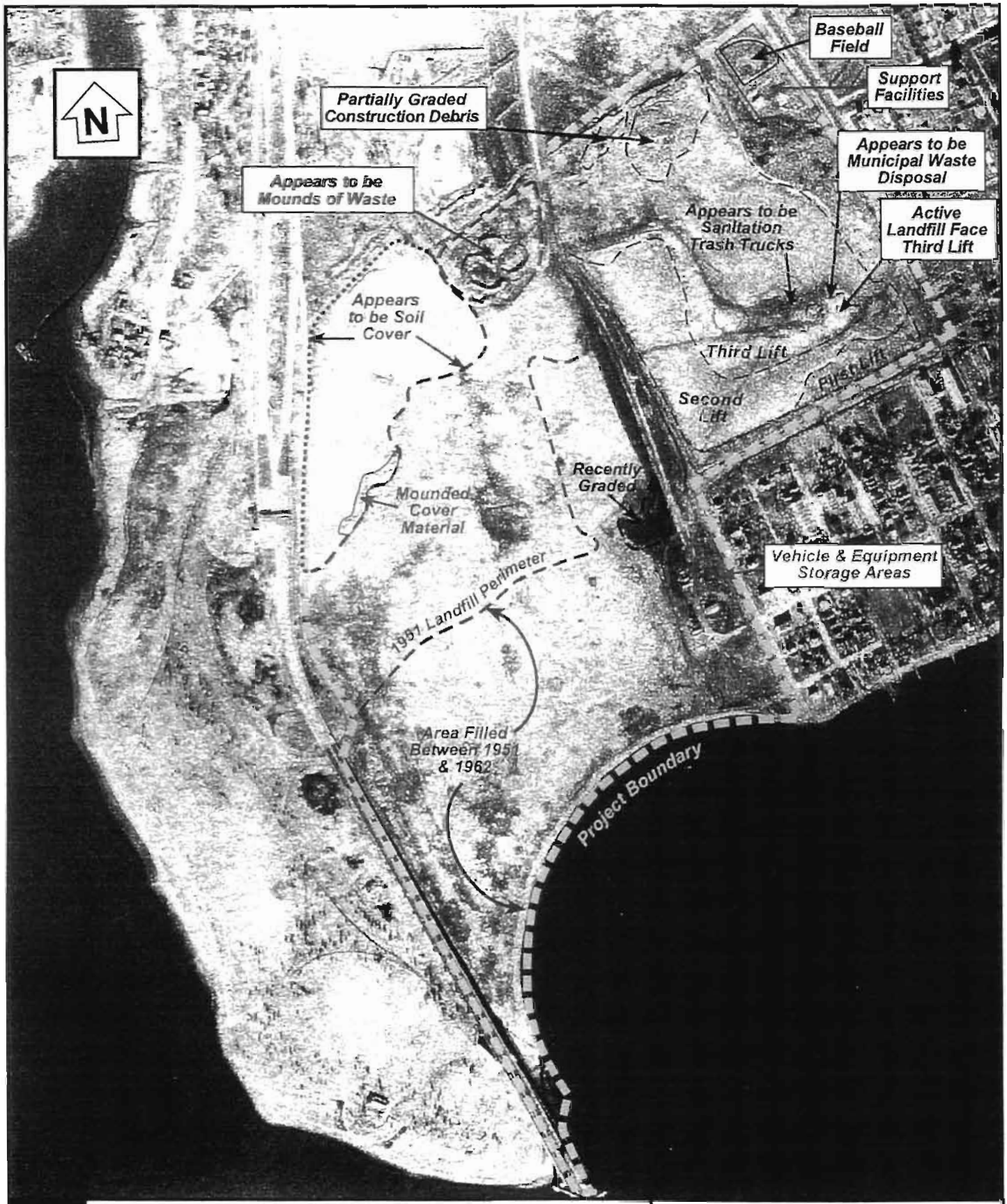
FERRY POINT LANDFILL
BRONX, NEW YORK

**FIGURE 6.**
**1959 AERIAL PHOTOGRAPH**

Date: 7/99 | Project No. 25800




KEY

0 1000
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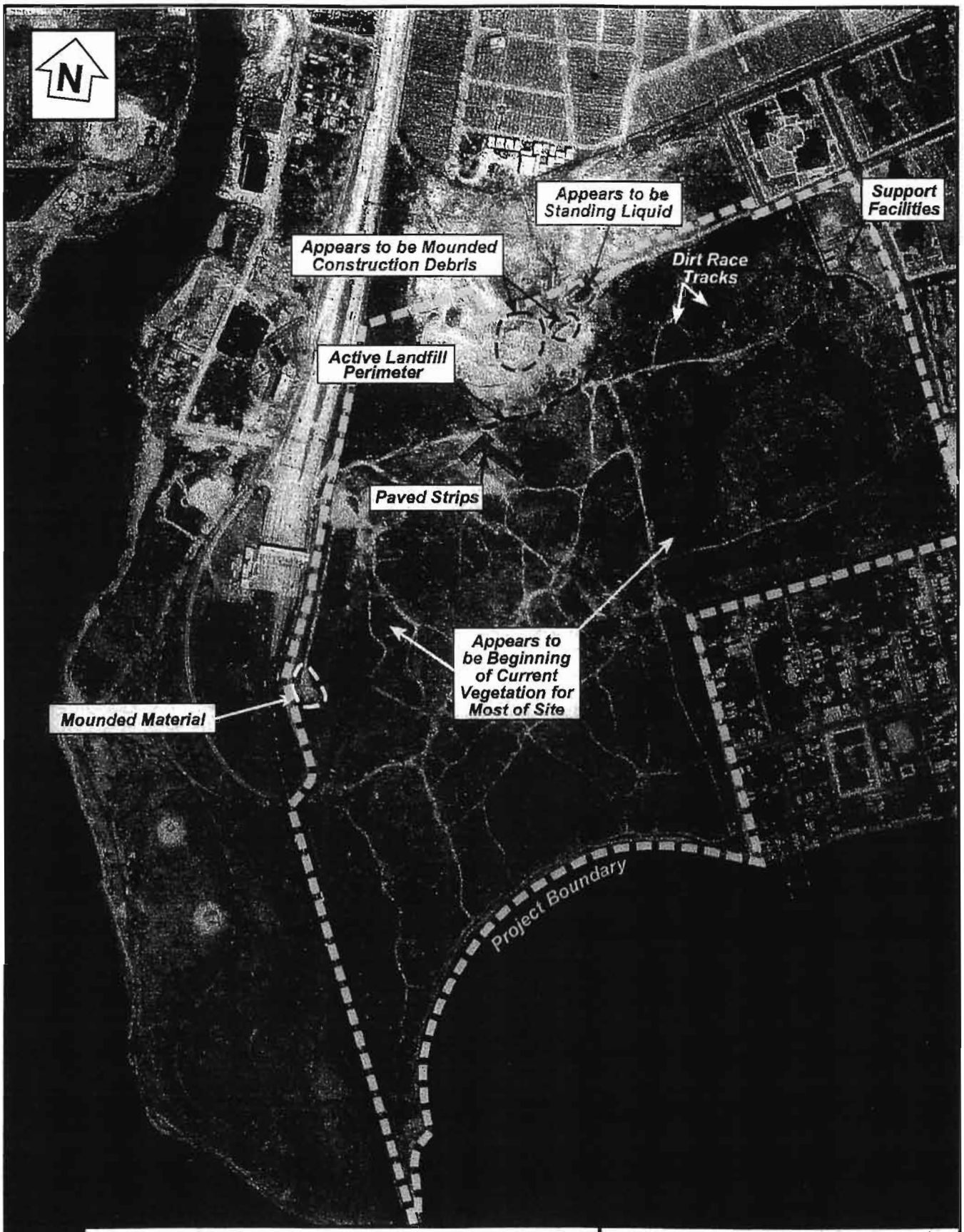
FERRY POINT LANDFILL
BRONX, NEW YORK

# FIGURE 7.
# 1962 AERIAL PHOTOGRAPH

Date: 7/99 | Project No. 25800




KEY

0 1000
APPROXIMATE SCALE FT

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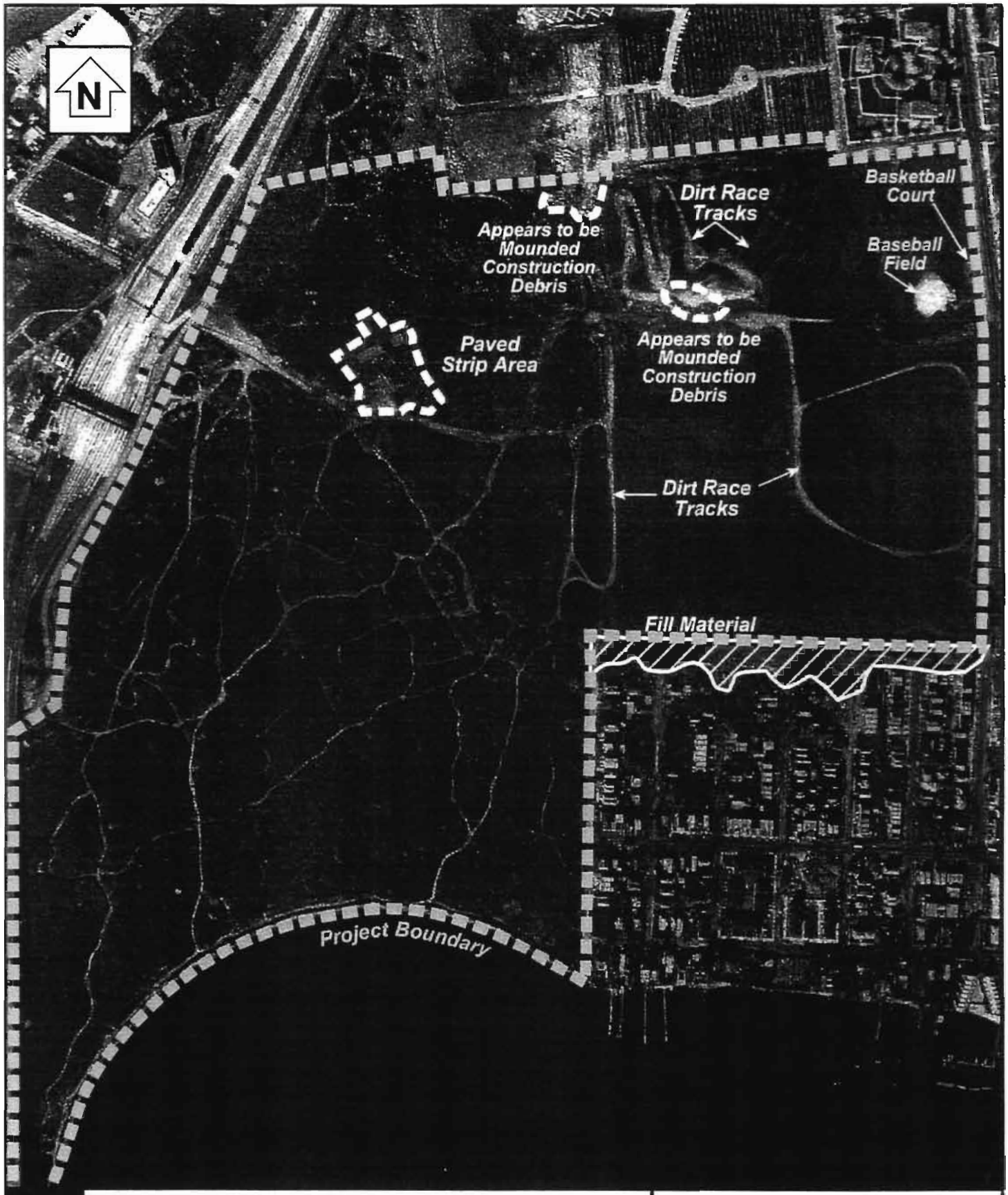
FERRY POINT LANDFILL
BRONX, NEW YORK

**FIGURE 8.**
**1982 AERIAL PHOTOGRAPH**

Date: 7/99 | Project No. 25800




KEY

0 1000
APPROXIMATE SCALE FEET

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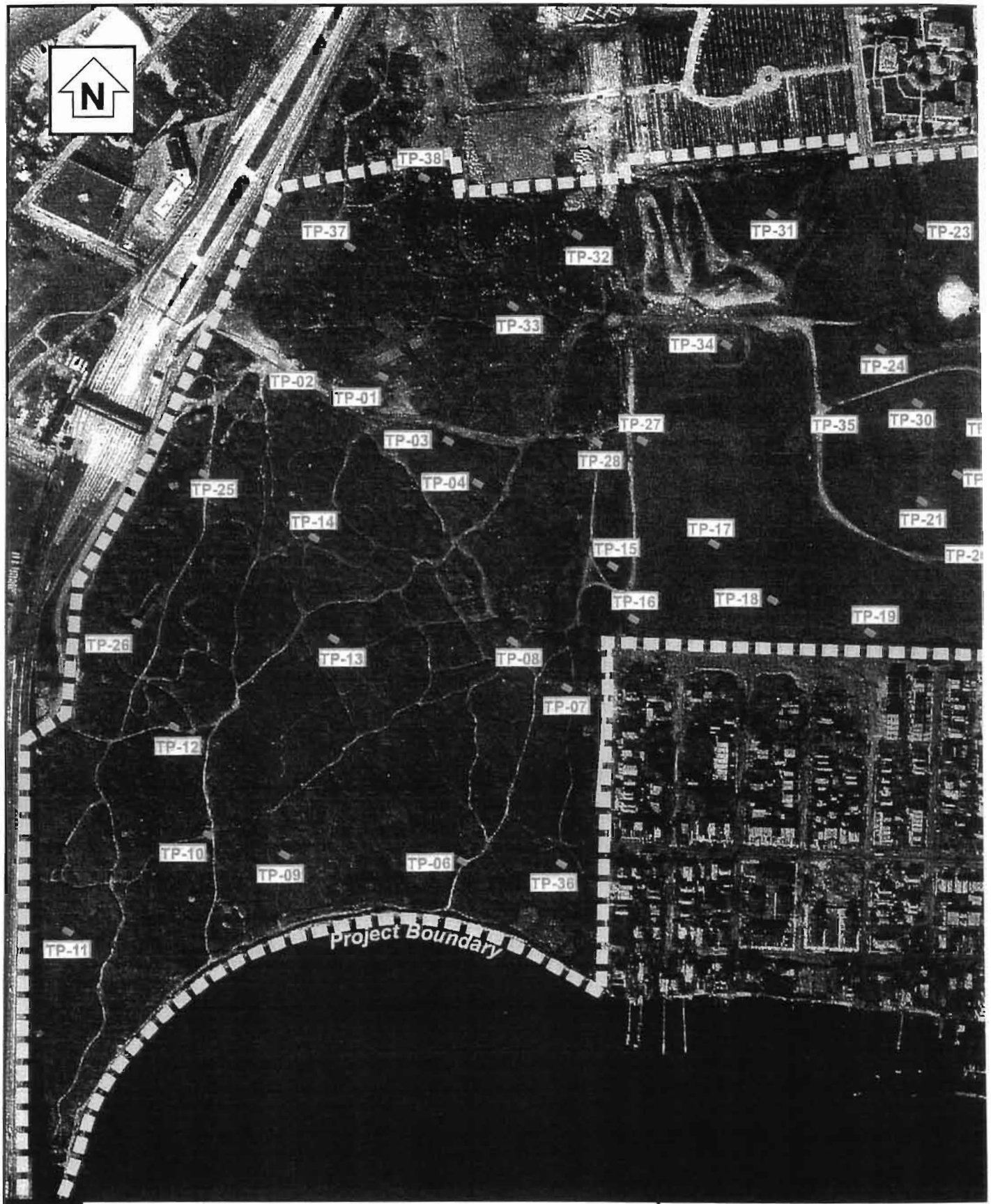
FERRY POINT PARK
BRONX, NEW YORK

**FIGURE 9.**
**1991 AERIAL PHOTOGRAPH**

Date: 7/99 | Project No. 25800




**KEY**

TP-16 Approximate Test Pit Location

0 400
APPROX. SCALE FT

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FERRY POINT PARK
BRONX, NEW YORK

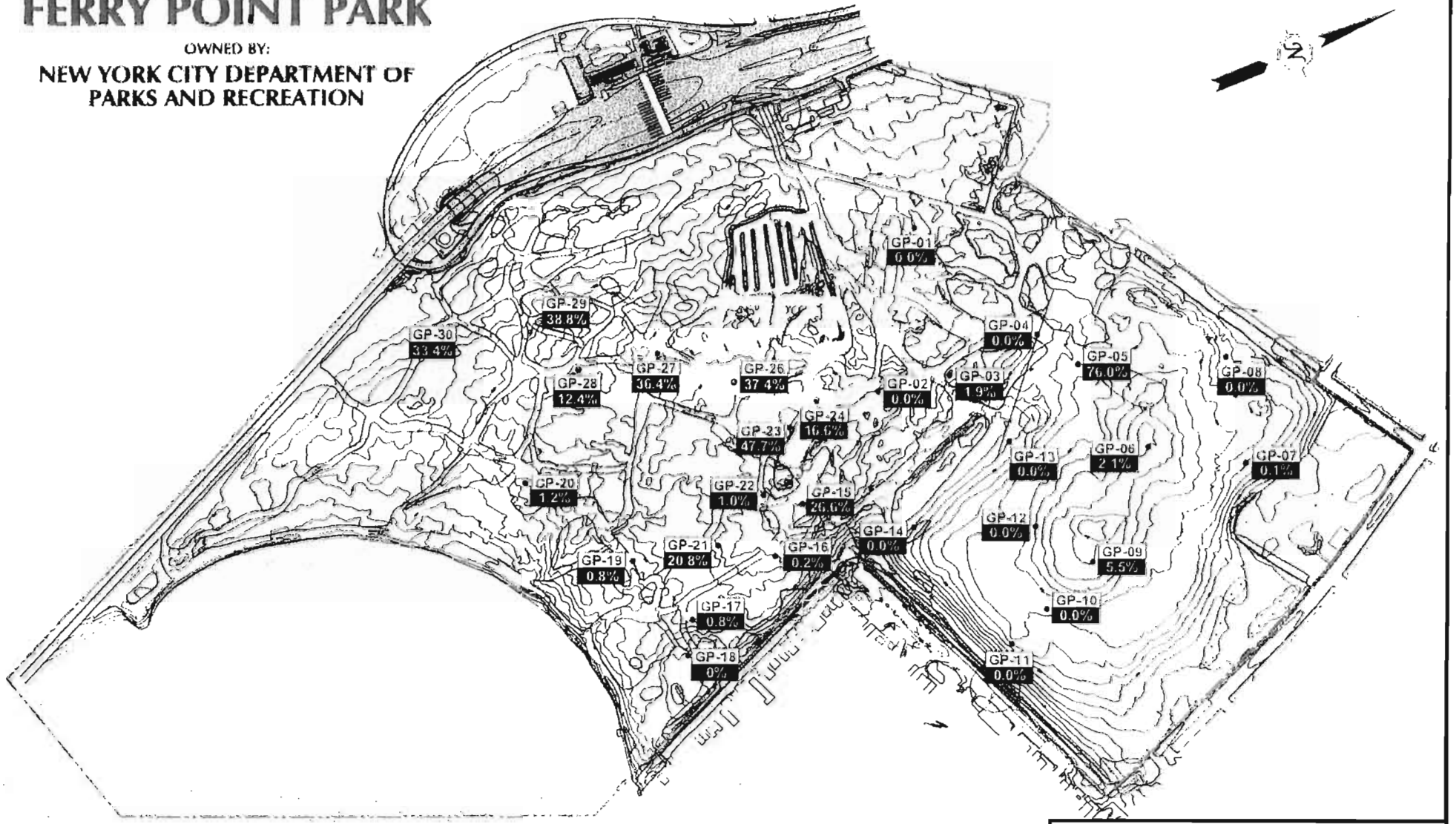
**FIGURE 10.**
**TEST PIT LOCATION MAP**

Date: 7/99 | Project No. 25800

# FERRY POINT PARK

OWNED BY:

NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION




NOT TO SCALE

KEY

GP-18 % ● Gas Probe Methane

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FERRY POINT LANDFILL
BRONX, NEW YORK

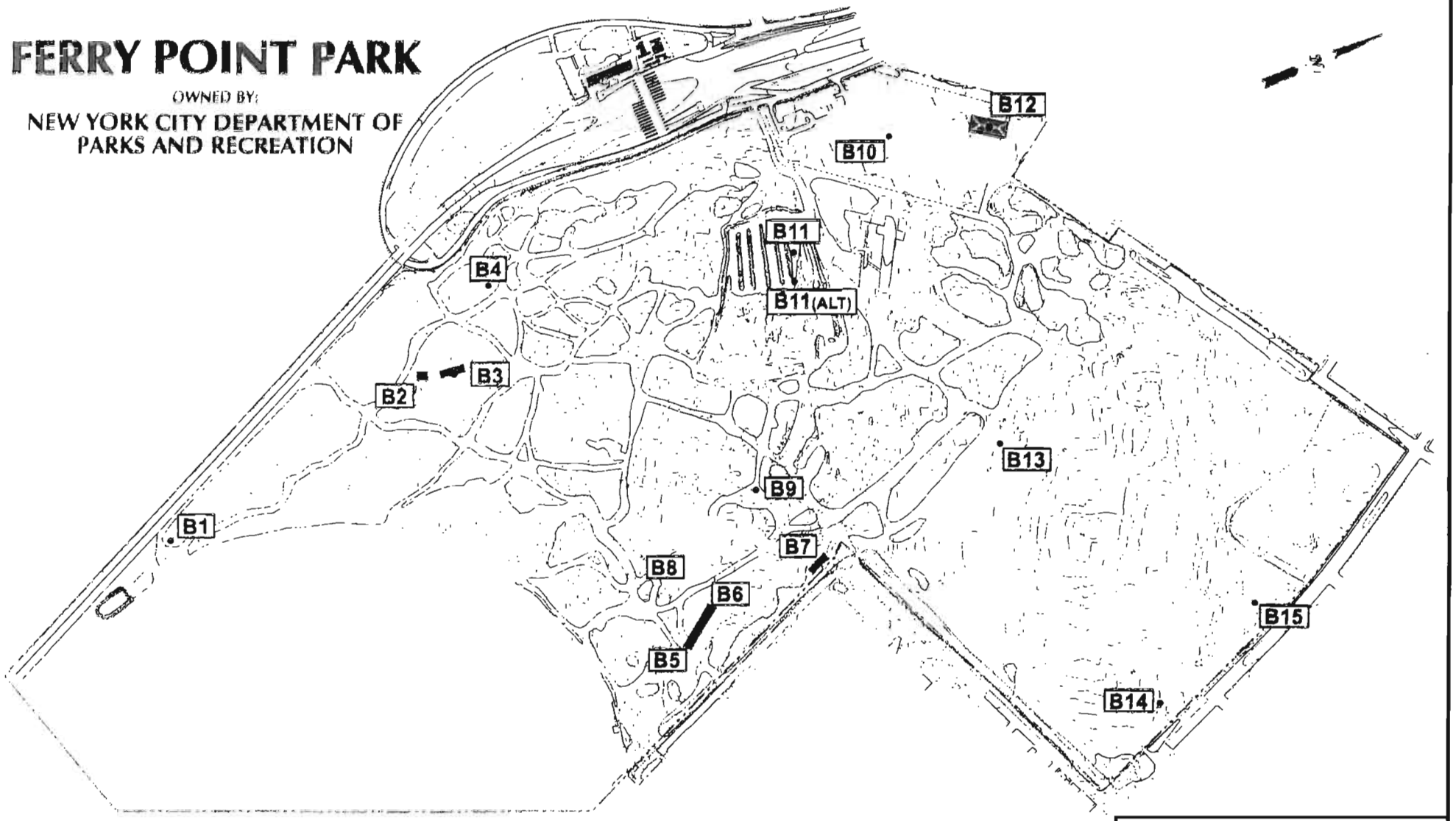
**FIGURE 11.**
**LANDFILL GAS ASSESSMENT MAP**

Date: 7/99 | Project No. 25800

# FERRY POINT PARK

OWNED BY:

NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION




NOT TO SCALE

KEY

B5 • BORING /NUMBER

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FERRY POINT PARK
BRONX, NEW YORK

FIGURE 12.
LANDFILL SOIL BORING LOCATIONS

Date: 9/99 | Project No. 25800

SOILBORE.fh8

# APPENDIX A

# COMPARISON OF COVER AND WASTE DATA TO TAGM RECOMMENDED SOIL CLEANUP OBJECTIVES

**TABLE 4A (Continued)**
**COMPARISON OF CONTAMINANTS DETECTED IN EXISTING COVER MATERIAL TO TAGM RSCOs**
**FERRY POINT PARK, BRONX, NEW YORK**

| Parameter | B2-Cover 0' - 2' | B7-2 - Cover 2' - 4' | B8-1-Cover 0' - 2' | B10-1-Cover 0' - 2' | B11-1-Cover 0' - 2' | B11-1 - Dup 0' - 2' | B13-1-Cover 0' - 2' | B14-2-Cover 2' - 4' | Field Blank | Trip Blank | TAGM RSCO (ppb) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TCL Pesticides/PCBs (ppb)** | ALL ND | | ALL ND | ALL ND | | ALL ND | ALL ND | | NA | NA | | |
| 4,4'-DDE | | 32 J | | | | | | | | | 2,100 | |
| 4,4'-DDD | | 26 J | | | | | | | | | 2,900 | |
| 4,4'-DDT | | 22 J | | | | | | | | | 2,100 | |
| alpha-Chlordane | | | | | | | | 15 J | | | 540 | |
| gamma-Chlordane | | | | | | | | 15 J | | | 540 | |
| **TOTAL PESTICIDES** | | 80 | | | | | | 30 | | | 10,000 | |
| PCB Aroclor-1248 | | | | | 720 | | | | | | | |
| **TOTAL PCBs** | | | | | 720 | | | | | | 1,000 | |
| **TAL Metals (ppm)** | | | | | | | | | NA | NA | TAGM RSCO (ppm) | Eastern USA Background (ppm) |
| Aluminum | 10,600 | 11,700 | 8,840 | 1,870 | 6,290 | 4,960 | 8,270 | 7,980 | | | SB | 33,000 |
| Arsenic | 1.78 | **9.1** | 1.49 | | | | 3.09 | 2.01 | | | 7.5 or SB | 3 - 12* |
| Barium | 99.1 | **901** | 175 | 15.9 | **319** | 235 | 89.8 | 108 | | | 300 or SB | 15 - 600 |
| Cadmium | | **16.7** | 0.66 | | | 0.67 | | | | | 1 or SB | 0.1 - 1 |
| Calcium | 1,270 | 29,200 | 37,000 | 79,400 | 32,100 | 36,200 | 5,500 | 6,660 | | | SB | 130 - 35,000* |
| Chromium | **43.8** | **76.6** | **22.4** | 5.52 | **19.5** | 15.1 | 19.7 | **18.6** | | | 10 or SB | 1.5 - 40* |
| Cobalt | 12.1 | 14 | 9.46 | 2.17 | 7.6 | 5.52 | 6.21 | 6.68 | | | 30 or SB | 2.5 - 60* |
| Copper | **34.4** | **1,340** | **189** | 16.8 | **100** | **48.6** | **28.9** | **37.8** | | | 25 or SB | 1 - 50 |
| Iron | **16,800** | **176,000** | **21,500** | **6,140** | **24,400** | **27,000** | **14,300** | **15,600** | | | 2,000 or SB | 2,000 - 550,000 |
| Lead | 13.9 | **927** | 227 | 31.8 | 252 | 143 | 64.1 | 147 | | | SB | 200 - 500** |
| Magnesium | 4,600 | 2,280 | 23,600 | 41,100 | 13,800 | 15,130 | 2,830 | 3,430 | | | SB | 100 - 5,000 |
| Manganese | 346 | 1,250 | 266 | 113 | 286 | 258 | 265 | 316 | | | SB | 50 - 5,000 |
| Nickel | **70.3** | **126** | **31** | 3.44 | **22.8** | **19.3** | **22.2** | **22.3** | | | 13 or SB | 0.5 - 25 |
| Potassium | 2,490 | 1,270 | 1,120 | 677 | 1,660 | 1,350 | 996 | 881 | | | SB | 8,500 - 43,000* |
| Selenium | **4.71** | **51.5** | | | | | **2.71** | 2.82 | | | 2 or SB | 0.1 - 3.9 |
| Silver | | 1.85 | | | | | | | | | SB | N/A |
| Sodium | | 2,570 | 800 | 714 | 591 | 683 | 229 | 185 | | | SB | 6,000 - 8,000 |
| Vanadium | 34.1 | 90.6 | 25 | 18.3 | 27 | 27.4 | 22.3 | 29.4 | | | 150 or SB | 1 - 300 |
| Zinc | **58.3** | **2,370** | **921** | **28.4** | **193** | **226** | **107** | **135** | | | 20 or SB | 9 - 50 |
| Mercury | **0.27** | | **0.35** | | **0.46** | | **0.38** | | | | 0.1 | 0.001 - 0.2 |
| Cyanide, Total | | 7.11 | | | | | | | | | | N/A |

B = Detected in blank sample
J = Estimated
**BOLD** = TAGM criterion exceeded
[ ] = Higher end of Eastern USA Background range exceeded
NA = Not Analyzed
N/A = Not Available
ND = Not Detected
* = New York State background levels
** = Ave. background in metropolitan or suburban areas

TABLE 4A
COMPARISON OF CONTAMINANTS DETECTED IN EXISTING COVER MATERIAL TO TAGM RSCOs
FERRY POINT PARK, BRONX, NEW YORK

| Parameter | B2-Cover 0' - 2' | B7-2 - Cover 2' - 4' | B8-1-Cover 0' - 2' | B10-1-Cover 0' - 2' | B11-1-Cover 0' - 2' | B11-1 - Dup 0' - 2' | B13-1-Cover 0' - 2' | B14-2-Cover 2' - 4' | Field Blank | Trip Blank | TAGM RSCO (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **TCL VOCs (ppb)** | | | | | | | | | | | |
| Methylene chloride | **500 B** | **900 B** | **470 B** | **480 B** | **490 B** | **550 B** | **360 B** | **400 B** | **430 B** | **480 B** | 100 |
| Acetone | **1,400 B** | **3,800 B** | **860 B** | **960 B** | **1,000 B** | **1,100 B** | **1,000 B** | **1,300 B** | **690 B** | **720 B** | 200 |
| Chloroform | 200 | 200 | 32 J | 39 J | 35 J | 30 J | 130 | 130 | | | 300 |
| 2-Butanone | | 140 J | | | | | | 270 | | | 300 |
| Benzene | | | | 50 J | | 31 J | | | | | 60 |
| Tetrachloroethene | | 650 | | | | | | | | | 1,400 |
| Toluene | 36 J | 46 J | | 92 J | 47 J | 59 J | 63 J | 37 J | | | 1,500 |
| Chlorobenzene | | | | | | 72 J | | | | | 1,700 |
| Ethylbenzene | | | | 40 J | 26 J | 43 J | | | | | 5,500 |
| Xylene (total) | | 24 J | | 290 J | 50 J | 68 J | | 18 J | | | 1,200 |
| **TOTAL VOCs*** | 236 | 1,060 | 32 | 511 | 158 | 303 | 193 | 455 | | | |
| **TCL SVOCs (ppb)** | | | | | | | | | NA | NA | |
| 2-Methylphenol | | | 110 J | | | | | | | | 100 or MDL |
| 4-Methylphenol | | | | 68 J | | | | | | | 900 |
| Isophorone | | | | | | | | 140 J | | | 4,400 |
| Naphthalene | | 74 J | 2,200 J | 780 J | 960 J | 350 J | 340 J | 120 J | | | 13,000 |
| 4-Chloro-3-methylphenol | | | | | | | | 15 J | | | 240 or MDL |
| 2-Methylnaphthalene | | 29 J | 330 J | 390 J | 140 J | 120 J | 360 J | 85 J | | | 36,400 |
| 2-Chloronaphthalene | | | | 69 J | | | | | | | 50,000 |
| Dimethylphthalate | | | | | | | | 110 J | | | 2,000 |
| Acenaphthylene | | | | 2,000 J | | | 44 J | 20 J | | | 41,000 |
| Acenaphthene | | 6 J | 160 J | 330 J | 92 J | 94 J | 110 J | 110 J | | | 50,000 |
| 4-Nitrophenol | | | | | | | | **140** J | | | 100 or MDL |
| Dibenzofuran | | | 76 J | 700 J | 42 J | 47 J | 87 J | 100 J | | | 6,200 |
| Diethylphthalate | | 29 J | | 150 J | | | | 110 J | | | 7,100 |
| Fluorene | | | 900 J | 1,100 J | | | 230 J | 150 J | | | 50,000 |
| Pentachlorophenol | | | | 230 J | | | | 35 J | | | 1,000 or MDL |
| Phenanthrene | 29 J | 38 J | 1,600 J | 4,500 J | 960 J | 970 J | 1,700 | 1,600 | | | 50,000 |
| Anthracene | 7 J | | 390 J | 1,400 J | 190 J | 230 J | 440 J | 370 J | | | 50,000 |
| Di-n-butylphthalate | 31 J | 76 J | 130 J | 180 J | | | 41 J | 51 J | | | 8,100 |
| Fluoranthene | 61 J | 63 J | 2,600 J | 9,700 | 1,300 J | 1,700 J | 2,200 | 1,900 | | | 50,000 |
| Pyrene | 78 J | 99 J | 2,800 J | 9,100 | 1,600 J | 2,100 J | 2,200 | 2,700 | | | 50,000 |
| Butylbenzylphthalate | | 840 | | | | 190 J | 65 J | 60 J | | | 50,000 |
| Benzo(a)anthracene | 50 J | 71 J | **1,400** J | **4,600** J | **800** J | **1,000** J | **1,100** | **1,000** | | | 224 or MDL |
| Chrysene | 47 J | 65 J | **1,500** J | **4,800** J | **950** J | **1,300** J | **1,100** | **980** | | | 400 |
| bis(2-Ethylhexyl)phthalate | 37 J | 590 J | 270 J | 490 J | 1,200 J | 1,300 J | 300 J | 160 J | | | 50,000 |
| Di-n-octylphthalate | | | | 130 J | | | | | | | 50,000 |
| Benzo(b)fluoranthene | 46 J | | **1,200** J | **4,800** J | 540 J | 990 J | 820 | 1,000 | | | 1,100 |
| Benzo(k)fluoranthene | 25 J | 39 J | **1,400** J | **5,100** J | 660 J | **1,200** J | 740 | 850 | | | 1,100 |
| Benzo(a)pyrene | | | **1,300** J | **4,900** J | **760** J | 1,100 J | **890** | **920** | | | 61 or MDL |
| Indeno(1,2,3-cd)pyrene | | | | 3,200 J | | | 680 J | 1,100 | | | 3,200 |
| Dibenz(a,h)anthracene | | | | 820 J | | | **260** J | | | | 14 or MDL |
| Benzo(g,h,i)perylene | | | | 3,000 J | | | 630 J | 1,200 | | | 50,000 |
| **TOTAL SVOCs** | 411 | 2019 | 18,366 | 62,537 | 10,194 | 12,691 | 14,337 | 15,026 | | | 500,000 |

B = Detected in blank sample
J = Estimated
**BOLD** = criterion exceeded
NA = Not Analyzed
N/A = Not Available
ND = Not Detected
Where health-based criteria for individual SVOCs are not available under TAGM, the 50 ppm TAGM limit for individual SVOCs is used.

* Due to the presence of methylene chloride and acetone in the blank samples, the reported concentrations of these compounds in the soil cover samples are considered to be attributable to laboratory contamination and are not included in the Total VOC values

TABLE 6A
COMPARISON OF CONTAMINANTS DETECTED IN WASTE MATERIALS TO TAGM RSCOs
FERRY POINT PARK, BRONX, NEW YORK

| Parameter | B1-3 4' - 6' | B2-2 4' - 6' | B3-6 8' - 10' | B4-6 10' - 12' | B5-6 10' - 12' | B6-9 16' - 18' | B7-6 10' - 12' | B8-7 12' - 14' | B9-6 10' - 12' | TAGM RSCO (ppb) | Eastern USA Background (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **TCL VOCs (ppb)** | | | | | | | | | | | |
| Vinyl chloride | | | | | | | | | 74 J | 200 | N/A |
| Methylene chloride | 720 B | 2,100 B | 920 B | 850 B | 470 B | 600 B | 1,000 B | 750 B | 560 B | 100 | N/A |
| Acetone | 3,100 B | 7,900 B | 3,500 B | 3,600 B | 1,600 B | 1,800 B | 4,200 B | 1,800 B | 1,600 B | 200 | N/A |
| 1,2-Dichloroethylene (total) | | | 370 | 75 J | | | | | | 300 | N/A |
| Chloroform | 110 | 270 | 130 | 150 | 170 | 120 | 190 | 41 J | 120 | 300 | N/A |
| 2-Butanone | | | 190 J | 780 | 350 | 130 J | 180 J | | 370 | 300 | N/A |
| Trichloroethylene | | | 230 | 49 J | | | | 44 J | | 700 | N/A |
| Benzene | 36 J | 96 J | 70 J | 300 | | 110 | 77 J | 76 J | 67 J | 60 | N/A |
| Tetrachloroethene | | | 640 | | | 60 J | | 66 J | 29 J | 1,400 | N/A |
| Toluene | 41 J | 140 | 170 | 1,200 | 970 | 130 | 150 | 200 | 140 | 1,500 | N/A |
| Chlorobenzene | | 300 | 300 | 460 | | | 410 | 800 | | 1,700 | N/A |
| Ethylbenzene | | | 55 J | 180 | 1,400 | 110 | 58 J | 220 | 42 J | 5,500 | N/A |
| Styrene | | | | | 250 | | | | | N/A | N/A |
| Xylene (total) | | 83 J | 210 | 650 | 2,900 | 200 | 190 | 330 | 130 | 1,200 | N/A |
| **TOTAL VOCS*** | 187 | 889 | 2,365 | 3,844 | 6,040 | 860 | 1,255 | 1,777 | 972 | 10,000 | N/A |
| **TCL SVOCs (ppb)** | | NA | | | | | | | | | |
| 2-Chlorophenol | | | 20 J | | | | | | | 800 | N/A |
| 1,4-Dichlorobenzene | 160 J | | | | | | | | | 8,500 | N/A |
| 1,2-Dichlorobenzene | | | | | | 50 J | | | | 7,900 | N/A |
| 4-Methylphenol | 14 J | | 30 J | 82 J | | | 20 J | 290 J | 22 J | 900 | N/A |
| 2,4-Dimethylphenol | 11 J | | | | | | | | | N/A | N/A |
| Naphthalene | 700 J | | 210 J | 430 J | 250,000 | 230 J | 210 J | 1,300 J | 180 J | 13,000 | N/A |
| 4-Chloro-3-methylphenol | | | 24 J | 9 J | | | | | | 240 or MDL | N/A |
| 2-Methylnaphthalene | 140 J | | 140 J | 140 J | 250,000 | 120 J | 92 J | 580 J | 120 J | 36,400 | N/A |
| Acenaphthylene | | | 10 J | 31 J | 11,000 J | 20 J | 16 J | | 21 J | 41,000 | N/A |
| Acenaphthene | 68 J | | 160 J | 140 J | 63,000 J | 94 J | 150 J | 440 J | 120 J | 50,000 | N/A |
| Dibenzofuran | 47 J | | 97 J | 110 J | 60,000 J | 47 J | 60 J | 290 J | 83 J | 6,200 | N/A |
| Diethylphthalate | 27 J | | 26 J | 11 J | | 42 J | | 370 J | 28 J | 7,100 | N/A |
| Fluorene | 63 J | | 200 J | 230 J | 160,000 | 70 J | | 760 J | 190 J | 50,000 | N/A |
| N-nitrosodiphenylamine | | | | | | | | 300 J | | N/A | N/A |
| Pentachlorophenol | | | 42 J | | | | | | | 1,000 or MDL | N/A |
| Phenanthrene | 170 J | | 1,100 | 1,300 | 550,000 | 450 J | 960 J | 4,000 J | 1,400 | 50,000 | N/A |
| Anthracene | 30 J | | 260 J | 230 J | 120,000 | 110 J | 280 J | 910 J | 300 J | 50,000 | N/A |
| Di-n-butylphthalate | 66 J | | 130 J | 46 J | | 130 J | 66 J | 1,100 J | 120 J | 8,100 | N/A |
| Fluoranthene | 360 J | | 1,300 | 1,300 | 220,000 | 520 J | 1,400 | 4,400 J | 2,000 | 50,000 | N/A |
| Pyrene | 170 J | | 1,200 | 1,500 | 620,000 | 760 J | 1,900 | 4,500 J | 3,000 | 50,000 | N/A |
| Butylbenzylphthalate | 18 J | | 130 J | | | | | 1,400 J | | 50,000 | N/A |
| Benzo(a)anthracene | 70 J | | 570 J | 690 J | 130,000 | 260 J | 630 J | 2,000 J | 1,200 | 224 or MDL | N/A |
| Chrysene | 88 J | | 620 J | 790 J | 120,000 | 270 J | 580 J | 2,000 J | 1,300 | 400 | N/A |
| bis(2-Ethylhexyl)phthalate | 200 J | | 20,000 | 1,900 | | 310 J | 12,000 | 24,000 | 440 J | 50,000 | N/A |
| Di-n-octylphthalate | | | 48 J | 18 J | | | | 660 J | | 50,000 | N/A |
| Benzo(b)fluoranthene | 53 J | | 420 J | 530 J | 68,000 J | 240 J | 470 J | 1,500 J | 1,100 | 1,100 | N/A |
| Benzo(k)fluoranthene | 50 J | | 400 J | 520 J | 69,000 J | 180 J | 490 J | 1,500 J | 1,100 | 1,100 | N/A |
| Benzo(a)pyrene | 55 J | | 450 J | 590 J | 92,000 J | 260 J | 340 J | 1,200 J | 1,000 | 61 or MDL | N/A |
| Indeno(1,2,3-cd)pyrene | | | 360 J | 410 J | | | | | 1,000 | 3,200 | N/A |
| Benzo(g,h,i)perylene | | | | 380 J | | | | | | 50,000 | N/A |
| **TOTAL SVOCs** | 2,560 | | 27,947 | 11,387 | 2,783,000 | 4,163 | 19,664 | 53,500 | 14,724 | 500,000 | N/A |
| **TCL Pesticides/PCBs (ppb)** | | NA | ALL ND | | | | | | | | N/A |
| 4,4'-DDE | | | | 20 J | | | 11 J | 88 | | 2,100 | N/A |
| 4,4'-DDD | | | | 37 J | | | 67 | 360 | | 2,900 | N/A |
| 4,4'-DDT | | | | 35 J | | | 17 J | 53 | | 2,100 | N/A |
| **TOTAL PESTICIDES** | | | | 92 | | | 95 | 501 | | 10,000 | N/A |
| PCB Aroclor-1242 | 870 | | | | | | | | | | N/A |
| PCB Aroclor-1260 | | | | | | 18,000 | | | | | N/A |
| **TOTAL PCBs** | | | | | | | | | | 10,000 | N/A |
| **TAL Metals (ppm)** | | NA | | | | | | | | (ppm) | (ppm) |
| Aluminum | 6,390 | | 10,600 | 6,590 | 6,670 | 7,740 | 8,210 | 7,580 | 7,470 | SB | 33,000 |
| Arsenic | | | 6.16 | 16.3 | 8.12 | | | | 3.08 | 7.5 or SB | 3 - 12* |
| Barium | 173 | | 334 | 261 | 768 | 1,020 | 105 | 854 | 135 | 300 or SB | 15 - 600 |
| Cadmium | 1.59 | | 1.77 | 3.03 | | 9.45 | | 3.63 | 0.853 | 1 or SB | 0.1 - 1 |
| Calcium | 5,440 | | 36,000 | 22,700 | 13,800 | 37,200 | 4,110 | 45,800 | 18,700 | SB | 130 - 35,000* |
| Chromium | 71.6 | | 37.5 | 23.7 | 15.6 | 67.8 | 29.7 | 82 | 25 | 10 or SB | 1.5 - 40* |
| Cobalt | 9.03 | | 10.3 | 5.95 | 6.15 | 18.6 | 8.53 | 10.5 | 7.87 | 30 or SB | 2.5 - 60* |
| Copper | 2,620 | | 205 | 67.8 | 89.4 | 970 | 40.7 | 266 | 90.2 | 25 or SB | 1 - 50 |
| Iron | 29,600 | | 43,500 | 17,200 | 16,500 | 216,000 | 26,800 | 79,700 | 28,800 | 2,000 or SB | 2,000 - 550,000 |
| Lead | 448 | | 673 | 289 | 287 | 1,200 | 85.1 | 1,030 | 461 | SB | 200 - 500** |
| Magnesium | 3,010 | | 21,600 | 3,200 | 2,940 | 2,850 | 3,360 | 5,900 | 3,290 | SB | 100 - 5,000 |
| Manganese | 597 | | 434 | 169 | 151 | 1,200 | 418 | 655 | 314 | SB | 50 - 5,000 |
| Nickel | 49.4 | | 52.3 | 23.5 | 23.1 | 156 | 32.2 | 109 | 32.3 | 13 or SB | 0.5 - 25 |
| Potassium | 1,440 | | 3,160 | 2,110 | 1,060 | 1,020 | 1,750 | 830 | 1,080 | SB | 8,500 - 43,000* |
| Selenium | 5.35 | | 2.22 | 12.5 | 4.09 | 37 | 6.69 | | 2.45 | 2 or SB | 0.1 - 3.9 |
| Silver | | | | | | 19 | | 12.5 | | SB | N/A |
| Sodium | 611 | | 607 | 947 | 537 | 2,590 | 333 | 1,800 | 484 | SB | 6,000 - 8,000 |
| Vanadium | 33.2 | | 41.3 | 20.1 | 22.9 | 78.3 | 30 | 55.2 | 40.4 | 150 or SB | 1 - 300 |
| Zinc | 568 | | 462 | 375 | 189 | 1,880 | 98.3 | 1,350 | 367 | 20 or SB | 9 - 50 |
| Mercury | | | 0.55 | 0.49 | | 0.56 | 0.64 | 0.52 | 0.28 | 0.1 | 0.001 - 0.2 |
| Cyanide, Total | | | | | | 2.65 | | | | | N/A |

B = Detected in blank sample
J = Estimated
BOLD = exceeds screening level
[ ] = Higher end of Eastern USA Background range exceeded
NA = Not Analyzed
ND = Not Detected
N/A = Not Available
Where health-based criteria for individual SVOCs are not available under TAGM, the 50 ppm TAGM limit for individual SVOCs is used.
* = New York State background levels
** = Ave. background in metropolitan or suburban areas

* Due to the presence of methylene chloride and acetone in the blank samples, the reported concentrations of these compounds in the soil cover samples are considered to be attributable to laboratory contamination and are not included in the Total VOC values.

**TABLE 6A (Continued)**
**COMPARISON OF CONTAMINANTS DETECTED IN WASTE MATERIALS TO TAGM RSCOs**
**FERRY POINT PARK, BRONX, NEW YORK**

| | B10-3 4' - 6' | B11-6 10' - 12' | B12-4 6' - 8' | B12-10+11 18' - 22' | B13-10 20' - 22' | B14-8 12' - 14' | B15-7 12' - 14' | Field Blank | Trip Blank | TAGM RSCO (ppb) | Eastern USA Background (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **TCL VOCs (ppb)** | | | | NA | | | | | | | |
| Vinyl chloride | | | | | | | | | | 200 | N/A |
| Methylene chloride | **450** B | **560** B | **400** B | | **600** B | **950** B | **500** B | **430** B | **480** B | 100 | N/A |
| Acetone | **930** B | **1,400** B | **960** B | | **1,800** B | **3,400** B | **2,100** B | **690** B | **720** B | 200 | N/A |
| 1,2-Dichloroethylene (total) | | | | | | | | | | 300 | N/A |
| Chloroform | 32 J | 31 J | 29 J | | 150 | **350** | 170 | | | 300 | N/A |
| 2-Butanone | | | | | **320** | 140 J | **1,000** | | | 300 | N/A |
| Trichloroethylene | | | | | | | | | | 700 | N/A |
| Benzene | 29 J | 31 J | | | 45 J | **70** J | | | | 60 | N/A |
| Tetrachloroethene | | | | | | | | | | 1,400 | N/A |
| Toluene | 69 J | 86 J | 33 J | | 99 J | 130 | 140 | | | 1,500 | N/A |
| Chlorobenzene | | 130 | | | 40 J | 500 | | | | 1,700 | N/A |
| Ethylbenzene | 27 J | | | | 71 J | | | | | 5,500 | N/A |
| Styrene | 25 J | | | | | | | | | N/A | N/A |
| Xylene (total) | 85 J | 48 J | 26 J | | 290 | 200 | 250 | | | 1,200 | N/A |
| **TOTAL VOCS** | 267 | 326 | 88 | | 1,015 | 1,390 | 1,560 | | | 10,000 | N/A |
| **TCL SVOCs (ppb)** | | | NA | | | | | NA | NA | | |
| 4-Methylphenol | | 280 J | | | 16 J | 46 J | 100 J | | | 900 | N/A |
| Naphthalene | 270 J | 2,200 | | 6,400 J | 170 J | 290 J | 1,400 | | | 13,000 | N/A |
| 2-Methylnaphthalene | 88 J | 330 J | | 1,400 J | 110 J | 120 J | 230 J | | | 36,400 | N/A |
| Acenaphthylene | 870 J | | | | 17 J | 14 J | 22 J | | | 41,000 | N/A |
| Acenaphthene | 120 J | 750 J | | 100 J | 92 J | 36 J | 50 J | | | 50,000 | N/A |
| Dibenzofuran | 160 J | 340 J | | 51 J | 75 J | 30 J | 31 J | | | 6,200 | N/A |
| Diethylphthalate | | | | | 28 J | 32 J | | | | 7,100 | N/A |
| Fluorene | 300 J | 900 J | | | 170 J | 54 J | 69 J | | | 50,000 | N/A |
| Phenanthrene | 1,500 J | 5,100 J | | 480 J | 770 J | 300 J | 270 J | | | 50,000 | N/A |
| Anthracene | 490 J | 1,300 J | | 95 J | 130 J | 48 J | | | | 50,000 | N/A |
| Di-n-butylphthalate | 150 J | | | 220 J | 350 J | 130 J | 89 J | | | 8,100 | N/A |
| Fluoranthene | 4,200 J | 5,400 J | | 480 J | 560 J | 330 J | 250 J | | | 50,000 | N/A |
| Pyrene | 4,700 J | 5,600 J | | 510 J | 620 J | 430 J | 450 J | | | 50,000 | N/A |
| Butylbenzylphthalate | | 190 J | | | | | | | | 50,000 | N/A |
| Benzo(a)anthracene | **2,200** J | **2,500** J | | 200 J | **290** J | 170 J | 200 J | | | 224 or MDL | N/A |
| Chrysene | **2,300** J | **2,700** J | | 230 J | 360 J | 230 J | 260 J | | | 400 | N/A |
| bis(2-Ethylhexyl)phthalate | 580 J | 1,300 J | | 2,000 J | 660 J | 550 J | 13,000 | | | 50,000 | N/A |
| Di-n-octylphthalate | | | | | 32 J | | | | | 50,000 | N/A |
| Benzo(b)fluoranthene | **2,700** | **2,000** J | | | 330 J | 150 J | 220 J | | | 1,100 | N/A |
| Benzo(k)fluoranthene | **2,200** J | **2,400** J | | | 210 J | 150 J | 150 J | | | 1,100 | N/A |
| Benzo(a)pyrene | **2,700** J | **1,600** J | | | **190** J | **170** J | **180** J | | | 61 or MDL | N/A |
| Indeno(1,2,3-cd)pyrene | 1,500 J | | | | | | | | | 3,200 | N/A |
| **TOTAL SVOCs** | 27,028 | 34,890 | | 12,166 | 5,180 | 3,280 | 16,971 | | | 500,000 | N/A |
| **TCL Pesticides/PCBs (ppb)** | | | NA | | | | | NA | NA | | |
| 4,4'-DDE | 11 J | 23 J | | | | | 15 J | | | 2,100 | N/A |
| 4,4'-DDD | 26 J | 41 | | | | | 22 J | | | 2,900 | N/A |
| 4,4'-DDT | 7.1 J | 13 J | | | | | 2.4 J | | | 2,100 | N/A |
| **TOTAL PESTICIDES** | 44.1 | 77 | | | | | 39.4 | | | 10,000 | N/A |
| **TOTAL PCBs** | | | | | | | | | | 10,000 | N/A |
| **TAL Metals (ppm)** | | | NA | | | | | NA | NA | (ppm) | (ppm) |
| Aluminum | 4,220 | 7,590 | | 3,940 | 3,490 | 5,820 | 6,810 | | | SB | 33,000 |
| Arsenic | | 3.36 | | **10.2** | **12.7** | | **35.6** | | | 7.5 or SB | 3 - 12* |
| Barium | 27.8 | **797** | | **506** | 219 | 22.7 | **511** | | | 300 or SB | 15 - 600 |
| Cadmium | | **1.87** | | **1.72** | **2.02** | | **2.43** | | | 1 or SB | 0.1 - 1 |
| Calcium | 44,500 | 10,500 | | 13,400 | 18,300 | 2,610 | 12,700 | | | SB | 130 - 35,000* |
| Chromium | **15** | **39.3** | | **29.3** | **39** | **18.1** | **32.9** | | | 10 or SB | 1.5 - 40* |
| Cobalt | 4.81 | 7.87 | | 5.71 | 11 | 4.88 | 10.2 | | | 30 or SB | 2.5 - 60* |
| Copper | **44.5** | **138** | | **68.6** | **212** | 24 | **244** | | | 25 or SB | 1 - 50 |
| Iron | **26,100** | **25,100** | | **52,800** | **71,800** | **32,400** | **73,800** | | | 2,000 or SB | 2,000 - 550,000 |
| Lead | 46.1 | **1,160** | | 52.1 | 233 | 14.8 | 459 | | | SB | 200 - 500** |
| Magnesium | 21,300 | 3,870 | | 2,410 | 1,780 | 4,270 | 1,880 | | | SB | 100 - 5,000 |
| Manganese | 228 | 250 | | 361 | 408 | 175 | 625 | | | SB | 50 - 5,000 |
| Nickel | **16.2** | **36.5** | | **34.3** | **56.8** | **27** | **55** | | | 13 or SB | 0.5 - 25 |
| Potassium | 654 | 1,300 | | 606 | 602 | 1,970 | 917 | | | SB | 8,500 - 43,000* |
| Selenium | | | | | | **7.64** | **26.4** | | | 2 or SB | 0.1 - 3.9 |
| Silver | | | | | | | | | | SB | N/A |
| Sodium | 811 | 711 | | 1,260 | 798 | 7,240 | 1,160 | | | SB | 6,000 - 8,000 |
| Vanadium | 33.8 | 40.3 | | 20.5 | 29.5 | 32.5 | 88.1 | | | 150 or SB | 1 - 300 |
| Zinc | **75.8** | **546** | | **593** | **346** | **72.6** | **663** | | | 20 or SB | 9 - 50 |
| Mercury | | **0.48** | | **0.35** | **0.35** | **0.52** | **0.86** | | | 0.1 | 0.001 - 0.2 |
| Cyanide, Total | | | | | | | | | | | N/A |

B = Detected in blank sample
J = Estimated
**BOLD** = exceeds screening level
[ ] = Higher end of Eastern USA Background range exceeded
NA = Not Analyzed
ND = Not Detected
N/A = Not Available

Where health-based criteria for individual SVOCs are not available under TAGM, the 50 ppm TAGM limit for individual SVOCs is used.
* = New York State background levels
** = Ave. background in metropolitan or suburban areas

* Due to the presence of methylene chloride and acetone in the blank samples, the reported concentrations of these compounds in the soil cover samples are considered to be attributable to laboratory contamination and are not included in the Total VOC values.

# APPENDIX B

# SAMPLE HEALTH AND SAFETY PLAN OUTLINE

# SAMPLE HEALTH AND SAFETY PLAN OUTLINE
# CONSTRUCTION, OPERATION AND MAINTENANCE ACTIVITIES
# FERRY POINT PARK, BRONX, NEW YORK

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1.0 Introduction
- 1.1 Objectives and Applicability
- 1.2 General Site Description

2.0 Health and Safety Personnel
- 2.1 Organizational Structure
- 2.2 Key Personnel/Responsibilities
  - 2.2.1 Health and Safety Director/Manager
  - 2.2.2 Project Manager[1]
  - 2.2.3 Field Operations Manager[1]
  - 2.2.4 On-Site Health and Safety Coordinator[1]
  - 2.2.5 On-Site Health and Safety Coordinator - Alternates[1]
  - 2.2.6 Subcontractors

3.0 Task/Operation Safety and Health Risk Analysis
- 3.1 Historic Overview of Site
- 3.2 Task-by-Task Safety and Health Risk Analysis
- 3.3 Hazard Communications Plan

4.0 Medical Surveillance and Training Requirements
- 4.1 Medical Surveillance
  - 4.1.1 Baseline or Pre-Assignment Monitoring
  - 4.1.2 Periodic Monitoring
  - 4.1.3 Site-Specific Medical Monitoring
- 4.2 Training
  - 4.2.1 OSHA-Required Training
  - 4.2.2 Site-Specific Training

5.0 Site Control Measures
- 5.1 Site Communications Plan
- 5.2 Work Zone Definition
- 5.3 Nearest Medical Assistance
- 5.4 Safe Work Practices
- 5.5 Confined Space Entry
- 5.6 Emergency Alarm Procedures

---

[1] Likely to be applicable only to the construction component of the Health and Safety Plan

6.0 Personal Protective Equipment
- 6.1 Overview of Levels of Protection
- 6.2 Personal Protective Equipment during Construction
  - 6.2.1 Equipment Overview
  - 6.2.2 Monitoring Requirements
  - 6.2.3 Action Levels

7.0 Task-Specific Health and Safety Procedures
- 7.1 General
  - 7.1.1 Chemical and Physical Hazards
  - 7.1.2 Monitoring
  - 7.1.3 Action Levels
  - 7.1.4 Personal Protective Equipment
  - 7.1.5 Decontamination
- 7.2 Subsurface Construction Activities
  - 7.2.1 Chemical and Physical Hazards
  - 7.2.2 Monitoring
  - 7.2.3 Action Levels
  - 7.2.4 Remedial Measures
  - 7.2.5 Personal Protective Equipment
  - 7.2.6 Exclusion Zone
  - 7.2.7 Decontamination
- 7.3 Landfill Gas Monitoring
  - 7.3.1 Monitoring Mechanisms
  - 7.3.2 Monitoring Procedures
  - 7.3.3 Action Levels
  - 7.3.4 Remedial Measures
- 7.4 Confined Space Entry
  - 7.4.1 Chemical and Physical Hazards
  - 7.4.2 Procedure for Confined Space Entry
  - 7.4.3 Confined Space Observer

8.0 Emergency Response/Contingency Plan
- 8.1 Pre-Emergency Planning
- 8.2 Personnel Roles and Lines of Authority
- 8.3 Emergency Recognition and Prevention
- 8.4 Evacuation Routes and Procedures
- 8.5 Site Security and Control
- 8.6 Emergency Contact/Notification System
- 8.7 Emergency Medical Treatment Procedures
- 8.8 Fire or Explosion Response Procedures
- 8.9 Spill or Leak Response Procedures
- 8.10 Personal Protective Equipment and Emergency Equipment

# APPENDIX C

# METHANE GENERATION AND PRELIMINARY VENTILATION RATE CALCULATIONS

Ferry Point Park
Bronx, NY

Goal: Determination of the maximum thickness of refuse at the landfill site during the soil boring program conducted in June 1999.

| Well ID | Top of Refuse feet bgs | Bottom of Refuse feet bgs | Refuse Thickness feet |
|---|---|---|---|
| B-1 | 3 | 6 | 3 |
| B-2 | 3 | 14 | 11 |
| B-3 | 3 | 14 | 11 |
| B-4 | 3 | 14 | 11 |
| B-5 | 3 | 12 | 9 |
| B-6 | 7 | 19 | 12 |
| B-7 | 3 | 14 | 11 |
| B-8 | 3 | 16 | 13 |
| B-9 | 3 | 40 | 37 |
| B-10 | 3 | 18 | 15 |
| B-11 | 3 | 10 | 7 |
| B-11 (Alt) | 5 | 30 | 25 |
| B-12 | 3 | 22 | 19 |
| B-13 | 3 | 26 | 23 |
| B-14 | 4 | 18 | 14 |
| B-15 | 8 | 22 | 14 |
| **Maximum Refuse Thickness** | | | **37** |

## Calculation for Met' e Generation Rate

### Ferry Point Park
### Bronx, NY

Given: $Q(CH4) = Lo \times R \times (e^{(-kc)} - e^{(-kt)})$

| | | | Comment |
|---|---|---|---|
| | | | see reference 1 |
| Where: | | | |
| Q(CH4) = the methane generation rate at time,t in cu. meters per year per square meter of landfill = | | | from above calculation |
| Lo = the methane generation potential of the refuse, in cu. meter of CH4 per megagram of refuse = | | 125 | see reference 2 |
| R = the average annual refuse acceptance rate during active life in megagrams per year per square meter of landfill = | | 0.6744976 | see aux. calculation 1 below |
| e = base log, unitless | | 2.7182818 | |
| k = the methane generation rate constant in year^-1 | | 0.04 | see reference 2 |
| c = the time since landfill closure in years = | | 37 | landfill closure in 1962 |
| t = the time since initial refuse placement in years = | | 47 | landfill began accepting refuse in 1952 |
| Q(CH4) = | 6.33 | m^3/yr/m^2 of landfill | |
| Q(CH4) = | 0.00004 | ft^3/min/ft^2 of landfill | |

**References:**


1) Air Emissions From Municipal Solid Waste Landfills - Background Information For Proposed Standards and Guidelines. Office of Air quality Planning and Standards, U.S. EPA Research Triangle Park, North Carolina, EPQ-450/3-90-011a. Chapters 3 and 4. March 1991
2) Compilation of Air Pollutant Emission Factors - Volume I: Stationary Point and Area Sources - AP-42 Fifth Edition. Section 2.4 Office of Air quality Planning and Standards, U.S. EPA Research Triangle Park, North Carolina, January 1995.


**Auxiliary Calculations**

1) Calculation for R

In order to produce the most conservative methane generation rate value (the highest methane generation rate), the largest amount of refuse will be used in the calculation. This will be determined using the maximum refuse thickness found during soil boring at the site.

Given

$R = Th\ (refuse, max) \times rho(refuse) * 0.3048 \times 0.0006/t2$

| | | | Comment |
|---|---|---|---|
| Where: | | | |
| R = the average annual refuse acceptance rate during active life in megagrams per year per square meter of landfill = | | ----- | calculated below |
| Th (refuse, max) = the maximum thickness of refuse within the landfill in feet = | | 37 | see attached spreadsheet |
| rho (refuse) = the density of the refuse in pounds per cubic yard = | | 1000 | |
| 0.3048 = conversion factor to convert from feet to meters = | | 0.3048 | |
| 0.0017 = conversion factor to convert value from pounds per cubic yard to megagrams per cubic meter = | | 0.0006 | .00045 Mg/lb x cubic yard per .076 cubic meter |
| t2 = total time for refuse placement in years | | 10.0000 | duration of landfill operation |
| R = | 0.67 | Mg /m^2/yr | |

# APPENDIX D

# IRRIGATION/INFILTRATION MEMORANDUM

**JWE ENGINEERING AND ENVIRONMENTAL SERVICES, LLC**

70 WEST RED OAK LANE, WHITE PLAINS, NY 10604 FAX: (914) 697-4803 OFFICE: (914) 697-7614

# *MEMORANDUM*

*Date:* September 9, 1999

| | | | |
|---|---|---|---|
| *Memo To:* | Steve Rosen | *Fax No:* | 212-213-3191 |
| *CC:* | Steve Kass | | 212-732-3232 |
| | Pierre Gagne | | |
| | Stuart Cohen | | 301-933-4701 |
| | Bob Smith | | 860-298-6399 |

*Memo From:* **W. Charles Utschig, Jr. P.E.**

*Project No.:* 1147

*Reference:* Ferry Point Park
Water Balance Analysis

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The following is a simplified response to the question from the NYCDEP relating to the potential increase in surface water contributing to the groundwater and on this site as a result of the proposed development.

There will be two new influences on the ground water on this site because of the proposed development. The first is the impact the new impervious areas will have on the amount of water reaching the ground water through percolation. The development of this site will produce approximately 26 acres of impervious area, approximately 13.5% of the overall site. Runoff from these areas will be directed to detention facilities where it will be detained and discharged through a closed drainage system either into the Cities combined sewer system or directly to the River. The collection and handling of the runoff from all impervious areas produces a reduction in runoff percolating into the groundwater. This reduction is proportionate to the amount of impervious area being created and produces a reduction in the amount of surface water filtering through the landfill material and into the groundwater.

The second component is the irrigation system. The introduction of irrigation water onto the site could potentially influence the water balance and have an affect on the amount of water percolating into the groundwater. However, "the state of the art" technology utilized in the design and construction of the

irrigation system allows the Golf Course Superintendent to monitor the water needs of the grass and apply only that which is actually required. By applying only the required amount of water, the root structure of the grass absorbs the water with no measurable additional percolation through the root structure into the groundwater. The Golf course Superintendent uses a weather station to determine the water needs of the grass. Using this information and a prescription watering technique, that allows control over each individual sprinkler head, the Superintendent is able to apply only the required amount of water need to sustain the growth of turf grass, with no measurable excess water beyond the root zone. The amount of water used to irrigate the golf course is estimated to be approximately 0.18 inches per day based on a typical summer day demand. In unusual circumstances where an unanticipated rainfall follows soon after irrigation, the additional soil layer added to the existing landfill cover layer would be adequate to prevent any significant increase in groundwater/leachate flows, even without taking credit for the reduced surface runoff described above.

In conclusion, through the use of a highly sophisticated irrigation system and the control of runoff from new impervious areas, it can be concluded that the there should be no significant increase in runoff filtering through the developed site and into the ground water.

**Attachment H:** **Waterfront Revitalization Program**

## NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM

## CONSISTENCY ASSESSMENT FORM

Proposed actions subject to CEQR, ULURP, State or Federal Agency Actions that are situated within the designated boundaries of New York City's Coastal Zone must be accessed for their consistency with the City's Local Waterfront Revitalization Program (LWRP). New York City's LWRP was adopted as a 197-a Plan in coordination with local, State, and Federal laws and regulations, including the State's Coastal Management Program (Executive Law, Article 42) and the Federal Coastal Zone Management Act of 1972 (P.L. 92-583). This form is intended to assist an applicant in certifying that the proposed activity is consistent with the local Waterfront Revitalization Program. It should be completed at the time when the local or state application is prepared. The Department of City Planning will use the completed form and accompanying information in its review of the applicant's certification of consistency. Answering "yes" to a question in section C does not necessarily mean an inconsistency exists but rather is intended to alert the applicant and reviewer that additional information is required.

### A. APPLICANT

1. Name: New York City Department of Parks & Recreation Contact Person: Jane Cleaver
   (please print)

2. Address: The Arsenal, Central Park, New York, New York 10021

3. Telephone: Area Code (212 ) 360-3401

4. Owner: New York City Department of Parks & Recreation

### B. PROPOSED ACTIVITY

1. Brief description of activity: Currently undeveloped parkland would be developed as a golf course and public park with restaurants and parking.

2. Purpose of activity: To provide recreational opportunities and a waterfront park

3. Location of activity:

   Bronx (County)

   The eastern portion of Ferry Point Park, bounded by the Bronx-Whitestone Bridge to the west, Balcom Avenue to the east, Schley Avenue to the north, and the East River to the south. (Street or Site Description)

4. Type of local or state action required: Uniform Land Use Review Procedure (ULURP)

5. If a federal or state permit/license was issued or is required for the proposed activity, identify the agency and provide the application or permit number, if known: No federal or state permits are required.

6. Is federal or state funding being used to finance the project? If so, please identify the funding source.

   No federal or state funds are being used.

**C. COASTAL ASSESSMENT** The following checklist represents in a broad sense, the 44 State Coastal Zone Management Program policies and 12 City LWRP policies. (The numbers and letters in parentheses after each question indicated the policy or policies that are the focus of the question.) A listing and detailed explanation of the Waterfront Revitalization Program policies titled New York City Waterfront Revitalization Program Manual can be obtained from the Department of City Planning Book Store located at 22 Reade Street, Manhattan, (212) 720-3667. Figures listed after various questions can be found in Section 3K of the Manual and are simplified, for information concerning detailed maps please contact the Department of City Planning, Waterfront and Open Space Division, (212) 720-3620.

Check either "Yes" or "No" for each of the following questions.

| | | YES | NO |
|---|---|---|---|
| 1. | Is the site(s) that would be affected by the action located in or near any significant coastal fish and wildlife habitats? (7) (see Figure 3K-2) | | ✔ |
| 2. | Would the action involve any activity in or near a tidal or freshwater wetland? (44) (see Figure 3K-3) | ✔ | |
| 3. | Would the action result in any activities within a Federally designated flood hazard area and/or State-designated erosion hazard area? (11, 12, 17, C, D, E) (see Figure 3K-4) | ✔ | |
| 4. | Would the action involve construction or reconstruction of a flood or erosion control structure? (13, 14, 16, 17, C, D, E) | | ✔ |
| 5. | Would the action involve any new or increased activity on or near any beach, dune, barrier island, or bluff? (12, G) | | ✔ |
| 6. | Would the action involve mining, dredging, or dredge disposal, or placement of dredged or fill materials in coastal waters? (15, 35, B) | | ✔ |
| 7. | Would the action result in any of the following:<br>- Shipping, handling, or storing of solid wastes, hazardous materials, or other pollutants; | | ✔ |
| | - Development of a site that may contain contamination or has a history of underground fuel tanks, oil spills, etc.; | ✔ | |
| | - Construction activities that could lead to erosion . (8, 36, 37, 38, 39) | | ✔ |
| 8. | Would the action result in the discharge of toxins, hazardous substances, or other pollutants, effluent, or waste into any waters? (8, 30, 31, 34, 37, 38, 40) | | ✔ |
| 9. | Would the action result in the draining of storm water runoff or sewer overflows into coastal waters? (8, 32, 33) | | ✔ |
| 10. | Would the project in any way affect the water quality classification of nearby waters or be unable to be consistent with that classification? (31) (see Figure 3K-5) | | ✔ |
| 11. | Would the action cause violations of the National or State air quality standards? (41, 42) | | ✔ |
| 12. | Would the action result in significant amounts of acid rain precursors (nitrates and sulfates)? (43) | | ✔ |
| 13. | Would the action have any effect on commercial or recreational use of fish resources? (9, 10) | | ✔ |
| 14. | Would the action have any effects on surface water or groundwater supplies? (38) | | ✔ |
| 15. | Would the action result in a reduction of existing or required access to or along coastal waters, public access areas, public parks or open spaces? (19, 20, 21, F) | | ✔ |
| | | YES | NO |
| 16. | Would the action result in any development along the shoreline but NOT include new water-enhanced or water-dependent recreation space? (21, 22) | | ✔ |
| 17. | Would the action result in new open space that is not accessible to immobile (handicapped) user groups? (F) | | ✔ |
| 18. | Would the action result in the provision of open space without the provision for its maintenance? (H) | | ✔ |

| | | | |
|---|---|---|---|
| 19. | Would the action affect natural or built resources that contribute to the scenic quality of a coastal area? (25) | | ✔ |
| 20. | Does this site currently include elements that degrade the area's scenic quality or block views to he water? (25) | | ✔ |
| 21. | Would the proposed action have a significant adverse impact on historic or archaeological resources? (23) | | ✔ |
| 22. | Would the action be located in an important maritime and industrial area as shown in the New York City Comprehensive Waterfront Plan? (see Figure 3K-6) | | ✔ |
| | Some of these areas may include portions of the following locations:<br>- Kill Van Kull in Staten Island from Howland Hook to Snug Harbor;<br>- Brooklyn waterfront at Red Hook and Sunset Park (from Pier 6 to Owls Head);<br>- Brooklyn Navy Yard:<br>- Newtown Creek; and<br>- South Bronx (Port Morris and Hunts Point). (2, 3) | | ✔ |
| 23. | Would the action be located in a small harbor area (any area with a unique maritime identity; for example, Sheepshead Bay or City Island)? (4) | | ✔ |
| 24. | Would the action involve the siting or construction of a facility essential to the generation or transmission of energy, or a natural gas facility, or would it develop new energy resources? (27, 29, I) | | ✔ |
| 25. | Would the action involve ice management practices? (28) | | |
| 26. | Would the action affect any sites that have been used as landfills? (J, L) | ✔ | |
| 27. | Is illegal dumping occurring on a site that would be affected by the action? (K) | | ✔ |
| 28. | Would the action affect solid waste management goals and objectives? (L) | | ✔ |
| 29. | Is the site of the action a deteriorated or underutilized waterfront site? (1, A) | ✔ | |
| 30. | Does the site of the action include any waterfront structures (e.g., piers, docks, bulkheads, wharves, or erosion protection devices)? (A) | ✔ | |
| 31. | Would the action result in a change in scale or character of a neighborhood? (1) | | ✔ |
| 32. | If the action would affect a site located on the waterfront, would it facilitate the siting of a use that is NOT water-dependent? (2) | | ✔ |
| | | YES | NO |
| 33. | Would the proposed action require provision of new public services or infrastructure in an undeveloped or sparsely populated section of the coastal area? (5, 6) | | ✔ |
| 34. | Would the action result in a physical alternation to a site along the waterfront, including land along the shoreline, land underwater, or coastal waters? (2, 11, 12, 18, 20-22, 25, 28, 32, 35, 37, 38, 41, 43, 44, A-E) | ✔ | |

D. ADDITIONAL STEPS

If any of the questions in Section C are answered "Yes", then the applicant or agent is advised to consult the local Waterfront Revitalization Program document, available at the Department of City Planning Book Store. The proposed activity must be analyzed in more detail with respect to the applicable state or local coastal policies. On a separate page(s), the applicant or agent shall: (a) identify, by policy numbers, which coastal policies are affected by the activity, (b) briefly assess the effects of the activity upon the policy; and (c) state how the activity is consistent with each policy. Following the completion of this written assessment, the applicant or agency shall complete Section E and submit the documentation required by Section F.

E. CERTIFICATION

The applicant or agent must certify that the information provided is truthful and that the proposed activity is consistent with the New York City Waterfront Revitalization Program or the State Coastal Management Program, as appropriate. If this certification cannot be made, the proposed activity shall not be undertaken as proposed and the applicant should contact the Waterfront and Open Space Division for further instructions. If the certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program, or with the applicable New York City Waterfront Revitalization Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Signature: _____ Date: _____

F. SUBMISSION REQUIREMENTS

1. The applicant or agent shall submit the following documents to the New York City Department of City Planning, Waterfront and open space Division, 22 Reade Street, 6W, New York, NY, 10007.

   a. Original signed Waterfront Revitalization Program Assessment Form.
   b. Copy of the completed ULURP, CEQR, or State Permit Application. (If applicable)
   c. Other available information which would support the certification of consistency.

2. If there are any questions regarding the completion or submission of this form, contact the Department of City Planning, Waterfront and Open Space Division at (212) 720-3620.

## ADDITIONAL INFORMATION FOR THE COASTAL ZONE CONSISTENCY DETERMINATION

New York City Department of Parks and Recreation (DPR) plans to issue a license to Ferry Point Partners, LLC, for a major concession. Ferry Point Partners would develop the currently unused eastern portion of Ferry Point Park into a golf course and public waterfront park. Ferry Point Partners would be responsible for the development, construction, operation, management and maintenance of the golf course, park and all appurtenance facilities. The golf course would occupy the majority of the interior of the site with a community park fronting onto Balcom Avenue. A 300-foot wide swath along the East River would be used as the public waterfront park. This park would be physically connected with the existing Ferry Point Park on the west side of the Bronx-Whitestone Bridge.

The following narrative discusses all questions in the Consistency Assessment Form that were answered with a yes in order. Then public access is discussed.

*POLICIES 44, 11, 12, 17, C, D, E*

The waterfront is currently protected with a rip rap slope that is generally in good functional condition. Where necessary, the slope would be repaired in-kind to assure its long term stability and functionality. A small portion along the waters' edge of the site is within the 100-year flood plain. No structures would be built in this area. The restaurants and other buildings would be located in areas outside of the 100-year flood plain.

*POLICIES 8, 36, 37, 38, 39, J, L, K*

Evidence indicates that the land was built out into the water using municipal waste and construction debris. The soil is being sampled, and a detailed discussion of the findings is in Attachment G. Over the whole site with the exception of the proposed lakes, a layer of clean soil would be placed over the current soils. This layer would prevent accidental human contact with the underlying soils. In the lakes, an impervious layer would be placed to hold the water. This layer would also prevent human contact with the existing soils. The materials that are removed to form the lakes would be used to contour the land in the golf course. Any waste materials excavated would be disposed of off-site in accordance with applicable rules and regulations. The development of the golf course and park with their attendant uses would stop the illegal dumping that currently occurs on the site.

*POLICIES 1, A*

The site is currently vacant, except for the organic recycling/composting facility, an informal model airplane facility, and some active recreation facilities. The proposed public recreation facility would bring park activities and users to the area. The deteriorated (but functioning) waterfront rip rap slope would be rebuilt and repaired. The waterfront itself would be used as the park.

*POLICIES 19, 20, 21, 22, F*

Access would be through the current roadway system that is used for the developed portion of Ferry Point Park on the west side of the Bronx-Whitestone Bridge. Because of its proximity to major roadways in the area, with the exception of the community park, the proposed recreation facility would be primarily a regional park. Vehicles, pedestrians, and bicycles would be able to access the golf course, the waterfront park, the boathouse grill restaurant, and the fine dining/banquet facility via the I-678 service road which goes under the Bronx Whitestone Bridge. Vehicular parking and bike racks would be provided at various locations on-site. To provide security, the public recreational facilities would be fenced, and the single access point would allow monitoring of the park and golf course. The new eastern waterfront park would be connected with the existing western portion

of the Ferry Point Park, providing easy circulation between both facilities and providing a continuous waterfront walkway. Access for emergency vehicles will be provided via Emerson Avenue (see Figure A-2, "Site Plan," in Attachment A, "Project Description").

**Attachment I:** **Infrastructure**

## 1.0 INTRODUCTION

The project will utilize the existing sewer water and drainage systems adjacent to and through the project site to service the proposed golf course, parks, restaurant catering facility and other secondary uses. It will consume energy in the form of electricity and natural gas and will generate solid waste. This attachment identifies the existing services available in the area, outlines the demands created by this project and concludes with a description of the project designed to produce no adverse impacts on the existing infrastructure or adjacent users.

## 2.0 WATER SUPPLY

### 2.1 Existing Conditions:

Water mains exist around the perimeter of this site. There is an existing 12-inch water main that runs along the east side of the service road. A 12-inch water mains also runs along the west side of Emerson Avenue, the south side of Miles Avenue and the west side of Balcom Avenue. Hydrants are spaced along these roads at intervals of approximately 250 feet. Fire flow tests were run on the 12-inch main in the south side of Miles Avenue between Emerson Avenue and Robinson Avenue and on the 12-inch main in the east side of the Hutchinson River Parkway between Randall Avenue and Philip Avenue. The test results indicate a flow of 500 gallons per minute (gpm) is available with a static pressure of approximately 42 pounds per square inch (psi) and a residual pressure of 41 psi.

### 2.2 Proposed Conditions - Demand.

The estimated average daily demand on the water system created by this project is estimated as follows:

| | | |
|---|---|---|
| Irrigation System | | 500,000 gpd |
| Golf Club | 216 people x 25 gpd | 5,400 gpd |
| Catering Facility | 1000 seats x 20 gpd | 20,000 gpd |
| Waterfront Park | 500 people x 5 gallons per person (gpp) | 2,500 gpd |
| Maintenance Facility | 30 people x 25 gpd | 4,166 gpd |
| Boathouse Grill | 1200 patrons x 20 gpp | 15,000 gpd |
| **Average Daily Domestic Demand** | | **51,066 gpd** |
| **Average Daily Irrigation Demand** | | **500,000 gpd** |
| **Total Average Daily Demand** | | **551,066 gpd** |

The peak daily demand would be the irrigation flows at 500,000 gpd plus the domestic flows peak at a factor of four, 204,264 gpd, for a total peak daily demand of 704,264 gpd. Because there are no facilities planned at this time in the community park, there will be no impact on the domestic water demand.

The average hourly supply, drawn from the City system to satisfy the average daily demand calculated above is shown in the table below. The average hourly supply is based on a supply duration of 10 hours for a 24-hour period.

| | | |
|---|---|---|
| Irrigation supply | 500,000/10 hours | 833 gpm |
| Domestic supply | 51,066/10 hours | 85 gpm |
| **Average Hourly supply** | | **920 gpm** |

The peak hourly demand using the same supply times and peaking factors outlined above would be approximately 1200 gpm.

Based on the fire flow test results which produced a flow rate of 500 gpm with only 1 psi drop in pressure, the average daily demand will drop the available pressure in the City system by less than 2 psi and the peak hourly demand will reduce pressures by less than 3 psi. Both of these pressure drops are negligible and should not adversely affect the available water supply or pressure in the area.

In addition, these calculations are very conservative in that the supply to the irrigation system will occur between 8 PM and 6 AM—a time that is off peak compared to the demands of other components of this project (predicted to occur from 6 AM to 12 AM) but also off peak from the existing demand in the City system. The peak in this residential area will be early morning, approximately 6-7 AM.

## 2.3 Water Distribution System

The expansion of the water supply system to service this project includes the extension of the water main along Emerson Avenue through the site, interconnecting it with the existing water main along the service road. The proposed loop will include a 12-inch Ductile Iron mainline with fire hydrants spaced at 250 feet on center. In addition, a line will be extended from the main along the service road to serve the maintenance facility and supply the irrigation system. From this looped line services for both fire flows and domestic flows will be extended to the clubhouse, fine dining/banquet facility and boathouse grill. In addition, water will be supplied to the bathroom facilities on the golf course and the facilities planned for the waterfront park.

The additional demand created by this project relative to supply and pressure will not have an adverse impact of the overall existing system.

# 3.0 Sanitary Sewer

## 3.1 Existing Conditions

This area of the Bronx is served by a combined sewer system, which ultimately discharges to and is treated at the Hunts Point Sewage Treatment Plant. There are major combined sewer mains along Miles Avenue, Emerson Avenue, Balcom Avenue and Schley Avenue including that portion of Schley Avenue that crosses this site and is proposed to be demapped. These lines were originally designed to handle the storm and sanitary sewer discharges from this site. These existing sewers vary in size from 3 by 4 feet along Emerson Avenue to 12 by 8 feet along that portion of Schley Avenue that crosses through this site.

## 3.2 Proposed Conditions

Based on the estimated water demand outlined above, the average daily sanitary sewer flows generated by this project are estimated to be approximately 51,066 gpd. These flows will be directed to the existing collection system adjacent to the site and ultimately treated at the Hunts Point Treatment plant. The average daily flow will be approximately 71 gpm based on a flow period of 12 hours. Because there are no facilities planned at this time, no additional sewer flows would be generated from this park.

The existing combined sewer system will be utilized to service this site. The primary sanitary sewer collection system will include a 10-inch gravity sewer line extending from Emerson Avenue along the loop

road. From this main, gravity services will be extended to the clubhouse, fine dining/banquet facility, and the facilities at the waterfront park.

Because of the grade differential, a pump station and forcemain will be required to service the boathouse grill. The pump station will be located behind the restaurant and the forcemain will extend to meet the proposed gravity line. The maintenance facility will be connected to the combines system by gravity and the facilities on the golf course will require small grinder pump stations.

Based on general information provided by the New York City Department of Environmental Protection (DEP), there would be adequate conveyance capacity and plant capacity to handle the flows generated by this project with out adversely affecting the existing systems.

## 4.0 Solid Waste

### 4.1 Existing Conditions

The existing site produces a small amount of solid waste from one existing use, the City's organic recycling and composting facility.

### 4.2 Proposed Conditions

All aspects of this facility will generate solid waste. A private commercial operator will be contracted to handle all waste generated on-site. All facilities will be provided with appropriately sized dumpsters or containers. The recycling/composting facility is proposed to be relocated, and would, therefore, no longer generate solid waste.

It is anticipated that the private operator contracted to handle this facility would have adequate capacity to handle the solid waste generated by this project without adversely affecting their existing operations or the areas adjacent to this project.

## 5.0 Energy

### 5.1 Existing Conditions

The existing site consumes a small amount the energy as a result of the City's recycling/composting operations.

### 5.2 Proposed Conditions:

It is anticipated that this facility will be serviced by both electricity and natural gas. The estimated demands for the proposed uses are summarized in the following table:

| Use | Electrical | Gas (cubic feet/hour) |
|---|---|---|
| Clubhouse | 125 kw | 400 cfh |
| Boathouse Grill | 215 kw | 1,250 cfh |
| Catering Facility | 500 kw | 3,500 cfh |
| Managers Quarters | 60 kw | 400 cfh |
| Service Building | 100 kw | 200 cfh |
| Parking Lighting | 40 kw | |
| Park Facilities | 50 kw | |
| **Total:** | **1090 kw** | **5,750 cfh** |

The electric services to the site will be extended from the existing lines along the east side of the site. Based on the anticipated loads, it appears that this project can be serviced without any adverse affects on the current system and the areas adjacent to this site. Because the recycling/composting facility is proposed to be relocated, it would no longer consume any energy.

## 6.0 DRAINAGE SYSTEM

### 6.1 Existing Drainage

The existing site ultimately drains to the East River. The site is relatively flat with elevations varying from 6 to 35. The site can be divided into three drainage areas generally defined as follows (see Figure I-1):

Area 1 – This area is approximately 40 acres in size and drains to the existing drainage system along the service road and then to the East River.

Area 2 – This area is approximately 75 acres in size and drains to the combined sewer system along Balcom Avenue, Miles Avenue and Emerson Avenue. This combined system has a diversion chamber at the intersection of Schurz Avenue and Emerson Avenue, which under high flow conditions discharges into the East River.

Area 3 – This area is approximately 90 acres in size and drains directly to the East River by overland flow.

A portion of the Bronx-Whitestone Bridge also drains through the project site and into the East River along with a portion of the City park to the west of the bridge. Absent remediation, which is currently not provided, water from the Bronx-Whitestone Bridge collects in low-lying areas on the westerly side of the bridge adjacent to Area 3.

### 6.2 Proposed Conditions

Under the proposed conditions, the site would be divided into seven primary drainage areas (see Figure I-2). All of them would include provisions for water quality treatment prior to discharge of the site. In addition, those areas that discharge into the City's combined sewer system have been designed with detention basins so that the pre-development discharges are not exceeded in the post-development condition for the prescribed rainfall event.

The methodology utilized in this analysis includes TR-20 and TR-55 computer programs designed to model small watersheds and the recommendations included in the New York State Department of Environmental Conservation (DEC) publication entitled "Reducing the Impacts of Stormwater Runoff from New

Figure F-1
Existing Drainage Areas

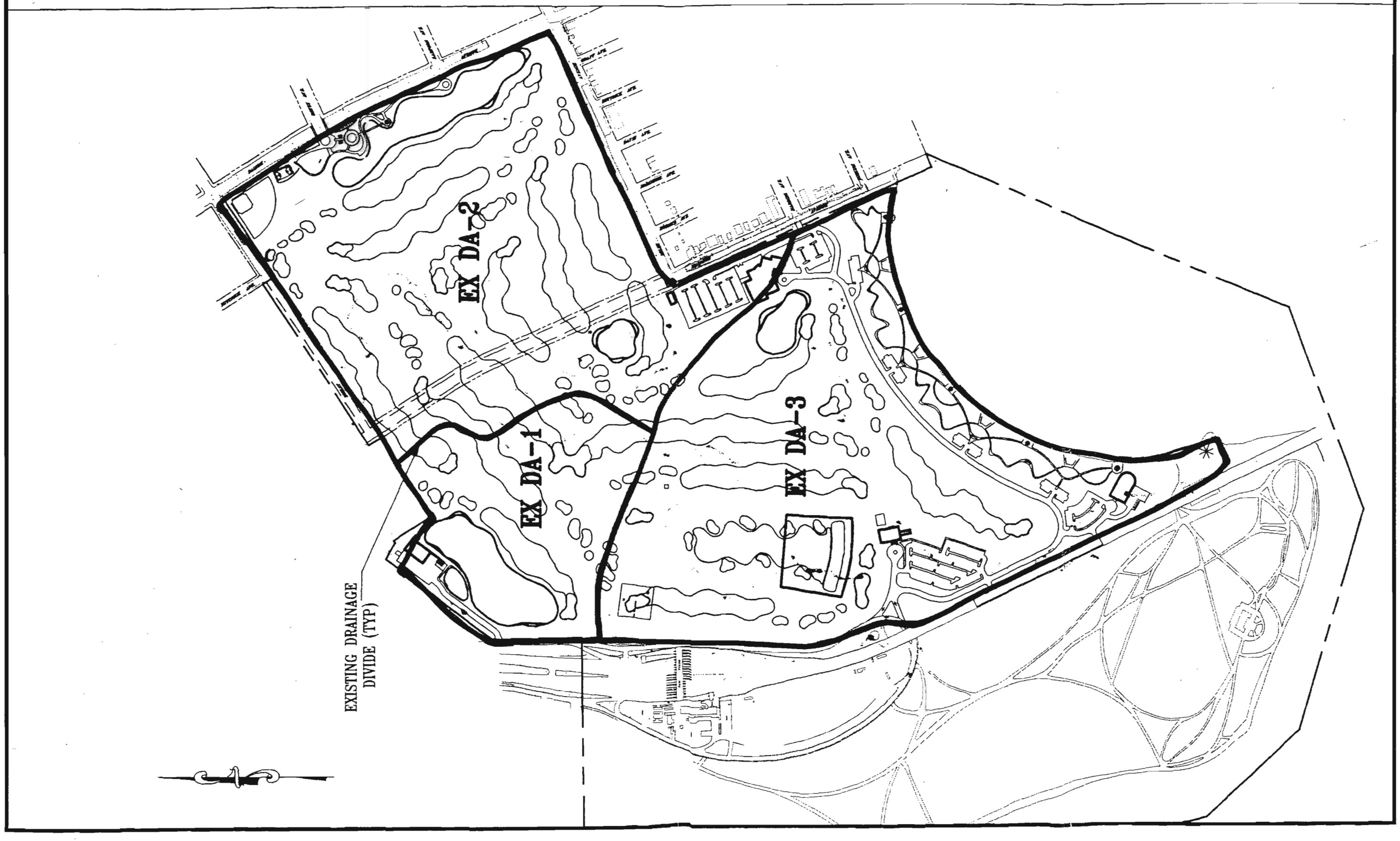
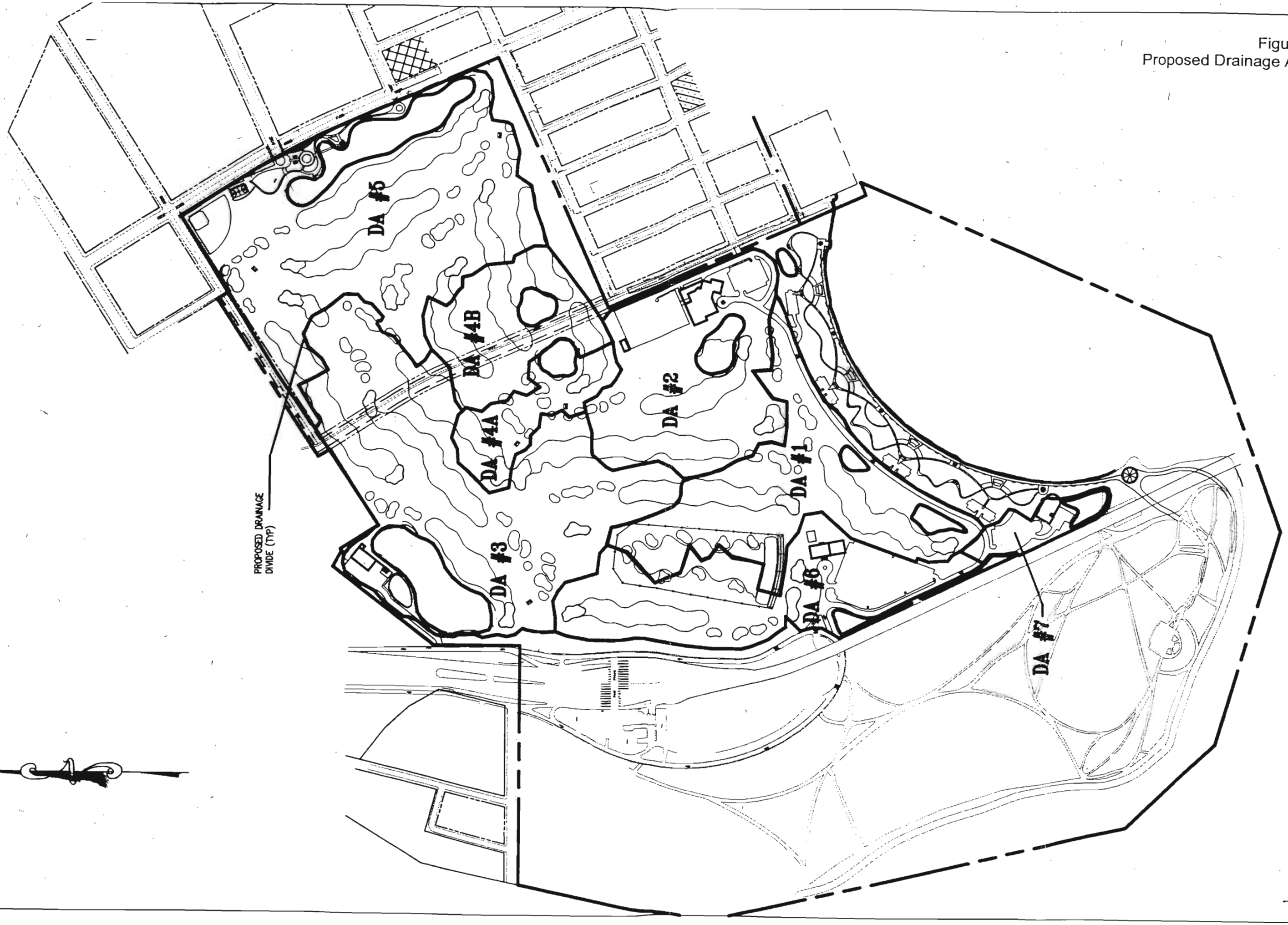


Figure 1-2
Proposed Drainage Areas



Development," the DEP publication entitled "Criteria for Determination of the Volume of Detention Facilities" and "Applicant's Guide to Stormwater Pollution Prevention Plans," also by DEP.

This system is designed to mitigate runoff contaminates generated by the proposed project, using wet and dry detention basins which include prolonged (in excess of two days) detention of the first flush. The first flush is defined as the first ½-inch of runoff from those areas whose imperviousness has changed, or a 1-year, 24-hour storm event—whichever is greater. For this project, the detention systems are sized to provide extended detention of the 1-year storm event. The performance of this system was evaluated for the 2-year event.

Runoff from all impervious areas and the golf course except the waterfront park is directed to some form of a detention basin. These basins are then designed with an outlet structure that detains for an extended period of time the first flush which contains approximately 90 percent of the pollutants generated by developments similar to the proposed project. Those areas that discharge out of the detention system and into the City's combined sewer system have been designed to include the detention volume necessary to insure that the post-development discharge rates do not exceed the estimated allowable discharge rates based on the estimated design capacity of the existing combined sewer system.

Following is a summary of the drainage areas, their specific land use characteristics, detention facilities, and outlet conditions.

Area 1:

This area is 26.3 acres in size and encompasses the access road and a portion of the golf course. The area includes approximately 54,000 square feet of impervious area; the balance is landscaped and golf course.

The water quality feature designed for this drainage area includes three dry detention areas—two integrated into the golf course design and one along the eastern edge of the waterfront park. The total area of these basins is 1.12 acres with an average depth of approximately three feet. These basins area designed with small (3- and 4-inch) outlets, which control the 1-year storm to provide the required detention time. For greater storms these basins discharge through the cover of a 4-by-4-foot catch basin. The piping system from this outlet structure is interconnected with the discharge piping from Drainage Area 2 and is connected to the City's sewer system below the diversion chamber in Emerson Road. The discharge from these combined areas is 0.34 cubic feet per second (cfs) for the 1-year event. The total runoff volume is 2.7 acre-feet (ac-ft) and the maximum detention time for this area is 3.93 days. The maximum depth of water in the basin during the 1-year storm is approximately 1.3 feet. The maximum depth of water in the basins during the 100 year event is 3.5 feet and the discharge for this storm event is 68 cfs.

Area 2:

This area is 24.60 acres and encompasses the fine dining/banquet facility and a portion of the golf course. The area includes approximately 209,393 square feet of impervious area and a 0.75- acre lake. The balance of the area is landscaped grounds and golf course. The water quality feature designed for this drainage area includes one wet pond and one retention basin. The lake is designed with a 4-inch outlet, which controls the 1-year storm to provide the required detention time. For greater storms, this system discharges through the cover of a 2-by-2-foot catch basin. The piping system from this outlet structure is interconnected with the discharge piping from Drainage Area 1 and is connected to the City's sewer system below the diversion chamber. The discharge from this area is 0.44 cfs for the one-year event. The total runoff volume is 2.62 ac-ft

and the maximum detention time for this area is 3 days. The maximum increase in water elevation in the lake during the 1-year storm is approximately 1.3 feet. The maximum increase in water elevation in the lake during the 100-year event is 2.5 feet.

Area 3:

This area is 47.1 acres and encompasses the maintenance area and a portion of the golf course. The area includes approximately 53,343 square feet of impervious area and 4.98 acres of lake. The balance of the area is landscaped and golf course.

The water quality feature designed for this drainage area includes one lake. The lake is designed with a 4-inch outlet, which control the 1-year storm to provide the required detention time. For greater storms, this system discharges through the cover of a 1.5-by-1.5-foot catch basin. The piping system from this outlet structure is connected to the City's sewer system along the 8-by-6-foot pipe that runs under the portion of Emerson being demapped. The discharge from this area is 0.27 cfs for the 1-year event. The total runoff volume is 4.31 ac-ft and the maximum detention time for this area is 8 days. The maximum increase in water elevation in the lake during the 1-year storm is approximately 0.6 feet. The maximum depth of water in the basins during the 100-year event is 2.4 feet. This system is connected directly to the city's sewer system therefore detention is required. The required detention volume is provided in the lake from elevation 14 to elevation 14.9 and is approximately 0.82 ac-ft of storage. The discharge rate as prorated for this area is 9.9 cfs.

Area 4:

This area is 21.05 acres and encompasses the central portion of the golf course and includes only landscaped areas and golf course. The water quality feature designed for this drainage area includes one lake and one shallow retention area. The lake and detention area discharge through a 4-inch outlet, which controls the 1-year storm to provide the required detention time. For greater storms this system discharges through the cover of a 1-by-1-foot and a 2-by-3-foot catch basin, respectively. The piping system from this outlet structure is connected to the City's sewer system along the 8-by-6-foot pipe that runs under the portion of Emerson being demapped. The discharge from this area is 0.35 cfs for the one-year event. The total runoff volume is 1.75 ac-ft and the maximum detention time for this area is 3.1 days. The maximum increase in water elevation in the lake during the 1-year storm is approximately 0.8 feet. The maximum depth of water in the basins during the 100-year event is 1.9 feet. This system is connected directly to the City's sewer system therefore a detention is required. The required detention volume is provided in the lake from elevation 13 to elevation 14.2 and is approximately 0.37 ac-ft of storage. The discharge rate as prorated for this area is 31.46 cfs.

Area 5:

This area is 46.22 acres and encompasses the eastern portion of the golf course and the community park. This area includes 40,000 square feet of impervious area and 4.52 acres of lake. The balance of the area is landscaped and golf course. The water quality feature designed for this drainage area includes one lake. The lake discharges through a 4-inch outlet, which controls the 1-year storm to provide the required detention time. For greater storms, this system discharges through the cover of a 2-by-3-foot catch basin. The piping system from this outlet structure is connected to the City's sewer system under Miles Avenue. The discharge from this area is 0.28 cfs for the 1-year event. The total runoff volume is 4.2 ac-ft and the maximum detention time for this area is 7.5 days. The maximum increase in water elevation in the lake during the 1-year storm

is approximately 0.6 feet. The maximum increase in water elevation in the lake during the 100-year event is 2 feet. This system is connected directly to the City's sewer system; therefore, a detention is required.

The required detention volume is provided in the lake from elevation 13 to elevation 13.9 and is approximately 0.9 ac-ft of storage. The discharge rate as prorated for this area is 26.65 cfs.

Areas 6 and 7:

These areas are 25.70 acres and encompass the western portion of the golf course, the clubhouse site and the boathouse grill. They include 279,809 square feet of impervious area. The balance of the area is landscaped and golf course. The water quality feature designed for these drainage area include two dry retention basins. Basins 6 and 7 discharge through a 6-inch and 3-inch outlet, respectively. These outlets control the 1-year storm to provide the required detention time. For greater storms these basin discharges over a 5-inch sharp-crested weir and a 2-by-3-foot catch basin. The piping system from these outlet structures is directed to a natural low area adjacent to the East River; it ultimately overflows into the East River. The combined discharge from these areas is 1.42 cfs for the 1-year event. The total runoff volume is 3.6 ac-ft and the maximum detention time for this area is 5.14 days. The depth of water in these basins during the 1-year storm event is approximately 1.5 feet. The depth of water in the basin during the 100-year event is 3.6 feet and the peak discharge is 68.89 cfs.

Bridge Drainage

Under existing conditions, drainage from the bridge and a portion of the western park area drain to a low area along the western side of the bridge adjacent to the site. As this runoff builds, it flows overland along the southern end of the bridge and discharges into the East River. This natural ponding area and undefined sheet flow discharge will be maintained and not impacted by the proposed development. The runoff from this portion of the bridge and park area will bypass the stormwater management systems designed for the project and be allowed to discharge directly into the East River as it does under existing conditions.

New York City Detention Volume Criteria:

There are two areas discharging into the City's Sewer system. Discharge Area 1 includes Drainage Area 5 that discharges into the existing sewer system on Miles Avenue. The allowable discharge from this area is calculated to be 35.2 cfs based on a contributing areas of approximately 20 acres, a composite Cn of 0.44 and a rainfall of 4 inches. The second area Discharge Area 2 includes Drainage Areas 3 and 4. The allowable discharge for this area is calculated to be 44.4 cfs based on a contributing area of 25.25 acres, a composite Cn of 0.44 and a rainfall event of 4.0 inches.

For Discharge Area 1, the required detention volume required to maintain a maximum discharge equal to the allowable discharge of 35.2 cfs is 0.9 ac-ft based on a composite Cn of 0.32 and area of 44.2 acres and a rainfall event of 5.95 acres.

For Discharge Area 2, the required detention volume required to maintain a maximum discharge equal to the allowable discharge of 44.4 cfs is 1.19 ac-ft based on a composite Cn of 0.27 and area of 67.7 acres and a rainfall event of 5.95 acres.

Based on the information outlined above, it can be concluded that the stormwater management system for this site has been designed to adequately control stormwater runoff from this site so as not to adversely affect the receiving system or the adjacent properties.

**Attachment J:** **Traffic**

## A. INTRODUCTION

This attachment assesses the potential traffic impacts of the proposed development of a public recreation facility at Ferry Point Park, to the east of the Bronx-Whitestone Bridge. Vehicles would enter and exit the recreation facility from an entrance road to be constructed as part of the proposed project located off of the Ferry Point Park Access Road. The Ferry Point Park Access Road is currently a lightly traveled two-way roadway, except for the segment between Schley Avenue and the southbound I-678 park ramp, which is one-way southbound. As part of the proposed project, the Ferry Point Park Access Road would become a two-lane, one-way loop functioning as a southbound roadway on the west side of the Bronx-Whitestone Bridge and as a northbound roadway on the east side of the bridge. Currently, the project site is primarily unimproved and undeveloped New York City parkland; existing uses on the site are an organic recycling and composting facility (which would be relocated with development of the proposed project) and one baseball field and basketball court (which would be redeveloped as part of the public recreation facility). The proposed project would provide a total of 965 parking spaces (945 public parking spaces plus 20 parking spaces at the maintenance facility). Currently, there is an existing parking lot which serves users of the developed portion of Ferry Point Park to the west of the Bronx-Whitestone Bridge. This attachment analyzes the existing traffic conditions for the network and assesses potential changes in travel patterns associated with the development of the proposed public recreation facility.

## B. EXISTING CONDITIONS

### ROADWAY NETWORK

To assess the potential traffic impacts associated with the development of the project, seven key intersections were identified as those most likely to be affected by the project-related traffic (see Figure J-1). These include the signalized intersections of Lafayette Avenue with Brush Avenue, the I-678 north- and southbound service roads, and East Tremont Avenue; and Bruckner Boulevard and Brush Avenue. The intersection of the I-678 southbound service road and Schley Avenue is the only unsignalized location included in the study.

The I-678 north- and southbound service roads are major streets in the study area that provide two moving lanes. The service roads range in width from approximately 24 feet to 26 feet. Parking is not permitted along the service roads.

Lafayette Avenue and Bruckner Boulevard are major east-west roadways in the study area, providing access to the I-678 service roads, the Cross-Bronx Expressway and the Hutchinson River Parkway. Lafayette Avenue provides two moving lanes during the peak periods and ranges in width from 67 to 75 feet. Bruckner Boulevard provides two to three lanes in each direction during the peak periods and is approximately 75 feet in width. On-street parking is provided along portions of these streets.

East Tremont Avenue is a major north-south roadway in the study area. East Tremont Avenue provides two moving lanes in each direction during the peak periods. East Tremont Avenue and is approximately 60 feet in width. Two-hour metered parking is permitted along this street between 9:30 AM and 7:30 PM except on Sunday.

Brush and Schley Avenues are lightly traveled local roads in the study area. Brush Avenue operates in the north-south direction with one to two lanes in each direction. This street is approximately 50 feet in width. Parking is not permitted along Brush Avenue. Schley Avenue operates in the east-west direction with one lane in each direction. Schley Avenue is approximately 54 feet in width. There is 90 degree parking along the south side of Schley Avenue.

Currently, the Ferry Point Park Access Road is lightly traveled, and operates with one lane in each direction (north- and southbound), except for the segment between Schley Avenue and the southbound I-678 park ramp, which operates one-way southbound. Vehicles traveling north- and southbound on this access road are primarily park users traveling to and from the existing parking lot located on the west side of the bridge. Additionally, Triborough Bridge and Tunnel Authority (TBTA) vehicles traveling southbound from the eastern side of the bridge access the road from a restricted ramp located near the Bronx-bound toll plaza of the Bronx-Whitestone Bridge.

## ANALYSIS METHODOLOGIES

### *SIGNALIZED INTERSECTIONS*

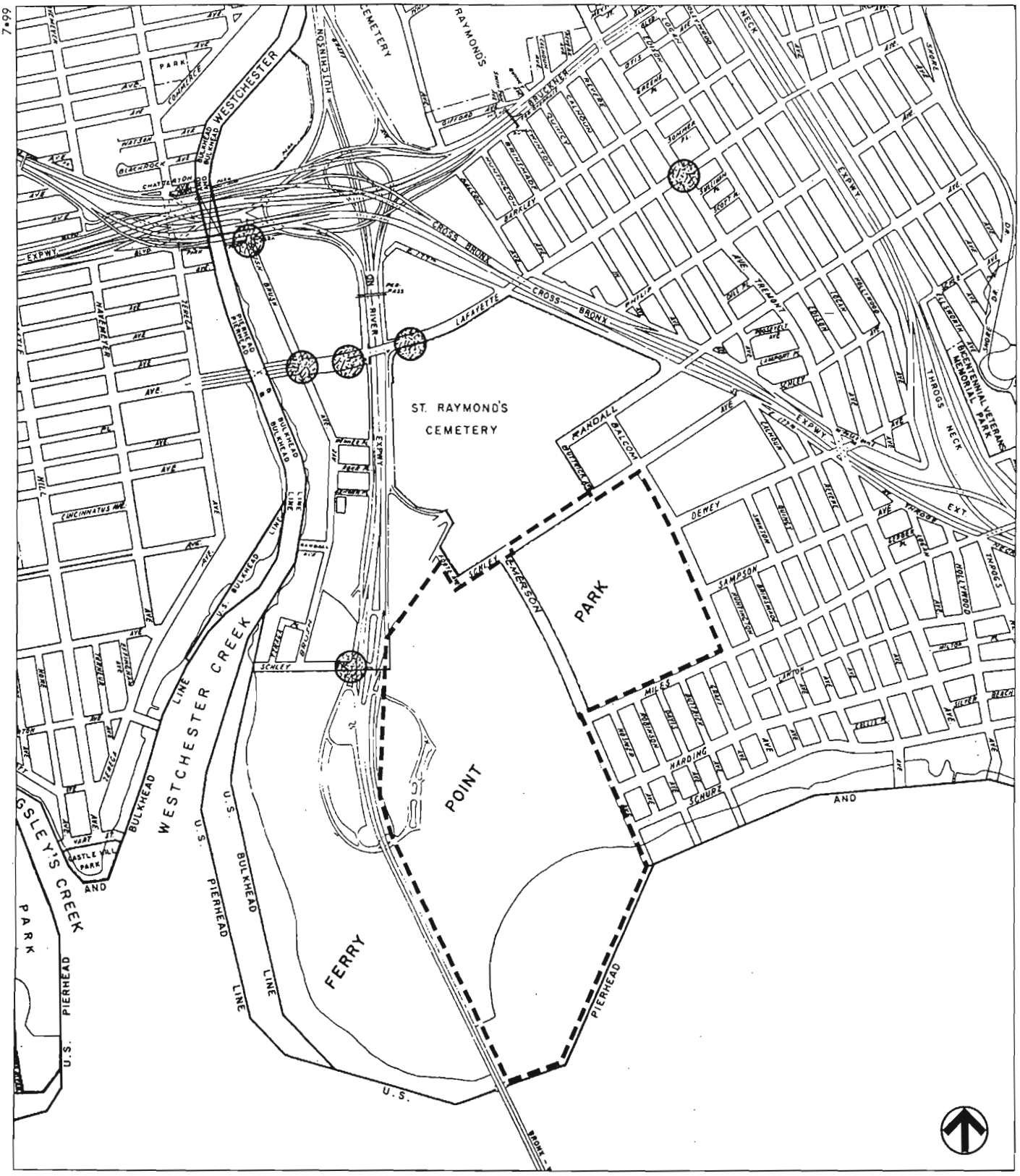
The operation of the signalized intersections in the study area was analyzed applying the methodologies presented in the 1994 *Highway Capacity Manual* (*HCM*). This procedure evaluates signalized intersections for average delay per vehicle and level of service (LOS).

LOS for the signalized intersections is based on the average stopped delay per vehicle for the various lane group movements within the intersection. This delay is the basis for an LOS determination for individual lane groups, the approach as a whole, and the overall intersection.

The delay criteria for the range of service levels (LOS) follows below:

| LOS | Average Delay |
|---|---|
| A | <5.0 seconds |
| B | 5.1-15.0 seconds |
| C | 15.1-25.0 seconds |
| D | 25.1-40.0 seconds |
| E | 40.1-60.0 seconds |
| F | >60.0 seconds |

Although the *HCM* methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS. A high v/c ratio indicates substantial traffic passing through an intersection, but a high v/c ratio combined with a low average delay actually is the best case in terms of traffic engineering standards, where an approach, or the whole intersection, processes traffic close to its theoretical maximum with a minimum of delay. However, very high v/c ratios—especially those greater than 1.0—are often correlated with a deteriorated LOS. LOS A and B indicate good operating conditions with minimal delay. Other important variables




*Ferry Point Park*

## Traffic Study Area

*Figure J-1*

affecting delay include cycle length, progression, and green time. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition where congestion levels are more noticeable and individual cycle failures (a condition where motorists may have to wait for more than one green phase to clear the intersection) can occur. Conditions at LOS E and F reflect poor service levels, and cycle breakdowns are frequent. The methodology provides for a summary of the total intersection operating conditions. The analysis chooses the two the worst-case movements from each roadway and calculates a summary v/c ratio, delay, and LOS for the intersection.

*UNSIGNALIZED INTERSECTIONS*

The LOS criteria are given below. As used here, total delay is defined as the total elapsed time when a vehicle stops at the end of the queue until the vehicle departs from the stop line; this includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average total delay for any particular minor movement (referred to as a "critical movement") is a function of the service rate or capacity of the approach and the degree of saturation.

| LOS | Average Delay |
|---|---|
| A | ≤5.0 seconds |
| B | >5.1 and ≤10.0 seconds |
| C | >10.0 and ≤20.0 seconds |
| D | >20.0 and ≤30.0 seconds |
| E | >30.0 and ≤45.0 seconds |
| F | >45.0 seconds |

The LOS criteria (number of seconds of delay corresponding to each LOS category) for unsignalized intersections are somewhat different from the criteria used in signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. In addition, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than at signalized intersections. For these reasons, it is considered that the total delay threshold for any given LOS is less for an unsignalized than for a signalized intersection.

## EXISTING TRAFFIC CONDITIONS AND LEVELS OF SERVICE

Existing traffic volumes in the study area were based on counts conducted in April and May 1999. These volumes indicate a weekday PM peak hour of 5 to 6 PM, a Saturday midday peak hour of 12 to 1 PM, and a Saturday PM peak hour of 5 to 6 PM. An inventory of the analyzed intersections was performed to determine cycle length, signage, timings, and phasings to be used in the calculation of the street capacities.

As shown in Figures J-2 through J-4, traffic volumes were estimated for the weekday PM, Saturday midday, and Saturday PM peak hours. These hours represent the heaviest network volumes

during the operation of the recreational facility and thus are the most sensitive hours for assessing impacts. Trips generated by the project during the weekday AM peak period would be minimal. Therefore, the weekday AM peak period is not a sensitive peak for assessing potential project impacts. North- and southbound volumes on the I-678 service roads range from 115 to 145 vehicles per hour (vph) and 210 to 430 in each direction, respectively, during the peak hours of analysis. East- and westbound traffic volumes on Lafayette Avenue range from 320 to 820 vph in each direction during the weekday PM, Saturday midday, and Saturday PM peak periods. East- and westbound volumes on Bruckner Boulevard range from 810 to 1,105 vph in each direction during the peak hours of analysis. North- and southbound volumes on the Brush Avenue range from 120 to 335 vph in each direction during the peak periods. North- and southbound volumes on East Tremont Avenue range from 600 to 790 vph in each direction during the weekday PM, Saturday midday, and Saturday PM peak periods. East- and westbound volumes on Schley Avenue range from 75 to 130 vph in each direction during the peak periods.

Tables J-1 and J-2 present the level of service conditions for the study area's signalized and unsignalized intersections, respectively. The capacity analysis indicates that all approaches operate acceptably—at mid-range LOS D or better for the weekday PM, Saturday midday, and Saturday PM peak hours.

*PARKING*

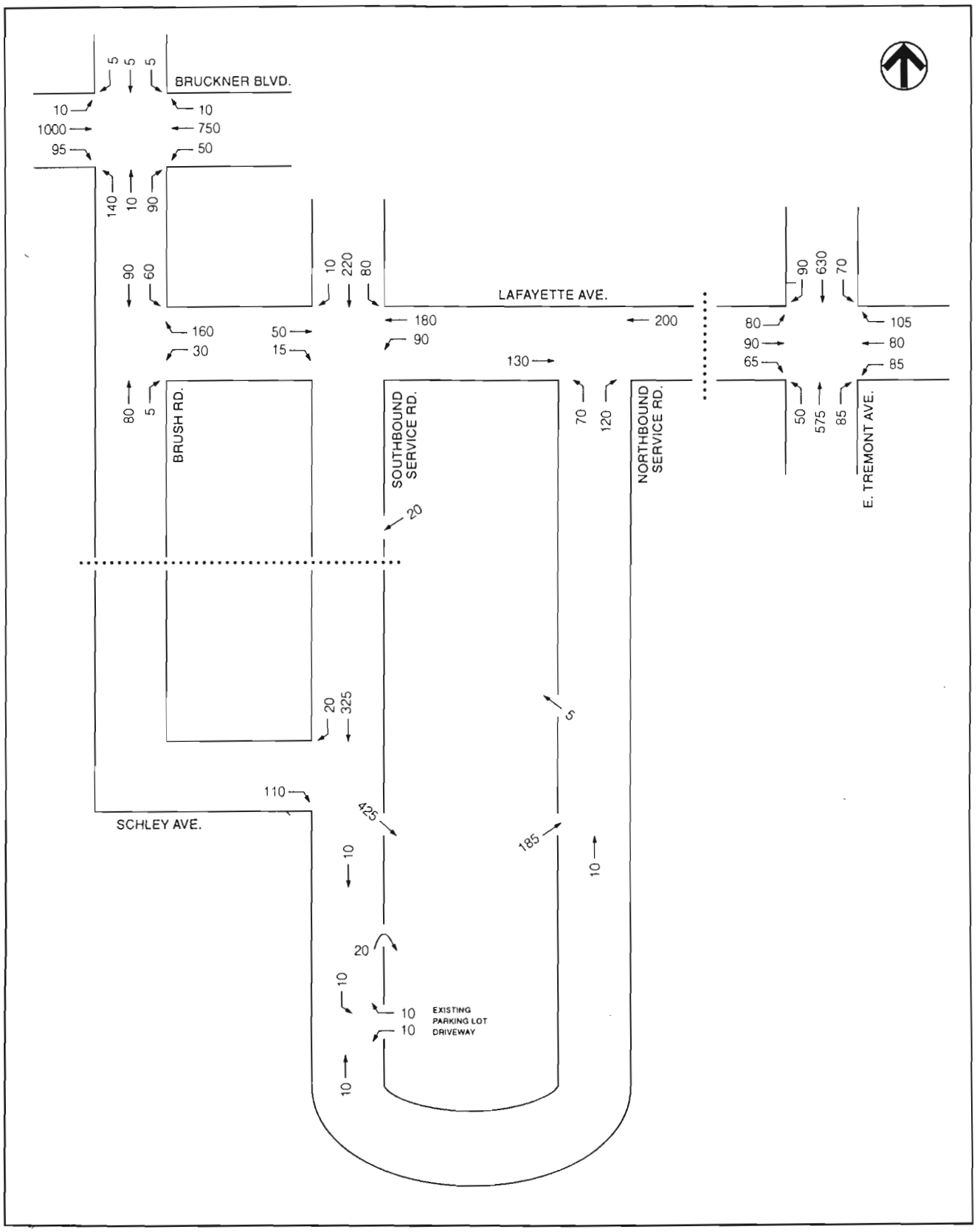
The project site is composed primarily of undeveloped parkland, with the exception of an organic recycling and composting facility operated by the New York City Department of Parks and Recreation (DPR) at the northwestern corner of the site, and a ballfield and basketball court at the northeastern corner of the site. Informal uses on the site include dirt bike trails and a model airplane field. There is a parking lot at the west side of the Bronx-Whitestone Bridge which serves the developed western portion of Ferry Point Park.

*PUBLIC TRANSPORTATION*

As shown in Figure J-5, the study area is served by buses Q44 (operated by New York City Transit [NYCT]) and QBx1 (operated by Queens Surface Corporation). The closest Q44 bus stop to Ferry Point Park is at the intersection of Lafayette Avenue and the I-678 southbound service road (approximately 0.7 miles from the park). The Q44 operates 8, 7, and 8 buses per hour during the weekday PM, Saturday midday peak hours, respectively. The QBx1, an express bus which provides service between Flushing and Co-Op City via the Bronx-Whitestone Bridge, stops at the intersections of Lafayette Avenue and the I-678 north- and southbound service roads, and the intersection of Wenner Place and the I-678 southbound service road (approximately 0.5 miles from the park). Because the existing bus stops are relatively distant from the park, and sidewalks along the I-678 southbound service road are not continuous, few users travel to the park by bus.

*PEDESTRIANS AND BICYCLES*

Existing pedestrian activity in the study area is low. There are lightly used sidewalks along portions of the I-678 north- and southbound service roads and the Ferry Point Park access road. Based on field reconaissance, there are no pedestrian-vehicle conflict locations. There is no existing bicycle lane on the Ferry Point Park access road.

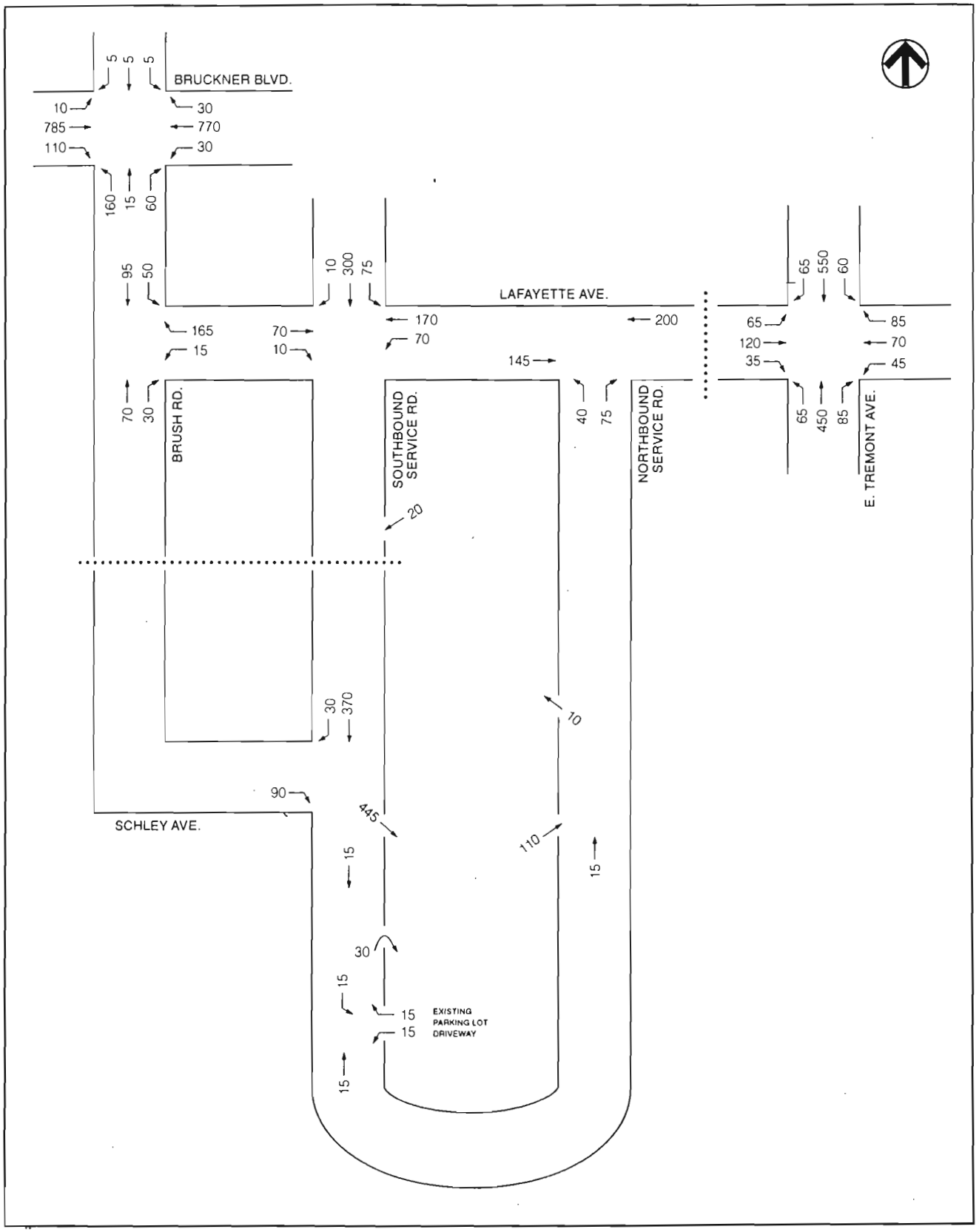



Not to Scale

# Existing Traffic Volumes • Weekday PM Peak Hour

*Ferry Point Park*

*Figure J-2*

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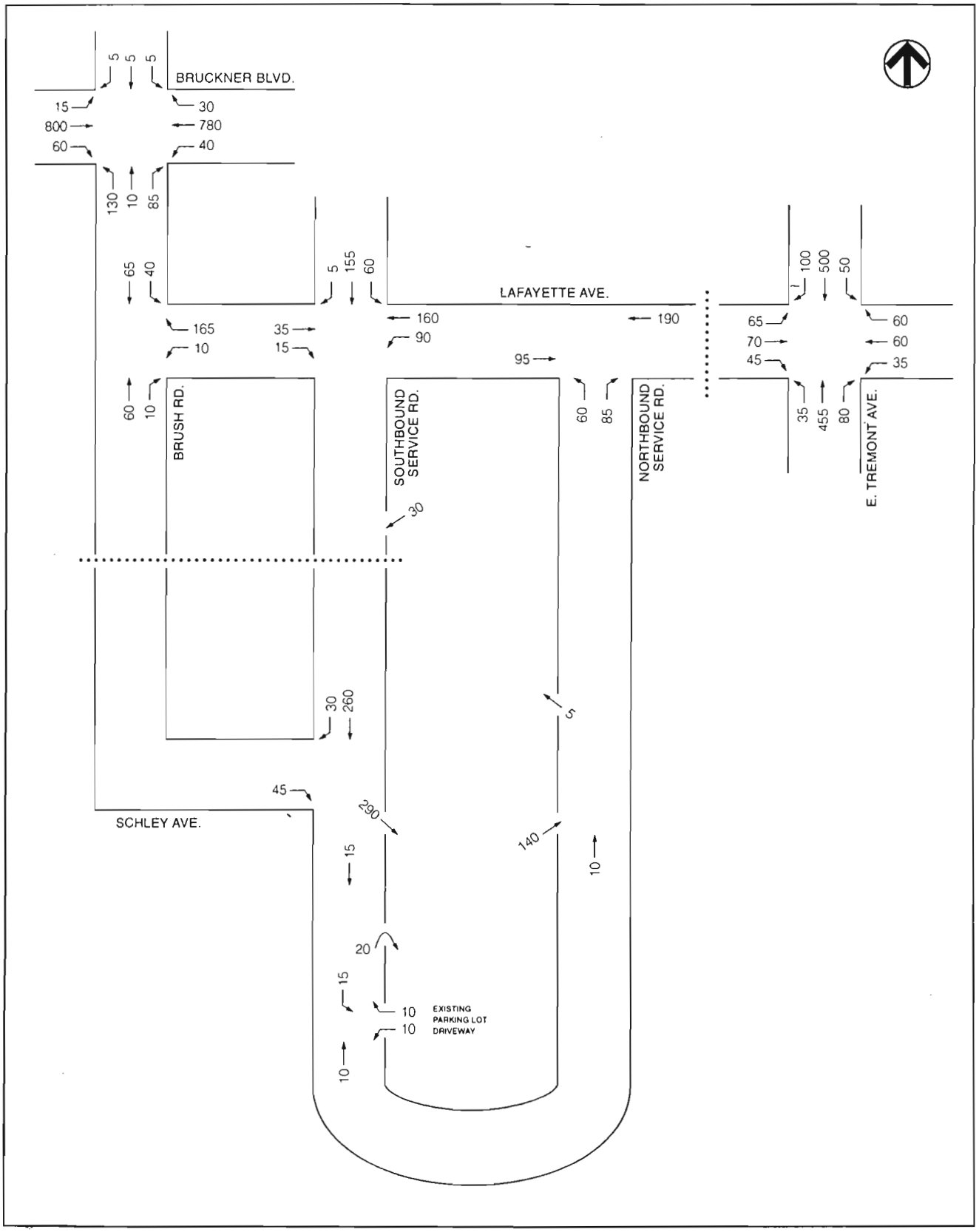
# Existing Traffic Volumes • Saturday Midday Peak Hour

*Ferry Point Park*

*Figure J-3*




Not to Scale

# Existing Traffic Volumes • Saturday PM Peak Hour

*Ferry Point Park*

*Figure J-4*

# Table J-1
# Signalized Intersections:
# 1999 Existing Conditions Level of Service Analysis

| Intersection | Weekday PM Existing | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | |
| Eastbound | LTR | 0.611 | 10.7 | B | 10.7 | B | 12.4 | B |
| Westbound | DfL | 0.798 | 42.2 | E | 11.6 | B | | |
| | TR | 0.516 | 9.7 | B | | | | |
| Northbound | DfL | 0.411 | 24.4 | C | 24.1 | C | | |
| | TR | 0.334 | 23.5 | C | | | | |
| Southbound | DfL | 0.020 | 20.9 | C | 21.0 | C | | |
| | TR | 0.030 | 21.0 | C | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | |
| Westbound | L | 0.049 | 4.7 | A | 5.1 | B | 8.4 | B |
| | R | 0.198 | 5.2 | B | | | | |
| Northbound | TR | 0.130 | 10.1 | B | 10.1 | B | | |
| Southbound | LT | 0.249 | 10.6 | B | 10.6 | B | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD** | | | | | | | | |
| Eastbound | T | 0.042 | 6.9 | B | 6.9 | B | 11.9 | B |
| Westbound | LT | 0.230 | 7.8 | B | 7.8 | B | | |
| Southbound | LTR | 0.417 | 15.9 | C | 15.9 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | |
| Eastbound | T | 0.094 | 6.8 | B | 6.8 | B | 6.4 | B |
| Westbound | T | 0.144 | 7.0 | B | 7.0 | B | | |
| Northbound | L | 0.204 | 14.9 | B | 5.5 | B | | |
| | R | 0.129 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE** | | | | | | | | |
| Eastbound | LTR | 0.566 | 18.2 | C | 18.2 | C | 23.7 | C |
| Westbound | LTR | 0.563 | 18.2 | C | 18.2 | C | | |
| Northbound | LTR | 0.950 | 28.5 | D | 28.5 | D | | |
| Southbound | LTR | 0.924 | 23.5 | C | 23.5 | C | | |

# Table J-1 (continued)
# Signalized Intersections:
# 1999 Existing Conditions Level of Service Analysis

| Intersection | Saturday Midday Existing | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | |
| Eastbound | LTR | 0.505 | 9.5 | B | 9.5 | B | 11.4 | B |
| Westbound | LTR | 0.500 | 9.5 | B | 9.5 | B | | |
| Northbound | DfL | 0.500 | 25.7 | D | 24.7 | C | | |
| | TR | 0.257 | 22.8 | C | | | | |
| Southbound | DfL | 0.018 | 20.9 | C | 20.9 | C | | |
| | TR | 0.029 | 21.0 | C | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | |
| Westbound | L | 0.022 | 4.7 | A | 5.1 | B | 8.4 | B |
| | R | 0.179 | 5.1 | B | | | | |
| Northbound | TR | 0.136 | 10.1 | B | 10.1 | B | | |
| Southbound | LT | 0.200 | 10.4 | B | 10.4 | B | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD** | | | | | | | | |
| Eastbound | T | 0.054 | 7.0 | B | 7.0 | B | 12.0 | B |
| Westbound | LT | 0.186 | 7.5 | B | 7.5 | B | | |
| Southbound | LTR | 0.423 | 15.9 | C | 15.9 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | |
| Eastbound | T | 0.120 | 6.9 | B | 6.9 | B | 6.4 | B |
| Westbound | T | 0.150 | 7.0 | B | 7.0 | B | | |
| Northbound | L | 0.121 | 14.4 | B | 5.0 | A | | |
| | R | 0.084 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE** | | | | | | | | |
| Eastbound | LTR | 0.351 | 15.9 | C | 15.9 | C | 12.3 | B |
| Westbound | LTR | 0.299 | 15.5 | C | 15.5 | C | | |
| Northbound | LTR | 0.678 | 11.8 | B | 11.8 | B | | |
| Southbound | LTR | 0.620 | 10.6 | B | 10.6 | B | | |

# Table J-1 (continued)
# Signalized Intersections:
# 1999 Existing Conditions Level of Service Analysis

| Intersection | Saturday PM Existing | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | |
| Eastbound | LTR | 0.500 | 9.5 | B | 9.5 | B | 11.1 | B |
| Westbound | LTR | 0.496 | 9.5 | B | 9.5 | B | | |
| Northbound | DfL | 0.374 | 23.9 | C | 23.6 | C | | |
| | TR | 0.304 | 23.2 | C | | | | |
| Southbound | DfL | 0.019 | 20.9 | C | 21.0 | C | | |
| | TR | 0.029 | 21.0 | C | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | |
| Westbound | L | 0.014 | 4.7 | A | 5.1 | B | 8.3 | B |
| | R | 0.179 | 5.1 | B | | | | |
| Northbound | TR | 0.103 | 10.0 | B | 10.0 | B | | |
| Southbound | LT | 0.181 | 10.3 | B | 10.3 | B | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD** | | | | | | | | |
| Eastbound | T | 0.031 | 6.9 | B | 6.9 | B | 11.1 | B |
| Westbound | LT | 0.215 | 7.7 | B | 7.7 | B | | |
| Southbound | LTR | 0.322 | 15.1 | C | 15.1 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | |
| Eastbound | T | 0.081 | 6.7 | B | 6.7 | B | 6.6 | B |
| Westbound | T | 0.136 | 7.0 | B | 7.0 | B | | |
| Northbound | L | 0.155 | 14.6 | B | 6.0 | B | | |
| | R | 0.081 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE** | | | | | | | | |
| Eastbound | LTR | 0.328 | 15.7 | C | 15.7 | C | 11.6 | B |
| Westbound | LTR | 0.267 | 15.3 | C | 15.3 | C | | |
| Northbound | LTR | 0.591 | 10.3 | B | 10.3 | B | | |
| Southbound | LTR | 0.608 | 10.4 | B | 10.4 | B | | |

# Table J-2
# Unsignalized Intersections:
# 1999 Existing Conditions Level of Service Analysis

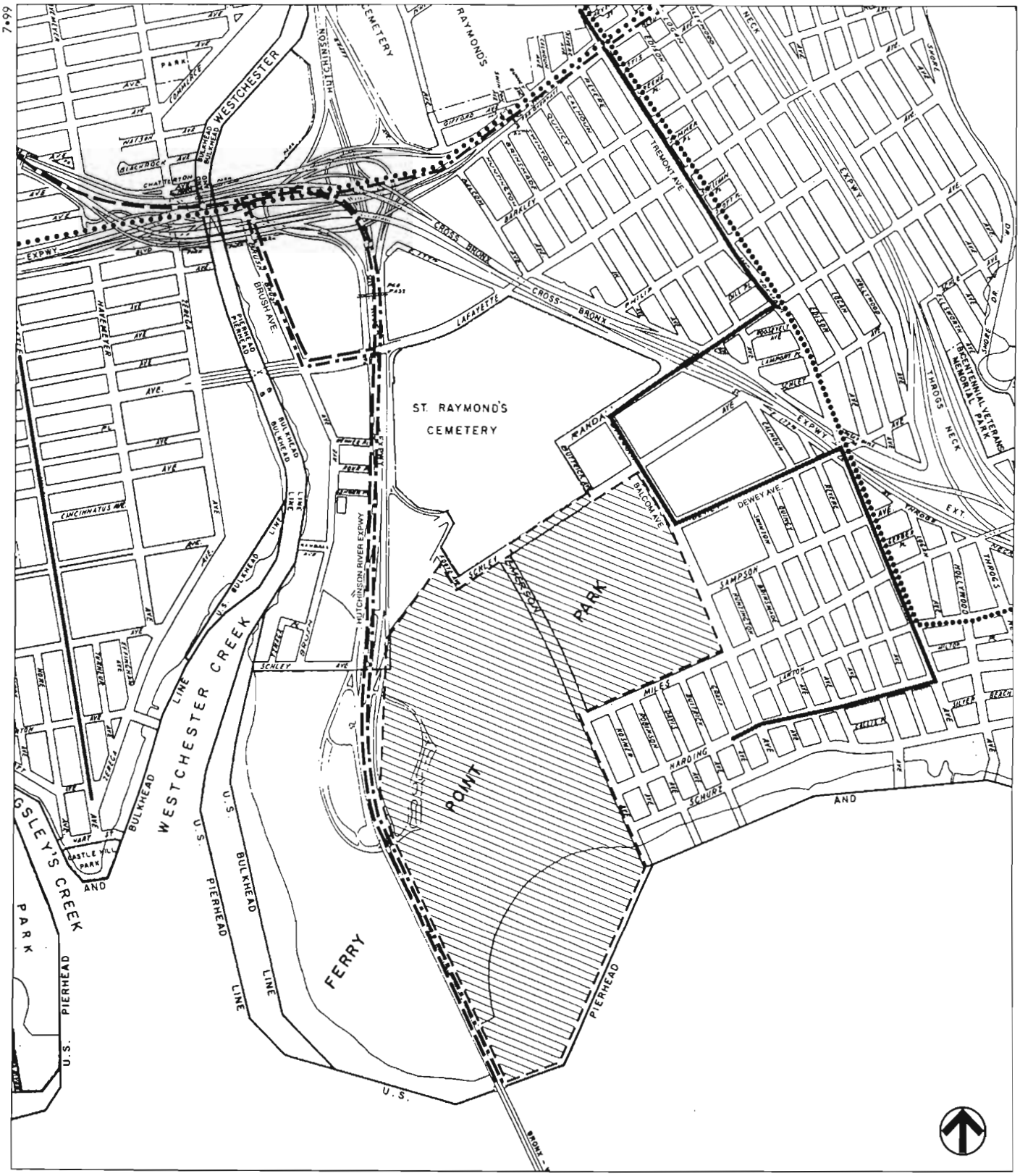
| Intersection | Weekday PM Existing | | |
|---|---|---|---|
| | Lane Group | Lane Group | |
| | Lane Group | Delay (seconds) | LOS |
| **I-678 SB SERVICE ROAD & SCHLEY AVENUE** Eastbound | R | 3.7 | A |

# Table J-2 (continued)
# Unsignalized Intersections:
# 1999 Existing Conditions Level of Service Analysis

| Intersection | Saturday Midday Existing | | |
|---|---|---|---|
| | | Lane Group | |
| | Lane Group | Delay (seconds) | LOS |
| I-678 SB SERVICE ROAD & SCHLEY AVENUE<br>Eastbound | R | 3.9 | A |

# Table J-2 (continued)
# Unsignalized Intersections:
# 1999 Existing Conditions Level of Service Analysis

| Intersection | Saturday PM Existing | | |
|---|---|---|---|
| | Lane Group | Lane Group | |
| | Lane Group | Delay (seconds) | LOS |
| I-678 SB SERVICE ROAD & SCHLEY AVENUE<br>Eastbound | R | 3.4 | A |




Project Site

**Bus Routes**

- Q-Bx 1
- Q44
- 42
- 40
- 5

0 1000 2000 FEET

SCALE

*Ferry Point Park*

## Public Transportation

*Figure J-5*

## C. THE FUTURE WITHOUT THE PROJECT

To establish a baseline (the No Build scenario) against which to evaluate the impacts of the proposed project, future year traffic conditions were conservatively analyzed for 2002, when all components of the project would be completed and operational. Future conditions were estimated by applying a growth rate of 2.0 percent (0.67 percent per year, more conservative than the 0.5 percent per year stipulated in the *City Environmental Quality Review Technical Manual*) to the existing network volumes, and by adding these grown volumes to vehicle trips generated by the development of approximately 50 residential units in the vicinity of Balcom Avenue and Huntington Avenue (to the east of the project site) in the study area. The vehicle trip generation for these residential units were based on rates presented in the *Institute of Transportation Engineers' Trip Generation Manual, Sixth Edition* and existing travel patterns. The trip assignment for these residential units were based on existing travel patterns in the area.

Analysis of future conditions also accounts for the TBTA relocation of the southbound on-ramp to the Bronx-Whitestone Bridge near Schley Avenue. This ramp, which is currently south of the intersection of Schley Avenue and the I-678 southbound service road, is being moved north of Schley Avenue, and is planned for completion by 2000. Because of this change, vehicles traveling from Brush Road and Schley Avenue were reassigned to the most logical route to the new southbound on-ramp (i.e., vehicles previously traveling southbound on Brush Road to Schley Avenue to the southbound ramp would instead travel on the I-678 southbound service road to the southbound ramp). This change would reduce queues on the southbound service road and delays at the Queens-bound toll plaza. Furthermore, "No Bridge Re-Entry" signs will be provided to discourage vehicles from bypassing the queue on the mainline via the I-678 southbound service road.

In addition, the TBTA is considering the relocation of the on- and off-ramps on the I-678 northbound service road. This would involve moving the off-ramp toward Lafayette Avenue and the on-ramp toward the Bronx Whitestone Bridge. Currently, vehicles traveling north from the bridge pass the off-ramp to the I-678 northbound service road first, then pass the on-ramp from the service road. If the relocation occurs, this order would be switched. The relocation of the northbound ramps is in the proposal stage and therefore is not included in this analysis of traffic conditions. However, the development of the proposed public recreation facility would not affect plans to relocate the northbound ramps in future conditions.

### TRAFFIC CONDITIONS

The 2002 No Build volumes are shown in Figures J-6 through J-8 for the weekday PM, Saturday midday, and Saturday PM peak hours. Tables J-3 and J-4 present a comparison of the Existing and No Build service conditions for the study area's intersections. There would be no notable changes in LOS at the study area intersections, with the exception of the north- and southbound approaches at the intersection of East Tremont Avenue and Lafayette Avenue, which would drop from mid-range LOS D in existing conditions to upper-range LOS D in No Build conditions, and from LOS C in existing conditions to LOS D in No Build conditions, respectively, during the weekday PM peak hour.

*PARKING*

Parking is expected to remain similar to existing conditions.

## Table J-3
## Signalized Intersections:
## 1999 Existing and 2002 No Build Conditions Level of Service Analyses

| Intersection | Weekday PM | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Existing | | | | | | | | No Build | | | | | | | |
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.611 | 10.7 | B | 10.7 | B | 12.4 | B | LTR | 0.624 | 10.9 | B | 10.9 | B | 11.9 | B |
| Westbound | DfL | 0.798 | 42.2 | E | 11.6 | B | | | DfL | 0.423 | 11.1 | B | 9.8 | B | | |
| | TR | 0.516 | 9.7 | B | | | | | TR | 0.525 | 9.8 | B | | | | |
| Northbound | DfL | 0.411 | 24.4 | C | 24.1 | C | | | DfL | 0.419 | 24.5 | C | 24.1 | C | | |
| | TR | 0.334 | 23.5 | C | | | | | TR | 0.340 | 23.6 | C | | | | |
| Southbound | DfL | 0.020 | 20.9 | C | 21.0 | C | | | DfL | 0.021 | 20.9 | C | 21.0 | C | | |
| | TR | 0.030 | 21.0 | C | | | | | TR | 0.030 | 21.0 | C | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Westbound | L | 0.049 | 4.7 | A | 5.1 | B | 8.4 | B | L | 0.016 | 4.7 | A | 5.2 | B | 8.2 | B |
| | R | 0.198 | 5.2 | B | | | | | R | 0.205 | 5.2 | B | | | | |
| Northbound | TR | 0.130 | 10.1 | B | 10.1 | B | | | TR | 0.134 | 10.1 | B | 10.1 | B | | |
| Southbound | LT | 0.249 | 10.6 | B | 10.6 | B | | | DfL | 0.223 | 10.5 | B | 10.3 | B | | |
| | | | | | | | | | T | 0.108 | 10.0 | B | | | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.042 | 6.9 | B | 6.9 | B | 11.9 | B | T | 0.043 | 6.9 | B | 6.9 | B | 12.6 | B |
| Westbound | LT | 0.230 | 7.8 | B | 7.8 | B | | | LT | 0.242 | 7.8 | B | 7.8 | B | | |
| Southbound | LTR | 0.417 | 15.9 | C | 15.9 | C | | | LTR | 0.490 | 16.6 | C | 16.6 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.094 | 6.8 | B | 6.8 | B | 6.4 | B | T | 0.097 | 6.8 | B | 6.8 | B | 6.4 | B |
| Westbound | T | 0.144 | 7.0 | B | 7.0 | B | | | T | 0.148 | 7.0 | B | 7.0 | B | | |
| Northbound | L | 0.204 | 14.9 | B | 5.5 | B | | | L | 0.209 | 14.9 | B | 5.5 | B | | |
| | R | 0.129 | 0.0 | A | | | | | R | 0.133 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.566 | 18.2 | C | 18.2 | C | 23.7 | C | LTR | 0.589 | 18.6 | C | 18.6 | C | 29.6 | D |
| Westbound | LTR | 0.563 | 18.2 | C | 18.2 | C | | | LTR | 0.583 | 18.5 | C | 18.5 | C | | |
| Northbound | LTR | 0.950 | 28.5 | D | 28.5 | D | | | LTR | 0.991 | 36.7 | D | 36.7 | D | | |
| Southbound | LTR | 0.924 | 23.5 | C | 23.5 | C | | | LTR | 0.975 | 31.6 | D | 31.6 | D | | |

Table J-3 (continued)
Signalized Intersections:
1999 Existing and 2002 No Build Conditions Level of Service Analyses

| Intersection | Saturday Midday | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Existing | | | | | | | | No Build | | | | | | | |
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.505 | 9.5 | B | 9.5 | B | 11.4 | B | LTR | 0.505 | 9.5 | B | 9.5 | B | 11.2 | B |
| Westbound | LTR | 0.500 | 9.5 | B | 9.5 | B | | | LTR | 0.444 | 9.0 | B | 9.0 | B | | |
| Northbound | DfL | 0.500 | 25.7 | D | 24.7 | C | | | DfL | 0.516 | 25.9 | D | 24.9 | C | | |
| | TR | 0.257 | 22.8 | C | | | | | TR | 0.260 | 22.8 | C | | | | |
| Southbound | DfL | 0.018 | 20.9 | C | 20.9 | C | | | DfL | 0.018 | 20.9 | C | 20.9 | C | | |
| | TR | 0.029 | 21.0 | C | | | | | TR | 0.029 | 21.0 | C | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Westbound | L | 0.022 | 4.7 | A | 5.1 | B | 8.4 | B | L | 0.008 | 4.6 | A | 5.1 | B | 8.2 | B |
| | R | 0.179 | 5.1 | B | | | | | R | 0.187 | 5.2 | B | | | | |
| Northbound | TR | 0.136 | 10.1 | B | 10.1 | B | | | TR | 0.139 | 10.1 | B | 10.1 | B | | |
| Southbound | LT | 0.200 | 10.4 | B | 10.4 | B | | | DfL | 0.162 | 10.2 | B | 10.1 | B | | |
| | | | | | | | | | T | 0.103 | 10.0 | B | | | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.054 | 7.0 | B | 7.0 | B | 12.0 | B | T | 0.056 | 7.0 | B | 7.0 | B | 12.6 | B |
| Westbound | LT | 0.186 | 7.5 | B | 7.5 | B | | | LT | 0.196 | 7.6 | B | 7.6 | B | | |
| Southbound | LTR | 0.423 | 15.9 | C | 15.9 | C | | | LTR | 0.486 | 16.5 | C | 16.5 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.120 | 6.9 | B | 6.9 | B | 6.4 | B | T | 0.123 | 6.9 | B | 6.9 | B | 6.5 | B |
| Westbound | T | 0.150 | 7.0 | B | 7.0 | B | | | T | 0.155 | 7.0 | B | 7.0 | B | | |
| Northbound | L | 0.121 | 14.4 | B | 5.0 | A | | | L | 0.125 | 14.4 | B | 5.0 | A | | |
| | R | 0.084 | 0.0 | A | | | | | R | 0.087 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.351 | 15.9 | C | 15.9 | C | 12.3 | B | LTR | 0.362 | 16.0 | C | 16.0 | C | 12.7 | B |
| Westbound | LTR | 0.299 | 15.5 | C | 15.5 | C | | | LTR | 0.306 | 15.5 | C | 15.5 | C | | |
| Northbound | LTR | 0.678 | 11.8 | B | 11.8 | B | | | LTR | 0.710 | 12.5 | B | 12.5 | B | | |
| Southbound | LTR | 0.620 | 10.6 | B | 10.6 | B | | | LTR | 0.641 | 10.9 | B | 10.9 | B | | |

**Table J-3 (continued)**
**Signalized Intersections:**
**1999 Existing and 2002 No Build Conditions Level of Service Analyses**

| Intersection | Saturday PM | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Existing | | | | | | | | No Build | | | | | | | |
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.500 | 9.5 | B | 9.5 | B | 11.1 | B | LTR | 0.512 | 9.6 | B | 9.6 | B | 11.1 | B |
| Westbound | LTR | 0.496 | 9.5 | B | 9.5 | B | | | LTR | 0.490 | 9.4 | B | 9.4 | B | | |
| Northbound | DfL | 0.374 | 23.9 | C | 23.6 | C | | | DfL | 0.384 | 24.1 | C | 23.7 | C | | |
| | TR | 0.304 | 23.2 | C | | | | | TR | 0.310 | 23.3 | C | | | | |
| Southbound | DfL | 0.019 | 20.9 | C | 21.0 | C | | | DfL | 0.020 | 20.9 | C | 21.0 | C | | |
| | TR | 0.029 | 21.0 | C | | | | | TR | 0.029 | 21.0 | C | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Westbound | L | 0.014 | 4.7 | A | 5.1 | B | 8.3 | B | L | 0.008 | 4.6 | A | 5.1 | B | 8.0 | B |
| | R | 0.179 | 5.1 | B | | | | | R | 0.187 | 5.2 | B | | | | |
| Northbound | TR | 0.103 | 10.0 | B | 10.0 | B | | | TR | 0.104 | 10.0 | B | 10.0 | B | | |
| Southbound | LT | 0.181 | 10.3 | B | 10.3 | B | | | DfL | 0.153 | 10.2 | B | 10.1 | B | | |
| | | | | | | | | | T | 0.129 | 10.1 | B | | | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.031 | 6.9 | B | 6.9 | B | 11.1 | B | T | 0.033 | 6.9 | B | 6.9 | B | 11.4 | B |
| Westbound | LT | 0.215 | 7.7 | B | 7.7 | B | | | LT | 0.224 | 7.7 | B | 7.7 | B | | |
| Southbound | LTR | 0.322 | 15.1 | C | 15.1 | C | | | LTR | 0.358 | 15.4 | C | 15.4 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.081 | 6.7 | B | 6.7 | B | 6.6 | B | T | 0.084 | 6.7 | B | 6.7 | B | 6.6 | B |
| Westbound | T | 0.136 | 7.0 | B | 7.0 | B | | | T | 0.140 | 7.0 | B | 7.0 | B | | |
| Northbound | L | 0.155 | 14.6 | B | 6.0 | B | | | L | 0.157 | 14.6 | B | 5.9 | B | | |
| | R | 0.081 | 0.0 | A | | | | | R | 0.084 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.328 | 15.7 | C | 15.7 | C | 11.6 | B | LTR | 0.343 | 15.8 | C | 15.8 | C | 11.9 | B |
| Westbound | LTR | 0.267 | 15.3 | C | 15.3 | C | | | LTR | 0.272 | 15.3 | C | 15.3 | C | | |
| Northbound | LTR | 0.591 | 10.3 | B | 10.3 | B | | | LTR | 0.619 | 10.7 | B | 10.7 | B | | |
| Southbound | LTR | 0.608 | 10.4 | B | 10.4 | B | | | LTR | 0.629 | 10.7 | B | 10.7 | B | | |

# Table J-4
# Unsignalized Intersections:
# 1999 Existing and 2002 No Build Conditions Level of Service Analysis

| Intersection | Lane Group | Weekday PM | | | |
|---|---|---|---|---|---|
| | | Existing | | No Build | |
| | | Lane Group | | Lane Group | |
| | | Delay (seconds) | LOS | Delay (seconds) | LOS |
| I-678 SB SERVICE ROAD & SCHLEY AVENUE<br>Eastbound | R | 3.7 | A | 2.7 | A |

# Table J-4 (continued)
# Unsignalized Intersections:
# 1999 Existing and 2002 No Build Conditions Level of Service Analysis

| Intersection | Lane Group | Saturday Midday | | | |
|---|---|---|---|---|---|
| | | Existing | | No Build | |
| | | Lane Group | | Lane Group | |
| | | Delay (seconds) | LOS | Delay (seconds) | LOS |
| I-678 SB SERVICE ROAD & SCHLEY AVENUE<br>Eastbound | R | 3.9 | A | 2.7 | A |

# Table J-4 (continued)
# Unsignalized Intersections:
# 1999 Existing and 2002 No Build Conditions Level of Service Analysis

| Intersection | Saturday PM | | | | |
|---|---|---|---|---|---|
| | Lane Group | Existing | | No Build | |
| | | Lane Group | | Lane Group | |
| | | Delay (seconds) | LOS | Delay (seconds) | LOS |
| I-678 SB SERVICE ROAD & SCHLEY AVENUE<br>Eastbound | R | 3.4 | A | 2.7 | A |

*PUBLIC TRANSPORTATION*

Bus service to the study area is expected to remain similar to that in existing conditions.

*PEDESTRIANS AND BICYCLES*

In No Build conditions, pedestrian activity is expected to remain similar to those in existing conditions. In No Build conditions, there would be the potential for development of a greenway along the I-678 north- and southbound service roads, as well as along the Bronx Whitestone Bridge (via bus service), by the NYC DCP in accordance with its *Greenway Plan for New York City.* In addition, NYC DCP's *1999 Draft Greenway Master Plan: Soundview Park to Ferry Point Park* proposes a greenway connection from Brush Avenue and Lafayette Avenue to the I-678 northbound service road. At the present time, these are proposals which may or may not be implemented.

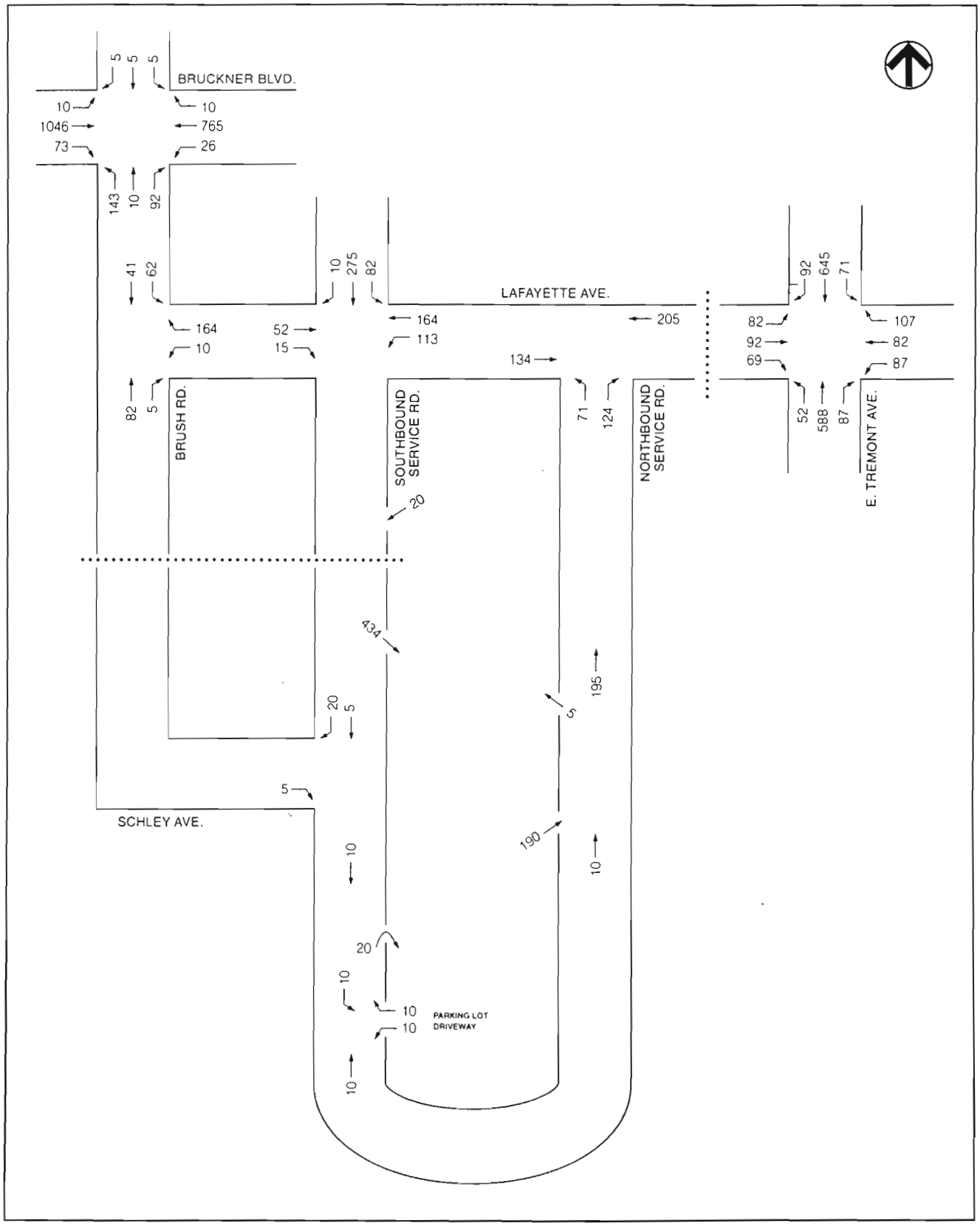
## D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

### TRIP GENERATION

The proposed public recreation facility includes a 7.0-acre community park, 19.5-acre waterfront park, 400-seat boathouse grill restaurant, 1,000-seat banquet facility, and golf facilities, including an 18-hole golf course and 100-stall driving range. As presented in Table J-5, trips generated by the proposed boathouse grill, banquet facility, and golf facilities were based on rates found in the *ITE Trip Generation Manual, Sixth Edition.* Trips generated by the proposed community and waterfront parks were based on existing activity at the currently developed western portion of Ferry Point Park. Estimated trip generation for future conditions are 502 vehicles in and 150 vehicles out during the weekday PM peak, 334 vehicles in and 269 vehicles out during the Saturday midday peak, and 510 vehicles in and 144 vehicles out during the Saturday PM peak. The traffic analysis is conservative because it overlays the peak hour volumes of the proposed facility onto the peak hour of the roadway network. Trips generated by the proposed project would increase traffic on the I-678 mainline by 5 percent or less, which would not significantly impact traffic operating conditions on the parkway. In reality, these two peaks (the generator and base network) do not necessarily overlap. Truck trips generated during construction of the project would be temporary in nature and are not included in this analysis.

### TRIP ASSIGNMENT

Trips were assigned based on existing travel patterns in the study area and knowledge of the customer base for the proposed facility are as follows: 20 percent of trips originating from the northeastern portion of the study area and 15 percent of trips originating from the northwestern portion of the study area would travel on local roadways; 40 percent of trips originating from the north would travel southbound on the Hutchinson River Parkway; and 25 percent of trips from the south would travel over the Bronx-Whitestone Bridge from Queens. Trips generated during construction of the proposed project would utilize New York City truck routes to the site, including the I-678 north- and southbound service roads and Lafayette Avenue. As noted above, construction vehicles are not included in this analysis. Figures J-9 through J-11 show the estimated project-generated vehicle trips for the weekday PM, Saturday midday, and Saturday PM peak hours.

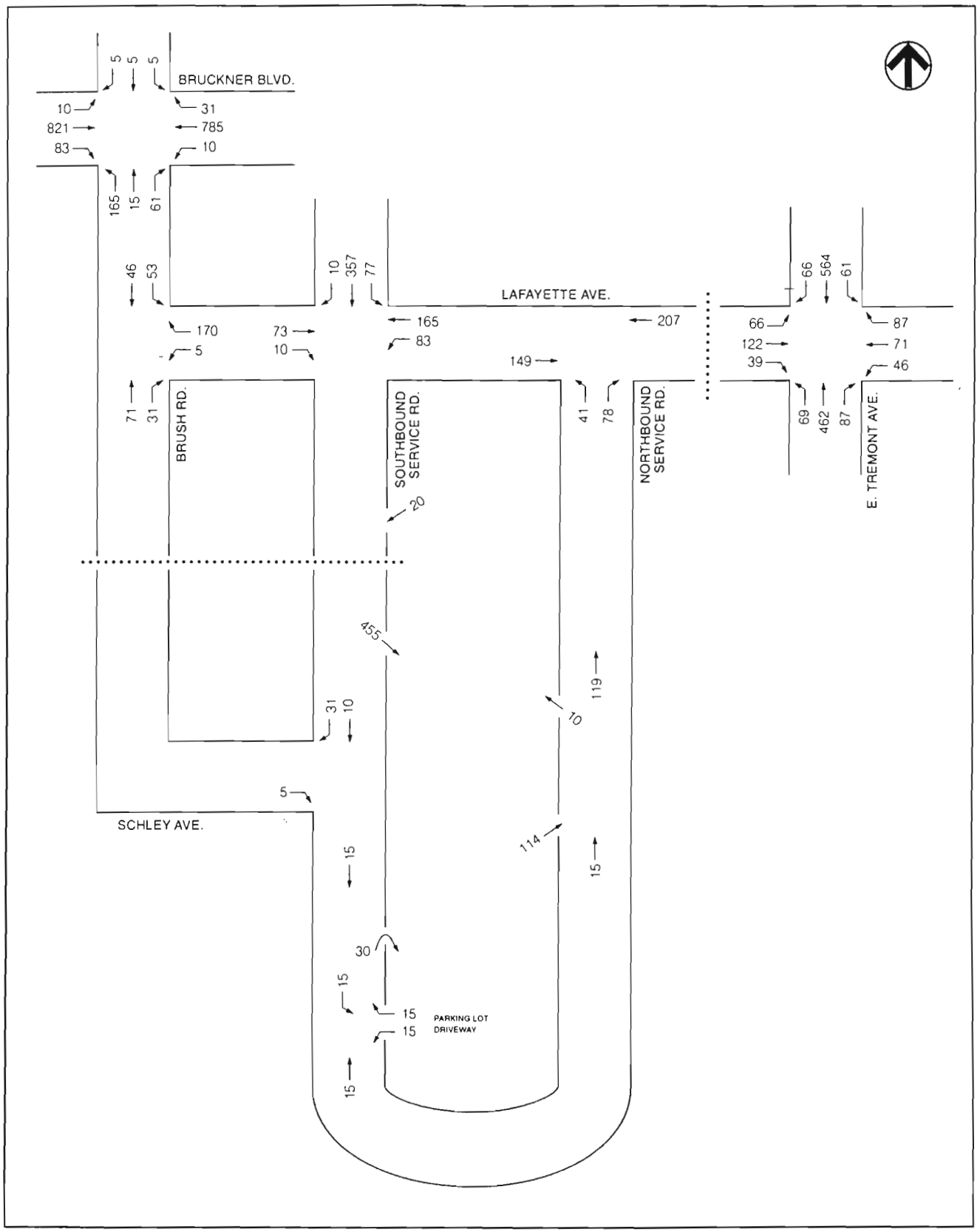



Not to Scale

# 2002 No Build Traffic Volumes • Weekday PM Peak Hour

*Ferry Point Park*

*Figure J-6*

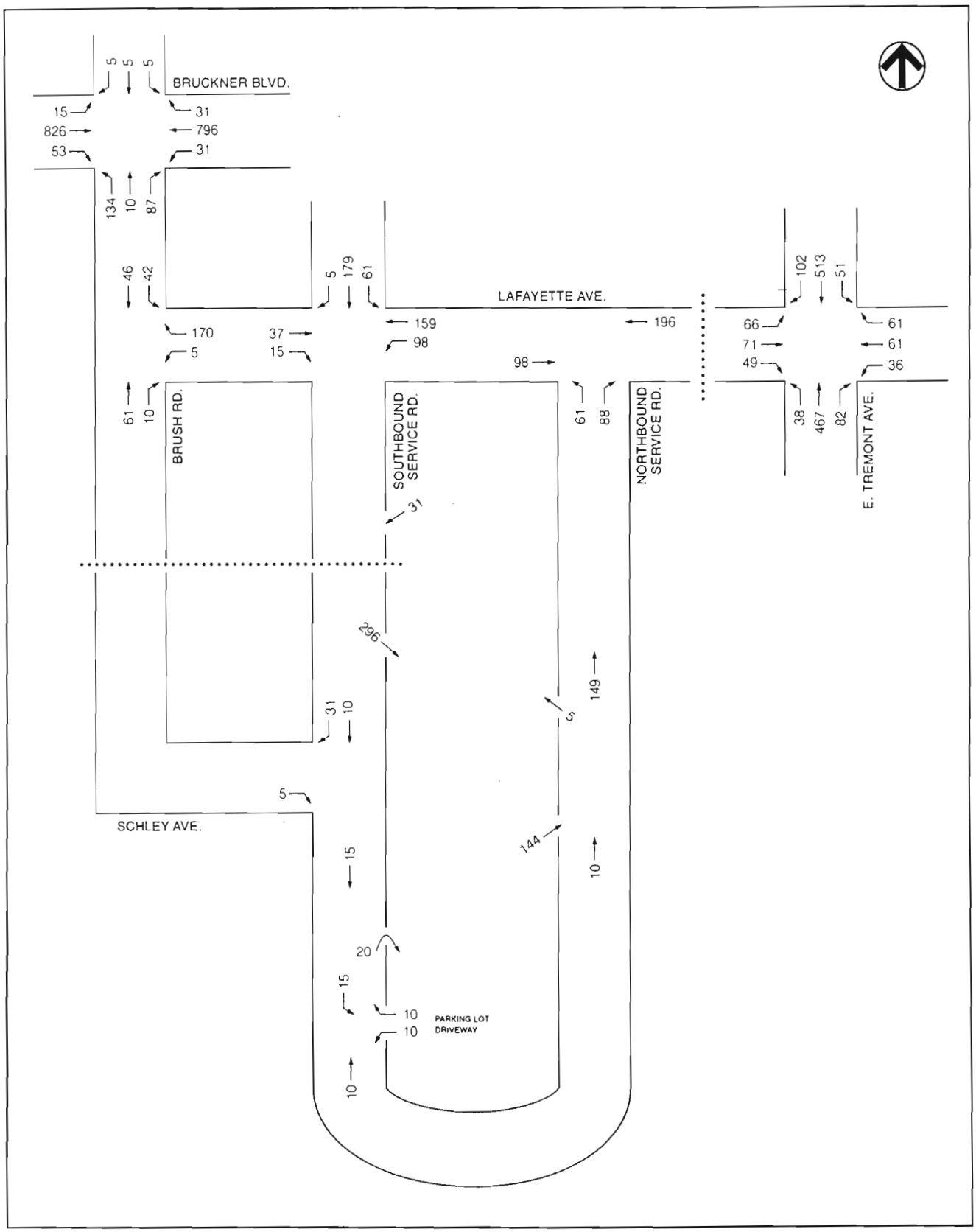



Not to Scale

# 2002 No Build Traffic Volumes • Saturday Midday Peak Hour

*Ferry Point Park*

*Figure J-7*




Not to Scale

# 2002 No Build Traffic Volumes • Saturday PM Peak Hour

*Ferry Point Park*

*Figure J-8*

## Table J-5
## Vehicle Trip Generation

| Proposed Program | |
|---|---|
| Fine Dining/Banquet Facility | 1,000 seats |
| Boathouse Grill | 400 seats |
| Golf Course | 18 holes |
| Driving Range | 100 stalls |
| Waterfront Park | 19.5 acres |
| Community Park | 7 acres |

| Trip Generation Rates | |
|---|---|
| Fine Dining/Banquet Facility[1] and Boathouse Grill[2] | |
| Weekday PM Peak | T = 0.404(X) - 31.482 |
| Saturday Midday and PM Peaks | T = 0.384(X) - 16.724 |
| Golf Course[3] | |
| Weekday PM Peak | 3.56 vehicle trips per hole |
| Saturday Midday and PM Peaks | 4.59 vehicle trips per hole |
| Driving Range[3] | |
| Weekday PM Peak | 1.25 vehicle trips per stall |
| Saturday Midday and PM Peaks | 0.80 vehicle trips per stall |
| Waterfront Park/Community Park[4] | |
| Weekday PM Peak | N/A |
| Saturday Midday and PM Peaks | N/A |

| Directional Distribution | | |
|---|---|---|
| | Percent | |
| | In | Out |
| Fine Dining/Banquet Facility[1] and Boathouse Grill[2] | | |
| Weekday Midday Peak and Saturday Midday Peaks | 59% | 41% |
| Saturday PM Peak | 100 | 0 |
| Golf Course[3] | | |
| Weekday Midday Peak | 43 | 57 |
| Saturday Midday and PM Peaks | 49 | 51 |
| Driving Range[3] | | |
| Weekday Midday Peak | 42 | 58 |
| Saturday Midday and PM Peaks | 54 | 46 |
| Waterfront Park/Community Park[4] | | |
| Weekday Midday Peak | 24 | 76 |
| Saturday Midday Peak | 34 | 66 |
| Saturday PM Peak | 15 | 85 |

| Vehicle Trips by Peak | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Weekday PM | | | Saturday Midday | | | Saturday PM | | |
| Use | In | Out | Total | In | Out | Total | In | Out | Total |
| Fine Dining/Banquet Facility [1] | 370 | 0 | 370 | 218 | 152 | 370 | 370 | 0 | 370 |
| Boathouse Grill[2] | 58 | 40 | 98 | 31 | 21 | 52 | 61 | 42 | 102 |
| Golf Course/Driving Range[3] | 68 | 91 | 159 | 72 | 71 | 143 | 72 | 71 | 143 |
| Waterfront Park/Community Park[4] | 6 | 19 | 25 | 13 | 25 | 38 | 7 | 31 | 38 |
| TOTAL | 502 | 150 | 652 | 334 | 269 | 603 | 510 | 144 | 654 |

**Notes:**
[1] *ITE Trip Generation Manual Sixth Edition* rate for "Quality Restaurant" (Use 831). Assumes equal trip generation for Saturday afternoon and Saturday evening events.
[2] *ITE Trip Generation Manual Sixth Edition* rate for "Quality Restaurant" (Use 831). Assumes 15 percent linkage from other project uses. The Saturday midday peak hour vehicle trips are assumed to be 50 percent of Saturday evening peak trips.
[3] *ITE Trip Generation Manual Sixth Edition* rate for "Golf Course" (Use 430) and "Golfing Range" (Use 432). Assumes equal trip generation for Saturday afternoon and Saturday evening peak periods. Assumes 25 percent linkage between driving range and golf course.
[4] Surveys conducted at existing Ferry Point Park (west of the Bronx-Whitestone Bridge) May 1999 by Allee King Rosen & Fleming.

## TRAFFIC CONDITIONS

Figures J-12 through J-14 show the Build conditions vehicle trips for the weekday PM, Saturday midday, and Saturday PM peak hours. Tables J-6 and J-7 present a comparison of No Build and Build service conditions for the study area's signalized and unsignalized intersections.

Impacts are considered significant (and require examination of improvement measures) according to the guidelines presented in the *CEQR Technical Manual* if they result in an increase of 5 or more seconds in a lane group if the No Build LOS is D. For No Build LOS E, 4 seconds of delay is considered significant. For No Build LOS F, 3 seconds of delay is considered significant. However, if No Build LOS F condition already has delays in excess of 120 seconds, an increase of more than 1.0 second of delay is considered significant unless the proposed action generates fewer than five vehicle-trips through that intersection in the peak hour. Additionally, if the traffic analyses indicate that future No Build v/c ratios below 0.95 are projected to increase to more than 0.95, or where future No Build v/c ratios above 0.95 are expected to increase by 0.020 or more at locations where acceptable levels of service are projected to occur in the future Build condition, additional analyses should be conducted to determine how close the projected project's increment is to creating a significant impact. These analyses should consist of determining how much additional traffic at that analysis location would cause the LOS to deteriorate from its projected acceptable level of service to unacceptable LOS D. This incremental volume represents the "buffer" available to the New York City Department of Transportation before it may need to consider capacity improvements.

In addition, impacts are also considered significant if levels of service deteriorate from acceptable LOS A, B, or C in the future No Build condition to unacceptable LOS D, E, or F in the Build condition.

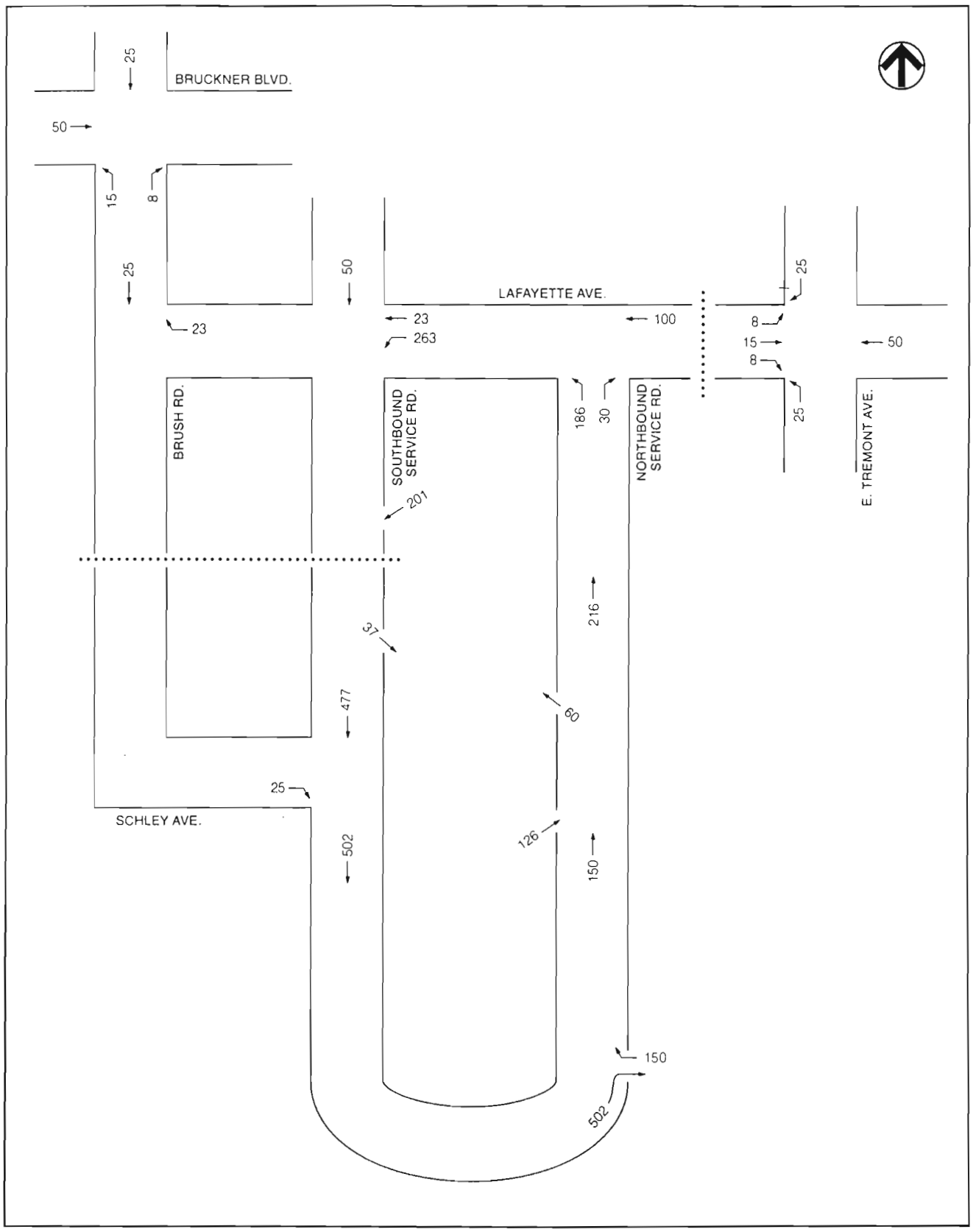
With the proposed project improvements, increases in traffic volumes at study area intersections would not generate any significant impacts at the study area intersections (see Tables J-6 and J-7). These project improvements include:

- At the intersection Lafayette Avenue and the I-678 southbound service road, the restriping of the westbound approach from two lanes to three lanes (an exclusive left-turn lane and two through lanes), the addition of an exclusive left turn phase, and coordination of the westbound signal with the intersection of Lafayette Avenue and the I-678 northbound service road. Signal coordination would ensure that left-turn queues can be accommodated within available storage capacity.
- At the intersection of East Tremont Avenue and Lafayette Avenue, daylight (restrict the use of up to three parking spaces) at the northbound approach during the weekday PM peak period.

The study area intersections would operate at LOS C or better in Build conditions.

## SITE ACCESS

Project-generated vehicle trips would access the site from a new entrance road off the Ferry Point Park Access Road. In Build conditions, the two-way segment of the Ferry Point Park Access Road would be changed to a two-lane, one-way loop road operating in the southbound direction west of the Bronx-Whitestone Bridge and in the northbound direction east of the bridge. With the exception of the community park, all access to the proposed recreation facility would be from the west—vehicular, bicycle, and pedestrian access would be from the I-678

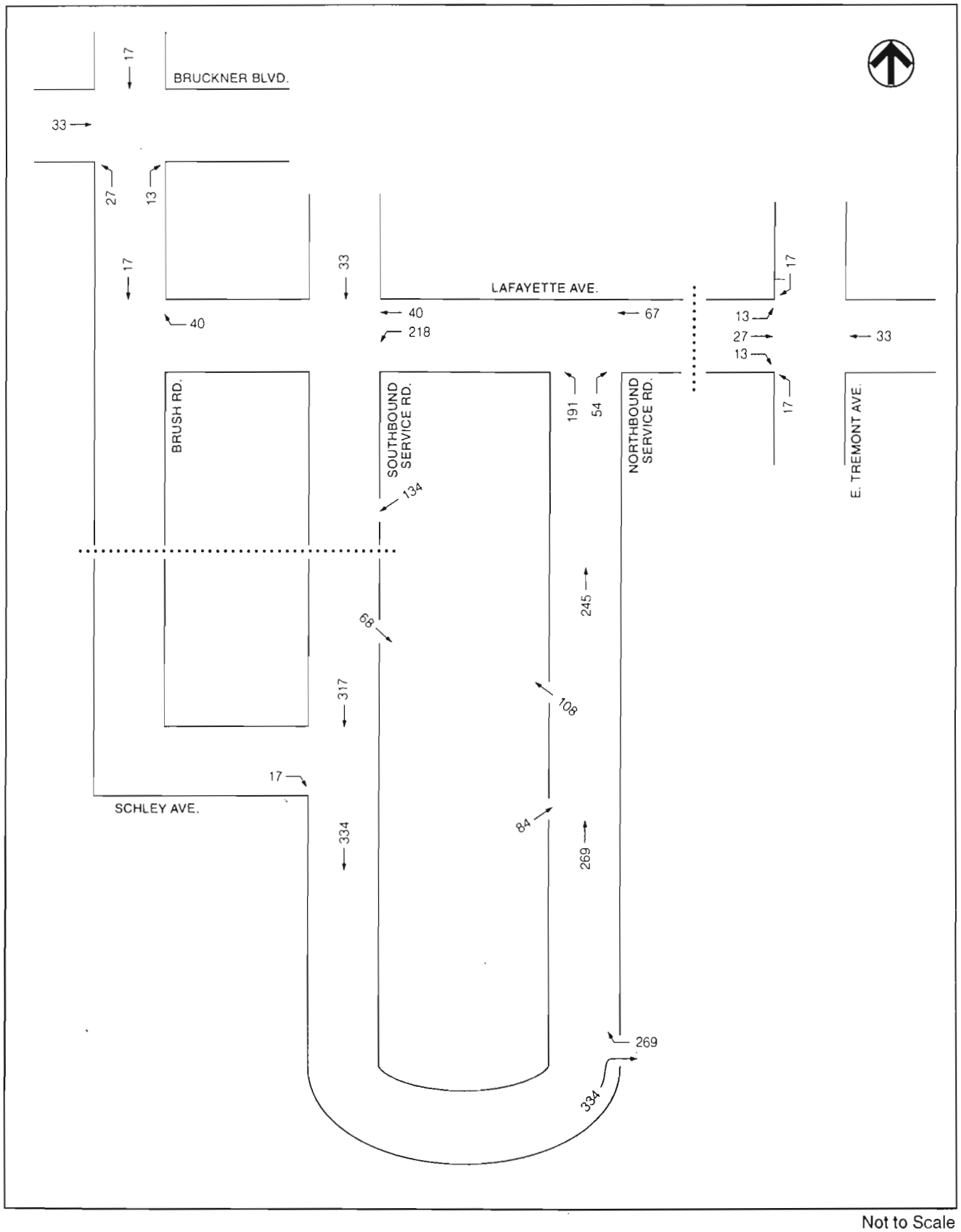



Not to Scale

# Project Generated Traffic Volumes • Weekday PM Peak Hour

*Ferry Point Park*

*Figure J-9*

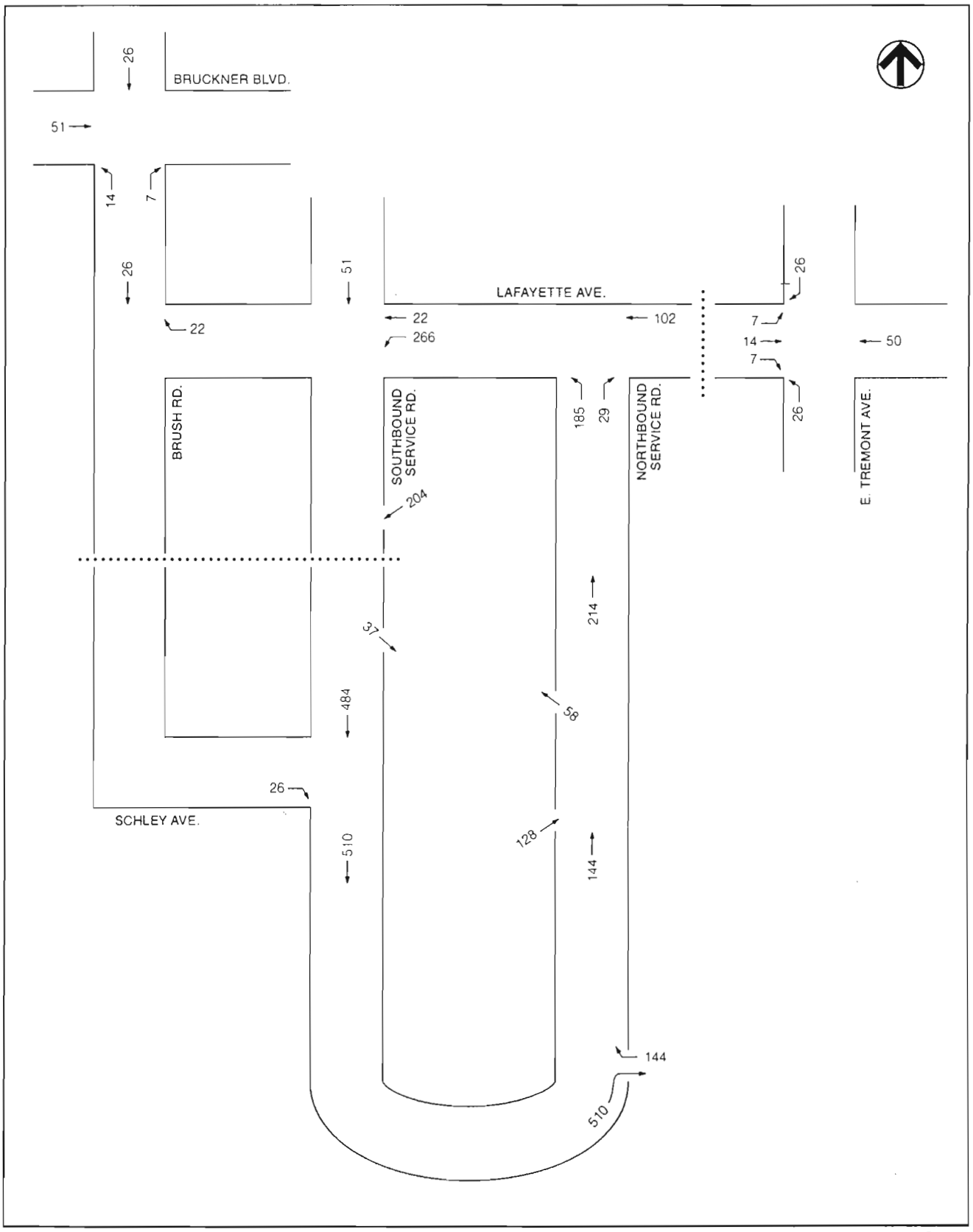



Not to Scale

# Project Generated Traffic Volumes • Saturday Midday Peak Hour

*Ferry Point Park*

*Figure J-10*

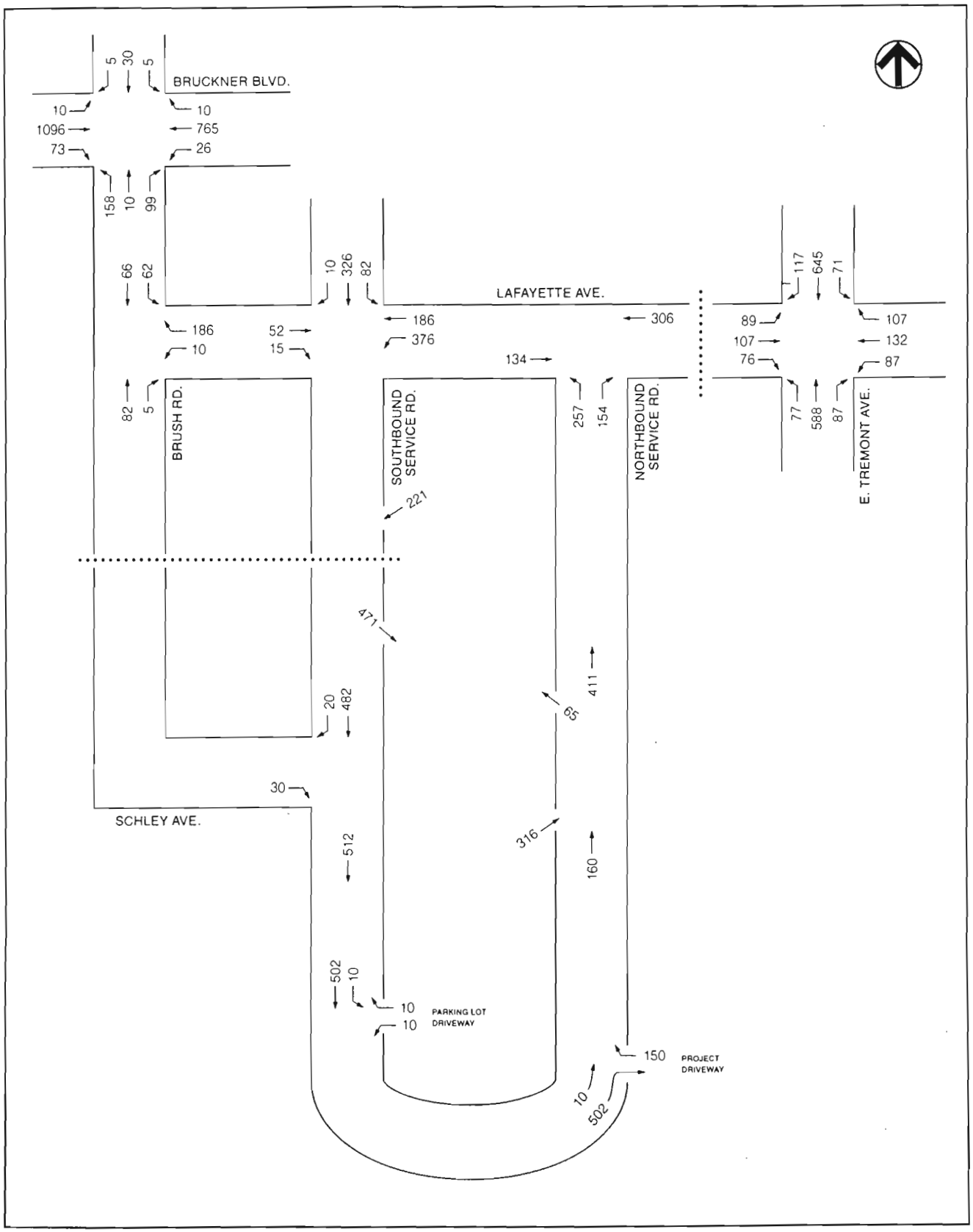



Not to Scale

## Project Generated Traffic Volumes • Saturday PM Peak Hour

*Ferry Point Park*

*Figure J-11*

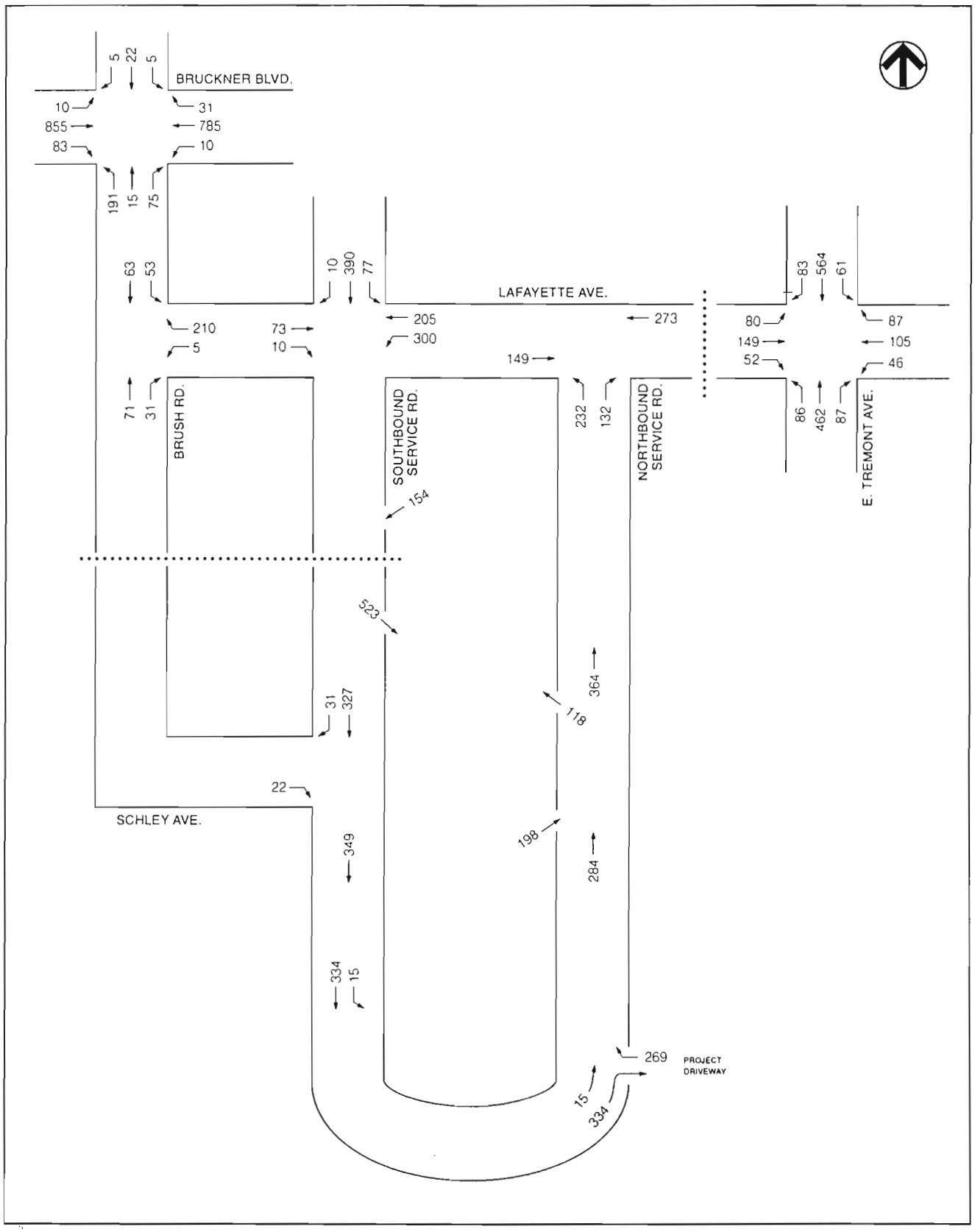



Not to Scale

# 2002 Build Traffic Volumes • Weekday PM Peak Hour

*Ferry Point Park*

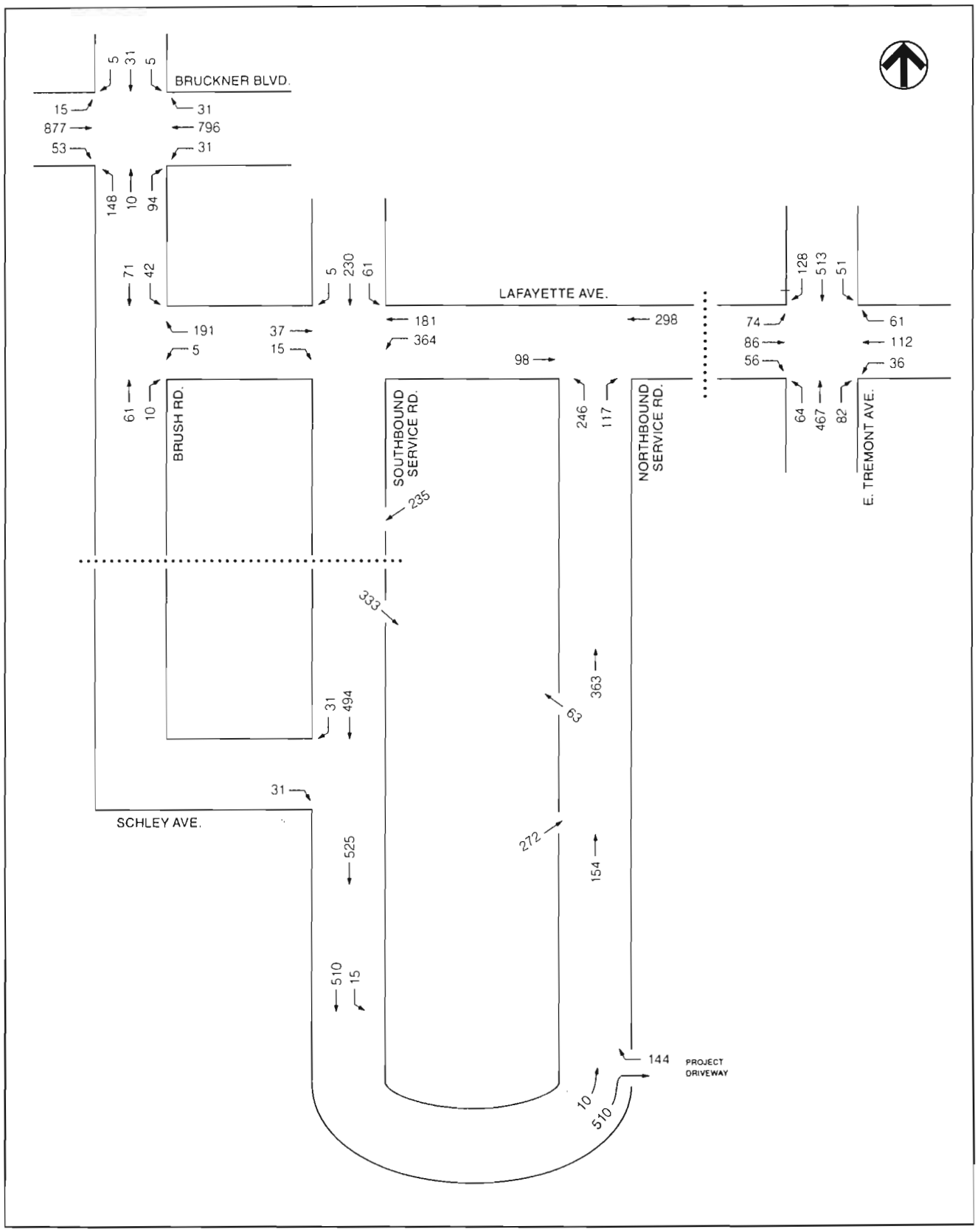
*Figure J-12*




# 2002 Build Traffic Volumes • Saturday Midday Peak Hour

*Ferry Point Park*

*Figure J-13*




Not to Scale

# 2002 Build Traffic Volumes • Saturday PM Peak Hour

*Ferry Point Park*

*Figure J-14*

## Table J-6
## Signalized Intersections:
## 2002 No Build and Build Conditions Level of Service Analyses

| Intersection | Weekday PM | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No Build | | | | | | | | Build | | | | | | | |
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.624 | 10.9 | B | 10.9 | B | 11.9 | B | LTR | 0.650 | 11.3 | B | 11.3 | B | 12.4 | B |
| Westbound | DfL | 0.423 | 11.1 | B | 9.8 | B | | | DfL | 0.430 | 11.3 | B | 9.8 | B | | |
| | TR | 0.525 | 9.8 | B | | | | | TR | 0.525 | 9.8 | B | | | | |
| Northbound | DfL | 0.419 | 24.5 | C | 24.1 | C | | | DfL | 0.505 | 25.9 | D | 25.1 | D | | |
| | TR | 0.340 | 23.6 | C | | | | | TR | 0.365 | 23.9 | C | | | | |
| Southbound | DfL | 0.021 | 20.9 | C | 21.0 | C | | | LTR | 0.061 | 21.2 | C | 21.2 | C | | |
| | TR | 0.030 | 21.0 | C | | | | | | | | | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Westbound | L | 0.016 | 4.7 | A | 5.2 | B | 8.2 | B | L | 0.016 | 4.7 | A | 5.3 | B | 8.2 | B |
| | R | 0.205 | 5.2 | B | | | | | R | 0.241 | 5.4 | B | | | | |
| Northbound | TR | 0.134 | 10.1 | B | 10.1 | B | | | TR | 0.134 | 10.1 | B | 10.1 | | | |
| Southbound | DfL | 0.223 | 10.5 | B | 10.3 | B | | | DfL | 0.223 | 10.5 | B | 10.4 | | | |
| | T | 0.108 | 10.0 | B | | | | | T | 0.172 | 10.3 | B | | | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD (1)** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.043 | 6.9 | B | 6.9 | B | 12.6 | B | T | 0.051 | 10.0 | B | 10.0 | B | 9.3 | B |
| Westbound | LT | 0.242 | 7.8 | B | 7.8 | B | | | L | 0.686 | 2.9 | A | 2.3 | A | | |
| | | | | | | | | | T | 0.142 | 1.2 | A | | | | |
| Southbound | LTR | 0.490 | 16.6 | C | 16.6 | C | | | LTR | 0.554 | 17.3 | C | 17.3 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.097 | 6.8 | B | 6.8 | B | 6.4 | B | T | 0.097 | 6.8 | B | 6.8 | B | 11.1 | B |
| Westbound | T | 0.148 | 7.0 | B | 7.0 | B | | | T | 0.221 | 7.4 | B | 7.4 | B | | |
| Northbound | L | 0.209 | 14.9 | B | 5.5 | B | | | L | 0.754 | 24.2 | C | 15.2 | C | | |
| | R | 0.133 | 0.0 | A | | | | | R | 0.166 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE (2)** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.589 | 18.6 | C | 18.6 | C | 29.6 | D | LTR | 0.693 | 20.8 | C | 20.8 | C | 23.0 | C |
| Westbound | LTR | 0.583 | 18.5 | C | 18.5 | C | | | LTR | 0.684 | 20.6 | C | 20.6 | C | | |
| Northbound | LTR | 0.991 | 36.7 | D | 36.7 | D | | | LT | 0.907 | 23.0 | C | 21.2 | C | | |
| | | | | | | | | | R | 0.148 | 7.0 | B | | | | |
| Southbound | LTR | 0.975 | 31.6 | D | 31.6 | D | | | LTR | 0.949 | 26.5 | D | 26.5 | D | | |

**Notes:**
(1) The analysis of Build Conditions at this intersection includes improvements to be implemented as part of the proposed project (addition of a westbound exclusive left turn lane, westbound leading phase, and coordination of signal timing with the intersection of Lafayette Avenue and the I-678 Northbound Service Road).
(2) The analysis of Build Conditions at this intersection includes improvements to be implemented with the proposed project (daylighting).

## Table J-6 (continued)
## Signalized Intersections:
## 2002 No Build and Build Conditions Level of Service Analyses

| Intersection | Saturday Midday | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No Build | | | | | | | | Build | | | | | | | |
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.505 | 9.5 | B | 9.5 | B | 11.2 | B | LTR | 0.523 | 9.7 | B | 9.7 | B | 11.9 | B |
| Westbound | LTR | 0.444 | 9.0 | B | 9.0 | B | | | LTR | 0.448 | 9.0 | B | 9.0 | B | | |
| Northbound | DfL | 0.516 | 25.9 | D | 24.9 | C | | | DfL | 0.634 | 28.6 | D | 26.9 | D | | |
| | TR | 0.260 | 22.8 | C | | | | | TR | 0.311 | 23.3 | C | | | | |
| Southbound | DfL | 0.018 | 20.9 | C | 20.9 | C | | | LTR | 0.048 | 21.1 | C | 21.1 | C | | |
| | TR | 0.029 | 21.0 | C | | | | | | | | | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Westbound | L | 0.008 | 4.6 | A | 5.1 | B | 8.2 | B | L | 0.008 | 4.6 | A | 5.3 | B | 8.0 | B |
| | R | 0.187 | 5.2 | B | | | | | R | 0.245 | 5.4 | B | | | | |
| Northbound | TR | 0.139 | 10.1 | B | 10.1 | B | | | TR | 0.139 | 10.1 | B | 10.1 | B | | |
| Southbound | DfL | 0.162 | 10.2 | B | 10.1 | B | | | DfL | 0.162 | 10.2 | B | 10.2 | B | | |
| | T | 0.103 | 10.0 | B | | | | | T | 0.139 | 10.1 | B | | | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD (1)** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.056 | 7.0 | B | 7.0 | B | 12.6 | B | T | 0.067 | 10.0 | B | 10.0 | B | 9.1 | B |
| Westbound | LT | 0.196 | 7.6 | B | 7.6 | B | | | L | 0.518 | 1.8 | A | 1.6 | A | | |
| | | | | | | | | | T | 0.142 | 1.2 | A | | | | |
| Southbound | LTR | 0.486 | 16.5 | C | 16.5 | C | | | LTR | 0.519 | 16.9 | C | 16.9 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.123 | 6.9 | B | 6.9 | B | 6.5 | B | T | 0.123 | 6.9 | B | 6.9 | B | 10.4 | B |
| Westbound | T | 0.155 | 7.0 | B | 7.0 | B | | | T | 0.205 | 7.3 | B | 7.3 | B | | |
| Northbound | L | 0.125 | 14.4 | B | 5.0 | A | | | L | 0.704 | 22.0 | C | 14.0 | B | | |
| | R | 0.087 | 0.0 | A | | | | | R | 0.147 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.362 | 16.0 | C | 16.0 | C | 12.7 | B | LTR | 0.461 | 16.9 | C | 16.9 | C | 13.8 | B |
| Westbound | LTR | 0.306 | 15.5 | C | 15.5 | C | | | LTR | 0.355 | 15.9 | C | 15.9 | C | | |
| Northbound | LTR | 0.710 | 12.5 | B | 12.5 | B | | | LTR | 0.776 | 14.5 | B | 14.5 | B | | |
| Southbound | LTR | 0.641 | 10.9 | B | 10.9 | B | | | LTR | 0.664 | 11.3 | B | 11.3 | B | | |

**Notes:**
(1) The analysis of Build Conditions at this intersection includes improvements to be implemented as part of the proposed project (addition of a westbound exclusive left turn lane, westbound leading phase, and coordination of signal timing with the intersection of Lafayette Avenue and the I-678 Northbound Service Road)

## Table J-6 (continued)
## Signalized Intersections:
## 2002 No Build and Build Conditions Level of Service Analyses

| Intersection | Saturday PM | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No Build | | | | | | | | Build | | | | | | | |
| | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS | Lane Group | V/C Ratio | Delay (seconds) | LOS | Approach Delay | Approach LOS | Intersection Delay | Intersection LOS |
| **BRUCKNER BOULEVARD & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.512 | 9.6 | B | 9.6 | B | 11.1 | B | LTR | 0.539 | 9.9 | B | 9.9 | B | 11.6 | B |
| Westbound | LTR | 0.490 | 9.4 | B | 9.4 | B | | | LTR | 0.499 | 9.5 | B | 9.5 | B | | |
| Northbound | DfL | 0.384 | 24.1 | C | 23.7 | C | | | DfL | 0.461 | 25.1 | D | 24.5 | C | | |
| | TR | 0.310 | 23.3 | C | | | | | TR | 0.333 | 23.5 | C | | | | |
| Southbound | DfL | 0.020 | 20.9 | C | 21.0 | C | | | LTR | 0.058 | 21.2 | C | 21.2 | C | | |
| | TR | 0.029 | 21.0 | C | | | | | | | | | | | | |
| **LAFAYETTE AVENUE & BRUSH AVENUE** | | | | | | | | | | | | | | | | |
| Westbound | L | 0.008 | 4.6 | A | 5.1 | B | 8.0 | B | L | 0.008 | 4.6 | A | 5.2 | B | 8.2 | B |
| | R | 0.187 | 5.2 | B | | | | | R | 0.217 | 5.3 | B | | | | |
| Northbound | TR | 0.104 | 10.0 | B | 10.0 | B | | | TR | 0.104 | 10.0 | B | 10.0 | | | |
| Southbound | DfL | 0.153 | 10.2 | B | 10.1 | B | | | LT | 0.195 | 10.4 | B | 10.4 | | | |
| | T | 0.129 | 10.1 | B | | | | | | | | | | | | |
| **LAFAYETTE AVENUE & I-678 SB SERVICE ROAD (1)** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.033 | 6.9 | B | 6.9 | B | 11.4 | B | T | 0.040 | 9.9 | B | 9.9 | B | 7.7 | B |
| Westbound | LT | 0.224 | 7.7 | B | 7.7 | B | | | L | 0.654 | 2.6 | A | 2.1 | A | | |
| | | | | | | | | | T | 0.142 | 1.2 | A | | | | |
| Southbound | LTR | 0.358 | 15.4 | C | 15.4 | C | | | LTR | 0.429 | 16.0 | C | 16.0 | C | | |
| **LAFAYETTE AVENUE & I-678 NB SERVICE ROAD** | | | | | | | | | | | | | | | | |
| Eastbound | T | 0.084 | 6.7 | B | 6.7 | B | 6.6 | B | T | 0.084 | 6.7 | B | 6.7 | B | 10.1 | B |
| Westbound | T | 0.140 | 7.0 | B | 7.0 | B | | | T | 0.214 | 7.3 | B | 7.3 | B | | |
| Northbound | L | 0.157 | 14.6 | B | 5.9 | B | | | L | 0.638 | 20.1 | C | 13.6 | B | | |
| | R | 0.084 | 0.0 | A | 0.0 | 0.0 | | | R | 0.111 | 0.0 | A | | | | |
| **LAFAYETTE AVENUE & EAST TREMONT AVENUE** | | | | | | | | | | | | | | | | |
| Eastbound | LTR | 0.343 | 15.8 | C | 15.8 | C | 11.9 | B | LTR | 0.411 | 16.4 | C | 16.4 | C | 13.1 | B |
| Westbound | LTR | 0.272 | 15.3 | C | 15.3 | C | | | LTR | 0.351 | 15.9 | C | 15.9 | C | | |
| Northbound | LTR | 0.619 | 10.7 | B | 10.7 | B | | | LTR | 0.718 | 12.7 | B | 12.7 | B | | |
| Southbound | LTR | 0.629 | 10.7 | B | 10.7 | B | | | LTR | 0.664 | 11.3 | B | 11.3 | B | | |

**Notes:**
(1) The analysis of Build Conditions at this intersection includes improvements to be implemented as part of the proposed project (addition of a westbound exclusive left turn lane, westbound leading phase, and coordination of signal timing with the intersection of Lafayette Avenue and the I-678 Northbound Service Road)

# Table J-7
# Unsignalized Intersections:
# 2002 No Build and Build Conditions Level of Service Analysis

| Intersection | Weekday PM | | | | |
|---|---|---|---|---|---|
| | | No Build | | Build | |
| | | Lane Group | | Lane Group | |
| | Lane Group | Delay (seconds) | LOS | Delay (seconds) | LOS |
| **I-678 SB SERVICE ROAD & SCHLEY AVENUE** | | | | | |
| Eastbound | R | 2.7 | A | 3.7 | A |
| **PARK ACCESS ROAD & PROJECT ENTRANCE ROAD** | | Entrance road does not | | | |
| Westbound | R | exist in No Build | | 4.3 | A |

# Table J-7 (continued)
# Unsignalized Intersections:
# 2002 No Build and Build Conditions Level of Service Analysis

| Intersection | Saturday Midday | | | | |
|---|---|---|---|---|---|
| | | No Build | | Build | |
| | | Lane Group | | Lane Group | |
| | Lane Group | Delay (seconds) | LOS | Delay (seconds) | LOS |
| **I-678 SB SERVICE ROAD & SCHLEY AVENUE** | | | | | |
| Eastbound | R | 2.7 | A | 3.4 | A |
| **PARK ACCESS ROAD & PROJECT ENTRANCE ROAD** | | | | | |
| Westbound | R | Entrance road does not exist in No Build | | 4.5 | A |

# Table J-7 (continued)
# Unsignalized Intersections:
# 2002 No Build and Build Conditions Level of Service Analysis

| Intersection | Saturday PM | | | | |
|---|---|---|---|---|---|
| | | No Build | | Build | |
| | | Lane Group | | Lane Group | |
| | Lane Group | Delay (seconds) | LOS | Delay (seconds) | LOS |
| **I-678 SB SERVICE ROAD & SCHLEY AVENUE** | | | | | |
| Eastbound | R | 2.7 | A | 3.9 | A |
| **PARK ACCESS ROAD & PROJECT ENTRANCE ROAD** | | | | | |
| Westbound | R | Entrance road does not exist in No Build | | 4.3 | A |

service roads under the Bronx-Whitestone Bridge and onto the crescent road. With the exception of the community park, the proposed recreation facilities would be primarily a regional park. Visitors would enter the site at this location, pass by a stone gateway on the entrance road, and choose to either proceed north to the golf clubhouse area, or south to the community park and the boathouse grill, waterfront park, or fine dining/banquet facility. Access for emergency vehicles would be provided via Emerson Avenue. A stop-controlled entrance road with one lane in each direction would provide access to public recreation facility at the southeastern portion of the site. As shown in Table J-7, the proposed project entrance road would operate at LOS A or better during the weekday PM, Saturday midday, and Saturday PM peak periods.

*PARKING*

Parking would be provided throughout the facility to accommodate park users as shown in Table J-8. The project would provide a total of 965 spaces, including 20 self-park spaces for maintenance vehicles only. The balance of the 945 spaces would include 350 spaces near the fine dining/banquet facility, 350 spaces near the clubhouse, 125 spaces near the boathouse grill, and 120 spaces in other parking lots at the site. During peak hours of operation at the banquet facility, the 350 self-park spaces could be utilized as 500 valet parking spaces. There would be sufficient parking on the project site to accommodate project demand.

**Table J-8**

**Parking by Location and Use**

| Parking Location and Use | Number of Spaces |
|---|---|
| Golf facility | 350 self-park |
| Boathouse grill restaurant | 125 self-park |
| Waterfront park | 120 self-park |
| Fine dining/banquet facility | 350 self-park convertible to 500 valet-park |
| Maintenance building | 20 self-park for staff only |
| Total | 965 self-park (1,115 self/valet-park) |

*PUBLIC TRANSPORTATION*

With completion of the proposed project, the addition of a proposed bus stop with a shelter at the intersection of Schley Avenue and the I-678 southbound service road would be proposed to serve park users. This effort will be coordinated with NYCT. The most likely route to serve this stop is the Q44 bus.

*PEDESTRIANS AND BICYCLES*

As part of the proposed project, sidewalks on the Ferry Point Park access road would be improved for pedestrian access and safety to the public recreation facilities. Pedestrian and bicycle connections would connect the proposed waterfront park with the existing Ferry Point Park located to the west of the bridge. In addition, pedestrians and bicyclists would be able to access the project site through the same entrance road as vehicles and continue on to the crescent road. Bicycle racks would be provided in the waterfront park.

## E. CONCLUSIONS

Based on the analysis above, with the proposed improvements, the proposed development of a public recreation facility is not expected to result in any significant impacts to traffic, parking, transit, pedestrian, or bicycle conditions in the study area. ❖

**Attachment K:** **Air Quality**

## A. INTRODUCTION

This section identifies and quantifies all the significant direct and indirect air quality impacts from the proposed public recreation facility at Ferry Point Park in the Bronx. Direct effects stem from emissions generated by stationary sources on the project site, such as emissions from fuel burned on-site for heating, ventilation, and air conditioning (HVAC) systems. Indirect effects are caused by emissions from motor vehicles traveling to and from the project site (mobile sources) after completion.

## B. POLLUTANTS FOR ANALYSIS

In New York City, ambient concentrations of carbon monoxide (CO), ozone ($O_3$), and lead are predominantly influenced by mobile source emissions. Emissions of nitrogen oxides ($NO_x$) come from both mobile and stationary sources, and emissions of respirable particulate matter and sulfur dioxide ($SO_2$) are associated mainly with stationary sources.

While the project site is a former landfill, no detailed air quality studies were performed to model methane concentrations since methane was not detected in the ambient air during a landfill gas survey conducted as part of the project's soil assessment (see Attachment G, "Hazardous Materials," Section 3.2), and more importantly, the proposed project would not change the quantity of this area-wide pollutant emitted from this site..

### CARBON MONOXIDE

Carbon monoxide, a colorless and odorless gas, is produced in the urban environment primarily by the incomplete combustion of gasoline and other fossil fuels. In New York City, approximately 80 to 90 percent of CO emissions are from motor vehicles. CO concentrations can vary greatly over relatively short distances. Elevated concentrations are usually limited to locations near crowded intersections, along heavily traveled and congested roadways. Consequently, CO concentrations must be predicted on a localized or microscale basis. The proposed project would increase traffic volumes on streets near the project site and could therefore result in localized increases in CO levels.

### NITROGEN OXIDES AND OZONE

Nitrogen oxides are of principal concern because of their role as precursors in the formation of photochemical oxidants, such as ozone. There is a standard for average annual concentrations, which is normally examined only for fossil fuel energy sources. Ozone is formed through a series of reactions that take place in the atmosphere in the presence of sunlight. Because the reactions are slow and occur as the pollutants are diffusing downwind, elevated ozone levels are often found many miles from sources of the precursor pollutants. The effects of nitrogen oxide emissions from mobile sources are therefore generally examined on a regional basis. The change in regional mobile source emissions of these pollutants is related to the total number of vehicle

trips and vehicle miles of travel throughout the New York metropolitan area. The proposed action would not have a significant effect on the overall volume of vehicular travel in the metropolitan area. It would not, therefore, have any measurable impact on regional nitrogen oxide emissions or on ozone levels, and an analysis is not warranted.

## LEAD

Lead emissions are principally associated with industrial sources and motor vehicles that use gasoline containing lead additives. Most U.S. vehicles produced since 1975, and all produced after 1980, are designed to use unleaded fuel. As these newer vehicles have replaced the older ones, motor vehicle-related lead emissions have decreased. As a result, ambient concentrations of lead have declined significantly. Nationally, the average measured atmospheric lead level in 1985 was only about one-quarter the level in 1975.

In 1985, the U.S. Environmental Protection Agency (EPA) announced new rules drastically reducing the amount of lead permitted in leaded gasoline. The maximum allowable lead level in leaded gasoline was reduced from the previous limit of 1.1 grams per gallon to 0.5 grams per gallon effective July 1, 1985, and to 0.1 grams per gallon effective January 1, 1986. Monitoring results indicate that this action has been effective in significantly reducing atmospheric lead levels. Even at locations in the New York City area where traffic volumes are very high, atmospheric lead concentrations are far below the national standard of 1.5 micrograms per cubic meter (three-month average). No significant sources of lead are associated with the project.

## RESPIRABLE PARTICULATES—$PM_{10}$ AND $PM_{2.5}$

Particulate matter is emitted into the atmosphere from a variety of sources: industrial facilities, power plants, construction activity, etc. Gasoline-powered vehicles do not produce any significant quantities of particulate emissions. Diesel-powered vehicles, especially heavy trucks and buses, do emit particulates, and respirable particulate concentrations may, therefore, be locally elevated near roadways with high volumes of heavy diesel-powered vehicles. Particulates less than 10 microns (μm) in diameter ($PM_{10}$) have become of primary concern because they are respirable. In addition to $PM_{10}$, EPA has determined that elevated airborne levels of particulate matter less than 2.5 microns ($PM_{2.5}$), show consistent and coherent associations with serious health effects. The project would not be a significant source of increased regional vehicular trips or local diesel vehicle trips, and therefore, an analysis for respirable particulates was not warranted.

## SULFUR DIOXIDE

Sulfur dioxide emissions are primarily associated with the combustion of sulfur-containing fuels: oil and coal. No significant quantities are emitted from mobile sources. Monitored sulfur dioxide concentrations in Bronx are below the national standards. If oil is burned for the on-site HVAC systems, sulfur dioxide would be included in the exhaust from such units.

## CONCLUSIONS

The areas of potentially significant air quality impacts from the proposed project that require an analysis are the following:

- Effects of the proposed project on CO concentrations from increased traffic generated by the proposed project; and

- Potential stationary source impacts from the fuel burned on-site for the project's HVAC systems.

## C. AIR QUALITY STANDARDS

### NATIONAL AND STATE AIR QUALITY STANDARDS

As required by the Clean Air Act, primary and secondary National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: carbon monoxide, nitrogen dioxide, ozone, respirable particulate matter, sulfur dioxide, and lead. (Hydrocarbon standards have been rescinded because these pollutants are primarily of concern only in their role as ozone precursors.) EPA has adopted 24-hour and annual standards for respirable particulate matter with an aerodynamic equivalent diameter less than 2.5 μm ($PM_{2.5}$), which became effective September 16, 1997. As recognized by EPA, the adoption of the $PM_{2.5}$ standard is intended to provide increased protection of public health from fossil fuel combustion. At this time, EPA is only requiring states to implement monitoring programs to determine the scope of the problem. It will likely be at least 5 years before any attainment/non-attainment designations are made and a few more years before any implementation plans are required.

Table K-1 shows the standards for these pollutants. These standards have also been adopted as the ambient air quality standards for the State of New York. The primary standards protect the public health, and represent levels at which there are no known significant effects on human health. The secondary standards are intended to protect the nation's welfare, and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the environment. For carbon monoxide, nitrogen dioxide, ozone, and respirable particulates, the primary and secondary standards are the same.

### STATE IMPLEMENTATION PLAN (SIP)

The Clean Air Act requires each state to submit to EPA a SIP for attainment of NAAQS. The 1977 and 1990 amendments require comprehensive plan revisions for areas where one or more of the standards have yet to be attained. In the New York City metropolitan area, the standard for ozone continues to be exceeded as New York State Department of Environmental Conservation (DEC) is currently preparing a revision of the SIP. A CO attainment demonstration was submitted to EPA by DEC in November 1992. This submission noted that, with an Enhanced Inspection and Maintenance program in effect, there would be no CO violations in New York City by the December 31, 1995 attainment deadline. No violations of the CO standard have been recorded at DEC monitoring stations over the past few years. Recently, however, EPA designated New York County (Manhattan) non-attainment for respirable particulate matter ($PM_{10}$). In 1995, a SIP revision and Attainment Demonstration was submitted to EPA for the control of $PM_{10}$ concentrations in New York County.

New York City is implementing measures to reduce levels of hydrocarbons as part of its effort to attain the SIP ozone standard. As part of its effort to reduce CO levels and attain the CO standard, New York City is also committed to implementing area-wide and site-specific control measures, should unanticipated localized growth result in elevated CO levels, both before the attainment deadline and into the maintenance period.

Table K-1

## National and New York State Ambient Air Quality Standards

| Pollutant | Primary | | Secondary | |
|---|---|---|---|---|
| | PPM | Micrograms Per Cubic Meter | PPM | Micrograms Per Cubic Meter |
| Carbon Monoxide | | | | |
| Maximum 8-Hour Concentration[1] | 9 | | 9 | |
| Maximum 1-Hour Concentration[1] | 35 | | 35 | |
| Lead | | | | |
| Maximum Arithmetic Mean Averaged Over 3 Consecutive Months | | 1.5 | | 1.5 |
| Nitrogen Dioxide | | | | |
| Annual Arithmetic Average | 0.05 | 100 | 0.05 | 100 |
| Ozone | | | | |
| 1-Hour Average[2] | 0.12 | 235 | 0.12 | 235 |
| 8-Hour Average | 0.08 | 157 | 0.08 | 157 |
| Total Suspended Particulates (TSP)[3] | | | | |
| Annual Mean | | 75 | | |
| Maximum 24-Hour Concentration | | 250 | | |
| Respirable Particulates ($PM_{10}$) | | | | |
| Annual Arithmetic Mean | | 50 | | 50 |
| Maximum 24-Hour Concentration[4] | | 150 | | 150 |
| Respirable Particulates ($PM_{2.5}$) | | | | |
| Annual Arithmetic Mean | | 15 | | 15 |
| Maximum 24-Hour Concentration[5] | | 65 | | 65 |
| Sulfur Dioxide | | | | |
| Annual Arithmetic Mean | 0.03 | 80 | | |
| Maximum 24-Hour Concentration[1] | 0.14 | 365 | | |
| Maximum 3-Hour Concentration[1] | | | 0.50 | 1,300 |

**Notes:**

[1]Not to be exceeded more than once a year.
[2]Applies only to areas that were designated nonattainment when the ozone standard was adopted in July 1997.
[3]TSP levels are regulated by a New York State Standard only.
[4]Not to be exceeded by 99th percentile of 24-hour $PM_{10}$ concentrations in a year (averaged over 3 years).
[5]Not to be exceeded by 98th percentile of 24-hour $PM_{2.5}$ concentrations in a year (averaged over 3 years).
PPM = parts per million

**Sources:**

40 CFR Part 50—National Primary and Secondary Ambient Air Quality Standards 40 CFR 50.12 "National Primary and Secondary Standard for Lead," 43 CFR 46245

### *DE MINIMIS* CRITERIA

For all pollutants, project-related NAAQS exceedances generally constitute a significant impact. In addition to the NAAQS, New York City has developed *de minimis* criteria to assess the significance of impacts on air quality that would result from a proposed development. These criteria, as detailed in the *City Environmental Quality Review (CEQR) Technical Manual,* set the minimum change in CO concentration that defines a significant environmental impact. Significant increases with respect to CO concentrations in New York City are defined as 1) an increase of 0.5 parts per million (ppm) or more in the maximum 8-hour average CO concentration at a location where the predicted No Build 8-hour concentration is equal to or between 8 ppm and 9 ppm; or 2) an increase of more than half the difference between baseline concentrations and the 8-hour standard, when No Build concentrations are below 8.0 ppm.

## D. METHODOLOGY FOR PREDICTING POLLUTANT CONCENTRATIONS FROM MOBILE SOURCES

### INTRODUCTION

To compare estimated carbon monoxide concentrations with the national and state ambient air quality standards for carbon monoxide (which are based on 1- and 8-hour averages of carbon monoxide concentrations), estimates of maximum concentrations for these same periods must be prepared.

The prediction of motor vehicle-generated carbon monoxide concentrations in an urban environment influenced by meteorological phenomena, traffic conditions, and physical configurations is a challenging problem. Air pollutant dispersion models simulate mathematically how traffic, meteorology, and geometry combine to affect pollutant concentrations. The mathematical expressions and formulations that make up the various models attempt to describe an extremely complex physical phenomenon as closely as possible. However, because all models contain simplifications and approximations of actual conditions and interactions, and because a worst-case condition is of most interest, most of these dispersion models are conservative and tend to overpredict pollutant concentrations, particularly under adverse meteorological conditions.

The CO analysis for the proposed project has employed a modeling approach approved by EPA that has been widely used for evaluating air quality impacts of projects in New York City, New York State, and throughout the country, and has coupled this approach with a series of worst-case assumptions relating to meteorology, traffic, background concentration levels, etc. This combination results in a conservative estimate of expected carbon monoxide concentrations and resulting air quality impacts caused by the project.

### DISPERSION MODELS FOR MICROSCALE ANALYSES

At the site selected for study, a first-level conservative analysis was performed using EPA's CAL3QHC model, version 2.* The CAL3QHC model is based on the CALINE-3 line source dispersion model with an additional algorithm for estimating vehicle queue lengths at signalized

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* *User's Guide to CAL3QHC, A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections,* Office of Air Quality, Planning Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina

intersections. The CALINE-3 model is a Gaussian model, which assumes that the dispersion of pollutants downwind of a pollution source follows a Gaussian (or normal) distribution, and is used for predicting CO concentrations along roadway segments. The pollution source is the emissions from motor vehicles operating under free-flow conditions. The refinement that CAL3QHC provides is the inclusion of the contribution of emissions from idling vehicles in the overall concentration. The queuing algorithm requires additional input for site-specific traffic parameters, such as signal timing, and performs delay calculations from the *1994 Highway Capacity Manual* traffic forecasting model to predict the number of idling vehicles. The CAL3QHC model was recently modified to include saturation flow rate, vehicle arrival type, and signal actuation characteristics as input parameters.

For a more refined analysis, the CAL3QHC model has been updated with an extended module, which allows for the incorporation of actual meteorological data into the modeling, instead of worst-case assumptions regarding meteorological parameters. This refined version of the model, CAL3QHCR, is only employed if maximum predicted CO concentrations are greater than the applicable ambient air quality standards or if significant air quality impacts are predicted with the first-level screening CAL3QHC modeling.

## WORST-CASE METEOROLOGICAL CONDITIONS

In general, the transport and concentration of pollutants from vehicular sources are influenced by three principal meteorological factors: wind direction, wind speed, and atmospheric stability.

Wind direction influences the accumulation of pollutants at a particular receptor location. Wind direction was chosen to maximize pollutant concentrations at each of the prediction sites. In applying the CAL3QHC model, the wind angle was varied to determine the worst-case wind direction resulting in the maximum concentrations.

Following the recommendations of EPA and the procedures followed in the recent SIP submissions, carbon monoxide computations were performed using a wind speed of 1 meter/second, and stability class D. A persistence factor of 0.7 for the 8-hour period was selected. This persistence factor takes into account that over 8 hours, vehicle volumes will fluctuate downward from the peak, speeds may vary, and wind directions and speeds will change somewhat as compared with the conservative assumptions used for the single highest hour. A surface roughness of 3.21 meters was chosen, and a 43° Fahrenheit ambient temperature was assumed for the emissions computations. At each receptor location, the wind angle that maximized the pollutant concentrations was used in the analysis, regardless of frequency of occurrence.

## ANALYSIS YEARS

The carbon monoxide microscale analysis was performed for 2001, both the year of completion of the golf course component of the project and the worst-case year with respect to CO emissions (i.e., in later years, emissions would be less due to vehicle turnover). However, the analysis was performed with worst-case traffic conditions, assuming completion of all the components of the project, which is expected to be in 2002. This approach is extremely conservative, since the modeled worst-case scenario is not an actual scenario that will occur as part of the proposed project. The 2001 analysis was performed both without (the No Build) and with the proposed project (Build).

## VEHICLE EMISSIONS DATA

To predict ambient concentrations of pollutants generated by vehicular traffic, emissions from vehicle exhaust systems must be estimated accurately. Vehicular emissions were computed using the EPA-developed Mobile Source Emissions Model, MOBILE5B. Emission estimates were made for six classes of motor vehicles:

- Light-duty, gasoline-powered automobiles;
- Light-duty, gasoline-powered new taxis;
- Light-duty, gasoline-powered used police car taxis;
- Light-duty, gasoline-powered trucks;
- Heavy-duty, gasoline-powered trucks; and
- Heavy-duty, diesel-powered vehicles.

No light-duty diesel-powered vehicles (automobiles and taxis), light-duty diesel-powered trucks, or motorcycles were assumed. In the case of motorcycles, the number of such vehicles on any street is generally small. In the case of diesel-powered vehicles, emissions from a comparable class of gasoline-powered vehicles were included. Carbon monoxide emissions from the gasoline-powered vehicles are higher than the comparable diesel-powered vehicle emissions, and thus yield conservative estimates of total composite CO emissions and concentrations. Oxygenated-fuel credits were taken in the microscale modeling analyses. Emission estimates for oxygenated fuels were based on a gasoline blend with a 2.7 percent oxygen content.

Emission estimates were based on implementation of the New York State auto and light-duty gasoline-powered truck inspection and maintenance (I&M) program begun in January 1982 and the taxi I&M program begun in October 1977. The I&M program requires annual inspections of automobiles and light trucks to determine if carbon monoxide and hydrocarbon emissions from the vehicles' exhaust systems are below emission standards. Vehicles failing the emissions test must undergo maintenance and pass a re-test to be registered in New York State.

Heavy-duty vehicle emission estimates reflect local engine displacement and vehicle loading characteristics. Light-duty truck emissions were based on an assumed 73 percent-27 percent split between trucks weighing less than 6,000 pounds and trucks weighing 6,000 to 8,500 pounds. These data were obtained from the New York City Department of Environmental Protection (DEP) and are based on vehicle registration data.

Recently, New York state has decided to revise its future I&M program. Originally, the future I&M program was envisioned to include centralized facilities that would test vehicles under an "enhanced" program, at a dynamic load instead of at a simple idle. However, New York State has recently decided that, while the future I&M program would still involve an enhanced I&M program, motorists would be allowed to take their vehicles to nearby service stations that would be allowed to both test and repair autos that failed the new I&M test. The new I&M program started last year. Emissions for the future year (2001) analysis were developed using the new I&M program.

For automobiles and light-duty gasoline-powered trucks, emission estimates account for three possible vehicle operating conditions: cold-vehicle operation, hot-start operation, and hot-stabilized operation. It is important to distinguish between these three operating categories, because vehicles emit carbon monoxide at different rates depending on whether they are cold or warmed up. All taxis were assumed to be operating in a hot-stabilized mode; all arriving project-generated autos were assumed to be operating in a hot-stabilized mode; and all departing

project-generated autos were assumed to be operating in a cold mode. Auto operating conditions used in the future No Build emission calculations were obtained from data supplied by DEP, Bureau of Science and Technology *Report No. 34 (Revised)*. Light-duty truck operating conditions for Manhattan were based on data supplied by the former Tri-State Regional Planning Association, now the New York Metropolitan Transportation Coordinating Council (NYMTC). Table K-2 summarizes the thermal state conditions (i.e., *Report No. 34* for autos and NYMTC-supplied values for light-duty trucks) used in the analysis.

**Table K-2**

**Vehicle Operating Conditions**

| | Arterial | Expressway |
|---|---|---|
| **Auto** | | |
| Percentage Cold (Non-Catalytic) | 27.9 | 10.8 |
| Percentage Cold (Catalytic) | 33.8 | 13.3 |
| Percentage Hot (Catalytic) | 9.4 | 3.7 |
| **Light-Duty Gasoline Trucks** | | |
| Percentage Cold (Non Catalytic) | 4.1 | 4.1 |
| Percentage Cold (Catalytic) | 5.4 | 5.4 |
| Percentage Hot (Catalytic) | 50.5 | 50.5 |

## TRAFFIC DATA

Traffic data for the air quality analysis were derived from traffic counts and other information developed as part of the project's traffic analysis (see Attachment J, "Transportation"). For the air quality analysis, traffic conditions on all of the pertinent roadway segments (including the main roadways of I-678) that assume completion of all the components of the project were employed, since volumes and levels of service would be worse. This would result in a conservative estimate of potential air quality impacts associated with the proposed project. The weekday PM (5-6 PM) and Saturday midday (12-1 PM) peak periods were subjected to full-scale microscale analysis. These time periods were selected for the mobile source analysis because they produce the maximum project-generated traffic and therefore have the greatest potential for significant traffic and/or air quality impacts.

## BACKGROUND CONCENTRATIONS

Background concentrations are those pollutant concentrations not directly accounted for through the modeling analysis (which directly accounts for vehicular-generated emissions on the streets within 1,000 to 1,600 feet and line-of-sight of the receptor location). Background concentrations must be added to modeling results to obtain total pollutant concentrations at a prediction site.

The 1-hour average CO background concentration used in this analysis was 5.7 parts per million (ppm), and the 8-hour average background concentration was 2.3 ppm. These values, obtained from DEP, are based on CO concentrations measured at DEC monitoring stations and are adjusted to reflect the reduced vehicular emissions expected in the analysis years. For purposes of this adjustment, based on EPA guidance, it was assumed that 20 percent of the background value is caused by stationary source emissions that have remained relatively unchanged with time and that 80 percent of the background value is caused by mobile sources that decrease with time. This decrease reflects the increasing numbers of federally mandated lower-emission

vehicles that are projected to enter the vehicle fleet as older, higher-polluting vehicles are retired (i.e., vehicle turnover), and the continuing benefits of the New York I&M program. No credits for oxygenated fuels or an enhanced I&M program were taken in the rollback analysis.

### MOBILE SOURCE RECEPTOR LOCATION

One complex air quality receptor site was selected for microscale analysis—the intersections of Lafayette Avenue and the I-678 north- and southbound service roads (see Figure K-1). Multiple receptor sites were modeled at this intersection (i.e., receptors were placed along the approach and departure links at spaced intervals).

This receptor site was selected because it is the key location in the study area where the largest levels of project-generated traffic are expected and overall constrained traffic conditions exist, and, therefore, where the greatest air quality impacts and maximum changes in CO concentrations would be expected.

## E. EXISTING CONDITIONS

### EXISTING MONITORED AIR QUALITY CONDITIONS (1997)

Monitored concentrations of CO, sulfur dioxide, particulates, nitrogen dioxide ($NO_2$), lead, and ozone ambient air quality data for the area are shown in Table K-3. These values are the most recent monitored data available that have been published by DEC for these locations. The nearest monitoring station for lead is in Manhattan. There were no monitored violations of the NAAQS for the pollutants at these sites or any other in New York City (with the exception of ozone, which is a regional pollutant) in 1997.

**Table K-3**

**Representative Monitored Ambient Air Quality Data**

| Pollutant | Location | Units | Period | Concentrations | | | Number of Exceedances of Federal Standard | |
|---|---|---|---|---|---|---|---|---|
| | | | | Mean | Highest | Second Highest | Primary | Secondary |
| CO | Botanical Gardens | ppm | 8-hour | — | 4.6 | 3.5 | 0 | 0 |
| | | | 1-hour | — | 7.4 | 7.3 | 0 | 0 |
| $SO_2$ | Morrisania II | ppm | Annual | 0.012 | — | — | 0 | — |
| | | | 24-hour | — | 0.055 | 0.043 | 0 | — |
| | | | 3-hour | — | 0.090 | 0.089 | — | 0 |
| Respirable Particulates ($PM_{10}$) | Morrisania II | µg/m³ | Annual | 24 | — | — | 0 | 0 |
| | | | 24-hour | — | 58 | 48 | 0 | 0 |
| $NO_2$ | Morrisania II | ppm | Annual | 0.035 | — | — | 0 | 0 |
| Lead | Madison Avenue | µg/m³ | 3-month | — | 0.060 | 0.060 | 0 | 0 |
| $O_3$ | Morrisania II | ppm | 1-hour | — | 0.124 | 0.115 | 0 | 0 |

**Source:** *New York State Air Quality Report, Ambient Air Monitoring Systems*, Annual 1997 DAR-98-1.

## F. THE FUTURE WITHOUT THE PROPOSED ACTION

CO concentrations without the proposed project were determined for the 2001 analysis year using the methodology previously described. Table K-4 shows future (2001) maximum predicted 1- and 8-hour average CO concentrations without the proposed project (i.e., 2001 No Build values) at the analysis intersection in the project study area. The values shown are the highest predicted concentrations for the receptor location for the time periods analyzed.

**Table K-4**

**Future (2001) Maximum Predicted 1- and 8-Hour Average Carbon Monoxide No Build Concentrations in the Project Study Area (parts per million)**

| Receptor Site | Location | Time Period | 1-Hour | 8-Hour |
|---|---|---|---|---|
| 1 | Lafayette Avenue and I-678 NB & SB Service Roads | Sat MD | 7.3 | 3.4 |
| **Note:** 1-hour standard is 35 ppm; 8-hour standard is 9 ppm. | | | | |

## G. PROBABLE IMPACTS OF THE PROPOSED ACTION

### INTRODUCTION

Operation of the proposed project would result in increased mobile source emissions in the immediate vicinity of the project. In addition, the proposed project could also affect the surrounding community by emissions from the project's HVAC systems. Both areas of potential impact are examined below.

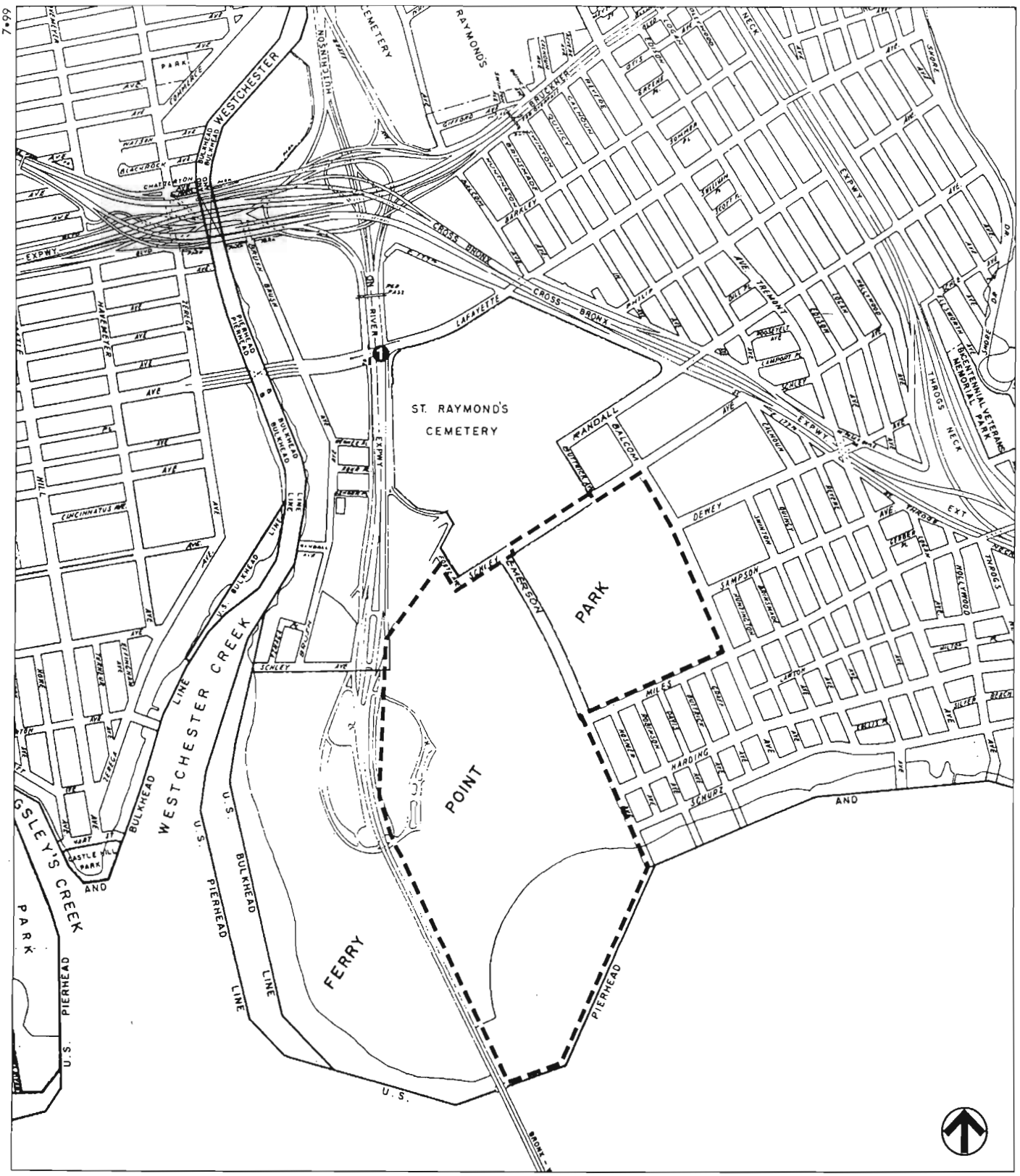
### MOBILE SOURCE ANALYSIS

CO concentrations with the proposed project were determined for the 2001 analysis year using the methodology previously described. Table K-5 shows the maximum predicted future (2001) 8-hour average CO concentrations with the proposed project at the analysis intersection in the study area. (No 1-hour values are shown since no exceedances of the standard would occur and the *de minimis* criteria is only applicable to 8-hour concentrations. Therefore, the 8-hour values are the most critical for impact assessment.) The values shown are the highest predicted concentrations for the receptor location for the time periods analyzed.

**Table K-5**

**Future (2001) Maximum Predicted 8-Hour Average Carbon Monoxide No Build and Build Concentrations (parts per million)**

| Receptor Site | Location | Time Period | No Build | Build |
|---|---|---|---|---|
| 1 | Lafayette Avenue and I-678 NB & SB Service Roads | Sat MD | 3.4 | 3.5 |
| **Note:** 8-hour standard is 9 ppm. | | | | |




Project Site Boundary

1 Air Quality Receptor Location

*Ferry Point Park*

# Air Quality Receptor Location

*Figure K-1*

The 2001 results indicate that the proposed project would not result in exceedances of the CO standards or the *de minimis* criteria at this location. Therefore, the site in the future Build condition would not have a significant mobile source air quality impact.

## STATIONARY SOURCE ANALYSIS

The only stationary source of air pollutants associated with the proposed project would be the emissions from the oil- or gas-fired HVAC systems. The primary pollutant of concern when burning oil is sulfur dioxide, and when burning natural gas is nitrogen dioxide. Based on the methodologies in the *CEQR Technical Manual*, either case would not result in any significant stationary source air quality impacts. Because there would be no tall structures or elevated receptors adjacent to the project site, the results of this analysis show that there would be no significant air quality impacts from the proposed project's HVAC system.

## CONSISTENCY WITH THE NEW YORK STATE AIR QUALITY IMPLEMENTATION PLAN

The mobile source receptor location analyzed under the Build condition predicts that carbon monoxide levels would be less than the corresponding ambient air standard. Therefore, construction of the project would be consistent with the New York State Implementation Plan.

## CONSTRUCTION IMPACTS

Possible impacts on local air quality during construction of the proposed project include:

- Fugitive dust (particulate) emissions from land clearing operations; and
- Mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide emissions.

(Measures to protect workers during construction from the presence of methane are discussed in Section 4.1 of Attachment G. Construction activities would not be expected to significantly change areawide emission of this pollutant.)

These are described below.

### *FUGITIVE EMISSIONS*

Fugitive dust emissions from land clearing operations can occur from excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of the clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. EPA has suggested, in general, an overall emission rate of about 1.2 tons of particulate/acre/month of active construction from all phases of land-clearing operations with no fugitive dust control measures. However, this is a national estimate and actual emissions would vary widely depending on many factors, including the intensity and type of land-clearing operations. Much of the fugitive dust generated by construction activities consists of relatively large-size particles, which are expected to settle within a short distance from the construction site and not significantly affect the buildings or people nearby.

For this project, excavation, and construction would be conducted with the care mandated by the site's proximity to active uses. All appropriate fugitive dust control measures—including

watering of exposed areas and dust covers for trucks—would be employed. In addition, all necessary measures would be implemented to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed. As a result, no significant air quality impacts from fugitive dust emissions would be anticipated.

*MOBILE SOURCE EMISSIONS*

Mobile source emissions are emissions of air pollutants from motor vehicles, referred to as mobile sources. During construction, such emissions may result from: 1) trucks delivering construction materials, 2) workers' private vehicles, 3) disruptions in traffic near the construction site, and 4) construction equipment.

Localized increases in mobile source emissions would be minimized by incorporating traffic maintenance requirements into the construction contract documents to ensure that:

- Construction requiring temporary street closings for the relocation of utilities and for other purposes in heavily traveled areas would be performed, to the maximum extent possible, during off-peak hours;
- Existing number of traffic lanes would be maintained to the maximum extent possible; and
- Idling of delivery trucks or other equipment would not be permitted during periods when they are being unloaded or are not in active use. ❖

**Attachment L:** **Noise**

## A. INTRODUCTION

Noise pollution in an urban area comes from many sources. Some sources are activities essential to the health, safety, and welfare of the city's inhabitants, such as noise from emergency vehicle sirens, garbage collection operations, and construction and maintenance equipment. Other sources, such as traffic, stem from the movement of people and goods, activities that are essential to the viability of the city as a place to live and do business. Although these and other noise-producing activities are necessary to a city, the noise they produce is undesirable. Urban noise detracts from the quality of the living environment and there is increasing evidence that excessive noise represents a threat to public health.

The proposed public recreation center at Ferry Point Park (i.e., the project) may increase ambient noise levels principally due to: increased automobile and truck traffic generated by the proposed project, including noise from vehicular movements in the parking lots at the fine dining/banquet facility on the eastern side of the project site; noise from maintenance operations, principally gas cutting on the eastern side of the project site adjacent to residences, and; noise from park activities, principally at the ballfield at the community park. In addition, construction of the proposed project will increase noise levels.

### NOISE FUNDAMENTALS

Quantitative information on the effects of airborne noise on people is well documented. If sufficiently loud, noise may adversely affect people in several ways. For example, noise may interfere with human activities, such as sleep, speech communication, and tasks requiring concentration or coordination. It may also cause annoyance, hearing damage, and other physiological problems. Several noise scales and rating methods are used to quantify the effects of noise on people. These scales and methods consider such factors as loudness, duration, time of occurrence, and changes in noise level with time. However, it must be remembered that all the stated effects of noise on people vary greatly with the individual.

#### *"A"-WEIGHTED SOUND LEVEL (dBA)*

Noise is typically measured in units called decibels (dB), which are 10 times the logarithm of the ratio of the sound pressure squared to a standard reference presence squared. Because loudness is important in the assessment of the effects of noise on people, the dependence of loudness on frequency must be taken into account in the noise scale used in environmental assessments. One of the simplified scales that accounts for the dependence of perceived loudness on frequency is the use of a weighting network, known as "A"-weighting, in the measurement system, to simulate the response of the human ear. For most noise assessments, the A-weighted sound pressure level in units of dBA is used in view of its widespread recognition and its close correlation with perception. In the current study, all measured noise levels are reported in dBA or A-weighted decibels. Common noise levels in dBA are shown in Table L-1.

Table L-1
## Common Noise Levels

| Sound Source | (dBA) |
|---|---|
| Military jet, air raid siren | 130 |
| Amplified rock music | 110 |
| Jet takeoff at 500 meters | 100 |
| Freight train at 30 meters | 95 |
| Train horn at 30 meters | 90 |
| Heavy truck at 15 meters | |
| Busy city street, loud shout | 80 |
| Busy traffic intersection | |
| Highway traffic at 15 meters, train | 70 |
| Predominantly industrial area | 60 |
| Light car traffic at 15 meters, city or commercial areas or residential areas close to industry | |
| Background noise in an office | 50 |
| Suburban areas with medium density transportation | |
| Public library | 40 |
| Soft whisper at 5 meters | 30 |
| Threshold of hearing | 0 |

**Note**: A 10 dBA increase in level appears to double the loudness, and a 10 dBA decrease halves the apparent loudness.
**Source**: Allee King Rosen & Fleming, Inc.

*COMMUNITY RESPONSE TO CHANGES IN NOISE LEVELS*

The average ability of an individual to perceive changes in noise levels is well documented (see Table L-2). Generally, changes in noise levels less than three dBA are barely perceptible to most listeners, whereas 10 dBA changes are normally perceived as doublings (or halvings) of noise levels. These guidelines permit direct estimation of an individual's probable perception of changes in noise levels.

It is also possible to characterize the effects of noise on people by studying the aggregate response of people in communities. The rating method used for this purpose is based on a statistical analysis of the fluctuations in noise levels in a community. Typically, the analysis examines the fluctuation in noise levels over one-hour and/or 24-hour periods. Various government and research institutions have proposed criteria that attempt to relate changes in noise levels to community response. One commonly applied criterion for estimating response is incorporated into the community response scale proposed by the International Standards Organization (ISO) of the United Nations (see Table L-3). This scale relates changes in noise level to the degree of

Table L-2
## Average Ability to Perceive Changes in Noise Levels

| Change (dBA) | Human Perception of Sound |
|---|---|
| 2-3 | Barely perceptible |
| 5 | Readily noticeable |
| 10 | A doubling or halving of the loudness of sound |
| 20 | A "dramatic change" |
| 40 | Difference between a faintly audible sound and a very loud sound |

**Source**: Bolt Beranek and Neuman, Inc., *Fundamentals and Abatement of Highway Traffic Noise*, Report No. PB-222-703. Prepared for Federal Highway Administration, June 1973.

Table L-3
## Community Response to Increases in Noise Levels

| Change (dBA) | Category | Description |
|---|---|---|
| 0 | None | No observed reaction |
| 5 | Little | Sporadic complaints |
| 10 | Medium | Widespread complaints |
| 15 | Strong | Threats of community action |
| 20 | Very strong | Vigorous community action |

**Source**: International Standards Organization, *Noise Assessment with Respect to Community Responses*, ISO/TC 43. (New York: United Nations, November 1969).

community response and permits direct estimation of the probable response of a community to a predicted change in noise level.

### NOISE STANDARDS AND CRITERIA

Noise levels associated with the construction and operation of the proposed project are subject to the emission source provisions of the New York City Noise Control Code and to Noise Standards set for the City Environmental Quality Review (CEQR) process. Other standards and guidelines promulgated by federal agencies do not apply to project noise control, but are useful to review in that they establish measures of impacts. Construction equipment is regulated by the Noise Control Act of 1972.

#### *NEW YORK CITY NOISE CODE*

The New York City Noise Control Code promulgates sound-level standards for motor vehicles, air compressors, and paving breakers; requires that all exhausts be muffled; and prohibits all unnecessary noise adjacent to schools, hospitals, and courts. The code further limits construction

activities to weekdays between 7 AM and 6 PM. In 1979, Section 1403.3-6.01 of the code was reenacted as Local Law No. 64. This new law established ambient noise quality criteria and standards based on existing land use zoning designations. Conformance with the noise level values contained in the law is determined by considering noise emitted directly from stationary activities within the boundaries of a project. Construction activities and noise sources outside the boundaries of a project are not included within the provisions of this law.

*NEW YORK CEPO-CEQR NOISE STANDARDS*

The New York City Department of Environmental Protection (DEP), Division of Noise Abatement has set external noise exposure standards and attenuation values. These standards are shown in Tables L-4 and L-5. Noise exposure is classified into four categories—acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable. The standards for traffic noise are based on maintaining an interior noise level for the worst-case hour $L_{10}$ of less than or equal to 45 A-weighted decibels (dBA). Standards for aircraft and train noise are different, and are derived from the standards of the Federal Department of Housing and Urban Development (HUD). These standards were adopted for use in the CEQR process.

## IMPACT DEFINITION

As recommended in the *CEQR Technical Manual*, this report will utilize the following criteria to define a significant noise impact:

- An increase of 5 dBA, or more, in Build $L_{eq(1)}$ noise levels at sensitive receptors to those calculated for the No Build condition, if the No Build levels are less than 60 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period.
- An increase of 4 dBA, or more, in Build $L_{eq(1)}$ noise levels at sensitive receptors to those calculated for the No Build condition, if the No Build levels are 61 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period.
- An increase of 3 dBA, or more, in Build $L_{eq(1)}$ noise levels at sensitive receptors to those calculated for the No Build condition, if the No Build levels are greater than 62 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period.
- An increase of 3 dBA, or more, in Build $L_{eq(1)}$ noise levels at sensitive receptors to those calculated for the No Build condition, if the analysis period is a nighttime period (defined by the CEPO-CEQR standards as being between 10 PM and 7 AM.).

## NOISE PREDICTION METHODOLOGY

*MOBILE NOISE SOURCES*

A proportional modeling technique was used to determine approximate increases in noise levels due to changes in traffic volumes. Using this technique, the prediction of future traffic noise levels is based on a calculation using measured existing noise levels and predicted changes in traffic volumes to determine No Build and Build levels. No Build traffic volumes were based on applying a growth factor to the existing traffic volumes and adding the traffic volumes from any planned projects. Future Build traffic volumes were obtained by adding project-generated traffic values to No Build conditions. The vehicular traffic volumes were converted into Passenger Car Equivalent (PCE) values, for which one medium-duty truck (having a gross weight between 9,400 and 25,000 pounds) is assumed to generate the noise equivalent of 16 cars, and one

## Table L-4
## CEPO-CEQR Noise Exposure Standards for Use in City Environmental Impact Review[1]

| Receptor Type | Time Period | Acceptable General External Exposure | Airport[3] Environs | Marginally Acceptable General External Exposure | Airport[3] Environs | Marginally Unacceptable General External Exposure | Airport[3] Environs | Clearly Unacceptable General External Exposure | Airport[3] Environs |
|---|---|---|---|---|---|---|---|---|---|
| 1. Outdoor area requiring serenity and quiet[2] | | $L_{10} \leq 55$ dBA | ---------- Ldn ≤ 60 dBA ---------- | | ---------- 60 < $L_{dn}$ ≤ 65 dBA ---------- | | (1) 65 < $L_{dn}$ ≤ 70 dBA, (II) 70 < $L_{dn}$ ≤ | | ---------- $L_{dn}$ > 75 dBA, ---------- |
| 2. Hospital, Nursing Home | | $L_{10} \leq 55$ dBA | | 55 < $L_{10}$ ≤ 65 dBA | | 65 < $L_{10}$ ≤ 80 dBA | | $L_{10}$ > 80 dBA | |
| 3. Residence, residential hotel or motel | 7 AM to 11 PM | $L_{10} \leq 65$ dBA | | 65 < $L_{10}$ ≤ 70 dBA | | 70 < $L_{10}$ ≤ 80 dBA | | $L_{10}$ > 80 dBA | |
| | 11 PM to 7 AM | $L_{10} \leq 55$ dBA | | 55 < $L_{10}$ ≤ 70 dBA | | 70 < $L_{10}$ ≤ 80 dBA | | $L_{10}$ > 80 dBA | |
| 4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility | | Same as Residential Day (7 AM-11 PM) | | Same as Residential Day (7 AM-11 PM) | | Same as Residential Day (7 AM-11 PM) | | Same as Residential Day (7 AM-11 PM) | |
| 5. Commercial or office | | Same as Residential Day (7 AM-11 PM) | | Same as Residential Day (7 AM-11 PM) | | Same as Residential Day (7 AM-11 PM) | | Same as Residential Day (7 AM-11 PM) | |
| 6. Industrial, public areas only[4] | Note 4 | Note 4 | | Note 4 | | Note 4 | | Note 4 | |

**Notes:**

(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more; (ii) CEPO-CEQR Noise Standards for train noise are similar to the above aircraft noise standards: the noise category for train noise is found by taking the $L_{dn}$ value for such train noise to be an $L_{dn}^{Y}$ ($L_{dn}$ contour) value (see table on the following page).

1 Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

2 Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.

3 One may use the FAA-approved $L_{dn}$ contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

4 External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

**Source:** New York City Department of Environmental Protection (adopted policy 1983).

Table L-5

## CEPO-CEQR Exterior Noise Standards and Attenuation Values

| Noise Category | Marginally Acceptable | Marginally Unacceptable | | Clearly Unacceptable | | |
|---|---|---|---|---|---|---|
| Vehicular[a, b] | $65 < L_{10} \leq 70$ | $70 < L_{10} \leq 75$ | $75 < L_{10} \leq 80$ | $80 < L_{10} \leq 85$ | $85 < L_{10} \leq 90$ | $90 < L_{10} \leq 95$ |
| Train[a, b] | $60 < L_{dn} \leq 65$ | $65 < L_{dn} \leq 70$ | $70 < L_{dn} \leq 75$ | $75 < L_{dn} \leq 80$ | $80 < L_{dn} \leq 85$ | $85 < L_{dn} \leq 90$ |
| Aircraft[a, b] | $60 < L^{y}_{dn} \leq 65$ | $65 < L^{y}_{dn} \leq 70$ | $70 < L^{y}_{dn} \leq 75$ | $L^{y}_{dn} > 75$ | N/A | N/A |
| Required Attenuation[c] | 25 dB(A) | (I) 30 dB(A) | (II) 35 dB(A) | (I) 40 dB(A) | (II) 45 dB(A) | (III) 50 dB(A) |

**Notes:**

[a] Different descriptors are used for each noise source: $L_{10}$ for vehicular traffic; $L_{dn}$ for train noise; and $L^{y}_{dn}$ ($L_{dn}$ Contour) for aircraft noise.[*,†]

[b] The various noise sources at a receptor location are measured and reported separately in accordance with generally accepted procedures for assessing an overall noise level. Cases where there is not a clearly dominant noise source require a judicious decision based on adequate field experience and analysis to determine the final noise category that is deemed appropriate for the overall noise exposure at each noise receptor site.

[c] The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.

[*] $L_{dn}$ requires a 24-hour measurement or supportive analysis if a shorter period is employed.

[†] $L^{y}_{dn}$ = "$L_{dn}$ Contour" is an annual average of $L_{dn}$ values ("y" indicates "yearly average").

heavy-duty truck (having a gross weight of more than 25,000 pounds) is assumed to generate the noise equivalent of 85 cars. Future noise levels are calculated using the following equation:

$$F\ NL = E\ NL + 10 * \log_{10} (FPCE / EPCE)$$

where:

F NL = Future Noise Level

E NL = Existing Noise Level

F PCE = Future PCEs

E PCE = Existing PCEs

Because sound levels use a logarithmic scale, this model proportions logarithmically with traffic change ratios. For example, assume that traffic is the dominant noise source at a particular location. If the existing traffic volume on a street is 100 PCE and if the future traffic volume were increased by 50 PCE to a total of 150 PCE, the noise level would increase by 1.8 dBA. If the future traffic were increased by 100 PCE, or doubled to a total of 200 PCE, the noise level would increase by 3.0 dBA. The proportional model screening technique was used to examine impacts during operation of the proposed project.

As mentioned previously, the *CEQR Technical Manual* considers a 3.0 dBA or higher increase in daytime noise levels a significant impact when the No Build noise level is equal to or greater than 62 dBA $L_{eq(1)}$, or if the analysis period is a nighttime period. Therefore, a doubling of traffic, where traffic is the dominant source of noise, results in a significant noise impact when daytime No Build noise levels are 62 dBA or greater, or when traffic is doubled during a nighttime hour. For daytime ambient No Build noise levels under 60 dBA, a noise level increase of 5 dBA is considered a significant increase in noise level. Traffic volumes must increase approximately by a factor of three for traffic-generated noise levels to increase by 5 dBA.

*NOISE EFFECTS FROM PARKING LOT NOISE*

Noise levels at locations adjacent to the parking lot for the fine dining/banquet facility were determined based on field measurements made at a location adjacent to comparable facility's parking lot in the area. Measurements were made on Saturday night, June 12, 1999 at the Marina del Rey Catering Facility, a banquet facility on Schurz Avenue at East Tremont Avenue. This Bronx facility is located near the project site, on the water, and in a lightly traffic, relatively quiet residential neighborhood. Measurements made at a distance of approximately 100 feet from the center of the parking lot, during an hour with approximately 110 vehicles departing the facility (i.e., 11:10 PM to 12:10 AM) and 36 vehicles on the adjacent Schurz Avenue, yielded a noise level of 57.7 dBA. This noise level was adjusted to represent conditions at the noise receptor location by assuming a change of 4.5 dBA per doubling (or halving) of distance between the noise source and receptor and proportionally adjusting the noise level based upon the source strength (i.e., the number of vehicles using the parking facility).

## NOISE EFFECTS FROM GRASS MAINTENANCE EQUIPMENT

In terms of grass maintenance, the noisiest operation, once the initial construction is completed, will be grass mowing operations. A wide range of equipment is available from various manufacturers for these purposes, each with somewhat different noise characteristics. This includes not only gasoline and natural gas powered equipment, but electric and battery powered equipment. To minimize noise impacts, the equipment to be used for grass cutting on the eastern part of the course, near the residences, will be selected to not produce more than 70 dBA at 50 feet. There is a variety of equipment which meets this requirement.

## NOISE FROM THE PARK ACTIVITIES

With the exception of noise generated from use of the community park active recreational area, park activities are not expected to generate any significant amount of noise. Noise from golfers is very low, and noise from the passive recreation activities in the waterfront park are also expected to be relatively low. Activities at location adjacent to the ball field at expected to be similar to noise levels measured at school playgrounds and have a worst-case $L_{eq(1)}$ dBA of 71.5 and a worst-case $L_{10(1)}$ of 74.5 dBA at the ball field or park boundary. These values are based on the results of a School Construction Authority (SCA) Playground Noise Study conducted by Allee King Rosen & Fleming, Inc., during October 1992. Geometric spreading and consequent dissipation of sound energy with increasing distance from the ball field would decrease noise levels at varying distances from the boundary. Hourly noise levels can be expected to decrease by the following values at the specified distances from the field boundary: 4.8 dBA at 20 feet, 6.8 dBA at 30 feet, and 9.1 dBA at 40 feet. For all distances between 40 and 300 feet, a 4.5-dBA drop-off per doubling of distances from the boundary should be utilized. For distances greater than 300

feet a general practice of using a 6-dBA drop-off rate per doubling of distance under normal circumstances.

## B. EXISTING CONDITIONS

### SITE DESCRIPTION

The project site is the eastern portion of Ferry Point Park and is bounded by: the Bronx-Whitestone Bridge and Hutchinson River Parkway to the west; Schley Avenue and Saint Raymond's Cemetery to the north; Balcom, Miles, and Emerson Avenues to the east; and the East River to the south. The project site is undeveloped except for an organic recycling and composting facility, which is located on the northwestern portion of the site, and an existing ballfield and basketball court that are located on the northeastern portion of the site. Existing traffic volumes on the Bronx-Whitestone Bridge/Hutchinson River Parkway, on the west of the project site are very high. There are a number of residences along Balcom, Miles, and Emerson Avenues, on the eastern boundary of the project site, and traffic levels in this area are relatively low.

The entire project site and its immediate environs are within the 65 $L_{dn}$ contour of LaGuardia Airport, and the area is subject to frequent aircraft flyovers.

### SELECTION OF NOISE RECEPTOR LOCATIONS

While all of the project-generated vehicular traffic will enter and leave the project site using the Hutchinson River Parkway Service Roads, an initial "worst case"screening analysis utilizing proportional modeling techniques (described above) showed that, because of the heavy traffic volumes on the Hutchinson River Parkway/Bronx-Whitestone Bridge, project-generated traffic would have an insignificant effect on noise levels at locations adjacent to this roadway (i.e., project-generated traffic would increase noise levels by less than 0.2 dBA. Similarly, results were obtained for an initial "worst case" screening analysis of Lafayette Avenue and other major feeder roadways to the project site. In addition, in general, these roadways are truck routes and do not have sensitive receptors on them. Consequently no noise receptor locations were selected at locations along the major feeder streets and roadways to the project site.

Instead, three noise receptor locations adjacent to the eastern side of the project site were selected for analysis. The selected receptor sites are at residences adjacent to the project site, and are located where noise from activities within the project site may directly affect sensitive receptors (i.e., residents). Site 1 is located at the intersection of Emerson and Miles Avenues; Site 2 is located at the intersection of Schurz and Emerson Avenues, and; Site 3 is located on Balcom Avenue between Schley and Dewey Avenues. Traffic volumes at Sites 1 and 2 are very low (less than 40 vehicles per hour). Traffic volumes at Site 3 are moderate (less than 400 vehicles per hour); however, there is approximately 8 buses/hour pass by this site. At all three sites there were frequent overflights by aircraft (i.e., approximately between 12 and 42 per hour).

### NOISE MONITORING

Noise levels at the three receptor sites were measured for 20-minute periods during a weekday midday, PM, and nighttime periods on Wednesday, June 23, 1999, and during Saturday midday, PM, and nighttime periods on Saturday, June 19, 1999.

*EQUIPMENT USED*

The instrumentation used for the 20-minute measurements at the sensitive receptor sites was a Larson Davis Labs (LDL) Model MK224 microphone connected to an LDL preamplifier attached to an LDL Model 700 Type 1 (according to ANSI Standard S1.4-1983) sound level meter. The instrument was mounted at a height of 4 feet above the ground on a tripod. The meter was calibrated before and after readings with a Brüel & Kjær Type 4230 sound level calibrator using the appropriate adaptor. Measurements at each location were made on the A-scale (dBA) for a sampling period of 20 minutes at each site. The data were digitally recorded by the noise analyzer and displayed at the end of the measurement period in units of dBA. The descriptors recorded during the field measurements included $L_{eq}$, $L_1$, $L_{10}$, $L_{50}$, and $L_{90}$. A windscreen was used during all sound measurements except for calibration. All measurement procedures conformed with the requirements of ANSI Standard S1.13-1971 (R1976).

*RESULTS OF MEASUREMENTS*

Existing $L_{eq}$, $L_1$, $L_{10}$, $L_{50}$, and $L_{90}$ noise levels at the three receptor sites are summarized in Table L-6. At Sites 1 and 2 noise levels are due to a combination of general background traffic levels in the area and aircraft flyovers, and at Site 3 traffic on Balcom Avenue, along with noise from aircraft flyovers, are the dominant noise sources. Noise levels excluding aircraft operations are approximately 2-5 dBA less than the values shown in the table.

**Table L-6**
**Existing Noise Levels**

| Site | Location | Time | $L_{eq}$ | $L_1$ | $L_{10}$ | $L_{50}$ | $L_{90}$ |
|---|---|---|---|---|---|---|---|
| 1 | Emerson/Miles Avenues | Weekday MD | 55.1 | 66.5 | 58.5 | 48.5 | 43.0 |
| | | Weekday PM | 54.8 | 61.0 | 58.0 | 52.5 | 49.5 |
| | | Weekday Night | 51.6 | 62.0 | 53.5 | 48.5 | 47.5 |
| | | Saturday MD | 56.3 | 69.5 | 58.0 | 49.0 | 45.0 |
| | | Saturday PM | 61.1 | 73.0 | 65.0 | 54.5 | 50.5 |
| | | Saturday Night | 49.4 | 60.0 | 53.0 | 44.0 | 42.5 |
| 2 | Schurz/Emerson Avenues | Weekday MD | 60.1 | 73.5 | 60.0 | 48.5 | 45.0 |
| | | Weekday PM | 59.9 | 73.0 | 61.5 | 55.0 | 52.0 |
| | | Weekday Night | 54.4 | 66.0 | 55.5 | 51.0 | 49.0 |
| | | Saturday MD | 57.6 | 68.0 | 62.0 | 49.0 | 45.0 |
| | | Saturday PM | 60.2 | 70.5 | 64.5 | 54.0 | 47.5 |
| | | Saturday Night | 51.1 | 62.5 | 53.5 | 46.5 | 45.0 |
| 3 | Balcom Avenue-Schley/Dewey Avenues | Weekday MD | 66.8 | 78.5 | 69.0 | 61.5 | 51.5 |
| | | Weekday PM | 65.6 | 76.5 | 69.0 | 58.0 | 44.5 |
| | | Weekday Night | 66.6 | 76.5 | 69.0 | 61.0 | 54.5 |
| | | Saturday MD | 67.9 | 80.0 | 70.5 | 62.5 | 58.5 |
| | | Saturday PM | 67.9 | 78.5 | 70.5 | 64.0 | 57.5 |
| | | Saturday Night | 63.9 | 73.0 | 66.0 | 58.0 | 52.0 |

**Note:** Based on noise measurements performed by Allee King Rosen & Fleming, Inc. on June 19th and 23rd, 1999.

In terms of the New York City CEPO-CEQR standards, existing noise levels at all three sites are in the "marginally acceptable" category.

In addition, it should be noted that the entire area, including Ferry Point Park, is impacted by aircraft flyovers from LaGuardia Airport, and noise levels in some areas of the park are above the 55 dBA $L_{10}$ levels recommended for park use in the *CEQR Technical Manual* (see Table L-4). $L_{10}$ levels in the park vary from approximately 78-80 dBA on the western edge of the park, adjacent to the Bronx-Whitestone Bridge/Hutchinson River Parkway, to approximately 52-53 dBA on interior, northern, and eastern locations, which do not have any adjacent vehicular traffic.

## C. THE FUTURE WITHOUT THE PROJECT

Traffic volumes for No Build conditions will not change significantly from existing traffic volumes (see Attachment J, "Transportation"). Using the proportional modeling methodology described above, based upon the general growth of traffic in the area which would result in relatively small changes in traffic volumes, $L_{eq(1)}$ noise levels for No Build conditions will change slightly compared with existing noise levels. At all three noise receptor sites, $L_{eq(1)}$ noise levels for No Build conditions would increase by less than 0.1 dBA. Changes of this magnitude would not be perceptible and would not be significant.

## D. POTENTIAL IMPACTS OF THE PROPOSED PROJECT

As discussed in Section B, Existing Conditions, Selection of Receptor Sites, a "worst case" analysis using proportional modeling techniques, indicated that project-generated traffic would increase noise levels on the feeder roadways to the project site by an imperceptible level (i.e., less than 0.2 dBA) and would not result in any significant noise impacts. However, noise generated by the proposed project due to three other sources—grass maintenance including grass mowing operations, operation of the fine dining/banquet facility including noise from their parking lots, and from use of the ballfield at the community park—have the potential for causing significant noise impacts at residents to the east of the project site and the potential for these impacts were examined. Due to the relatively low baseline noise levels at the project area, the likelihood of significant project-related impacts would be increased. The project would be designed so that noise from operation of all mechanical equipment, including HVAC equipment, would meet all applicable codes. Since the proposed project would be creating new parkland, conformance to the CEPO-CEQR guideline levels for outdoor areas potential sensitive to noise is also examined. Finally, impacts during construction are qualitatively discussed.

### GRASS MAINTENANCE AND MOWING OPERATIONS

Site 1 on Miles Avenue is the quietest noise receptor location that potentially would be effected by grass maintenance or cutting operations. As previously mentioned, the specifications for the equipment to be used for grass cutting on the eastern part of the course, near the residences, will require that the equipment produce noise of 70 dBA or less at 50 feet. This equipment will be moving, and would be expected to a $L_{eq(1)}$ of approximately 52.5 dBA. Therefore, using the lowest measured daytime noise levels at this site, an $L_{eq(1)}$ of 54.8 dBA, during the hours when grass mowing operations are taking place, noise levels would increase by 2.0 dBA to 56.8 dBA. An increase of this magnitude would not be perceptible and would not constitute a significant impact.

### OPERATION OF THE FINE DINING/BANQUET FACILITY

The project design includes a 8 to 10 foot noise barrier (with landscaping) along Emerson Avenue, behind the fine dining/banquet facility to shield residents on Emerson Avenue, both

visually and acoustically, and minimize effects of this facility on the adjacent community. Measurements at a distance of approximately 100 feet from the center of a comparable facility yielded 57.7 dBA with 110 vehicles departing from a parking lot. This noise level was adjusted to represent conditions at the noise receptor location by assuming a change of 4.5 dBA per doubling (or halving) of distance between the noise source and receptor and proportionally increasing the noise level based upon the number of vehicles using the parking facility. Parking for a maximum capacity event at the project site would be in two parking lots—a southern lot with approximately 100 car capacity, and a northern lot with approximately 400 car capacity. Site 2, on Emerson Avenue, is representative of locations that potentially may be effected by noise from this source. The noise barrier would reduce noise levels by approximately 8-10 dBA. Therefore, using the lowest measured PM or nighttime noise level at this site, an $L_{eq(1)}$ of 51.1 dBA, when a major event takes place at the banquet facility, during the hour when people arrive and depart, noise levels would increase by approximately 2.9 (2.0) dBA to 54.0 (53.1) dBA. An increase of this magnitude would not be perceptible and would not constitute a significant impact. This barrier would also reduce noise from any truck deliveries or other service area events.

## USE OF THE NEW BALLFIELD IN THE COMMUNITY PARK

Noise levels on Balcom Avenue near the new ballfield in the community park would not increase due to the proposed project for two reasons: First, existing noise levels are already a function of noise from the existing ballfield and traffic in this area; and Second, traffic noise on Balcom Avenue is the dominant noise source. Existing daytime $L_{eq(1)}$ noise levels on Balcom Avenue are currently typically approximately 65-68 dBA. Noise from the ballfield would be expected to be below 60 dBA. Therefore, project-generated noise would not be expected to have a significant impact.

## NOISE LEVELS IN NEWLY CREATED PARKLAND

The proposed action would result in the demapping of two unbuilt and undeveloped streets-Emerson Avenue between Miles and Schley Avenues, and Schley Avenue between Buttrick and Emerson Avenues. The two demapped streets would be remapped as parkland and incorporated into Ferry Point Park. Existing noise levels at these two locations are relatively low, since there is no adjacent vehicular traffic, and it would be expected that noise levels in these areas would be comparable to that in adjacent park areas and would exceed the CEPO-CEQR guideline level of 55 dBA $L_{10}$ for outdoor areas potentially sensitive to noise. Based upon CEQR criteria, noise levels in these new parklands would not cause a significant impact.

## CONSTRUCTION IMPACTS

Impacts on noise levels during construction of the proposed project include noise and vibration from construction equipment operation, and noise from construction and delivery vehicles traveling to and from the construction site. In general, the project site is removed from residents and other sensitive receptors, deliveries of supplies and workers will be via the I-678 service road, which is not adjacent to residents, and deliveries and parking will be accommodated on-site. Consequently noise impacts during construction are expected to be minimal and for relatively short durations.

The level of impact during construction depends on the noise characteristics of the equipment and activities involved, the construction schedule, and the location of potentially sensitive noise

receptors. Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site. The construction site of the proposed project will produce peak noise levels that will be clearly discernable at some nearby residences, and may be considered intrusive. Typical noise levels of construction equipment expected to be employed during the construction process are presented in Table L-7. Noise levels caused by construction activities would vary widely, depending on the phase of construction—land clearing and excavations, foundation and capping, erection of structural steel for any structures, construction of exterior walls, etc.—and the specific task being undertaken.

**Table L-7**

## Typical Noise Emission Levels for Construction Equipment

| Equipment Item | Noise Level at 50 Feet (dBA) |
|---|---|
| Air Compressor | 81 |
| Asphalt Spreader (paver) | 89 |
| Asphalt Truck | 88 |
| Backhoe | 85 |
| Bulldozer | 87 |
| Compactor | 80 |
| Concrete Plant | 83[1] |
| Concrete Spreader | 89 |
| Concrete Mixer | 85 |
| Concrete Vibrator | 76 |
| Crane (derrick) | 76 |
| Delivery Truck | 88 |
| Diamond Saw | 90[2] |
| Dredge | 88 |
| Dump Truck | 88 |
| Front End Loader | 84 |
| Gas-driven Vibro-compactor | 76 |
| Hoist | 76 |
| Jack Hammer (Paving Breaker) | 88 |
| Line Drill | 98 |
| Motor Crane | 93 |
| Pile Driver/Extractor | 101 |
| Pump | 76 |
| Roller | 80 |
| Shovel | 82 |
| Truck | 88 |
| Vibratory Pile Driver/Extractor | 89[3] |

**Notes:**

1 Wood, E.W. and A.R. Thompson, Sound Level Survey, Concrete Batch Plant; Limerick Generating Station, Bolt Beranek and Newman Inc., Report 2825, Cambridge, MA, May 1974.

2 New York State Department of Environmental Conservation, *Construction Noise Survey, Report No. NC-P2*, Albany, NY, April 1974.

3 F.B. Foster Company, Foster *Vibro Driver/Extractors, Electric Series Brochure*, W-925-10-75-5M.

**Source:** Patterson, W.N., R.A. Ely, and S.M. Swanson, *Regulation of Construction Activity Noise*, Bolt Beranek and Newman, Inc., Report 2887, for the Environmental Protection Agency, Washington, D.C., November 1974, except for notated items.

Increased noise levels caused by construction activities can be expected to be most significant during the early phases of construction. The most significant noise source associated with the construction equipment will be the use of pile-drivers for construction of any buildings on-site. A pile-driver will be used periodically for a limited time period during the early phases of construction of the buildings on-site. Most of the buildings are far removed from residences, which are located to the east of the site. Pile-driver noise will be intrusive and would be discernable to residences within several blocks of the project site during the limited time period that pile driving occurs during construction of the fine dining/banquet facility. However, these peak construction noise levels would persist for only a limited time period in the early phase of construction. During the later phases of construction noise levels would be much less severe.

Construction noise is regulated by the New York City Noise Control Code and by EPA noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under special circumstances where a variance is issued for a limited number of days, construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. These regulations would be carefully followed. In addition, appropriate low-noise emission level equipment and operational procedures would be used. Compliance with noise control measures would be ensured by including them in the contract documents as material specification and by directives to the construction contractor. ❖

**Attachment M: Pollutant Loading Analysis**

# *Non-Point Source Pollutant Loading Analysis: Ferry Point Park Recreational Facility*

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**30 September 1999**

*Ferry Point Park Recreational Facility*
*Non-point Source Pollutant Loading Analysis*

## *1.0 INTRODUCTION*

The Ferry Point Park recreational facility is a multi-use facility proposed for the eastern portion of Ferry Point Park (the site) in Bronx County, New York. This eastern portion of Ferry Point Park encompasses approximately 222 acres of ruderal vegetation (plant colonizing waste ground) on a former landfill. The comprehensive golf facility is the largest portion of the proposed project and is a primary focus of this evaluation—it will include a driving range, practice range clubhouse and associated parking. Other project components include a waterfront park, a community park, and two restaurant facilities.

The proposed project will modify and the site's existing land use, and land cover, and topography. As a former landfill, the site can best be characterized as an open field that is undergoing early ecological succession. Largely a mixture of grasses and other herbaceous plants, the site has some scattered patches of trees, the majority of which do not provide any substantial canopy cover. Throughout the site there is evidence of past dumping activity. There are small, isolated wetlands present on the site located along the Hutchinson River Parkway along the site's western border. Pockets of disturbed land and some impervious surfaces also occur throughout the site. In general, land cover is reflective of a typical open, urban site. Although the site's post-development condition will provide a much expanded and improved recreational opportunity for the area, the change in land use and vegetative cover has the potential to increase the generation of pollutants. The development of any site affects the generation of pollutants because of an increase in impervious cover, and an increase in the volume of stormwater runoff. Impervious cover, without adequate mitigation, reduces the infiltration of precipitation, leading to a decrease in ground water recharge and increase in surface runoff. The volume and energy associated with this additional runoff can potentially mobilize and transport pollutants. The actual types and availability of pollutants that will be mobilized or transported with runoff will vary with land use. Typically, the more intensely land is developed (i.e., the greater the amount of impervious cover) the greater the variety of potential pollutants. The pollutants most often associated with land development are nutrients (nitrogen and phosphorus), suspended sediments, petroleum hydrocarbons, organic material and heavy metals. Fertilizers are the main source of increased nitrogen and phosphorus loads. Soil erosion and decomposition of vegetation are other nutrient sources. Erosion of exposed, insufficiently vegetated land surfaces leads to increases in suspended sediments. The generation of heavy metals, organic material (reflected in the measurement of biochemical oxygen demand (BOD)) and petroleum hydrocarbons can also increase as land becomes increasingly developed. Many of these pollutants arise as a result of vehicular emissions.

For the Ferry Point project, the evaluation of post-development pollutant loading focused on the quantification of the pollutant load generated by the

comprehensive golf facility (pervious area) and the impervious area consisting of the two proposed restaurants, their associated parking areas, parking areas for the waterfront park, and the internal roadways (including cart paths). As discussed below in the subsequent sections of this report, the analysis utilizes a stormwater modeling technique that enables the comparison of pre- and post-site development pollutant loads. The methodology also allows pollutant reduction best management practices (BMPs) to be accounted for in the analysis. As a result, the data generated are considered to be reflective of the post-development pollutant load that will be discharged to the East River following the completion of construction.

Of the pollutants of concern listed above, emphasis was placed on the control of nutrients, BOD and heavy metals. Minimization of the post-development discharge of these pollutants into the East River is in keeping with the nutrient reduction strategies of the Long Island Sound initiatives and the environmental principles set forth for golf course developments (CRM 1996).

## *2.0 METHODOLOGY*

The objective of the pollutant loading analysis conducted for the Ferry Point project was to accurately quantify differences in pollutant loading between existing and proposed site-development conditions. The analysis was conducted on all areas of the project site, with the exception of the pervious sections of the waterfront park that drain directly to the East River. All impervious elements of the waterfront park (the parking areas) will be treated for water quality and are accounted for in the analysis.

The pollutant load analysis was conducted in accordance with the methodology specified in Schueler (1987). Referred to as the *Simple Method*, this pollutant load quantification technique has been adopted by a number of environmental and planning agencies including the New York State Department of Environmental Conservation (DEC). The *Simple Method* is especially well suited for the assessment of land use and associated pollutant loading changes for suburban/urban settings. The model integrates rainfall, rainfall intensity and impervious cover attributes, and can be used to examine pollutant loading under short-term (storm specific) and long-term (annual) scenarios. This makes the model very adept for analyzing changes in pollutant loading due to even minor changes in land use or land cover. DEC (1993) indicated that this pollutant quantification technique is robust and flexible, yet capable of generating accurate data. In addition, the results of the *Simple Method* can be used to evaluate the feasibility and effectiveness of different pollutant load management strategies or BMPs. Although loading coefficients specifically intended for the analysis of golf course development are not supplied in either Schueler (1987) or DEC (1993), appropriate coefficients are available in the scientific literature. These coefficients were developed as a result of the actual field study and measurement of storm related pollutant loading from turf.

The non-point source pollutant analysis discussed in this report focuses on pollutants that have the greatest potential to impact the water quality of the East

River—nutrients (nitrogen and phosphorus), organic loadings (BOD), and heavy metals. The modeling procedure for these pollutants consisted of three main components.

Delineation of the project site into sub-watershed (catchment) areas based on projected topographic contours, and the proposed stormwater collection and routing system.

Identification of the prevailing land use(s) within each sub-watershed under existing and post-development conditions.

Assignment of pollutant loading coefficients, under existing and post-development conditions. The coefficients selected for use in this study were obtained from Schueler (1987) and DEC (1993), and assessed for their applicability by comparison with data available through Barten (1995) and others. The selected coefficients are reflective of site-specific existing and post-development conditions with regard to imperviousness, slope, soils, and, in particular, land cover.

The characterization of pre-development land use conditions is the result of site inspections, the review and interpretation of aerial photos, and information supplied by other members of the project team. The post-development land use/cover designations were provided by the project engineer and are based on the input parameters of the TR-55 worksheets dated July 1999. Under the post-development scenario, the reported acreage of each land use and land cover reflects the most recent golf course layout. As such, the acreage of each sub-watershed used in this analysis accounts for the clubhouse, restaurants, maintenance facility, parking lots, roadways and other associated impervious surfaces. The selected coefficients were each cross-referenced with a number of sources, particularly Barten (1995) which provides coefficients based on the in-field measurement of runoff from four golf courses.

The comprehensive golf facility will use a combination of BMPs to mitigate the pollutant load generated from the operation of the facility. Thus, the pollutant load analysis conducted herein included the adjustment of the projected post-development pollutant loads to account for the load reductions attributable to BMP implementation. The functional characteristics of the BMPs are based on sizing and stormwater routing information (TR-55) provided by the project engineer (dated 8 July 1999).

It should be noted that the construction of the golf course will alter the existing sub-catchment divides. Reference to the area of each sub-catchment therefore reflects post-development topography. Alteration of the size of each sub-catchment is inconsequential to the overall purpose of the pollutant loading analysis, as all the runoff from the site will continue to be discharged to the East River via the same discharge points that currently convey runoff off-site.

## *3.0 RESULTS*

The Ferry Point Park Recreational Facility encompasses approximately 222 acres. Of this, the comprehensive golf facility covers approximately 190 acres. All of the drainage from the comprehensive golf facility is eventually directed to the East River through a portion of an existing stormwater collection system. In general, the project will result in the conversion of the existing open, urban grassland to a combination of turf/grass surfaces and impervious cover. The turf/grass is associated with the greens, fairways, tees and roughs of the comprehensive golf facility. Of these, only the greens, tees and fairways will be managed (treated with fertilizers and pesticides following initial grow in). The impervious sections of the project include the parking areas, cart paths, internal roadways and buildings (restaurants, clubhouse, and maintenance building). Table 1 summarizes the proposed land use conditions by sub-catchment. Current land use conditions and associated acreages by land use type are discussed in detail in Attachment E - Natural Resources. Most of the existing site (approximately 178 acres) can be characterized as urban meadow. These meadows are covered by plant species that reflect the site's disturbed nature and urban setting. The 19.5-acre waterfront park is not included in Table 1, but runoff from the park's impervious areas will be routed to the vegetated dry basins located nearby. The pervious portions of the waterfront park will be directed largely to the East River. The net change in land cover for these pervious areas is not likely to substantially change pollutant loadings from the existing condition.

***TABLE 1 Ferry Point Comprehensive Golf Facility Post-development Land Use/Cover in Acres***

| Sub-Catchment | Grassed | Ponds | Impervious |
|---|---|---|---|
| 1 | 25.09 | 0 | 1.24 |
| 2 | 19.04 | 0.75 | 4.81 |
| 3 | 41.22 | 4.62 | 1.22 |
| 4 | 7.09 | 0.65 | 0 |
| 4b | 13.31 | 0 | 0 |
| 5 | 41.08 | 4.22 | 0.92 |
| 6 | 17.40 | 0 | 4.64 |
| 7 | 1.86 | 0 | 1.79 |
| Total | 166.09 | 10.24 | 14.62 |

The changes from pre- to post-development pollutant loading were calculated for each sub-catchment using Schueler's *Simple Method*. As previously mentioned, DEC (1993) recommends the *Simple Method* for the computation of pollutant loading and the evaluation of the water quality benefits of BMPs. The coefficients for the *Simple Method* are flow weighted mean concentrations (milligrams per liter (mg/L)) derived from actual field measurements of pollutants in stormwater runoff (Reckhow et. al. 1980). The model includes a rainfall depth and rainfall intensity component, and thus allows for some degree of integration of the hydrologic, peak flow modeling data (SCS, TR-55) in the calculation of the pollutant load. That is, the CN (runoff curve number) values and soil

classifications used in the TR-55 analysis can be used to better define the $R_v$ (runoff coefficient) value of the *Simple Method*, thereby increasing the accuracy of the pollutant load analysis on a local scale.

For the pre-development condition, the average NURP (Nationwide Urban Runoff Program) values (Table 1.1 of Schueler 1987) were used. These values are reflective of the average concentration of pollutants measured in stormwater runoff sampled from sites throughout the Mid-Atlantic region. The post-development coefficients were also extracted from Table 1.1 of Schueler (1987) and are reflective of the average concentration of pollutants measured in stormwater runoff sampled from established suburban sites located in the Mid-Atlantic region. These coefficients are derived for landuse activities having a similar degree of imperviousness and a similar degree of use intensity. It should be noted that the selected loading coefficients used to model post-development pollutant loading are conservative, that is they most likely result in an overestimate of the pollutant load. This statement is based on the comparison of the selected coefficients to actual nutrient concentrations measured by Barten (1995) in runoff samples collected from four golf courses.

Table 2 summarizes the results of the *Simple Method* analysis, and provides a comparison of pre-development and post-development pollutant loads. The loadings presented in Table 2 do not reflect any reduction in pollutant loading attributable to the implementation of the golf course's proposed BMPs.

***Table 2 Ferry Point Comprehensive Golf Facility Pre and Post-Development Non-point Source Loading***

| | Lbs./Year | | | |
|---|---|---|---|---|
| **Loading** | **Total N** | **Total P** | **BOD** | **Heavy Metals** |
| Existing | 1392.1 | 181.0 | 3549.8 | 27.8 |
| Post-Development* | 1581.2 | 206.5 | 5774.5 | 86.0 |
| Difference (Lbs.) | + 189.1 | +25.5 | +2224.7 | +58.2 |

* Loading without pollutant removal attributable to BMPs, IPM, or other pollutant load mitigative strategies.

The comprehensive golf facility will use a combination of structural and non-structural techniques to decrease pollutant loading. The structural measures will include four water quality ponds, five vegetated dry detention basins, and water quality inlets designed to intercept and trap particulate pollutants, oils and heavy metals generated from parking areas and the maintenance area. Where practical, runoff will also be allowed to flow through grassed swales and vegetated buffers prior to its routing to the water quality ponds or vegetated dry detention basins. In addition to these structural techniques, the course will follow a turf management plan (Integrated Pest Management Plan [IPM]) designed to decrease the use of pesticides and fertilizers and control the potential for their off-site migration. Table 3 presents the pollutant removal efficiencies of the structural BMPs. These

values are in keeping with data reported in Schueler (1987), DEC (1993) and NJDEP (1994).

Given that the site's stormwater will be treated by a series of BMPs prior to discharge into the East River, the pollutant loads presented in Table 2 must be adjusted to account for their load-reduction capabilities. For this analysis, load reduction credit was given only to the structural BMPs; i.e., the water quality ponds, vegetated dry detention basins, water quality inlets and the grassed swales and buffers. Table 4 presents the results of the pollutant load calculations following adjustment for the treatment of stormwater runoff by the BMPs.

***Table 3 Ferry Point Comprehensive Golf Facility Pollutant Removal Efficiency of Proposed Structural BMPs***

| | Percent Removal* | | | |
|---|---|---|---|---|
| **BMP** | **Total N** | **Total P** | **BOD** | **Heavy Metals** |
| Water Quality Ponds | 30 | 50 | 40 | 75 |
| Vegetated Dry Detention Basins | 30 | 30 | 35 | 70 |
| Water Quality Inlets | 10 | 10 | 10 | 35 |
| Vegetated Swales / Buffers | 10 | 10 | 20 | 20 |

* As per DEC 1993; NJDEP 1994 and Horner et. al. 1994

***Table 4 Ferry Point Comprehensive Golf Facility Pre and Post-Development Non-point Source Loading Adjusted to Account For Pollutant Reduction Attributable to Proposed Structural BMPs***

| | Pollutant Loading Lbs./ Year | | | |
|---|---|---|---|---|
| **Loading** | Total N | Total P | BOD | Heavy M |
| Existing | 1392.1 | 181.0 | 3549.8 | 27. |
| Post-Development* | 1029.8 | 126.8 | 3282.5 | 26. |
| Difference (Lbs.) | - 362.3 | - 54.2 | - 267.3 | - 1. |

* Loading adjusted to account for pollutant removal attributable to water quality ponds, vegetated dry basins, water quality inlets, and vegetated swales/buffers.

The results presented in Table 4 indicate that nitrogen, phosphorus, and BOD will decrease from current loads in the post-development condition, while concentrations of heavy metals will remain the same. The differences in the post-development loads presented in Tables 4 is the result of the integrated utilization of the facility's BMPs. This includes the linkage of water quality ponds, vegetated dry detention basins, water quality inlets and vegetated swales/buffers. It should be noted that because of the proposed prolonged detention times, the pollutant removal efficiencies used in this analysis are conservative, and efficiencies of the BMPs may be actually higher than presented in Table 3. Furthermore, no credit

was taken for the pollutant reduction attributable to the proposed turf management plan. Therefore, the reduction in pollutant loading in the post-development condition is likely to be much greater than the values presented in Table 4.

## *4.0 DISCUSSION*

The potential for the increased generation of pollutants is inherent with any form of development. As presented in *Section 1.0*, changes in impervious cover, land use and the intensity of land invariably increases the amount and the types of pollutants. The data presented in Table 2 indicate that this is no different for the case of the proposed Ferry Point project.

However, it has also been repeatedly documented in the scientific literature that the nutrients, pesticides and other pollutants can be greatly reduced through the implementation of well designed BMPs. A highly integrated stormwater quality management system has been designed for the Ferry Point project. Runoff will be directed to a series of BMPs, which will utilize a combination of physical, chemical and/or biological processes to decrease pollutant loading to the East River.

Although the gross, predicted pollutant loads (Table 2) suggest that the off-site export of pollutants will be a greater following redevelopment, these data do not account for the mitigative benefits of the various BMPs and other pollutant management strategies, such as IPM, that will be implemented following the site's development. This approach to the on-site management of potential pollutants is a major tenet of the environmental principles for golf courses developed jointly by the U.S. Golf Association, U.S. Environmental Protection Agency, Golf Course Superintendents Association of America, and American Society of Golf Course Architects (CRM 1996). Under existing conditions, there are no specifically designed water quality enhancement BMPs in place—unstable, erosion prone areas exist, and there is the potential that pollutants associated with the site's past uses can be leached, mobilized and transported into the East River during storm events. Following the development of the site, runoff from the comprehensive golf facility, including all impervious surfaces, will be treated by a number of BMPs.

The runoff from sub-catchments 2, 3, 4 and 5 will be routed into specifically designed water quality ponds. The ponds managing the runoff from sub-catchments 3 and 5 will provide prolonged detention (>72 hours). Water quality ponds that provide prolonged detention times have substantially higher pollutant removal efficiency rates than most other types of BMPs, because they use a combination of physical, chemical and biological processes to reduce pollutants. As with any standing waterbody, the water column concentrations of incoming particulate pollutants (e.g. nutrients, heavy metals) will initially be reduced as a result of the settling of the heavier, course grain particulate matter (i.e. total suspended solids). Studies have shown that the majority of suspended particulate

pollutants will settle out of the water column during the first 6 to 12 hours (NJDEP 1994).

Unlike most conventional structural stormwater measures, water quality ponds can also remove significant amounts of dissolved pollutants, especially soluble nutrients, from the water column. This occurs due to a combination of chemical and biological processes associated with bacterial, algal and aquatic plant uptake of dissolved constituents. In particular, the biological assimilation of dissolved pollutants and soluble nutrients is an important pollutant removal pathway, and will aid in the control of nutrients originating from the application of fertilizers. As such, the combination of the settling of particulate pollutants and the assimilation of soluble pollutants, enables water quality ponds to be very effective in the reduction of stormwater-related pollutants.

The pollutant removal efficiency of water quality ponds varies depending on site specific conditions and the pond's design specifications (NJDEP 1994, Schueler 1987), but are generally high. For example, projected removal efficiencies of water quality ponds are estimated to 50 percent for total phosphorus (TP) and 30 percent for total nitrogen (TN) (Schueler 1996).

Vegetated dry basins will be used to manage the pollutant loading from sub-catchments 1, 2, 4B, 6, and 7. These basins, through filtration, settling and bio-uptake processes, are also very efficient in the removal of particulate and even soluble pollutants. Although they do not have the prolonged detention times of the water quality ponds, the vegetated basins will dampen and detain the first flush of storm events. This promotes the settling of particulates, while passage of runoff through the basin's vegetation promotes biofiltration and the assimilation of dissolved and soluble forms of pollutants.

Runoff from the impervious areas of the site, such as the parking lots and the golf course maintenance facility, will be routed to water quality inlets. Water quality inlets are catch basins with an outlet invert pipe raised approximately 0.6 m (2 ft) from the bottom. Standard catch basins have little, if any, positive impact on water quality. In contrast, water quality inlets can convey stormwater yet provide some degree of pollutant reduction (Schueler 1996). By raising the outlet pipe, and creating a retention sump in the bottom of the basin, sediments and particulate pollutants can be removed from the runoff. This is accomplished because the sump helps to slow storm surges and reduce the velocity of the runoff. This promotes the settling of sediment and the removal of pollutants such as heavy metals, petroleum hydrocarbons and nutrients bound to or adsorbed on the sediment particles. For the Ferry Point site, these inlets will be used as pre-treatment mechanisms for sub-catchments 1, 2, 6 and 7. These specially designed inlets will act to remove the courser sediments, and associated particulate pollutants, from the stormwater prior to its routing to the water quality ponds or the vegetated dry basins.

Additional, albeit minor, treatment of runoff from the grassed sections of the site will be accomplished, where possible and practical, by allowing runoff to sheet flow though vegetative buffers or be transported to the water quality ponds or

vegetated dry basins via vegetated swales. A swale is a natural depression or wide, man-made shallow ditch used to temporarily store, route or filter runoff (Schueler 1995). Although swales have a limited capacity to detain and treat stormwater runoff, when combined with other structural stormwater measures they can measurably decrease stormwater pollutants (Harper 1994). This is accomplished in three ways. First, the vegetation present in the swale reduces runoff velocity. The extent to which this occurs is dependent on the length, depth and gradient of the swale, as well as the density of the vegetation. A reduction in the velocity of runoff will increase the settling of particulate pollutants in much the same way as occurs in water quality ponds and vegetated dry detention basins. Second, a portion of the runoff discharged to a swale infiltrates into the soil, thus decreasing the volume of runoff. The extent to which this occurs is dependent on soil moisture conditions, the gradient of the swale, and the velocity of the runoff. Third, the vegetation present in the swale will filter out particulate pollutants and help retain these pollutants on-site.

Vegetated buffers work in much the same way as vegetated swales, relying on the combination of settling, filtration and infiltration to remove pollutants from runoff. Overall, these swales and buffers are relatively effective in the reduction of particulate pollutants, but are not highly effective in the removal of soluble pollutants such as nutrients. None-the-less, both are useful pre-treatment mechanisms.

For the Ferry Point project, the efficiency of the individual BMPs is further enhanced by the fact that most of the BMPs are linked. That is the site's stormwater routing system hydrologically connects certain BMPs, thereby creating a "pollutant removal train." Each of the inter-linked BMPs work in unison to remove pollutants by either different processes or as a result of repeated processes. For example, in sub-catchments 1, 2, 6 and 7, water quality inlets are utilized in unison with the water quality pond or vegetated dry basin. The water quality inlets serve as a pre-treatment mechanism removing course particulate materials and associated particulate pollutants (primarily by sedimentation) while the pond and vegetated basins remove finer sediments, nutrients and soluble pollutants (primarily by filtration and bio-uptake). When properly integrated, as has been accomplished for the Ferry Point project, the linkage of BMPs increases the overall efficiency of the stormwater management system (Horner et. al. 1994). As illustrated by the differences in projected loading with (Table 4) and without (Table 2) the implementation of the structural BMPs, the proposed combination of BMPs will significantly reduce the generation of pollutants and decrease the pollutant load to the East River.

In conclusion, the data indicate that on a gross scale a post-development increase in pollutant loading is projected for the Ferry Point project. However, with the implementation of the various BMPs, the pollutant load generated after the site's development will in fact be less than under existing conditions. As such, the development of the Ferry Point project is not expected to result in in a significant adverse impact to water quality for the above-identified pollutants.

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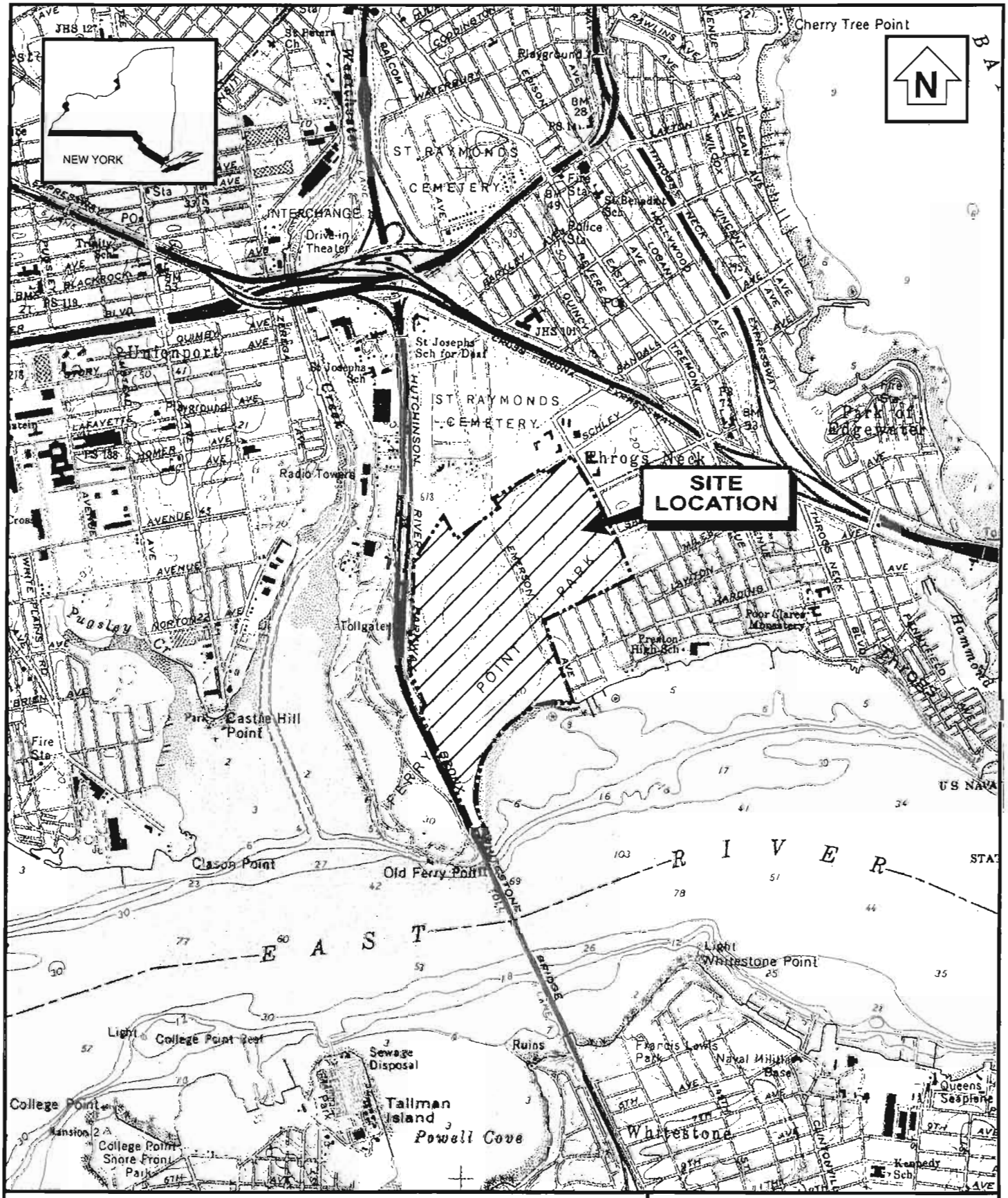


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BASE CREATED WITH TOPO™ © 1996 WILDFLOWERS PRODUCTIONS, www.topo.com
FLUSHING, NY 7.5' USGS TOPOGRAPHIC MAP

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**FERRY POINT PARK**
BRONX, NEW YORK

**FIGURE 1.**
**SITE LOCATION MAP**

**Date:** 7/99 | **Project No.** 25800

Figure 2
Boesch, 1993
Appendix

Results of Site File Search and Request for Site Evaluation:
New York Office of Parks, Recreation, and Historic Preservation and New York State Museum

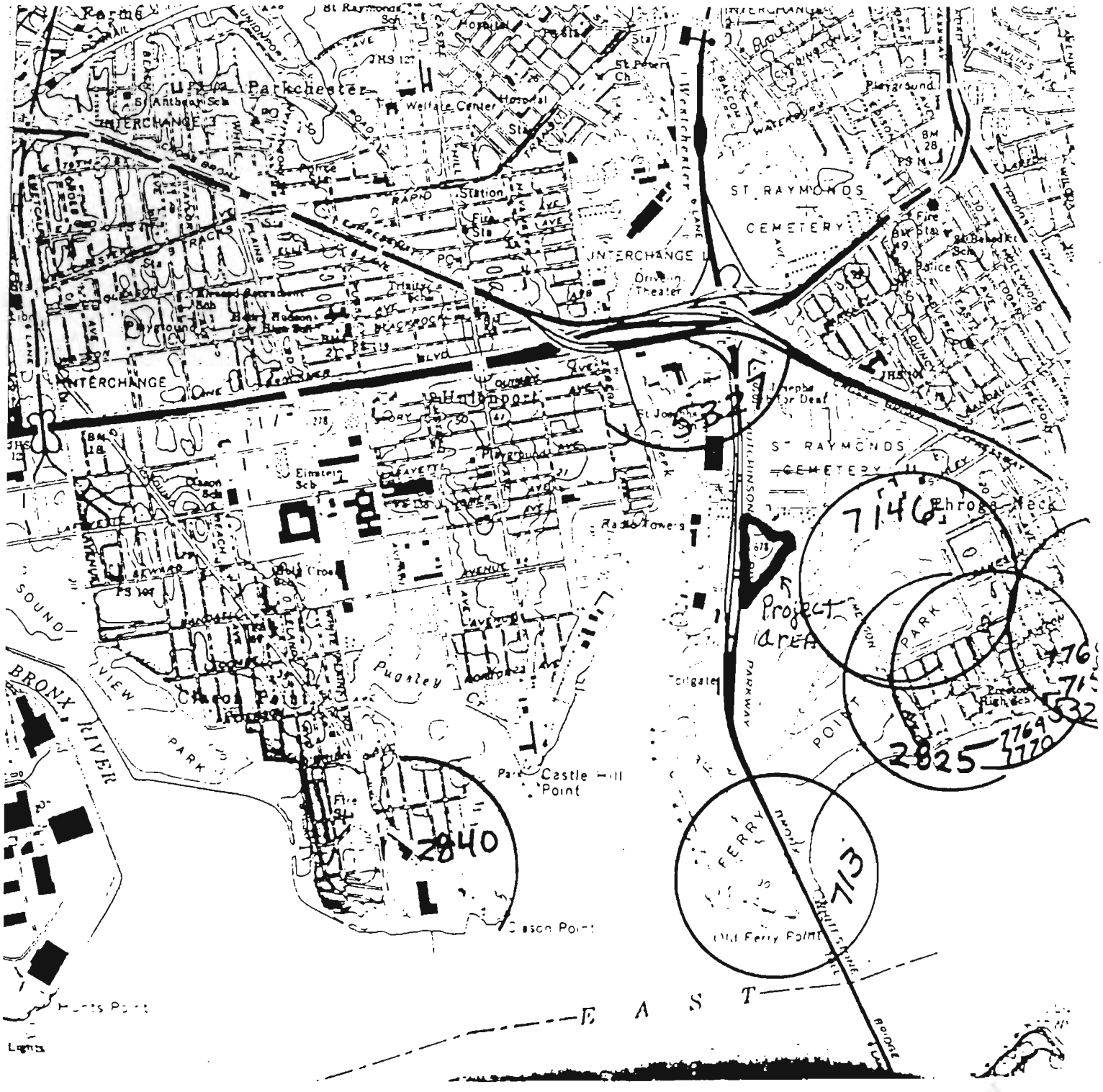


Figure 3
Arthur C. Parker, 1922
page 488/plate 147

Bronx County List of Sites: #3

*Extensive shell heaps at Weir Creek Point near Throggs Neck. Mr. Harrington believes it to have been one of the oldest along the sound, judging from the character of the relics disclosed.*

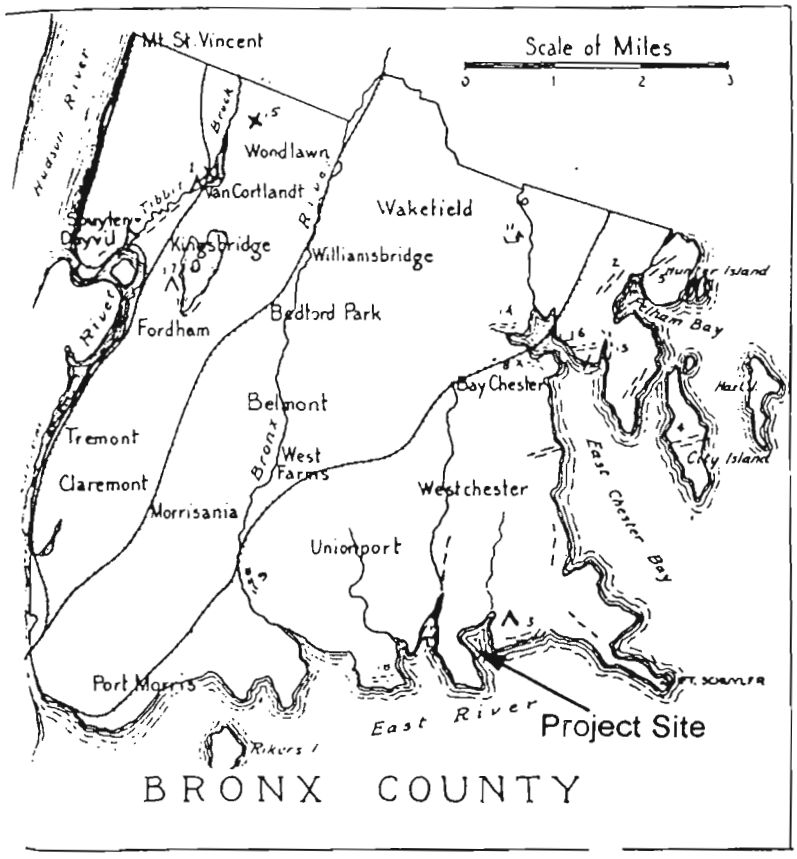


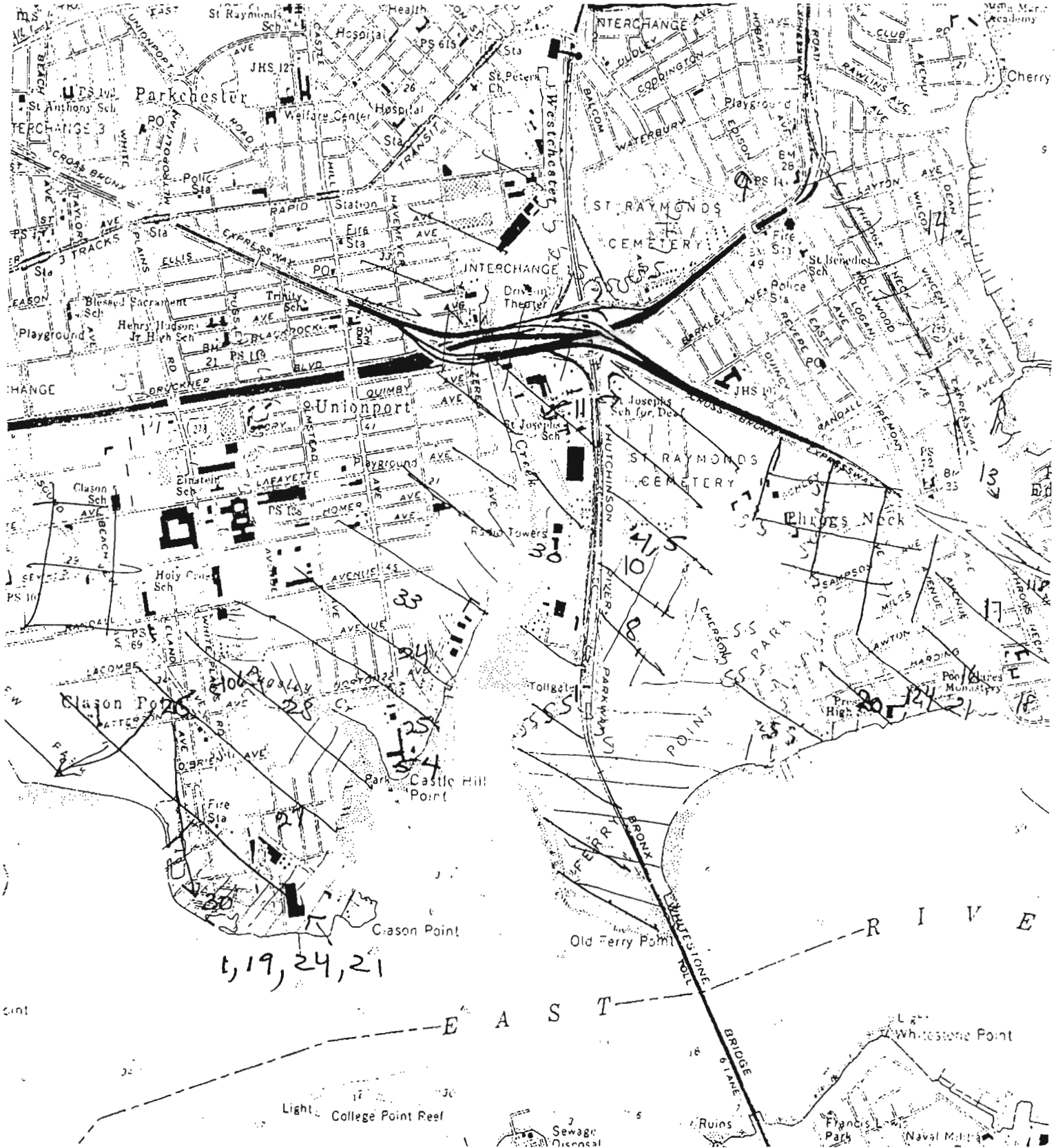
Figure 4
Historical Perspectives, Inc., 1986
Appendix

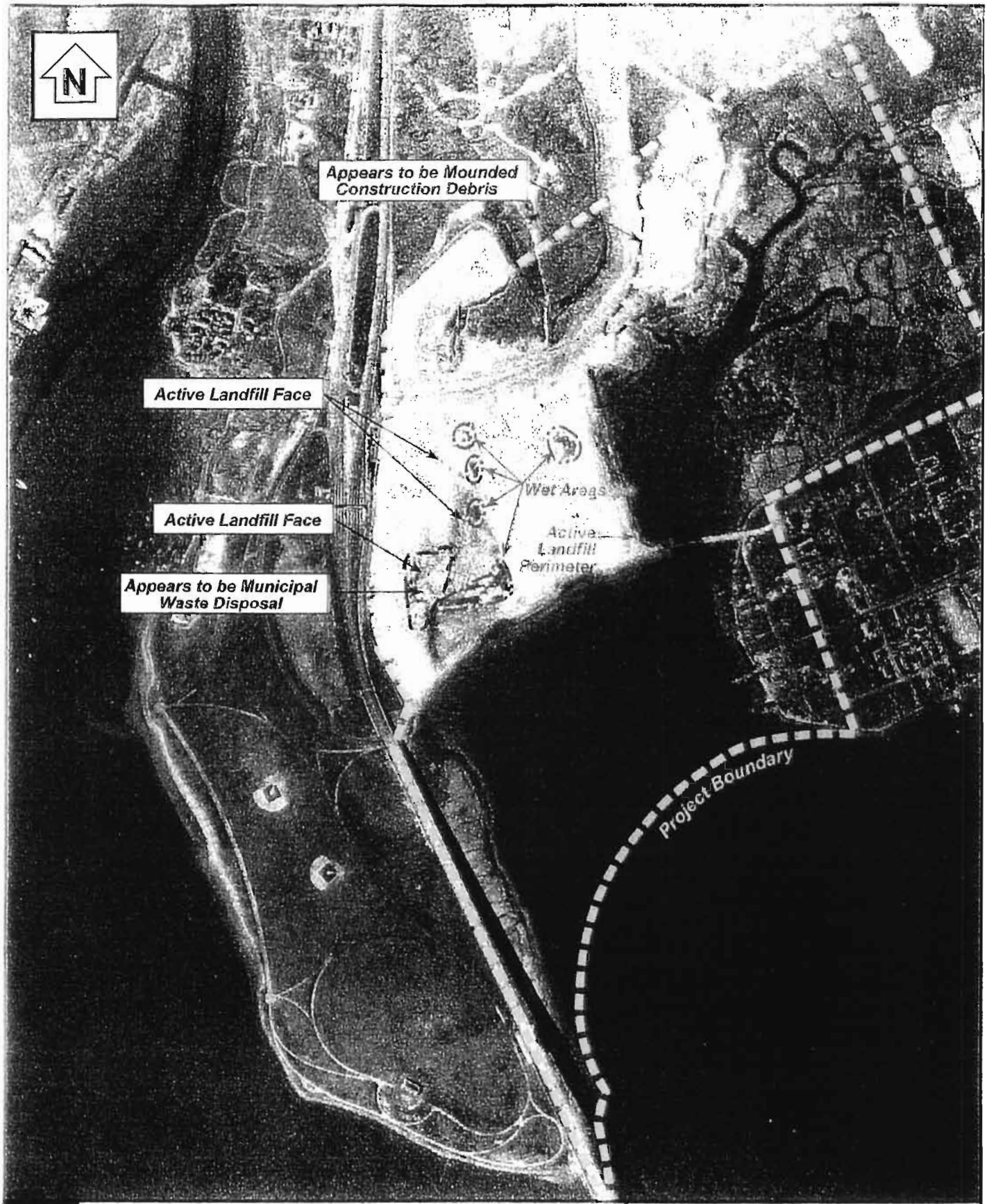
Results of Site File Search and Request for Site Evaluation:
New York Office of Parks, Recreation. and Historic Preservation and New York State Museum



Figure 5
*Archaeological Evaluation and Sensitivity Assessment of the Prehistoric and Contact Period Aboriginal History of the Bronx, NY* (Boesch 1997)

[Note: yellow markings are areas designated as "archaeological sensitive"]



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**FERRY POINT LANDFILL**
BRONX, NEW YORK

## FIGURE 6.
## 1951 AERIAL PHOTOGRAPH

Date: 7/99 | Project No. 25800

Attachment N: Archaeological Sensitivity

**Ferry Point Park**
**CEQR # 99DPR006X**

9/24/99

## Discussion: Archaeological Sensitivity

### *Introduction*

Ferry Point Partners, LLC, has proposed the development of a major recreational facility at Ferry Point Park in the Bronx. The project parcel, approximately 222 acres, is situated on the east side of the approach of the Bronx-Whitestone Bridge and is currently undeveloped except for a NYC organic recycling and composting facility, informal dirt bike paths, an informal model airplane area, a ballfield, and a basketball court. In addition to the existing parkland, the project would encompass two unbuilt and undeveloped streets, parts of both Emerson Avenue and Schley Avenue. A project location map is attached as Figure 1 and a photograph of the site also follows.

An Environmental Assessment Statement [EA] for the Ferry Point Park project was filed by the New York City Department of Parks & Recreation on July 30, 1999 (CEQR # 99DPR006X). In a review of the EA (8/5/99), the Landmarks Preservation Commission [LPC] noted that the project parcel had 'No architectural significance.' It did note, however, that the parcel 'May be archaeologically significant' and they requested additional materials. Subsequent to the original EA filing, the project engineers and various consultants have revised the proposed action. These revisions, as they relate to potential archaeological sensitivity, are critical since they limit the total depth of project impact to within the existing twentieth century landfill overburden. The following review, prepared by Historical Perspectives, Inc., addresses the LPC concerns and establishes archaeological sensitivity in relation to the revised (9/22/99) proposed action for the Ferry Point Park project.

### *Sensitivity Assessment*

The LPC notification stated:

> LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from Native American occupation and human burials on the project site. Accordingly, the Commission recommends that an archaeological

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documentary study be performed for this site to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary (see CEQR Technical Manual 1993).

There is no question that much of the Bronx shoreline is considered archaeologically sensitive and the Ferry Point parcel falls within this general area.[1] LPC's determination is based, in large part, on three factors:

- New York Office of Parks, Recreation, and Historic Preservation and the New York State Museum Sensitivity Model/Evaluation
- New York City Landmarks Preservation *Archaeological Evaluation and Sensitivity Assessment of the Prehistoric and Contact Period Aboriginal History of the Bronx, NY* (Boesch)
- Proximity to St. Raymond's Cemetery

However, none of these factors is specific to the actual landmass within the bounds of the Ferry Point Park project. In order to evaluate the realistic cultural resource potential of the approximately 222 project acres and satisfy the concerns expressed by LPC, the following discussion will address these general evaluation factors in relation to site-specific subsurface conditions.

*New York Office of Parks, Recreation, and Historic Preservation and State Museum Sensitivity Model*

LPC's concerns may, in part, be founded on the sensitivity models established for other development projects in the Bronx, particularly the adjoining property, St. Raymond's cemetery. In 1993, when St. Raymond's Cemetery proposed a southerly expansion of its interment facilities, repositories of the New York Office of Parks, Recreation and Historic Preservation [NYOPRHP] and the New York State Museum were tapped for information relevant to prehistoric and historic sensitivity surrounding the cemetery lands (Boesch 1993). This report is on file at LPC. In standard Museum response policy, a USGS topo map of the St. Raymond's Cemetery area was annotated with information on prehistoric sites in the vicinity. See Figure 2.

Museum-reported archaeological resources are to be used as indicators of potential sites. However, many of these geographical placements are based on extremely vague descriptions and maps that date to the early 1900s. See Figure 3 for a 1922 source for geographical locations. Museum correspondence regarding these specific sites acknowledges this lack of preciseness. Please note the following Museum descriptions, taken from the 1993 study, as they relate to Figure 2 and Arthur C. Parker's 1922 map, Figure 3:

[1] Detailed archaeological analysis of this area of the Bronx, presenting both the prehistoric and historic resource history and potential, is on file at LPC and not duplicated in this discussion. See Boesch 1993, Historical Perspectives, Inc. 1986, 1987, and 1994, Greenhouse Consultants, Inc. 1988

| *NYS Museum Site I.D. #* | *Alt. Old #* | *Reported: Age Occupation Type* | *[NYS Museum] Remarks* | *7.5' Topo Quad* | *Reporter/ Earlier Reporter* |
|---|---|---|---|---|---|
| *7146* | *ACP Bronx no #* | *village* | *On Parker's Map, it is near his Bronx #3 (NYSM # 2825), but not described in #3* | *Flushing* | *A. C. Parker, 1922* |
| *2825* | *ACP Bronx # 3* | *early* | *extensive shell heaps; M. R. Harrington [MNH] believed [ca. 1915] it to be one of oldest along sound; on Parker map, site is just to east of a bay that does not appear on present USGS map.* | *Flushing* | *A. C. Parker, 1922* |

These vague descriptions and tentative placements make it impossible to precisely locate the prehistoric shell heaps and villages identified more than 75 years ago on a vastly different landscape. In fact, as can be seen on Figure 4, an earlier Museum-generated annotated map (1987) of the same Bronx shoreline based on the same reported data from the 1920s provides both a different scale and geographical placement for these early sites.

In addition, as the author of the 1993 report stated, the NYSM # 713 is placed erroneously on the USGS quad, indicating more sensitivity to a specific section of the Ferry Point Park land mass than is appropriate.

*LPC Sensitivity Model*

LPC's concerns may, in part, be founded on the sensitivity model established by their consultant, Eugene Boesch, in *Archaeological Evaluation and Sensitivity Assessment of the Prehistoric and Contact Period Aboriginal History of the Bronx, NY*. Boesch's research into the myriad of reports and maps that relate to archaeological discoveries resulted in a sensitivity assessment that more realistically interprets historic discoveries and places them on today's landscape. Boesch's model, based on the state files and LPC's files and on file at LPC, is also superimposed on the 1:24000 scale USGS Flushing quad map. (See Figure 5.)

This latest evaluation does not necessarily indicate the absolute presence of archaeological resources in Ferris Point Park; rather, it establishes those areas that might be sensitive for Native American resources if subsequent activities have not obliterated the earlier living surfaces. The LPC data base clearly places two prehistoric sites within the northwest edge of the project parcel and establishes sensitivity along the northwest edge of the project parcel. The LPC #s 8 and 10 are based on the early twentieth century reportings discussed above. They are also presented in detail in the

1993 Boesch study of St. Raymond's Cemetery [represented by #s 4 and 5 on Figure 5].

This sensitivity guide was not established on specific details from every discrete parcel along the shore but it does note through its cartographic conventions that a major portion of Ferry Point Park is a former marsh and that former streams, now filled, ran through the eastern sections of the park parcel.

*Proximity to St. Raymond's Cemetery*

LPC's concerns may, in part, be founded on the proximity to St. Raymond's cemetery. Numerous high-profile archaeological excavations over the past decade have clearly indicated the possibility of locating early cemetery interments outside extant cemetery fence lines. Although the more northerly St. Raymond's Cemetery plots [north of the Bruckner Expressway and removed from the project site] date to an earlier period, the LPC must have assurances that there are no historic interments outside the current limits of St. Raymond's that would be affected by the Ferry Point Park project actions.

The possibility of unidentified St. Raymond's interments within the Ferry Point Park property has already been field investigated and found to be non existent. In 1993, St. Raymond's expansion proposal necessitated an archaeological field investigation of the lands that abut the northwest limits of the park parcel. Also, land that abuts a section of Schley Avenue that is proposed for de-mapping was field tested and no historic-era burials were recovered.

It should be noted that the 1993 trench excavations to determine presence/absence of culture-bearing deposits did not proceed beneath the impact of St. Raymond's proposed interments, approximately 12 to 14 feet below current grade. Archaeological testing of Zones 3 and 4, immediately north of the proposed park, identified landfill at between 8.3 and 14 feet below grade.

Zone 3
Foote and Schley Avenue easements: landfill, 13 - 14 ft below grade; Ground water at 7.5 - 13 ft below grade

Zone 4
Abuts Hutchinson River Parkway: landfill, 8.3 - 13.2 ft below grade/over marsh deposits in some locations; Ground water at 5.5 - 11.1 ft below grade

The 1993 study did not recommend further testing for Zones 3 and 4.

[Note: Prehistoric burials have also been associated with St. Raymond's Cemetery. However, the 1922 notations on [Native American] burials and "shell-pits" in association with St. Raymond's Cemetery refer to the older St. Raymond's Cemetery grounds more than a mile north of Ferry Point Park.]

## Depth of Existing Landfill

As the LPC sensitivity model indicates, the vast majority of the Ferry Point Project is former marshland. The EA included a series of twentieth century aerial photographs (1951, 1954, 1959, 1962, 1982, and 1991) that graphically illustrate the former marsh landscape as it disappeared under a massive city-operated landfilling process. A copy of the 1951 aerial is attached as Figure 6.

Two series of soil borings have been conducted at Ferry Point Park, providing a subsurface profile of the depth of landfill and ground water below current grade. These combined results, from more than 15 landfill soil boring tests [B] and 36 hazardous materials tests [TP] conducted by TRC Environmental Corporation of Windsor, CT, provide the following profile.

- Fill depth below current grade is approximately 8 to 47 feet, with an average of approximately 18 feet. TP25, in the western edge of the parcel may have the most shallow landfill overburden at slightly over 7 feet below grade.
- Fill is deeper than the current water table[2] with two exceptions (the fill in test # B5 stops approximately 2 feet above water table and the fill in B1 is one foot above the water table); There does not seem to be any correlation between depth of fill and water table/ test # B6 has fill and water both at 18 ft.
- Water table ranges from 5 to 30 feet below grade, average is about 10 -12 feet below grade; the deepest water table at test # B9 was 30 feet below grade and the most shallow, test # B7, at 5 feet below grade.
- Five borings indicate yellow sand subsoil at approximate termination of fill; these are all located in areas of possible highest elevation prior to landfilling.
- No shellfish material noted. Pther materials founds: brick, nylon, glass, wood, ceramic, vinyl, plastic, etc.
- Only one boring # B1 has a distinct two foot layer of silty clay with organic materials, but at 4 ft below landfill and 3 feet below water table.
- Clay occurs often in substrata.

## *Project Impact*

Prehistoric archaeological sites have been discovered in this general area of the Bronx within the last 12 years. However, sites such as the Pugsley Avenue

[2] The lack of consistency in landfill depths is, in part, due to undifferentiated fill material and a fluctuating water table. However, it is also a reflection of the pre-twentieth century knoll-dotted landscape that was a result of the Pleistocene era. During the Pleistocene, contact stratified drift was deposited during the retreat of glacial ice. The sediment was laid down as the ice remained stationary for a while or from a large piece that broke off and eventually wasted away. The small hillocks were formed as the ice- covered sediment melted and the sediment collapsed around it.

"workshop" reported by Cohn (1988) are removed from the regulated shoreline and not deeply buried under landfill deposits. It is critical to approach the potential of the Ferry Point Park parcel within the limits of the proposed depth of disturbance.

As stated in the project EA of 7/3/99:

> The proposed public recreation center would include a waterfront park of approximately 19.5 acres (including a waterfront esplanade, walkways, kiosks, and a boathouse grill restaurant); a community park of approximately 7 acres (including active and passive recreational areas such as a ballfield, basketball court, and children's recreation area); and a comprehensive golf facility, and fine dining/banquet facility on approximately 195.5 acres.

The existing topography of the proposed recreational facility, including the golf course and community park, is virtually flat. In order to create interesting vistas, contours for the golf course, and usable lounging lawns, additional soils would be brought to the site and, in conjunction with site soils, contoured into a new topography.

Possible below-grade intrusions include landscaping, road constructions, infrastructure systems, an irrigation system, pilings for foundation supports, and artificial lakes. In addition, two buildings - the clubhouse and the banquet facilities hall - may have lower level rooms that would be partially below grade.

Current plans (9/22/99) are for all construction excavation activities, including buildings and contouring for lakes and the golf course, to occur within six feet of the current grade. Based on TRC. Inc.'s Hazardous Materials Study for the EA [Attachment G, Secton 4.0: Impact Assessment, 7/30/99], Chuck Utschig, of JWE Engineering (9/22/99), has stated that none of the proposed construction excavations and removal of soil would be allowed to reach below the existing "waste layer," which is the relatively shallow stratum of "garbage" within the landfill. The landfill overburden will not be penetrated and the even deeper interface of possible undisturbed, buried soil horizons and the landfill will not be disturbed.

### *Recommendations*

As proposed, the Ferry Point Park project would not impact any deeply buried potentially sensitive prehistoric soil levels. Unless project design plans are revised to include excavation impacts to depths below the interface of the landfill and natural soils, no further archaeological consideration is warranted.

## Bibliography


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Cohn, Michael and Robert Apuzzo

1988 "The Pugsley Avenue Site," in The Bulletin of the New York State Archaeological Association, No. 96:5-7.

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1988 Phase 1B, Shorehaven Project Fieldwork Report, Fall 1987. Soundview Associates. CEQR 010X.

1994 Police Service Facility #8, Block 3540, Castle Hill, Bronx, Phase 1A Archaeological Study. Wall & Associates. CEQR 95-CHA002X.

Parker, Arthur C.

1922 "The Archaeological History of New York," in New York State Museum Bulletin, Part 2, in New York State Museum Bulletin, No. 237-238, Albany: The University of the State of New York.

# E-2

Bally's Bronx
NYSDEC Part 360 Permit

LANGAN

**New York State Department of Environmental Conservation**
**Division of Environmental Permits, Region 2 Office**
**47-40 21ST Street, Long Island City, NY 11101-5407**
**Phone:** (718) 482-4997 • **Fax:** (718) 482-4975

Joe Martens
Commissioner

May 21, 2014

Kay Zias
Capital Projects
City of New York Parks and Recreation
Olmstead Center
Flushing Meadows-Corona Park
Flushing, N.Y. 11368

Re: DEC No. 2-6006-00014/000013 (2-6006-00014/00016)
Permit Issuance - Solid Waste Management Facility (Tidal Wetlands)
Ferry Point Park Golf Course, Bronx, NY

Dear Ms Zias:

Enclosed are permits for the referenced facility. Please read all conditions carefully. Please provide a copy of the permit and all attachments to the document repository established for this project.

Special Conditions 28, 29, 32, 37, 38 and 39, among others, specify post permit submittals, please make a note of the submission deadlines. To assist the development of a deed restriction for the project site, Attachment A, to this notice contains draft language of the conditions to be specified in the restrictive covenant.

If you have questions on the specific solid waste management conditions, please contact Sam Arakhan at 718-482- 4894. If you have questions regarding marine resources issues and the development of the waterfront park contact Susan Maresca at 718-482-6464. If you have any other questions regarding the administration of this permit, please contact Michelle Moore at 718-4982-4967.

Sincerely,

John F. Cryan
Regional Permit Administrator

Enclosures

S. Arakhan, DMM, R2
K. Brezner, DMM, R2
D. Menasha, DAR, R2
S. Maresca, DMR, R2
J. Nehila, Esq., DLA, R2
S. Zacharias, DOW, R2
M. Moore, DEP, R2
File

# ATTACHMENT A

## DECLARATION OF COVENANTS AND RESTRICTIONS

**THIS COVENANT** made this __ day of _____, 2014, by the City of New York ("City"), a municipal corporation organized and existing under the laws of the State of New York, acting by and through the New York City Department of Parks and Recreation ("DPR") and having an office for the transaction of business 830 Fifth Avenue, New York, New York, 10021, and the New York City Department of Citywide Administrative Services ("DCAS"), having an office for the transaction of business at 1 Centre Street, New York, New York, 10007, in favor of the New York State Department of Environmental Conservation ("Department"), an agency of the State of New York, with offices at 625 Broadway, Albany, New York, 12233;

**WHEREAS,** DPR has jurisdiction pursuant to the New York City Charter over certain municipal parkland in the Borough and County of the Bronx, New York, known as "Ferry Point Park", which was the site of a former municipal landfill;

**WHEREAS**, pursuant to the New York State Environmental Conservation Law, Article 27, Title 7 and regulations promulgated pursuant thereto at 6 NYCRR Part 360, the Department has issued DPR a Solid Waste Management Permit (DEC Permit No. 2-6006-00014/00013-0)(the "Permit"), annexed hereto as Attachment A, to construct a Golf Course, Community Park and Waterfront Park (hereinafter "the Project") on the eastern portion of Ferry Point Park, a 222 acre parcel bounded by Bronx-Whitestone Bridge to the West, Balcom, Miles and Emerson Avenues to the East, Schley Avenue and St. Raymond's Cemetery to the North and the East River to the South (the "Site"), said parcel comprising Block 5583, Lot 100 and a portion Block 6522, Lot 1, as shown on the Bronx County Tax Map and more particularly depicted on the map attached hereto as Attachment B;

**WHEREAS,** the Permittee is authorized to import a total of 2,514,000 cubic yards of in-place fill material to the Site, which fill material shall consist of approximately 2,120,000 cubic yards of select exempt construction and demolition (C&D) debris for the shaping layer, and approximately 394,000 cubic yards of cover material, to be used in constructing the Project;

**WHEREAS,** Special Condition 17 requires the Permittee to implement a Groundwater Monitoring Program as described in section 4.5 of the Supplemental Engineering Report, Volume 1, dated October 15, 2013 (hereinafter the "Supplemental Engineering Report");

**WHEREAS,** Special Condition 26 requires the Permittee to perform monthly monitoring of the Landfill Gas Passive Venting Trenches for the duration of the Permit, and, thereafter, to monitor the Landfill Gas Passive Venting Trenches as described in the Supplemental Engineering Report, Volume 3, Appendix F;

**WHEREAS,** Special Condition 28 requires the Permittee, during the duration of the Permit, to inspect the Landfill Gas Passive Venting Trenches monthly to verify the integrity of the venting trenches and their mulch cover, and, thereafter, to maintain the Landfill Gas Passive Venting Trenches after the completion of construction of the Project, in the manner described in the Supplemental Engineering Report, Volume 3, Appendix F;

**WHEREAS,** Special Condition 29 requires the Permittee, until the completion of the Project, to conduct monthly monitoring of the depth of ground water in each piezometer installed at the gas venting trenches, and, thereafter, such piezometer monitoring shall be performed in accordance with the Supplemental Engineering Report, Volume 3, Appendix F, Section 6;

**WHEREAS,** Special Condition 32 requires the Permittee to execute and file a Department approved deed restriction, which shall run with the land in perpetuity, and shall recite and require compliance with the Permit's provisions as regards to the custodial care requirements described in the Supplemental Engineering Report, Volume 3, Appendix I;

**WHEREAS,** Special Condition 33 requires the Permittee to conduct bi-weekly monitoring of the On and Off-site Gas Monitoring Networks;

**WHEREAS,** Special Condition 34 requires the Permittee to maintain, and upgrade if required, the On and Off-site Gas Monitoring Networks during facility construction and after completion of the Project;

**WHEREAS,** Special Condition 35 requires the Permittee, upon Department approval of the Permittee's written post-construction certification report, to implement the custodial care plan described in the Supplemental Engineering Report, Volume 3, Appendix I;

**WHEREAS,** Special Condition 36 requires Permittee, should the Project be abandoned, to close, monitor and maintain after closure the entire 222 acre Site, in accordance with 6 NYCRR Sect. 360-2.15 as a landfill in operation since 2000;

**WHEREAS,** Special Conditions 17, 26, 28, 29, 33 and 34, require the installation, maintenance and operation of the Groundwater Monitoring Program, the Landfill Gas Passive Venting Trenches, the piezometers, and the On and Off-site Gas Monitoring Networks, on the perimeter of the site and off-site, for the purposes of monitoring groundwater and Landfill Gas and/or preventing Landfill Gas from migrating from the Site (hereinafter "Engineering Controls") said Engineering Controls being more particularly depicted on the map attached hereto as Attachment C.

**WHEREAS,** Special Condition 32 of the Permit requires the City of New York to execute and file a deed restriction for the real property beneath the site to run with the land in perpetuity, and that the deed restriction recites and requires compliance with the Permit's provisions as regards to Groundwater monitoring, the maintenance of Landfill Gas venting trenches, the piezometers, the On-site Landfill Gas Monitoring Network, including perimeter monitoring wells, the Off-site Landfill Gas Monitoring Network, and the criteria for abandonment of the site as specified in Special Condition 36 of the Permit;

**NOW THEREFORE**, pursuant to its terms, this covenant runs with the land and:

(1) requires the maintenance and operation of the Engineering Controls as set forth in Special Conditions 17, 26, 28, 29, 33 and 34 of the Permit;

(2) prevents modification or alteration of the Engineering Controls except as otherwise set forth in Special Conditions 17, 26, 28, 29, 33 and 34 of the Permit or in any subsequent written authorization by the Department or its successor agency;

(3) unless prior written approval by the Department or its successor agency is first obtained, there shall be no construction, use or occupancy of the Site that results in the disturbance or excavation of the Site which threatens the integrity of the Engineering Controls, or which results in unacceptable human exposure to contaminated soils;

(4) the owner of the Site shall not disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of Engineering Controls required by the Permit and the Supplemental Engineering Report, unless in each instance the owner first obtains a written waiver of such prohibition from the Department or its successor agency;

(5) the owner of the Site shall prohibit the Site from ever being used for purposes other than for the Project described in the Permit, without the express written waiver of such prohibition by the Department or its successor agency;

(6) the owner of the Site shall provide a periodic certification, prepared and submitted by a professional engineer or other environmental professional acceptable to the Department or its successor agency, which will certify that the Engineering Controls put in place are unchanged from the previous certification, comply with the Permit and the Supplemental Engineering Report, and have not been impaired;

(7) this Declaration is and shall be a covenant that shall run with the land and shall be binding upon all future owners of the Site, and shall provide that the owner and its successors and assigns consent to enforcement by the Department or its successor agency of the prohibitions and restrictions that the Permit requires be recorded, and hereby covenant not to contest the authority of the Department or its successor agency to seek enforcement;

(8) any deed of conveyance of the Site, or any portion thereof, shall recite, unless the Department or its successor agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions;

(9) in the event that the Project is abandoned, requires closure, monitoring and maintenance of the Site as a landfill in operation since 2000, in accordance with 6 NYCRR Part 360-2.15 and Special Condition 36 of the Permit; and

(10) may be modified by mutual agreement of the City or its successors and the Department or its successor agency.

**IN WITNESS WHEREOF**, the undersigned have executed this instrument on the day(s) written below.

_____
New York City Department of Parks and Recreation

Sworn to before me
this ____ day of _____, 201__

_____
Notary Public

Approved as to form
this ____ day of _____, 201__

_____
Assistant Corporation Counsel

_____
Department of Citywide Administrative Services

Sworn to before me
this ____ day of _____, 201__

_____
Notary Public

Approved as to form
this ____ day of _____, 201__

_____
Assistant Corporation Counsel

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

| DEC PERMIT NUMBER: | | EFFECTIVE DATE: |
|---|---|---|
| 2-6006-00014/00013 (SW)<br>2-6006-00014/00016 (TW) | PERMIT<br>Under the Environmental Conservation Law (ECL) | May 21, 2014 |
| **FACILITY:** | | **EXPIRATION DATE:** |
| Ferry Point Park Golf Course | | May 20, 2024 |

TYPE OF PERMIT: ☐ New ☒ Renewal ☒ Modification ☐ Permit to Construct ☐ Permit to Operate

☒ Article 27, Title 7; 6 NYCRR 360: Solid Waste Management

☐ 6 NYCRR 608: Water Quality Certification

☐ Article 15, Title 15: Long Island Wells

☐ Article 17, Titles 7, 8: SPDES

☒ Article 25: Tidal Wetlands

☐ Article 15, Title 5: Protection of Waters

| **PERMIT ISSUED TO:** | **TELEPHONE :** |
|---|---|
| Owner and Operator: NYC Department of Parks and Recreation | 212-360-8111(NYCDPR) |
| **ADDRESS OF PERMITTEE:** NYCDPR, 830 5th Avenue, New York, NY 10021-7001 | |
| **CONTACT PERSON FOR PERMITTED WORK:** Kay Zias | **TELEPHONE :** 718-760-6748 |

**PROJECT/FACILITY NAME:** Ferry Point Park Golf Course Construction

**PROJECT/FACILITY ADDRESS:** Eastern portion of Ferry Point Park, bounded by the Bronx Whitestone Bridge, Balcom, Miles and Emerson Avenues, Schley Avenue and the East River, Bronx County. Block 5583, Lot 100, Block 5622, Lot 1

**DESCRIPTION OF AUTHORIZED ACTIVITY:**

Construction of a Golf Course, Community Park and Waterfront Park on 222 acres of Ferry Point Park, requiring a total of approximately 2,514,000 cubic yards of material in-place volume. This material will be imported to the Site by truck and consist exclusively of: 1) recognizable and uncontaminated concrete or concrete products (including steel or fiberglass reinforcing rods that are embedded in the concrete), brick, soil, sand, gravel, and rock (hereafter referred to in this permit as select exempt construction and demolition debris) totaling approximately 2,120,000 in-place cubic yards for the shaping layer, and 2) approximately 394,000 in-place cubic yards of cover material. The imported material will be used to attain the final approved grades and contours.

All work associated with the authorized activity described above shall comply with all of the applicable provisions of 6 NYCRR Part 360 (Solid Waste Management Regulations), effective 29 September 1997. By acceptance of this permit, the Permittee agrees that this permit is contingent upon strict compliance with the ECL, all applicable regulations, and the General Conditions and Special Conditions included herein.

| **REGIONAL PERMIT ADMINISTRATOR:** John F. Cryan | **ADDRESS:** NYS Department of Environmental Conservation<br>47-40 21st Street, Long Island City, NY 11101 | |
|---|---|---|
| **AUTHORIZED SIGNATURE:** John F. Cryan | **DATE** May 21, 2014 | Page 1 of 17 |

**NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS**

**Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification**

The Permittee has accepted expressly, by the execution of its application for the subject work, the full legal responsibility for all damages and costs, direct or indirect, of whatever nature and by whomever suffered, for liability it incurs resulting from activity conducted pursuant to this permit or in noncompliance with this permit and has agreed to indemnify and save harmless the State from suits, actions, damages, and costs of every name and description resulting from such activity.

**Item B: No Right to Trespass or Interfere with Riparian Rights**

This permit does not convey to the Permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the subject work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

**GENERAL CONDITIONS**

**General Condition 1: Facility Inspection by the Department**

The subject facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the Permittee is complying with this permit and the ECL. Such representative may order the subject work suspended pursuant to ECL 71-0301 and SAPA 401(3).

The Permittee must provide a person to accompany the Department's representative during an inspection of the subject facility when the Department provides written or verbal notification to the Permittee at least 24 hours prior to such inspection.

A copy of this permit, including all general and special conditions therein, all amendments thereto, and all documents referenced therein must be available for inspection by the Department at the project site at all times that activity associated with the subject work is occurring. Failure to produce a copy of such permit, conditions, amendments, or documents upon request by a Department representative is a violation of this permit.

Any sign provided by the Department with this permit must be protected from the weather and posted in a conspicuous location at the subject work site throughout the period during which any of the subject work occurs.

**General Condition 2: Relationship of this Permit to Other Department Orders and Determinations**

Unless expressly provided for by the Department, this permit does not modify, supersede, or rescind any order or determination previously issued by the Department or any of the terms, conditions, or requirements contained in such order or determination.

**General Condition 3: Applications for Permit Renewals or Modifications**

The Permittee must submit a separate written application to the Department for renewal, modification, or transfer of this permit, including but not limited to a change in facility operator. Such application must include any forms or supplemental information the Department requires. Any renewal, modification, or transfer granted by the Department must be in writing. The Permittee must submit a renewal application at least:

a) 180 days before expiration of permits for State Pollutant Discharge Elimination System (SPDES), Hazardous Waste Management Facilities, major Air Pollution Control (APC) and Solid Waste Management Facilities; and
b) 30 days before the expiration of all other permit types.

Submission of applications for permit renewal, modification, or transfer are to be submitted to:
NYSDEC Regional Permit Administrator, Region 2, 47-40 21 Street, Long Island City, NY 11101 (tel. 718/482-4997).

**General Condition 4: Permit Modifications, Suspensions, and Revocations by the Department**

The Department reserves the right to modify, suspend, or revoke this permit when:

a) the scope of the permitted activity is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations is found;
b) the permit was obtained by misrepresentation or failure to disclose relevant facts;
c) new material information is discovered; or
d) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the permit was issued.

**General Condition 5: Compliance with Other Regulatory Requirements**

The Permittee is responsible for obtaining any other permits, approvals, lands, easements, and rights-of-way that may be required for the subject work. The Permittee and its independent contractors, employees, agents, and assigns must comply with all applicable local, State, and federal regulatory requirements.

**General Condition 6: Permittee to Ensure that its Contractors to Comply with Permit**

The Permittee must ensure that its independent contractors, employees, agents, and assigns read, understand, and comply with this permit, including all General and Special Conditions herein, in general, and General Condition No. 5, above, in particular. Such persons must be subject to the same sanctions for violations of this permit as those prescribed for the Permittee.

**ADDITIONAL GENERAL CONDITIONS FOR ARTICLE 27 and 6 NYCRR Part 360 (Solid Waste Management Facilities)**

7. That if future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized must not be completed, the owners, must, without expense to the State, and to such extent and in such time and manner as the Department may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.
8. The State of New York must in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.
9. All necessary precautions must be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate, or any other environmentally deleterious materials associated with the project. Any creosote-treated lumber must be weathered for at least six months before it is brought to the subject work site.
10. Any material dredged in association with the work herein permitted must be removed evenly, without leaving large refuse piles, ridges across the bed of a waterway or flood plain, or deep holes that may have a tendency to cause damage to navigable channels, the banks of a waterway, water quality, sediment quality, or benthic habitat.
11. There must be no unreasonable interference with navigation by the work herein authorized.
12. If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the Permittee must, without expense to the State, and to such extent and in such time and manner as the Department may require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.
13. If granted under Article 36, this permit does not signify in any way that the project will be free from flooding.
14. If granted under 6 NYCRR Part 608, the Department hereby certifies that the subject project will not contravene effluent limitations or other limitations or standards under Sections 301, 302, 303, 306, and 307 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.
15. In accordance with Title 19, Part 600.4 (c) of the New York Code of Rules and Regulations, the Department hereby certifies that the action described and approved in this permit, if located within the Coastal Zone, is consistent to the maximum extent practicable with the policies and purposes of the New York City Waterfront Revitalization Program.

## SPECIAL CONDITIONS

### Site Work

1. All activities authorized by this permit shall conform to all documents supporting the original permit, DEC No. 2-6006-00014/00011, dated July 17, 2000 ,and modified October 18, 2002 , November 18, 2005 and December 27, 2005 as modified by the following:

- Technical Environmental Assessment for the Ferry Point Park Recreation Facility prepared by Allee, King, Rosen and Fleming dated February 11, 2002 and amended September 29, 2004;
- Geotechnical Engineering Study prepared by Langan Engineering and Environmental Services, Inc. dated July 2, 2002;
- Response to Request for Additional Information prepared by TRC Raymond Keyes Associates dated July 2, 2002;
- Fill Procurement Protocol shall be as per the Department letters dated May 21, 2001 and May 23, 2001 from John Nehila to Steve Kass;
- Ferry Point Park: Offsite Methane Monitoring-Bronx, New York prepared by AKRF, Inc., October 12, 2001;
- Landfill Gas (LFG) Passive Vent Trench Along Miles And Emerson Avenues Plan and Detail, V-1, Sheet 1 of 4 prepared by TRC with checked date 02/04/02 ;
- Landfill Gas (LFG) Passive Vent Trench Along Balcom, Miles And Schley Avenues Plan and Detail, V-2, Sheet 2 of 4 prepared by TRC with checked date 02/04/02 ;
- Landfill Gas (LFG) Passive Vent Trench Along Northern Property Boundary Plan and Detail, V-3, Sheet 3 of 4 prepared by TRC with checked date 02/04/02;

**SPECIAL CONDITIONS**
**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities)**

- LFG Vent Trench and Piezometer Network Profile, V-4, Sheet 4 of 4 prepared by TRC with checked date 02/04/02;
- Landfill Gas (LFG) Passive Vent Trench Along Balcom, And Schley Avenues Plan and Detail, C-2, Sheet 1 of 1 prepared by TRC with checked date 07/20/01;
- Landfill Gas (LFG) Passive Vent Trench Along Balcom between Sampson & Dewey Avenues Plan and Detail, C-1, Sheet 1 of 1 prepared by TRC with checked date 03/09/01;
- Volume#1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associates, dated June 30, 2005. (revised)
- Volume #2, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associates, dated June 30, 2005.
- Settlement Evaluation and Long Term Monitoring Plan, Ferry Point Golf Course, Ferry Point Park, Bronx, NY, prepared by Langan Engineering and Environmental Services, Inc., dated January 26, 2005.
- Response to Department Comments prepared by TRC Raymond Keyes Associates, dated August 2, 2005 and by Langan Engineering and Environmental Services, Inc., dated June 30, 2005.
- Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, "Second Supplement to Engineering Report," prepared by TRC Raymond Keyes Associates, dated August 23, 2004.
- Site plans labeled "Ferry Point Park Public Recreational Facility Bulk Earthwork, Ferry Point Park Public Recreation Facility, Ferry Point Park, Bronx, New York" prepared by TRC Raymond Keyes Associates, dated April 22, 2005 (revised) consisting of drawings:

    - GC-2, G1 and G-2 dated 7/01/05 (last revised);
    - G-3, and G-4 dated 1/21/05 (last revised);
    - D-1 dated 7/1/04 (last revised);
    - D-2 dated 7/1/05 (last revised);
    - V-1, V-2, V-3 and V-4 dated 02/04/04 (last revised);
    - C-1 dated 3/09/01 (last revised);
    - C-2 dated 7/20/01;
    - SW-1.00 dated 4/13/04;
    - SW 1A.01 dated 2/18/04;
    - SW 1B.01 and SW 1b.02 dated 4/13/04;
    - Irrigation Design Phase 1 Ferry Point Park Approval Set, labeled "Ferry Point Park 0514-AS-R04-060704, Phase 1 Approval Set" dated 06/07/04 (last revised), sheets numbered 1, 2, 3 and 4 dated 5/22/03 and sheets numbered I, II and III dated 5/22/03

- Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, NY, Vol. 1 - 3 dated May 31, 2012 and last revised October 15, 2013.

**SPECIAL CONDITIONS**
**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )**

2. Activities authorized by this permit include development of a golf course and parks, as well as the construction of associated structures, utility lines, gas venting and control systems. All aspects of the project must be constructed in accordance with the Department approved design plans, specifications and documents noted in Special Condition # 1. All physical aspects of the project including project location referenced in this permit shall be referred to as the "Site." All construction aspects of the permitted activities referenced in this permit shall be referred to as the "Project."

3. In accordance with "Item A" of the Notification of Other Permittee Obligations" found on page 2 of this permit, the Department in general accepts no liability for the structural integrity and/or the adequacy of the buildings and/or foundation designs of the proposed buildings or other structures associated with the development of the golf course. In addition, the Department specifically does not guarantee nor accept liability in regards to the measures proposed to prevent the subsidence of any buildings, foundations and other structures built on or adjacent to the Site, or to prevent the migration of explosive gas.

4. All operations at the Site shall occur Monday through Saturday during daylight hours, between sunrise and sunset, unless otherwise authorized by the Department.

5. All truck traffic entering and leaving the Site shall use only authorized truck traffic routes, and conform to the construction traffic management plans noted in Exhibit K of Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, New York, Engineering Report, prepared by TRC Raymond Keyes Associates, dated June 30, 2005 (revised).

a) All truckers shall receive written instruction on the truck access routes to and from the Site.

b) All trucks entering the site shall be tarped or sufficiently covered to comply with local and state highway regulations. The Site access and exit routes shall be maintained so that they are free from dust, dirt and debris resulting from the truck traffic.

6. Short-term settlement monitoring must strictly conform to the recommendations listed in the Settlement Evaluation and Long Term Monitoring Plan, Ferry Point Golf Course Ferry Point Park, Bronx, NY, prepared by Langan Engineering and Environmental Services, Inc., dated January 26, 2005. As construction progresses and long term plates are installed, short term plates do not need to be re-installed.

7. The long-term settlement monitoring must strictly conform to the recommendations listed in the Settlement Evaluation and Long Term Monitoring Plan, Ferry Point Golf Course Ferry Point Park, Bronx, NY, prepared by Langan Engineering and Environmental Services, Inc., dated January 26, 2005.

a) The long-term monitoring shall be performed for locations shown in Appendix H of the October 15, 2013 supplemental engineering report as described in Appendix I of the October 15, 2013 supplemental engineering report.

b) All monitoring points must be maintained in proper working condition. If any points are unable to be sampled for any reason, they must be repaired within two weeks of such detection and re-tested.

## Fill Importation

8. The Permittees are authorized to import a total of 2,514,000 cubic yards of in-place fill material to the Site. The fill material shall consist of approximately 2,120,000 cubic yards of select exempt construction and demolition (C&D) debris for the shaping layer, and approximately 394,000 cubic yards of cover material. The imported material shall be used on Site to attain the final approved grades and contours approved by the Department, and referenced on plans made a part of this permit.

a) The use of asphalt as fill material on the Site is prohibited.

b) The use of dredge spoils as fill material on the Site is prohibited.

c) There shall be no mechanical separation of steel and fiberglass reinforcing rods from concrete and concrete products at the Site.

d) No size reduction or material processing may occur on Site, except with earth moving equipment in the course of placement. However, the breakdown and removal of stumps and wood previously left on Site by the New York City Department of Sanitation (DOS) is permitted.

e) All solid waste material excavated from the Site shall be properly secured immediately, and then removed from the Site and legally disposed of within seven (7) days.

f) All unauthorized solid waste or fill material found on the Site shall be properly secured immediately, and then removed and legally disposed of within five (5) days of its discovery by Permittees.

g) All select exempt construction and demolition (C&D) debris for the shaping layer and the cover layer material must be free of all non-exempt C&D recognizable debris.

9. The quantification of all imported fill material shall be continuously tracked by both truck volume, and periodic topographic survey of the imported in-place fill volume. Since compacted in-place fill volumes will not equal truck volumes of fill, a 41.7 percent (41.7%) correction factor shall be applied for shaping layer material and a correction factor of 18 percent (18%) shall be applied for cover material. The correction factor for converting truck volume into in-place volume may be modified by the Department.

10. The Permittees must cease the importation of fill material if:

a) The final approved grades are attained prior to the permitted amount of fill material being imported;

b) 2,120,000 cubic yards of select exempt construction and demolition debris for the shaping layer, as measured by in-place fill volume determined through topographic survey, are accepted. All material imported to the Site is considered shaping layer material, unless testing determines otherwise; or

c) 394,000 cubic yards of cover layer material, as measured by in-place volume, are accepted.

**SPECIAL CONDITIONS**

**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )**

11. Use of fill material from DEC registered construction and demolition debris processing facilities (DEC registered C&D facilities or registration facilities) requires written Departmental approval. Such requests must be submitted to the Department for approval not less than ten (10) business days prior to any proposed date for importation from the new locations. No fill material may be received from unapproved facilities or locations. DEC registered construction and demolition debris processing facilities (DEC registered C&D facilities or registration facilities) may be used to obtain select exempt construction and demolition debris for fill material to the Department for its approval prior to use. The subsequent transportation and use of fill material from other additional registration facilities requires written Departmental approval. Such requests must be submitted to the Department for approval not less than ten (10) business days prior to any proposed date for importation from the new locations. No fill material may be received from unapproved facilities or locations.

12. Select exempt construction and demolition debris to be used as fill material at the Site may be accepted from DEC registered C&D facilities as approved pursuant to Special Condition #11, provided that the facilities segregate and clearly mark each stockpile with a specific identification number, the date each stockpile was started and the date when it was sampled by the Permittees. The Department shall be notified by Permittees at least 24 hours before any sampling event at a DEC registered C&D facility. All sampling reports shall be transmitted to the Department or the IEM directly from the certified testing laboratory.

13. The Permittee shall be responsible for ensuring that cover layer material is procured from a DEC approved source, and it meets all permit specifications.

a) If cover layer material is manufactured, the soil used in its manufacture must not originate from any industrial sites, brownfield site, historical fill site or DEC registered C&D facilities.

14. The Permittee shall be responsible for ensuring that the shaping and cover layer materials meet sections 4.2.1 and section 4.3 of the October 15, 2013 Supplemental Engineering Report, Volume 1, as well as the following:

a) In order for select exempt construction and demolition debris material to be used on Site, it must be sampled both prior to acceptance and after the importation of each additional 10,000 cubic yards (in truck volumes). Each soil sample is to be analyzed for Toxicity Characteristic Leachate Procedure (TCLP), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals (including Resource Conservation and Recovery Act (RCRA) metals).

b) Cover layer material must be sampled prior to acceptance and after the importation of each additional 2,000 cubic yards (in truck volumes). Each soil sample is to be analyzed for the entire analyte list in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046, total volatile organic compounds (VOCs), total semi- volatile organic compounds (SVOCs), pesticides and herbicides, polychlorinated biphenyls (PCBs), and metals (including Resource Conservation and Recovery Act (RCRA) metals).

c) The shaping layer must meet the following chemical limits:

i. Total carcinogenic SVOC levels (weighted average as calculated by formula provided in 10/25/06 letter from NYSDEC) must be less than 3 ppm by completion of construction; maximum carcinogenic SVOCs level from individual source must be 10 ppm or less. The following are the list of carcinogenic SVOCs that are subject to this 3 ppm limit: Benzo(a)pyrene, Dibenzo(a,h)anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, and Chrysene.

ii. Total SVOCs must be less than 500 ppm

iii. Metals:

- Arsenic less than 28 ppm;
- Barium less than 2,000 ppm;
- Cadmium less than 20 ppm;
- Chromium less than 1,000 ppm;
- Copper less than 1000 ppm;
- Lead less than 400 ppm;
- Mercury less than 0.57 ppm
- Selenium less than 11 ppm
- Silver less than 100 ppm

iv. Asbestos for all layers must be 0.5% or less

v. Total sulfur for all layers must be 0.5% or less

vi. Total PCBs less than 10 ppm

vii. Total Pesticides less than 10 ppm

viii. VOCs (all individual analytes less than TAGM 4046)

d) The final placement of shaping and cover layer materials is subject to installation of a demarcation layer at locations where combined shaping and cover layers thickness are less than five (5) feet.

e) All shaping and cover layer material placed after the final placement of shaping and cover layer must meet the 6NYCRR Part 375 protection of public health restricted residential Part 375-6.8(b) SCOs.

15. The major components (greens, contours, heights and top soil) of the cover layer shall meet the Nicklaus Design Technical Specification, as noted in Exhibit C of the June 30, 2005 Engineering Report, and as follows:

- Greens - Greens mix imported to the site shall be tested as per material testing requirements. Fertilizer and soil amendments may be applied on the greens mix after spreading to construction specifications and finally grassed, as per the specifications provided by the agronomist.
- Topsoil - Topsoil imported shall be consistent with native topsoil, and shall be free of rock and debris greater than three quarters of an inch, as per Exhibit C of the Engineering Report. Soil amendments, fertilizer applications and seed may be applied to tee, fairway and rough areas, as per Exhibit C of the June 30, 2005 Engineering Report.

16. The Department may conduct joint sampling or take split samples as necessary for verification purposes.

**Groundwater**

17. The Permittee shall implement a groundwater monitoring program as described in section 4.5 of the Supplemental Engineering Report, Volume 1, dated October 15, 2013.

**Fill Progression Monitoring**

18. The Permittee shall place grade stakes indicating elevations for proposed final grades of fill and cover material.

19. The Permittee shall place benchmarks throughout the Site, in a manner acceptable to the Department, for the purpose of periodically measuring and surveying fill elevations. Benchmarks are to be maintained at all times. If it becomes necessary, they shall be repaired promptly.

**Project Completion Schedule**

20. The project shall progress according to the Construction Schedule provided in Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associates, dated June 30, 2005 (as revised), Exhibit A, and as updated in section 3.1 of the Supplemental Engineering Report dated October 15, 2013. The effective date for implementation of the construction schedule is the effective date of this permit.

21. In accordance with the approved plan in Special Condition #1, placement of fill material in each section of the Site shall not exceed the designed and approved final contours for each section.

22. Only cover material may be stockpiled in a section upon completion of the placement of fill material for the shaping layer in that section as per design calculations. In addition, cover material may be stockpiled in a section where the completion of fill placement has not occurred, if such stockpile is segregated and secured from construction and demolition debris used for the shaping layer.

23. Upon completion of filling operations to approved grades in a section, the Permittees shall commence the rough shaping and placement of cover material, and the installation of drainage, irrigation and utilities, as per Construction Schedule noted in Special Condition # 20. Prior to placement of this cover material, Permittee must comply with the requirements of Special Condition # 15(d).

**Independent Environmental Monitor**

24. An Independent Environmental Monitor (IEM), accountable to the Department, shall be retained by the Permittee to provide environmental oversight of all activities authorized by this permit for the duration of its permitted term, including, but not limited to, the quantification, importation and placement of fill, and the monitoring of the Site.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

a) It shall be the IEM"s responsibility to provide notice of any deviation from the activities authorized by this permit and any deviation from New York State Environmental Regulations (6NYCRR Part 360) to the Department immediately, but in no event later than 24 hours after such deviation is detected. This notification must include the date and time of the potential non-compliance, the nature of the non-compliance, any corrective action, and any additional measures the IEM will be undertaking to track the issue until corrected. Should the IEM be uncertain as to whether such a deviation has occurred, the matter shall be promptly reported to the Department for a determination. For the purposes of this permit, a deviation(s) shall mean any of the following:

   i. An apparent violation of any condition of this permit;

   ii. An apparent violation of Federal, State or Local Law;

   iii. A material difference between construction or monitoring data obtained by the Permittees or their consultants, and that obtained by the IEM;

   iv. Any receipt of fill that does not meet the specifications authorized in this permit;

   v. Any receipt of fill from a site not authorized under the permit or by the Department.

   vi. Any condition, activity or occurrence that may endanger or pose a threat to public health, safety or the environment.

b) Notwithstanding any other reporting this permit requires, the IEM shall submit a detailed written report to the Department no less frequently than every three months detailing the IEM"s activities at the Site, the estimated total volume of fill material (including cover material) received during the reporting period based on truck volume, the total volume of fill in place at the Site, the percentage of filling to final grades, and the number(s) of trucks prohibited from entering the Site. The report also shall summarize any site meetings amongst the Permittee, its consultants or others, verify that all samples taken and monitoring done at the Site by the Permittee or consultants conform to this permit, detail any substantive change in the condition of the Site or project, fully explain any deviations occurring during the reporting period and their disposition, and describe any other occurrence, circumstance or condition that may have a bearing upon the safe and environmentally sound operation of the Project or Site.

c) The IEM must be approved by the Department prior to the finalization of any contractual agreement with the Permittee, and the initial receipt of any fill material at the Site.

d) The continued retention, discharge, or replacement of the IEM shall be at the sole discretion of the Department. The Permittee waive any right to seek judicial review of the Department's exercise of that discretion. The Permittees must fully pay all invoices and bills from the IEM within sixty days of submission. The IEM or its Department approved representative shall be present on Site whenever it is open. Under no circumstances shall Project activities, including the receipt or management of fill, take place while the IEM or its designated representative is absent from the Site.

**SPECIAL CONDITIONS**
**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )**

e) The Department shall have access to any information obtained by the IEM at any time. The IEM shall keep all information including, but not limited to, fill records, inspection reports, field notes, monitoring data, graphics, databases, financial records, minutes of meetings and other information in a form approved by the Department

f) The IEM, if an individual, shall possess a New York State Professional Engineer license. If an engineering firm serves as the IEM, the firm must provide an employee of that firm who is a New York State licensed professional engineer to perform all functions and certifications noted in Section 1.1 of the Engineering Report referenced in Special Condition No. 1 above. In addition, the IEM shall:

i. monitor all aspects of the Permittees" fill operations at the Ferry Point Park ("FPP") facility;

ii. have unrestricted access to all personnel employed by the Permittee at the FPP facility, and to all files and records maintained by the Permittees at the FPP facility pursuant to this permit;

iii. inspect the proposed sources of fill, review the documentation about the sources of the material, including without limitation, any off-site sampling, and certify as to the acceptability of the material for use at the Site, in accordance with the criteria specified in the Engineering Report, Section 2. The IEM shall notify the Department at least 24 hours before any on-site sampling;

iv. visually inspect each truckload of imported fill material at the Site, and undertake reasonable verification activities including directing, where appropriate, verification sampling, analysis and certification by the IEM on a Project specific tracking form that it meets criteria for acceptable fill at the Site;

v. inspect each truckload of material upon its dumping on Site with a Photo-Ionization Detector (PID).

vi. prohibit any truck from leaving the dumping area before the load has been inspected, and the manifest signed by the IEM. If any load is rejected, the rejected fill material shall be reloaded onto the same truck immediately and legally transported off-site. However, if the rejected fill material is a DEC regulated solid waste or hazardous waste, it must be segregated immediately and secured on-site, until it is removed by a DEC permitted hauler for appropriate disposal. Such regulated or hazardous waste must be removed from the Site within 3 days of its discovery;

vii. monitor the off loading of all material at the unloading station. No truck shall be allowed to off load unless the IEM is present. Such truck shall only be allowed to leave the station after the load is tested and found acceptable.

viii. certify that the sampling of material at the project Site conforms to the permit requirements, and review the results of all laboratory tests;

ix. notify the Department daily about the receipt of unacceptable material or any violations of conditions set forth in this permit;

x. maintain files on Site of fill sampling data, site histories, and internal manifest (tracking) forms;

xi. report and certify to the Department that the on-site gas well monitoring has been conducted as required by this permit. Notify the Department immediately if levels exceed 25% of the lower explosive limit (LEL) in any gas monitoring well;

xii. certify that: (a) all grades of the shaping layer of a section are correct prior to the placement of cover material on that section; (b) a minimum of two feet of fill material covers the existing municipal solid waste layer; and (c) the final cover layer meets the appropriate specifications of the Engineering Report noted in Special Condition #1;

xiii. during fill delivery and earthwork, submit bi-weekly reports to the Department summarizing all Site activities set forth by this permit. Each report shall provide details of all rejected fill material, quantify the amount of material imported onto the Site using truck volumes, and the results of all on-site gas monitoring for that period;

xiv. review the final post-construction report and provide comments to the Department on whether the fill operation was performed in accordance with the permit documents and including any deviations thereof. These comments must be submitted by the IEM to the Department within sixty (60) calendar days of the receipt of the final post construction report, certify that the fill operation was performed in accordance with the permit documents. The certified post-construction report must be submitted by the IEM to the Department within sixty (60) calendar days after the completion of the earthwork portion of the Project;

xv. report all operational upsets, emergencies, unusual circumstances (including, but not limited to, unauthorized entries, security breaches, equipment breakdowns, fires, thefts, acts of vandalism, and on-site accidents) to the Regional Solid Waste Engineer by telephone (at 718/482-4996) within 24 hours of the occurrence, and in writing within 3 business days advising the engineer of the nature of the event, and providing a description of how the event was handled.

**Gas Venting Trench**

25. During the duration of this permit, the Permittee shall inspect the gas venting trench monthly to verify the integrity of the venting trench and its mulch cover. The Permittee shall maintain the gas venting trench at all times, and promptly repair any soil washouts of the mulch cover, as necessary. If any portion of the venting trench or mulch cover is found in need of repair, this fact must be reported to the IEM immediately and all necessary repairs must be made within two weeks of discovery.

**SPECIAL CONDITIONS**

**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )**

(SC 25 continued) In addition, the mulch cover shall be replaced, at a minimum, every spring to maintain the effectiveness of the gas venting trench. The Permittee shall maintain the gas venting trench after the completion of construction of the golf course in the manner described in the Supplemental Engineering Report, Volume 3, Appendix F.

26. Monthly monitoring of the gas venting trench shall continue for the duration of the permit.

27. **As required by the Custodial Care Plan**: Gas venting trench inspection reports shall include the inspection date, the name of inspector, and a description of repairs, monitoring results and maintenance performed. A log of these self-inspections must be maintained including the dates, times and results of the inspections.

**Piezometers**

28. The Permittee shall conduct monthly monitoring of the depth of ground water in each piezometer installed at the gas venting trench, until the completion of the construction of the golf course. All readings shall be submitted to the Department in a monthly report.

a) **As required by the Custodial Care Plan**: Post-construction piezometers monitoring shall be performed in accordance with the Supplemental Engineering Report dated October 15, 2013, Volume 3, Appendix F, Section 6.

29. Within sixty (60) days of receipt of this permit, the Permittee shall submit a Response Action Plan to the Department. This Plan shall set forth the measures to be implemented by the Permittee, if the piezometer readings indicate that the groundwater table has dropped below the depth of the gas venting trench during the post construction monitoring period.

30. The Permittee shall sample the perimeter gas monitoring wells #0, #1A, #1 to #3, #5 to #12, and #14 to #18, and the on-site monitoring wells #13 and #19 on a bi-weekly basis to detect any explosive gas migration. Copies of the bi-weekly monitoring field notes shall be electronically mailed to the Department within 24 hours after the sampling event and a copy of this report shall be submitted to the Department within 3 business days and reported to the IEM immediately and all necessary repairs must be made within two weeks of discovery.

31. All perimeter gas monitoring wells should be tested at least on a bi-weekly basis. However, if any individual monitoring point has a bi-weekly reading that equals or exceeds 100% LEL or three consecutive bi-weekly reading are greater than 25% LEL, a modified methane gas action plan shall be implemented by the Permittee. Such plan shall require, at minimum, weekly testing of the individual monitoring point(s) with the elevated readings. The Department also may require any additional measures it deems necessary. Any individual point under the modified methane gas action plan may return to the regular bi-weekly monitoring schedule, when three (3) consecutive weekly readings are all less than the 25% LEL action level.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

**Deed Restriction**

32. Within thirty (30) days of the date of the issuance of this permit, the Permittee shall submit a draft Deed Restriction to the Regional Permit Administrator. The deed restriction, which shall run with the land in perpetuity, shall recite and require compliance with this permit's provisions as regards to the custodial care requirements described in the Supplemental Engineering Report dated October 15, 2013, Volume 3, Appendix I. The deed restriction must be filed within six (6) months of the issuance date of this permit.

**Off-site Gas Monitoring Network**

33. The Permittee shall conduct bi-weekly monitoring of the Off-site Gas Monitoring Network. A copy of the bi-weekly monitoring field notes shall be electronically mailed to the Department within 24 hours, and a copy of the monitoring report shall be submitted to the Department within 3 days of the completion of each round of monitoring.

a) **As required by the Custodial Care Plan**. Each bi-weekly monitoring report shall include the geoprobe monitoring point(s) installed on or near Buttrick, Schley, Balcom, Miles and Emerson Avenues, as described in the methane monitoring reports referenced in Special Condition #1 of this permit.

34. The Permittee shall maintain, and upgrade if required, the Off-site Gas Monitoring Network during facility construction and after completion of the golf course.

a) The Permittees may request Departmental approval to substitute for all, or part of, the Off-site Gas Monitoring Network by installing geoprobe soil gas monitoring points of a placement and design suitable to the Department. Such points must be at linear intervals no greater than 50 feet (on 50-foot centers) along either segments of the perimeter boundary of the gas venting trench or the drainage ditch.

b) If any point used for off-site gas monitoring is found to require repairs, this fact must be reported to the IEM immediately and all necessary repairs must be made within two weeks of discovery. A copy of the off-site gas monitoring well results also must be sent to the New York City Housing Authority.

c) All off-site gas monitoring points shall be tested on a bi-weekly basis. If any individual monitoring point has a bi-weekly reading that equals or exceeds 100% LEL, or three consecutive bi-weekly readings that are greater than 25% LEL, sampling of that point shall be done weekly. Any individual point under the later modified methane gas action plan may return to the regular bi-weekly monitoring schedule, if there are three (3) consecutive weekly readings all less than the 25% LEL action level.

d) None of the requirements specified in Special Conditions Nos. 26 through 34, 36 (a) through (c) may be terminated without written approval from the Department.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

**Ferry Point Park East Post Construction Custodial Care Plan ( Custodial Care Plan)**

35. Upon Department approval of the Permittee's written post construction certification report, Permittee shall implement the Custodial Care Plan described in Supplemental Engineering Report dated October 15, 2013, Volume 3, Appendix I, as referenced in Special Condition No. 1.

**Project Abandonment and Environmentally Sound Closure**

36. Should the Project be abandoned, the entire 222 acre Site must be closed, monitored and maintained after closure in accordance with 6 NYCRR Sect. 360-2.15 as a landfill in operation since 2000.

a) Within one hundred and twenty (120) days after notice from the Department that the Site has been deemed abandoned, the Permittee shall implement the custodial care plan contained in the Supplemental Engineering Report dated October 15, 2013, Volume 3, Appendix I, as referenced in Special Condition No. 1.
b) For the purpose of this permit, abandonment shall mean any of the following:
    i. Filling operations authorized under this permit cease for a period of 12 consecutive months, as provided in 6NYCRR sect 360-1.11(f);
    ii. Failure to complete the Project within 12 months of the issuance of this permit, as determined by the Department, by the expiration date of this permit; or
    iii. Termination of this Project as a result of enforcement action by the Department or another government agency for non compliance with this permit, or with applicable Federal, State or Local Law.
c) The terms of this Special Provision shall govern, if in conflict with the terms of General Condition No. 12.

**Waterfront Park**

37. Within one hundred and eighty (180) days of the effective date of this permit, provide three hard copies and one copy on CD of revised design plans for the Waterfront Park, to the Regional Permit Administrator. Include in this submission details on the extent of adjacent area and tidal wetlands encroachment, water balance, proposed mitigation (including mitigation for the pool barge), implementation plans and staging.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

## Submittals

38. Within sixty (60) days of completion of the filling operation on the Site and construction of the earthwork portion of the Project, the Permittees shall provide:

a) as-built drawings of the Project, signed by a professional engineer licensed in New York State for DEC's approval. The post construction as built drawings shall, at a minimum, include detailed cross-sections illustrating the depth of fill placed and location of all utilities and associated structures, road ways, demarcation layer and storm water drainage control structures for the Project. The as-built plans also shall include the location of all monitoring and control systems and devices (including gas control and monitoring, water quality and elevation monitoring and settlement monitoring).

b) a written post-construction certification report for review and approval by the Department and certification by the Independent Environmental Monitor. This report shall include approved "as-built" drawings demonstrating that the earthwork and filling operation was accomplished in accordance with the Department approved plans and this permit. If as-built drawings are not approved by DEC within 120 days of the completion of the filling operation, the Site is deemed abandoned, as per Special Condition No. 36. This report and the as-built drawings cannot be done or submitted by the IEM.

39. Within ninety (90) days of approval of the post construction certification report, the Permittee shall submit an amended subsurface operations plan which includes relevant post construction storm water pollution prevention maintenance documentation as per the State Pollution Discharge Elimination System (SPDES) general permit for storm water discharges from construction activity.

40. Within sixty (60) days of the effective date of the permit, the Permittee shall submit a full size (24 inches by 36 inches) scaled, signed and sealed drawing showing construction of the irrigation lake passive venting system.

41. Thirty (30) days after approval of the construction certification report, the Permittee must provide to the Regional Solid Waste Engineer, a revised Table 6-1 (noted in the engineering report referenced in Special Condition #1 above).

42. Prior to the installation of any sub slab depressurization systems for onsite buildings, the Permittee must secure written approval of these systems from the NYS Department of Environmental Conservation and the NYS Department of Health.

43. All reports and written submissions shall be sent in duplicate to the regional office of the DEC, with an additional copy to DEC Central Office, and another copy to the document repository as noted below. Each submission shall have a transmittal page, which references the DEC permit number and the relevant Special Condition number.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

Samsudeen Arakhan
Regional Materials Management Engineer
NYS DEC, Region 2
47-40 21st Street
Long Island City, NY 11101

John Cryan
Regional Permit Administrator
NYSDEC, Region 2
47-40 21st Street
Long Island City, N.Y. 11101

David Vitale, Bureau Chief
Bureau of Solid Waste, Reduction, and Recycling
NYS DEC
625 Broadway
Albany, NY 12233-7253

FPP Golf Course Document Repository
New York City Department of Parks and Recreation
1 Bronx River Parkway
Bronx, NY 10462-2869

44. All notifications to the Department, as referenced in Special Conditions of this permit, shall be made to the Regional Materials Management Engineer, NYS DEC, 47-40 21st Street, Long Island City, NY 11101. All immediate, 24-hour, verbal or expedited notifications shall be made by telephone and electronic mail to the attention of Samsudeen Arakhan, Regional Solid Materials Engineer at: 718-482-4996 (phone) / skarakha@gw.dec.state.ny.us (email), or other numbers subsequently provided by the Department.

45. Copies of reports generated or reviewed by the Independent Environmental Monitor shall be maintained at the document repository referenced in Special Condition No. 43 above.

**End of Special Conditions**

# E-3

Bally's Bronx
Post Construction Custodial Care Plan (PCCCP)
*Prepared by: New York City Department of Parks and Recreation*

LANGAN

# FERRY POINT PARK EAST
# POST CONSTRUCTION
# CUSTODIAL CARE PLAN

**October 2013**

**Prepared by:**
**New York City Department of Parks and Recreation**

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# 1 Introduction and Purpose

The Ferry Point Park East Post Construction Custodial Care Plan (FPCCCP) has been prepared to comply with the requirements of the New York State Department of Conservation (DEC) 6NYCRR Part 360 Permit No 2-6006-00014/00013-0 (see attached) (hereafter referred to as the "2013 Permit") and applicable regulations and conditions as previously discussed and agreed upon between DEC and the New York City Department of Parks and Recreation (DPR). See the attached Figure 1-1 of Ferry Point Park. The purpose of this document is to define the post construction criteria applicable to the operation, monitoring and maintenance of the environmental protection systems installed as part of site wide development of Ferry Point Park East. DPR agrees to a 5-year rolling schedule whereby, at the end of a five year term, DPR may demonstrate that the routine operation and maintenance for the end use of the site, i.e., the golf course, meets the performance criteria established in the 2013 Permit, and petition to modify or terminate the FPCCCP. The general procedures for the termination of monitoring activities or abandonment of infrastructure are detailed further in the FPCCCP.

As built drawings and a written post-construction certification report for NYSDEC review and approval and certification by the IEM will be prepared within 60 days of completion of the filling operation on the Site and construction of the Earthwork portion of the Project. Therefore the as-built drawings and post construction certification report have not been provided in this FPCCCP.

As construction activities are on-going, relevant changes and additions associated with final construction will be incorporated into an amended Sub-Surface Operations Plan. As part of this addendum, DPR will also submit the relevant post construction Storm Water Pollution Prevention maintenance documentation as per the SPDES (State Pollution Discharge Elimination System) General Permit for Stormwater Discharges from Construction Activity. These amendments to the FPCCCP will be submitted to DEC within 90 days of the approval of the post construction certification report by DEC.

Post construction monitoring and maintenance of the Golf Course, Community Park and Waterfront Park will be the responsibility of DPR. At this time DPR has entered into a contract with a golf course concessionaire, Trump Ferry Point LLC, to implement post-construction care necessary to maintain the golf course for operational purposes. Golf course maintenance and operations exclude those requirements specific to post construction monitoring and maintenance of existing

environmental conditions and infrastructure as installed by DPR and specifically defined in this plan as being Landfill Gas systems, Groundwater monitoring and Long Term Settlement Plates. DPR's Maintenance & Operations division or an appointed representative will also implement the operational and maintenance post construction requirements associated with the Community and Waterfront Parks.

## 1.1 Document Organization

This FPCCCP provides descriptions – either within the document or by reference – of systems, facility management, maintenance operations, environmental monitoring and the construction schedule.

This FPCCCP is organized into three sections summarized below:

The first section provides the document overview, organization, scope and applicable permitting basis.

The second section provides the post closure operational details for the relevant site-wide compliance systems and components. This includes site background, information regarding the specific systems and components related to the specific closure parameters and relevant regulatory processes necessary to facilitate the FPCCCP.

The third section addresses various closure and post closure issues including end use, construction schedules, and the post construction custodial care plan.

## 1.2 Scope of Document

As part of the overall permit submittal, the FPCCCP provides an overview of the systems within Ferry Point Park East as they will exist following the conclusion of construction at the site. In order to avoid duplication, design drawings and details, discussed within the FPCCCP that are referenced and included within the overall permit submittal are noted as such within the document. These drawings, bound separately under the permit application and referenced herein, have been compiled from various source documents.

The respective drawings serve as a basis for management of the site during the post-construction period. However, as per the 2013 Permit, these drawings do not represent actual as-built conditions. In addition, the terms used within the FPCCCP are consistent with the list of preferred terms contained in the overall permit application.

Path: M:\New_York_City\FerryPoint\Maps\MXD\1-1 Project Area Map.mxd




**Figure 1-1**
**Ferry Point Park**
**Project Area Map**
Bronx, New York

**SOURCE**: ESRI 2012; Ecology and Environment, Inc. 2013; Ferry Point 2013.

## 1.3 Compliance Basis

As described in Section 2, Ferry Point Park East has an anticipated short operating life, as it has been designed and operated not for the purpose of disposal, but as a golf course and public park. Therefore, the scope of the FPCCCP is not congruous with facilities that have been operating as solid waste facilities.

The FPCCCP is prepared in accordance with the applicable regulatory requirements as they specifically relate to the Permit. The FPCCCP has been developed in conformance with applicable regulatory requirements of Article 27, Title 7, 6NYCRR Part 360 pertaining to construction and demolition material transfer operations as they relate to the infrastructure developed at Ferry Point Park East.

During 2010, fill material from one particular source was brought on-site and placed in seven different stockpiles. The material was believed to be in conformance with permit conditions. However, the material was found to be in violation of 2005 Permit Special Conditions 1, 9, and 16, during NYSDEC and IEM inspections. On January 10, 2011, DPR signed an Administrative Order on Consent (Consent Order), Case No. R2-20100521-172, related to this fill material.

Specific requirements within the Consent Order as they pertain to post construction operations are as follows:

**Consent Order No R2-20100521-172 (Appendix I.1)**
" *Attachment "A" Proposed Handling of Ferry Point Park Soil Stockpile, Item 6, Once the asphalt top course is installed, the asphalt surfaces of the clubhouse and maintenance facility parking lots will be inspected during April and October every year by a licensed professional engineer ("engineer") who is registered to practice in New York State. Within thirty days (30) days of such inspections, the engineer will submit to the Department a stamped and certified written detail report, including photo documentation, regarding the condition of the asphalt surfaces and their adequacy, including photo documentation, regarding the condition of the asphalt surfaces and their adequacy to effectively function as covers. A description of any needed repairs will be included in the engineer's report.*

*Item 7, Any repairs deemed necessary by the engineer must be completed by New York City Department of Parks and Recreation ("NYC Parks") within fifteen (15) days of the notification by the Department to NYCDPR to begin such repairs. A certification, including supporting written and photo documentation must be submitted by NYC Parks within fifteen (15) days after completion of repairs."*

# 2 Overview of Site Wide Systems and Components

Ferry Point Park East is bound by the Bronx-Whitestone Bridge to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue and St. Raymond's Cemetery to the north, and the East River to the south.

The Site, which comprises the eastern portion of Ferry Point Park, historically was largely unused and undeveloped. The project site is a former landfill that accepted municipal solid waste from before 1951 to the 1960's, and was closed and covered in the mid-1960's, with additional closure operations conducted in the late 1980's. The project site contained an organic recycling and composting facility (operated by DPR) that was located in the northwestern portion of the project site, informal dirt bike paths, an informal model airplane area in the western portion of the project site, and a ballfield and basketball court located on the northeastern portion of the project site.

The proposed Project includes three major elements (Waterfront Park, Community Park, and comprehensive golf facility) that together constitute a new regional park. The site map is attached as Figure 2-1 of the October 2013 Supplemental Engineering Report (pg 2-5).

Numerous systems have been constructed and installed at Ferry Point Park East that will continue to serve operational and environmental functions during the site closure and post closure period. Each of these systems has specific components, activities and controls. The purpose of this section is to describe the primary function intended to be served by each system and the components that comprise the system as they relate to closure and post closure activities.

Each of the relevant systems listed below have a specific compliance aspect which includes the following:

- **Final Cover and Drainage System (as applicable)**
- **Landfill Gas Control System**
- **Long Term Settlement Monitoring System**
- **Groundwater Characterization System**

## 2.1 Final Cover System

The overall function of the final cover system is to provide a clean barrier of one foot of uncontaminated soil (cover material) over a minimum of one foot of shaping material in designated passive recreation areas and a minimum of two feet of cover material over shaping material in designated active recreation areas. In areas where an impermeable cover system (e.g. asphalt) is in place no cover material or demarcation layer is present. The final cover system is dependent on the park design typology and use defined further below. Final cover design and construction for Ferry Point Park East are composed of the following common components in accordance with the 2013 Permit.

1. The Topmost Layer consists primarily of vegetated cover material throughout the park may also consist of impermeable asphalt or gravel materials, concrete or paver systems. Within the context of this FPCCCP, the topmost cover system is defined as that system which is used to stabilize the Barrier Protection Material (BPM).

2. The BPM layer or cover material consists of clean soil meeting permit requirements for cover material at a depth of one foot for passive recreation areas and two feet for active recreation areas.

3. The Surface Water Drainage System, where applicable, is constructed to protect the final cover system from the peak discharge based on a rainfall intensity of a 24-hour, 25 year storm event.

4. The Demarcation Layer, where applicable, is placed to provide a physical visual separation between the BPM which is underlain by select exempt Construction and Demolition (C&D) fill material and existing landfill and cover material. This item provides a visual warning against unintended penetration into the underlying C&D material layer. The Demarcation layer will be Guardian Safety Fence, as manufactured by Tenax ® Corporation, Baltimore, Maryland, or the 3T Product T820A as manufactured by 3T Products, LLC, Dalmatia, Pennsylvania, or approved equal.

Infiltration into the BPM is minimized by means of final grading. Infiltration that does enter the BPM is either released back into the air through evapo-transpiration or collected and diverted through the drainage layer (if used) and discharged to a system of catch basins or detention ponds located throughout the site.

As defined in the 2013 Permit documentation, minimum and maximum slopes combined with drainage elements are used to prevent ponding and ensure slope stability.

The BPM is placed in a manner that produces a well graded mass. The material is and will be constructed in a horizontal layer of twelve (12”) inches or (24”) in depth extending across the entire area of fill. The material is and will be placed

and distributed so that there will be no pockets of uniform size solid material. Hollows and depressions which develop during the process of rolling and compacting are filled with acceptable material and the subgrade is compacted again. This process of filling and compacting is repeated until no depressions develop. After compacting, the area must be in a uniformly compacted, smooth, dense, true, firm, satisfactory, and evenly finished condition, free of compaction planes, irregularities, voids, ridges, or loose material.

### 2.1.1 Final Cover Systems by Park Typology

#### 2.1.1.1 Community Park

The Community Park is classified as an active recreational facility and therefore requires a minimum of twenty four (24) inches of BPM per the New York State Department of Health (NYSDOH) determination regarding Ferry Point Park on August 2, 2006 and a further determination by NYSDEC staff on July 28, 2009.

*Excerpt from NYSDOH August 2, 2006 determination:*
*"Additionally, areas that are considered "Active Recreation" pursuant to New York State Brownfield Cleanup Program Technical Support Document, Section 3.0, will contain a minimum of twenty four-(24) inches of cover material that meets or exceeds NYSDEC TAGM 4046 guidelines for soil. In addition to cover material, a demarcation barrier will be used to divide the final cover fill from the existing landfill capping material."*

*Excerpt from July 28, 2009 NYSDEC Correspondence:*
*"…All other areas, that are not covered with a building or other acceptable impermeable cover system, including the …"Community Park" area are deemed active recreational areas that must be covered with at least two feet of soil over a demarcation layer."*

Community Park Final Cover System

1. Topmost Layer: Vegetated cover material or impermeable cover system.
2. BPM layer or cover material: 24" of topsoil meeting permit requirements for cover material at a depth of two feet in areas not covered with a building or impermeable material.
3. Demarcation Layer: The Demarcation layer utilized is a Guardian Safety Fence, as manufactured by Tenax ® Corporation, Baltimore, Maryland, or the 3T Product T820A as manufactured by 3T Products, LLC, Dalmatia, Pennsylvania, or approved equal.

### 2.1.1.2 Waterfront Park

1. Topmost Layer: Vegetated cover material or impermeable cover system. This topmost cover system throughout the park is primarily vegetative but may also consist of asphalt or gravel materials, concrete or paver systems.
2. BPM layer or cover material: consists of clean soil meeting permit requirements for cover material at a depth of one foot for passive areas and two feet for active areas.
3. Demarcation Layer: where applicable as determined by NYSDOH, the Demarcation layer will be Guardian Safety Fence, as manufactured by Tenax ® Corporation, Baltimore, Maryland, or the 3T Product T820A as manufactured by 3T Products, LLC, Dalmatia, Pennsylvania, or approved equal.

### 2.1.1.3 Golf Course

The Golf Course is classified as a passive recreational facility and therefore requires a minimum of twelve (12) inches of BPM per the New York State Department of Health (NYSDOH) determination regarding Ferry Point Park on August 2, 2006 and a further clarification by NYSDEC staff on July 28, 2009.

*Excerpt from NYSDEC July 28, 2009 correspondence:*
*"For the purpose of the permit, only the golf course is deemed a "passive recreational area" and is required to have a one foot thick cover layer over a demarcation layer."*

NYSDEC directed that the placement of the demarcation layer, per a March 9, 2011 correspondence, is required for the golf course in areas containing less than 5 feet of combined cover and shaping material thickness.

*Excerpt from a NYSDEC March 9, 2011 correspondence specific to the installation of a demarcation layer on the Golf Course:*
*"The Department and NYSDOH informed NYCDPR that a demarcation barrier would not be required at areas of the golf course having five feet or more of shaping and cover layer."*

Areas exempted from demarcation, structures, paved areas, and lakes are lined with an impermeable barrier. The preliminary Demarcation Layer Plan is shown on Figure 3 located in Section C.4 of the October 2013 Supplemental Engineering Report Drawing number S-H22.

The surface water drainage components are integrated into the final cover and function to control stormwater flow into the shaping layer material. Maintenance and inspection procedures for the surface water drainage system are provided in Section 3.3.2.2 Final Cover System Inspections and Maintenance. Additional maintenance and inspection criteria regarding these systems will be amended to the FPCCCP pursuant to the relevant post construction Storm Water Pollution

Prevention maintenance documentation as per the SPDES General Permit for Stormwater Discharges from Construction Activity.

The surface water drainage system includes a "tile drainage system" installed underneath the fairways, tees, greens and inner roughs that connects to the overall drainage system. The capacity of the drainage pipes was reviewed to make sure there is sufficient capacity for additional flow.

The surface water drainage system consists of the following that connect to catchbasins and manholes adjacent to the tile drainage system:

*"Golf course surface drainage pipe will be A.D.S. N12-or Approved Equivalent. Typically the golf course Grading Plans show the locations of the catch basins throughout the golf course. In these locations, there should be a 12 to 18-inch A.D.S. N12-or Approved Equivalent perforated riser, extending above grade 2 to 3-feet. Washed pea-gravel 1/4 to 3/8-inch in size, is mounded up around the base of the pipe, so that it functions throughout the construction process. Upon establishment of finish grade, the pipe is cut off flush with the grade. Soil is then removed 12-inches around and 12-inches deep and backfilled with clean, washed 1/4 to 3/8-inch pea-gravel. A cast iron or approved plastic grate is then inserted into the pipe and attached according to the manufacturer's specifications.*

*All golf course drainage pipe will have a 1.628 millimeter-14 gauge direct bury copper locator wire placed on top of the pipe prior to backfilling the pipe. This includes all sizes of perforated and solid pipe."*

1. Topmost Layer: Vegetated cover material or impermeable cover system. This topmost cover system throughout the park is primarily vegetative but may also consist of asphalt or gravel materials, concrete or paver systems.
2. BPM layer or cover material: consists of one foot of permit requirements for cover material at a depth of one foot for passive areas and two feet for active areas.
3. Surface Water Drainage System: where applicable, constructed to protect the final cover system from the peak discharge based on a rainfall intensity of a 24-hour, 25 year storm event.
4. Demarcation Layer: where applicable, the demarcation layer is placed to provide a physical visual separation between the BPM which is underlain by select exempt Construction and Demolition (C&D) fill material and existing landfill and cover material. This item provides a visual warning against unintended penetration into the underlying C&D material layer. The Demarcation layer will be Guardian Safety Fence, as manufactured by Tenax ® Corporation, Baltimore, Maryland, or the 3T Product T820A as manufactured by 3T Products, LLC, Dalmatia, Pennsylvania, or approved equal.

## 2.2 Landfill Gas Control

The generation of landfill gas (LFG) is a natural process resulting from the decomposition of organic material in municipal solid waste. LFG is comprised mainly of methane and carbon dioxide, along with traces of other gases.

LFG at the Ferry Point Park East site is present within the waste layer of the landfill. The waste at the Site consists of widely varying amounts of MSW and construction debris intermixed with soil. LFG is currently being generated at a very low rate, approximately 1 cfm/acre or less which correlated well with the modeling conducted in 1999 by DPR's consultant TRC Engineers (AP-42 modeling). Very little to no LFG was measured at the landfill surface during the flux box testing (Ferry Point Landfill Gas Report EEEPC 2011, Appendix F.1 Supplemental Engineering Report).

LFG that is generated accumulates in more pervious portions of the waste layer and/or migrates laterally to the east and northeast and is vented out the perimeter vent trenches. As shown on the graphs depicted on design drawings (S-H6.01 and S-H6.02 contained Ferry Point Landfill Gas Report EEEPC 2011, Appendix F.1 Supplemental Engineering Report).

The remaining Landfill gas at Ferry Point Park East is managed to control emissions of LFG and to prevent off site migration through a passive vent trench. Post construction care operations and maintenance of the landfill gas emissions management systems are detailed in Section 3.3 of the Post Construction Custodial Care Plan.

### 2.2.1 Passive Venting System

Passive venting systems have been and are being installed to vent LFG. The following are the design components of the passive control of LFG at the Ferry Point Park East site as further detailed in Appendix F.1 LFG Management Plan:

- Wet and dry utility pipe bedding corridors: contain low permeability soil plugs and gas vents at periodic intervals and terminations into structures. These include as applicable and approved by NYSDEC:
  1. Passive surface vents located adjacent to the plugs on the up gradient side to allow venting of built up gas;
  2. Plugs and passive vents prior to every potentially occupied structure at a suitable interval;
  3. Air vents on vault and manhole covers; and
  4. Explosion proof conduit seals and electrical connection.
- Vertical passive gas vent wells are located within the rough and other non-playing areas of the golf course. The vent locations were based on the following criteria:

1. Areas of significant waste thickness;
2. Areas of significant cover soil thickness;
3. Areas of historic high LFG concentrations; and areas in apparent lateral migration pathways.
4. A passive vent trench is located at the eastern perimeter of the Community Park. Vertical passive gas vents are additionally located within the passive LFG vent trench that has been installed at Community Park.

### 2.2.2 Landfill Gas Migration System

Ferry Point Park East utilizes a passive perimeter LFG interceptor venting system or LFG vent trench as an engineered control against the migration of LFG off site. The vent trench is installed along the edge of the East River near the foot of Emerson Avenue, along the length of the Balcolm Avenue Site boundary, along Schley Avenue, and continues approximately 1,050 feet west past the intersection of Schley and Buttrick Avenues as shown in Figure 5 (located in Appendix F.1 of the October 2013 Supplemental Engineering Report).

A review of the historic field data associated with the perimeter LFG vent trench monitoring program from 2001 to present was conducted to evaluate LFG trends at the Site relative to the perimeter passive LFG control.

The following key findings were noted:

1. After the installation of the vent trench in 2001, methane levels in the vicinity of the LFG vent trench tended to decrease significantly within a year in most monitoring wells;
2. Methane levels remained relatively low and below regulatory limits for the next three years (2002 thru 2004), except for a few wells that sporadically exceeded the regulatory limit;
3. In 2005, the measured methane levels tended to increase, likely due to the installation of more reliable monitoring points (new monitoring points and repaired wells); and,
4. Results from 2008-2011 generally indicate relatively consistent levels of methane, with certain limited sporadic increases above regulatory limits.

The vent trench is extended below the seasonal low groundwater table to form a barrier to off-site migration of LFG generated within the site and to allow the LFG to vent passively. Where underground utilities may act as conduits for the LFG migration, utility seals and low permeability soil collars are used to cut off the LFG from migrating along the utility corridors.

To remain consistent with the design intent of the LFG vent trench, monitoring of the groundwater is done by utilizing installed piezometers in accordance with the 2013 Permit.

To evaluate the effectiveness of the engineered controls monitoring at the vent trench has been ongoing since it became operational in 2002 at a frequency of bi-weekly monitoring with a contingency of weekly monitoring if the lower explosive limit is greater than 25%.

To meet the requirements of the 2013 Permit, a monitoring program and contingency procedures have been developed and are referenced (to the Landfill Gas Management Plan Appendix F.1 of the October 2013 Supplemental Engineering Report) in Section 3.3 of this report.

### 2.2.3 Interior Active Collection Systems

The intent of the interior active collection systems is to control LFG emissions such that safe levels are maintained in all potential occupied interior spaces. This is achieved by including active removal systems beneath all enclosed buildings within the site.

The interior active collection system is comprised of a sub slab depressurization system (SSD) designed to protect LFG from migrating into confined spaces and monitor those spaces. The interior LFG venting system is designed to prevent the accumulation of gas at greater than 25% of the lower explosive limit in structures on site. The system is designed to achieve lower sub slab air pressure relative to indoor air pressure by use of a fan powered vent drawing air from beneath the slab. The system prevents the migration of LFG into the interior of on-site buildings. Further, the system is designed to achieve depressurization during winter conditions when ventilation is limited.

To meet the requirements of the 2013 Permit, a monitoring program and contingency procedures have been developed and are referenced (to the Landfill Gas Management Plan Appendix F.1 of the October 2013 Supplemental Engineering Report) in Section 6.3.4.1 of the LFG Management Plan.

## 2.3 Long Term Settlement

In accordance with Special Condition #9 of the 2005 Permit, a settlement monitoring program was developed and a report issued. The report made recommendations with respect to the impact of potential long-term settlements of C&D fill and cover material on the construction and operation of the Ferry Point Golf Course (Settlement Evaluation and Long-Term Monitoring Plan Ferry Point Golf Course January 2005 Appendix I.2).

Settlement monitoring began on site in December 2002 and consisted of the construction of 7 instrumented test fills and installation of 6 settlement plates

throughout the site. The test fills ranged in height between 10ft and 18ft and were located in areas where significant thicknesses of fill were required, in areas where thick compressible layers existed and in future green areas. Additional, short and long term settlement monitoring has been on-going on the site since the original monitoring program began.

Further evaluation was completed in the Settlement Evaluation and Long-Term Monitoring Plan regarding Slope Stability; this evaluation indicated that the factors of safety exceeded the minimum acceptable factor of safety for a circular global slope failure, and thus that the steepest slopes of the proposed grades for the project are stable and will not require any reinforcement for construction or maintenance purposes.

As part of the report, a Long Term Settlement Monitoring plan was developed to be implemented after the final grading of the golf course and during the golf course operation. The Settlement Plate Location Plan (Figure 2) is located in Section H.1 of the October 2013 Supplemental Engineering Report.

The plan consists of the construction of nine (9) settlement monitoring plates to be placed throughout the golf course. As per the Long Term Settlement Monitoring plan, final locations of the monitoring plates were coordinated with the golf course architect and approved by NYSDEC staff. The locations were chosen to be adjacent to the water and sewer mains and/or adjacent to green areas, where differential settlements are potentially critical. The settlement points are located in variable subsurface conditions, but generally in the highest fill areas and thickest compressible layers.

The settlement plates will be placed as close to the defined area as possible without interrupting play or compromising the viability of the plate. The settlement monitoring points will be installed to within 1 foot of the final grade. The work consists of installing settlement plates consisting of a base plate, steel riser pipe sections, and any additional hardware and couplers which may be required that is consistent with the 2005 Settlement and Long Term Monitoring Plan.

The work consists of installing settlement plates consisting of a base plate, steel riser pipe sections, and any additional hardware and couplers which may be required that is consistent with the 2005 Settlement and Long Term Monitoring Plan.

1. Initial Installation: The base plate will be installed at least 12 inches (150 mm) below natural ground, firmly seated on a level surface.
2. Adding Extensions: Riser pipe extensions and couplers will be added, as necessary, in 5 foot increments as construction of the embankment progresses. The Contractor will install extensions in a plumb line.

The monitoring requirements associated with the long term settlement plates are discussed in Section 3.3.

## 2.4 Groundwater Monitoring

Characterization of the on-site groundwater was not initially contemplated as part of the 2005 permit by DEC. As per a 2011 DEC directive, DPR installed 11 groundwater monitoring wells on site in February of 2012, reference Figure 4 located in Appendix G.2 of the October 2013 Supplemental Engineering Report.

The purpose of the well installation was to obtain baseline chemical data on groundwater constituents at the Ferry Point site. Basic site hydrogeological information was also characterized during this effort, including direction of flow, groundwater elevation gradients, and flow velocity.

At the time of installation, construction activities were 80% complete. The baseline characterization is expected to capture conditions representing 80% of the potential measurable impacts to groundwater. Future monitoring is expected to capture less than 20% of the potential post-construction impacts.

Groundwater characterization monitoring has been performed for an initial three quarterly rounds of sampling and the data has been compared to data from landfills of similar age and type. DPR will continue to conduct annual groundwater sampling after the golf course is operational.

Trend analysis was used to develop an understanding of the effectiveness of an implemented remedy in addressing the exposures presented at the site and to begin to identify any trend(s) with regard to the achievement of remedial objectives (DER-10 6.2.2.c.6). However, the current redevelopment project is not intended as a 'remedy' for the site, and there are no remedial action objectives for groundwater at Ferry Point Park East. Therefore activities usually associated with monitoring for the effectiveness or performance of a remedy, such as trend analysis, are not appropriate for Ferry Point Park East.

Exposure to groundwater upon completion of the project will be managed by engineering controls (DER-10 6.1 Site Management).

Engineering controls to limit exposure to groundwater/leachate include:

- The placement of fill material ranging from 1 to 12 feet in depth above the original soil cover placed following termination of landfill activities in the 1960s.
- A demarcation layer to be placed in areas of the site where the combined cover and shaping material is less than 5 feet thick.

# 3 Post Construction Custodial Care Operations

This section addresses the compliance items as necessary to provide for the proper post construction custodial care for the site. The specific components of this section consist of a description of the sites' end use, the construction schedule, the environmental monitoring requirements, post construction custodial care operations and maintenance plan, consent order maintenance and the implementation of the site wide health and safety plan and emergency contact information.

## 3.1 End Use

DPR agrees that any proposed change of end use that significantly alters the intended recreational character or that impacts the integrity or operation of the environmental control and monitoring systems will require DEC approval. The End use of the site during the term of the FPCCCP will be in accordance with the 2013 Permit.

The end use for Ferry Point Park East will be a public passive and active recreational facility owned by DPR. There are three distinct areas or "Parks" within the project site.

- Community Park: Approximately 10 acres of active and passive recreation are replaces and expands an existing recreational facility. The project includes a walking path, detention area, ballfields, basketball courts, tot-lot, comfort station and seating areas.
- Golf Course: Approximately 180 acres, contains an 18-hole tournament quality golf course, driving range and practice areas for chipping and putting, a clubhouse, maintenance building, comfort station and rain shelter.
- The Waterfront Park: Approximately 19.5 acres of passive park land, the Waterfront Park design includes a small parking lot and comfort station, a beach and picnic area, salt marsh, and grassed and landscaped features with a continuous path that crosses the park.

## 3.2 Construction Schedule

The various components of the three distinct Parks have been and are being installed in various stages. Construction completion for each of the Parks is defined as placement of the final cover system, specifically the vegetated cover material or impermeable cover material. Final stabilization of the golf course, parks and ancillary facilities will be in accordance with the approved design specifications and the final plans of the Waterfront and Community Parks as approved by DPR.

Attached as Appendix I.3 is the construction schedule for the Golf Course project, upon completion of filling operations for the shaping layer, the Contractor will commence the rough shaping, placement of cover material and installation of drainage, irrigation and other utilities as per the construction schedule and construction sequence, for the purposes of this FPCCCP referred to as the Closure Construction Schedule.

The Community Park is substantially complete except for the proposed Comfort Station at Community Park which is contemplated for final completion in fall 2013.

The Waterfront Park, currently in design, is anticipated to begin construction in fall 2013, once a construction schedule is completed for this project it will be submitted to NYSDEC as an addendum to the FPCCCP.

Upon completion of the fill delivery and construction of the earthwork portion of the project, DPR agrees that its engineer will prepare the post construction certification report and the IEM will certify that the fill operation was performed in accordance with the 2013 Permit. Any deviations from the permit will be noted. This report will include approved "as-built" drawings demonstrating that the earthwork and filling operation were accomplished in accordance with the Department approved plans and the permit.

## 3.3 Post Construction Custodial Care Plan

The Post Closure Care Monitoring and Maintenance Operations Plan provides a description of overall management of the Site during the post construction period and sets the performance standards and requirements under which the actual monitoring, maintenance and reporting practices are to be carried out. Contingency procedures are discussed within the specific document as applicable.

This Plan consists of these components:

1. Environmental Monitoring Requirements
2. Health and Safety Plan Emergency Contact
3. Post Construction Custodial Care Inspections and Maintenance

Unless otherwise noted, compliance actions governed by the FCCCP will commence within 60 days of the NYSDEC's approval of the construction certification report. The compliance documentation, in the form of either or both:

1. Monitoring Data and Summary Report
2. Inspection Report

Compliance reports will be submitted within 30 days of the initial monitoring or inspection. Concurrent reports will be submitted within 30 days of the submittal of the initial report unless otherwise noted.

### 3.3.1 Environmental Monitoring Requirements

Environmental monitoring, maintenance and reporting will be performed at Ferry Point Park East during the post-construction period. The plans are specific to groundwater characterization, landfill gas monitoring and long term settlement monitoring. Record keeping and reporting requirements and contingency action levels and procedures are also addressed.

Maintenance of the systems associated with Ferry Point Park East monitoring will be performed:

1. Based on the result of inspections performed during monitoring events; or
2. If an issue is identified during general site wide operations; or
3. Specifically determined by contingencies for applicable systems.

Maintenance, monitoring, and reporting for activities associated with the LFG systems, long term settlement plates, final cover system and groundwater monitoring infrastructure will be performed by a DPR approved representative.

As necessary, changes may be made to the FPCCCP to reflect monitoring results and address relevant site conditions. Modifications to the environmental monitoring program will be implemented in compliance with the FPCCCP or by written request to the NYSDEC. Revisions to the FPCCCP monitoring program may be made through issuance of addenda, submittal of a partially or fully revised document, submittal of revised supporting documentation or other approved vehicle to NYSDEC.

#### 3.3.1.1 Groundwater Characterization Monitoring

Groundwater monitoring will be performed at the eleven well locations located within the golf course. Upon commencement of operation of the golf course, groundwater sampling will take place annually with samples being analyzed for constituents listed in 6 NYCRR Subpart Part 360-2.11 routine parameters. The groundwater monitoring report and summary will be submitted to NYSDEC as a part of the annual monitoring and inspection report. Monitoring and inspection

will commence concurrently within 60 days of the approval of the construction certification report for a period of three years.

Upon completion of 3 years of post-operation annual routine groundwater sampling DPR may submit documentation to NYSDEC in furtherance of a request to reduce or cease groundwater sampling at the FPP golf course. DPR agrees to perform operational groundwater sampling, data analysis and reporting for a minimum of three years after construction, with the goal of demonstrating whether operation of the Park adversely impacts on water quality with respect to leachate quality or quantity, and whether operation of the park meets the performance criteria established in the 2013 Permit. .

When the request for cessation is accepted, the groundwater monitoring wells will be evaluated for either abandonment or removal within the first year of the cessation of monitoring. The abandonment or removal documentation, signed and certified by a licensed NYS Engineer will be provided to DEC within the concurrent post closure reporting period after the completion of the work.

#### 3.3.1.2 Long Term Settlement Monitoring

Long term settlement monitoring will be performed at the 9 installed settlement monitoring plates throughout the golf course for a period of thirty years after completion of construction.

The long term settlement monitoring report and summary will be submitted to NYSDEC as a part of the annual monitoring and inspection report and will be certified by a licensed NYS professional engineer. The report will include:

1. Commencing within 60 days of the approval of the construction certification report, for a period of five years, the quarterly monitoring results collated and summarized for the year.
2. Commencing at the fifth year, for a period of five years, bi-annual monitoring results collated and summarized for the year.
3. Commencing at the 10th year, for a period of twenty years, yearly monitoring results and summary.

Monitoring will commence concurrently within 60 days of the approval of the construction certification report for a period of three years. Based on the results of the initial five years of monitoring, DPR may petition for decreased monitoring or a cessation in frequencies.

When the request for cessation is accepted, the long term settlement plates will be evaluated for either abandonment or removal within the first year of the cessation of monitoring and inspection. The abandonment or removal documentation signed and certified by a licensed NYS Engineer, will be provided to DEC within the concurrent post closure reporting period after the completion of the work.

#### 3.3.1.3 Landfill Gas Monitoring Program

The LFG monitoring program, in accordance with the 2013 Permit will support compliance with the following requirements: (1) the concentration of explosive gases will not exceed 25% of the lower explosive limit (LEL) in on-site structures; and (2) the concentration of explosive gases must not exceed the LEL at the property boundary as defined by the Landfill Gas Management Plan (LFGMP).

Operations, monitoring and maintenance (OM&M) for the Site's LFG management system will take place on an ongoing, routine schedule with additional inspections to address maintenance concerns and potential alarm call-outs, and to provide contingency monitoring and actions as needed. The OM&M plan for the Site is presented in Section 6 of the LFGMP (located in Appendix F.1 of the October 2013 Supplemental Engineering Report).

OM&M of the piezometer network is also incorporated into Section 6 of the LFGMP (see Appendix F.1). OM&M operations regarding landfill gas are to be in compliance with the LFGMP. The abandonment or removal documentation signed and certified by a licensed NYS Engineer, will be provided to DEC within the concurrent post closure reporting period after the completion of the work as documented in the OM&M plan.

The LFG monitoring report and summary will be submitted to NYSDEC as a part of the annual monitoring and inspection report unless otherwise noted within the OM&M plan. Monitoring and inspection will commence concurrently within 60 days of the approval of the construction certification report unless otherwise noted within the OM&M plan. Adjustments to monitoring frequencies will be requested of NYSDEC upon meeting the performance criteria thresholds identified in Section 6.3.4.2 of the LFG Management Plan. DPR will submit a request with supporting documentation to NYSDEC 30 days prior to the desired date of the proposed change in monitoring. DPR will not change monitoring frequencies until the request has been approved.

### 3.3.2 Post Construction Custodial Care Inspections and Maintenance

The site will be operated as part of the New York City Department of Parks and Recreation system. The Community Park and Waterfront Park will be operated and maintained by the DPR Borough of the Bronx Operations and Maintenance division or an appointed representative. The golf course site will be operated and maintained, unless otherwise noted within the FPCCCP by a Concessionaire, identified as Trump Ferry Point, LLC. DPR remains responsible for all inspection monitoring, reporting and oversight of operations and maintenance of the applicable site wide components as identified within the FPCCCP.

Inspection and maintenance will be conducted in coordination with monitoring events unless otherwise noted or as directed by DEC in response to a specific

monitoring condition or violation. If a contingency action or maintenance is warranted based on the inspection it will be noted in the inspection report to be provided as explained below. The inspection report will be submitted annually for the first ten years and then every five years unless noted; the first report will be submitted within 30 days of the initial monitoring and inspection operations. Subsequent reports will be submitted within 30 days of the submittal of the initial report unless otherwise noted or as directed by DEC in response to a specific monitoring condition or violation. Reports will be certified by a New York State licensed engineer.

The inspection reports will include:

1. Brief Summary
2. Site Inspection Documentation
3. As noted, photographs documenting site conditions.

The content and scope of the inspection reports may be subject to change based on the termination or reduction in frequency of monitoring and maintenance activities. DPR will advise through a transmittal letter included with the inspection report of any changes within the inspection report. Inspection reports will be sent to:

NYSDEC Region 2 Office
C/O Division of Materials Management
1 Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101

As relevant and in accordance with specific component plans, DPR may consult with DEC for guidance regarding the appropriate data to demonstrate whether or not DPR has achieved the performance goals that would provide the basis for modifying or terminating any or all components of the plan.

| Component | Frequency | Duration |
|---|---|---|
| Final Cover System | Quarterly | 5 years |
| LFG System | Quarterly | 5 years |
| Infrastructure | Bi-Annually<br>Annually | 10 years<br>15 years |
| Groundwater Monitoring | Annually | 3 years* |
| Long Term Settlement Plates | Quarterly | 5 years* |
| Parking Lot Asphalt Cover (April & October) | Bi-Annually<br>Annually | 5 years*<br>20 years* |

*Denotes Dependent on Cessation of Activity

### 3.3.2.1 Final Cover System

The integrity of the final cover system will be inspected by DPR quarterly and will report to DEC on an annual basis during the post-closure period to observe and document changes as they occur to the cover system.

Inspection frequencies, procedures and documentation are applicable to erosion damage, vegetative cover condition, settlement and the cover drainage system. Those systems that may specifically impact the integrity of the final cover system.

Final Cover System inspections are performed routinely as part of the Golf Course Operations and Management Manual, as the integrity of the cover system is paramount to the success of the Golf Course. The maintenance of the golf course will be performed by Trump Ferry Point LLC with inspections performed by a duly appointed DPR representative. Please refer to Appendix I.5 of this plan for further information regarding the Golf Course management operations..

DPR agrees to a rolling five-year plan, whereby DPR may petition to modify or terminate the final cover inspection requirements by demonstrating that the integrity of the final cover system has been maintained in accordance with performance criteria established in the 2013 Permit. DPR may consult with DEC to ensure that DPR is collecting and reporting the appropriate data for this purpose. For the purpose of reporting a yearly inspection report will be submitted verifying the integrity of the final cover system for a period of thirty years, unless otherwise approved by DEC for the Ferry Point Park East Site. The report will be certified by a New York State licensed engineer. The inspections will be performed by an appointed DPR representative. Commencing within 60 days of the submittal of the post construction certification report and then undertaken annually within 30 days of the submittal of the initial report.

As part of the inspection, DPR or their duly appointed representative will:

(a) verify the cover systems are being maintained as per routine visual inspections observing and noting any significant diversions from the final cover system. Any findings will be recorded in the inspection report.

(b) DPR will inspect the surface of the cover for evidence of erosion within one week of a storm event with precipitation amounts greater than a 100 year storm event or as otherwise directed by DEC for any precipitation event. If erosion damage greater than eight inches in depth has occurred, or if an area greater than one quarter of an acre of vegetative cover has been destroyed due to erosion, corrective action will be initiated within 30 days of the incident.

(c) in the unlikely event that a large unexplained settlement problem, or vegetative die-off occurs, examine the subsurface conditions beneath the distressed areas. Non-destructive techniques will be utilized at the location of the problem where there is significant contrast from surrounding areas and evidence of large scale settlement. Excavation of test pits will not be conducted due to the

complexity of the designs. If the exploratory operation penetrates the areas where a demarcation layer is placed, then it will be excavated and patched according to the sub surface plan. Backfill for exploratory operations above the demarcation layer will be of a material compatible with the final cover system plan. The exploratory operations will be backfilled with suitable material from their total depth to the ground surface. Photographic documentation of these operations will be included with the inspection report.

(d) note any bare areas susceptible to erosion and the presence of deteriorated or dead vegetation.

(e) during each of the inspections, observe the cover drainage system and note any presence of debris in the discharge pipes or waterlogged soil condition which may indicate that the drains are not functioning. If debris is found in discharge pipes that will be initiated within 14 days to clear the pipes.

Documentation: DPR or their duly appointed representative will submit to NYSDEC, Department of Materials Management correspondence that contains the information noted above as well as provides for an explanation of any contingency actions.

Contingency Action: If significant maintenance is required as a result of the inspections, unless otherwise noted, DPR has 60 days to remedy the issue. If it is determined that the issue cannot be resolved within the 60 days, DPR will immediately inform NYSDEC and request an extension of time based on the scope of work necessary to bring the issue to closure. A report will be submitted to NYSDEC within 60 days of completion of work that documents the specific close-out of the action item. DPR agrees to notify DEC within 7 days of detecting any significant issue found during inspection, and to provide a schedule and plan for remedying the condition. DPR will take steps to stabilize the condition within 60 days unless directed by DEC to expedite the remedial work, or, if the remedial action will take longer than 60 days to implement, and DEC has agreed to an extended schedule.

#### 3.3.2.2 Landfill Gas Management

Operations, monitoring and maintenance (OM&M) for the Site's LFG management system will take place on an ongoing, routine schedule with additional inspections to address maintenance concerns and potential alarm call-outs, and to provide contingency monitoring and actions as needed. The OM&M plan for the Site is presented in Section 6 of the LFGMP (located in Appendix F.1 of the October 2013 Supplemental Engineering Report).

OM&M of the piezometer network is also incorporated into Section 6 of the LFGMP (see Appendix F.1). OM&M operations regarding landfill gas are to be in compliance with the LFGMP.

The LFG inspection report will be submitted to NYSDEC as a part of the annual monitoring and inspection report unless otherwise noted within the OM&M plan. Monitoring and inspection will commence concurrently within 60 days of the approval of the construction certification report unless otherwise noted within the OM&M plan.

#### 3.3.2.3 Groundwater Characterization Monitoring

Groundwater characterization monitoring infrastructure inspections will be performed 30 days prior to the sampling events to ensure that infrastructure necessary to successfully perform the sampling event is in adequate working condition.

Upon commencement of operation of the golf course, groundwater infrastructure inspections will take place annually.

DPR agrees to perform operational groundwater sampling and reporting for a minimum of three years after construction, with the goal of demonstrating whether or not operation of the Park adversely impacts on water quality with respect to leachate quality or quantity, and whether or not operation of the park meets the performance criteria established in the permit modification. DPR may consult with DEC to ensure that DPR is collecting the appropriate data to achieve the performance goals that would provide the basis for a cessation of groundwater sampling or a reduction in sampling frequency. Commencing within 60 days of the submittal of the post construction certification report and then undertaken annually within 30 days of the submittal of the initial report. Inspections will continue annually past the eight year term of inspections only if the petition to discontinue monitoring is denied. At that time a revised inspection timeline will be submitted to NYSDEC as an addendum to this plan.

As part of this inspection, DPR or their duly appointed representative will:

(a) inspect the monitoring wells to confirm the area surrounding the well is free of debris and vegetation that may affect the ability to accurately sample the wells. If the area is not free of debris or vegetation all materials that hinder the ability to sample will be removed 72 hours prior to the sampling event.

(b) confirm that all components and parts of the well are working correctly and free of defect or damage that affects the ability to accurately sample the wells. If all the components and parts of the well are not functional, all repairs must be completed 24 hours prior to the sampling event.

Documentation: DPR or their duly appointed representative will submit to NYSDEC, Department of Materials Management correspondence that contains the information noted above as well as provides for an explanation of any contingency actions.

Contingency Action: If it is determined that the issue cannot be resolved within the 30 days, DPR will immediately inform NYSDEC and request an extension of

time based on the scope of work necessary to bring the issue to closure. And a revised monitoring date will be included with the request. A report will be submitted to NYSDEC within 60 days of completion of work that documents the specific close-out of the action item.

#### 3.3.2.4 Long Term Settlement Plates

Long term settlement plate inspections will be performed 30 days prior to the settlement plate monitoring event on an annual basis commencing within 60 days of the submittal of the post construction certification report and then undertaken annually within 30 days of the submittal of the initial report. As DPR may petition for decreased monitoring frequencies if data supports the request at year five, inspections of the settlement plate locations will terminate based on the NYSDEC decision. Consistent with the rolling five-year schedule DPR agrees to monitor the long term settlement plates in accordance with the performance goals established in the 2013 permit until DPR has demonstrated to DEC that continued monitoring is no longer necessary. If additional monitoring is required inspections will continue on an annual basis until otherwise approved by DEC.

As part of this inspection, DPR or their duly appointed representative will:

(a) verify that the settlement plate location is being maintained to allow for the proper monitoring of the settlement . If the area is not properly maintained, the area will be properly cleared 48 hours prior to the monitoring event.

(b) visually inspect the monitoring apparatus, if the apparatus is not fully functional via the visual inspection, DPR will remedy the settlement plate apparatus 48 hours prior to the monitoring event.

Documentation: DPR or their duly appointed representative will submit to NYSDEC, Department of Materials Management correspondence that contains the information noted above as well as provides for an explanation of any contingency actions.

Contingency Action: If it is determined that the issue cannot be resolved within the 30 days, DPR will immediately inform NYSDEC and request an extension of time based on the scope of work necessary to bring the issue to closure. And a revised monitoring date will be included with the request. A report will be submitted to NYSDEC within 60 days of completion of work that documents the specific close-out of the action item.

### 3.3.3 Sub-Surface Operations Plan

The Sub Surface Operations plan reviews those appropriate controls to protect worker health and safety and assure that soils meeting the cover layer materials requirements are restored. As previously stated, DPR contemplates an amendment to this plan once construction operations on the site are finalized based on final construction information.

The amendment will be submitted within 90 days of the approval of the certification report.

1. The Plan will apply to disturbances of material below the cover layer (i.e. soils at a depth below the finished grade of greater than one foot or two feet) or for areas where the demarcation layer is required to be breached.

2. For purposes of the Plan, sub surface activities will be characterized as either routine or non-routine as described below:

   A. Routine Disturbances

   Routine disturbances are those generally associated with the operations and maintenance of the project. Examples include localized pipeline or electrical replacement/repairs, drainage system repairs, building or pond system repairs. These disturbances will always encompass less than one acre in area.

   B. Non-Routine Disturbances

   Non-routine disturbances are those not generally associated with the operations and maintenance of the project and larger projects. Examples include pipeline excavation and replacement, course upgrade involving re-grading. All disturbances of greater than one acre in area will be considered non-routine. Based on the nature of the disturbance and applicable regulatory guidance, inspection certification by a qualified environmental professional may be required and will be vetted with the advance notification to DEC. The below table presents the various plan elements to be prescribed and initiated for both routine and non-routine disturbances. As necessary additional information is provided below the table:

| Management Element | Routine Disturbances | Non-Routine Disturbances |
|---|---|---|
| Advanced Notification to NYSDEC | No | Yes |
| Initiation of Worker Health and Safety Plan | Yes | Yes |
| Inspections certification by Environmental Professional | No | Yes |
| Dust Control | No | Yes |
| Stockpile Protection | Yes | Yes |
| Stormwater Pollution Prevention | No | Yes, if greater than 1 acre of disturbance |
| Segregation of existing cover material for reuse | Yes | Yes |
| New cover layer material option | Yes | Yes |
| Excess Soil Material Disposal | Yes | Yes |
| MSW Segregation & Disposal | Yes, but not anticipated | Yes, to the extent excavated |

In all areas where the demarcation layer is breached, the layer must be re-installed to include the original area of coverage removed during operations. Once the de-

marcation layer is re-installed backfilling of compatible materials to those removed may occur.

When stockpiling occurs, all material above the demarcation layer or material within one or two feet (as applicable by the recreational designation) will be segregated for re-use. Material will be visually inspected upon excavation to ensure comingling does not occur.

The material designated for re-use will be segregated from other excavated materials and placed in a location proximate to the excavated area. The stockpiles will be visibly marked for re-use via placards or other similar methods. Material stockpiles will consist of approximately 500 cubic yards. These piles will generally have a 60 ft by 60 ft footprint and be approximately 6 ft in height. The material stockpiled will be covered with plastic sheets at end of each day. Plastic sheet covers will be weighted down with sand bags or equal at the end of the day to avoid a sailing effect.

Material that is not designated for re-use will be removed from the site and transported to a facility compatible to the disposal requirements. The material will be characterized to ensure proper disposal prior to leaving the site. A report of the material characterization and the identification of the disposal location will be submitted as part of the routine and non-routine reporting requirements.

At times, additional cover layer material may be required to be imported to the site to supplement that material identified for re-use. This material will meet the performance requirements for each component of the Ferry Point Park East project as subject to the Permit. However, one chemical analytical test will be performed per 10,000 cubic yards of cover material to be imported if the material is specifically of the nature of non-exempt construction debris as under the jurisdiction of the permit. If the material to be used is commercially available and purchased for the purpose of replacing or supplementing the cover layer this material is exempt from analytical testing. The analytical report will be included as part of the post event reporting.

Documentation: DPR or their duly appointed representative will submit to NYSDEC, Department of Materials Management correspondence that contains the following information as it relates to routine or non-routine actions:

1. Routine Actions: These actions will be reported as part of the annual inspection report. The report will include proper documentation including a written summary of the event, photographic documentation and a location plan of the routine action.
2. Non-Routine Actions: These actions will be reported to NYSDEC 60 days prior to an event. This notification will include summary documentation regarding the scope of the action and a schedule for the commencement and conclusion of the action and any designs or details as deemed applicable by DPR. Within 90 days of completion, DPR will provide NYSDEC a report

documenting close-out of the action and provide updated as-built drawings as necessary.

If non-routine actions are imminently required due to site safety or operational risks, DPR will immediately inform NYSDEC of the action and commence operations as necessary.

Within 10 days of the commencement of these operations DPR will provide NYSDEC with a draft schedule of completion.

Within 90 days of completion, DPR will provide NYSDEC a report documenting close-out of the action and provide updated as-built drawings as necessary.

### 3.3.4 Health and Safety Plan and Emergency Contact

A Site-Wide Health and Safety Plans (HASP) was developed for construction operations at Ferry Point Park East and approved by DPR in 2009. Based on sub surface post construction operations and maintenance certain portions or the plan in its entirety will be instituted. The HASP is attached as Appendix I.1.

The DPR appointed emergency contact personnel for the site will be submitted with the amended sub surface operations plan. If there are personnel changes this will be noted via an e-mail correspondence to NYSDEC upon identification of the new personnel and noted in the annual report.

## 3.4 Consent Order Maintenance

As per the Order of Consent the following inspection schedule attached as Appendix I.1 specific to "Attachment "A" Proposed Handling of Ferry Point Park Soil Stockpile, Item 6 will be followed:

"*Once the asphalt top course is installed, the asphalt surfaces of the clubhouse and maintenance facility parking lots will be inspected during April and October every year by a licensed professional engineer ("engineer") who is registered to practice in New York State. Within thirty days (30) days of such inspections, the engineer will submit to the Department a stamped and certified written detail report, including photo documentation, regarding the condition of the asphalt surfaces and their adequacy, including photo documentation, regarding the condition of the asphalt surfaces and their adequacy to effectively function as covers. A description of any needed repairs will be included in the engineer's report.*

*Item 7, Any repairs deemed necessary by the engineer must be completed by New York City Department of Parks and Recreation ("NYC Parks") within fifteen (15) days of the notification by the Department to NYCDPR to begin such repairs. A certification, including supporting written and photo documentation must be submitted by NYC Parks within fifteen (15) days after completion of repairs."*

## 3.5 Golf Course Maintenance Guidelines

The **Maintenance Guidelines for Trump Golf Links at Ferry Point Park** attached as Appendix I.5 provides for the operations and maintenance of the golf course by the Concessionaire for a period of 25 years commencing once the golf course is operational. The manual describes those operations and maintenance activities contemplated as part of the day to day operations of the golf course facility. The maintenance guidelines are subject to amendment and revision based on site conditions over time.

# E-4

Bally's Bronx
2023 Semi Annual Post Closure Certification Report
*Prepared by: EGEI Consultants, Inc., P.C.*

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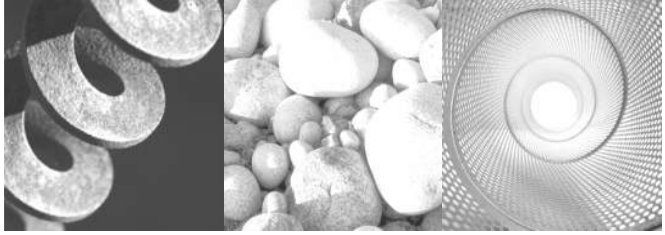

GEI Consultants

Consulting
Engineers and
Scientists

# 2023 Semi-Annual Post-Closure Certification Report

Ferry Point Park
500 Hutchinson River Parkway
Bronx, New York 10465
NYSDEC Part 360 Permit No. 2-6006-00014/00013
(2-6006-00014/00016)

**Prepared for:**
New York State Department of
Environmental Conservation
Division of Materials Management, Region 2
47-40 21st Street
Long Island City, New York 11101

**On Behalf of:**
New York City Department of Parks & Recreation
Capital Projects – Environmental Remediation Unit
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Corona, NY 11368

**Prepared by:**
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October 2023
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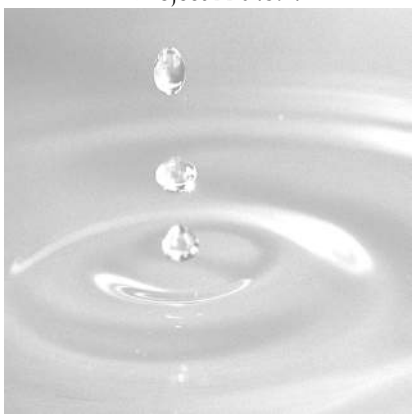

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A. Cover System and Infrastructure Inspection Reports
B. Groundwater Sampling Summary Report – 2023 Sampling Event
NYSDEC Groundwater Sampling Reduction in Frequency Letter
C. Landfill Gas Monitoring Reports
D. Piezometer Monitoring Reports
E. Settlement Plate Monitoring Report
NYSDEC Settlement Plate Monitoring Termination Letter
F. Sub-Slab Depressurization System Monitoring Reports

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# Certification

I, Gary Rozmus, P.E., am currently a registered professional engineer licensed by the State of New York. On behalf of New York City Department of Parks & Recreation (NYCDPR) and acting as its consultant, I hereby certify to the best of my knowledge, and based on all of the information made available to me, that the post-closure activities summarized in this report and performed at the Ferry Point Park Golf Course project site in Bronx, New York, were completed in general accordance with the Post-Closure Custodial Care Plan (PCCCP), originally included in the Supplemental Engineering Report dated October 15, 2013 (Volume 3, Appendix I), and as stated in Special Condition No. 35 of the New York State Department of Environmental Conservation (NYSDEC) Part 360 Permit No. 2-6006-00014/00013 (2-6006-00014/00016), effective May 21, 2014.

To the best of my knowledge, the statements included in this 2023 Semi-Annual Post-Closure Certification Report are accurate based on the information available. GEI Consultants has not knowingly falsified any of the information presented in this document. The post-closure monitoring activities and deliverables included in this report were performed by GEI Consultants, subcontractors, and field personnel under my supervision.

This statement does not apply to the Waterfront Park. It is our understanding that the originally developed plans for the Waterfront Park were revised to reflect a passive open space with multiuse paths, lookout points and a constructed wetland. The Waterfront Project was removed from the New York Codes, Rules and Regulations (6 NYCRR) Part 360 Permit No. 2-6006-00014/00013 and NYSDEC and United States Army Corps of Engineers (USACE) issued Tidal Wetlands permits to the revised Waterfront.

Date signed and sealed:

10/04/2023




Gary Rozmus, P.E.
NY License #056744

# 1. Introduction

This Semi-Annual Post-Closure Certification Report documents the work performed by New York City Department of Parks & Recreation (NYCDPR) and its contractors to complete the post-closure activities conducted from January 2023 through June 2023 at the Ferry Point Park (Site), located at 500 Hutchinson River Parkway, Bronx, New York. Post-closure activities were conducted in accordance with the Post-Closure Custodial Care Plan (PCCCP), originally included in the Supplemental Engineering Report dated October 15, 2013 (Volume 3, Appendix I), as stated in Special Condition No. 35 of the New York State Department of Environmental Conservation (NYSDEC) Part 360 Permit No. 2-6006-00014/00013 (2-6006-00014/00016). Post-closure monitoring activities include piezometer monitoring, landfill gas (LFG) monitoring, sub-slab depressurization system (SSDS) monitoring, cover system and infrastructure inspections, settlement plate monitoring, groundwater sampling, and infrastructure repairs and upgrades (if needed).

In accordance with the PCCCP, piezometer monitoring was conducted monthly. On a quarterly basis, SSDS and LFG monitoring were performed, as well as cover system and infrastructure inspections. Settlement plate monitoring was conducted annually, however, as of June 15, 2023, NYSDEC has approved the cessation of all future annual settlement plate monitoring. Biennial groundwater sampling was conducted in April 2023. Copies of the post-closure monitoring activity reports conducted between January 2023 and June 2023 are provided as appendices to this report.

## 1.1 Site History

Historically, Ferry Point Park operated as a municipal solid waste landfill from 1951 to the 1960s. The landfill was operated by the New York City Department of Sanitation (NYCDOS), with operations ceasing in the 1960s. The entire site was capped thereafter with a soil cover of varying thickness. In the late 1990s, NYCDPR entered into an agreement to develop and operate a new public recreation facility including a 10-acre community park, 180-acre golf course, 19.5-acre waterfront park, as well as related facilities (referred to collectively as "Ferry Point Park"). Ferry Point Park is bounded by the East River to the south, Schley Avenue and St. Raymond's Cemetery to the north, Miles, Balcom, and Emerson Avenues to the east, and Hutchinson River Parkway and the Whitestone Bridge to the west.

The Site is operated as a part of the NYCDPR system; the Community Park and Waterfront Park are operated and maintained by the NYCDPR Borough of the Bronx Operations and Maintenance division (or an appointed representative), the Golf Course was operated and maintained by a Concessionaire identified as Trump Ferry Point, LLC, which has since been transferred to the Bally's Corporation as of September 13, 2023. NYCDPR remains responsible for all inspection monitoring, reporting, and oversight of operations and maintenance of the

pertinent Site-wide components identified in the PCCCP. While the 19.5-acre Waterfront Park is included as a portion of "Ferry Point Park," the Waterfront Park area is not included in the scope of post-closure monitoring or within this report. The originally developed plans for the Waterfront Park were revised to reflect a passive open space with multiuse paths, lookout points and a constructed wetland. The Waterfront Project was removed from the New York Codes, Rules and Regulations (6 NYCRR) Part 360 Permit (2-6006-00014/00013) and NYSDEC and United States Army Corps of Engineers (USACE) issued Tidal Wetlands permits to NYCDPR for the revised Waterfront.

# 2. Post-Closure Monitoring Program

## 2.1 Cover System and Infrastructure Inspection

In accordance with Section 3.3.2.1 of the PCCCP, quarterly monitoring of the final cover system is required during the post-closure period to observe and document vegetative cover conditions, settlement, erosion damage, and cover drainage systems. Additionally, as stated in Section 3.3.2 of the PCCCP, biannual infrastructure inspections of the LFG vents are required; the LFG system included 25 individual passive vents and 12 passive utility collar vents located within the golf course, 12 passive vents located within the community park, as well as additional passive vents through the Site corresponding to features such as the water quality pond liners. Cover system and/or infrastructure inspections were conducted on the following dates:

- March 30, 2023
- June 26 and 27, 2023

In addition, an inspection of the asphalt pavement of the Clubhouse parking lot was conducted on the following date:

- June 27, 2023

Cover inspection and parking lot pavement inspection reports for the referenced events are provided in Appendix A. Overall, the cover system remains in good condition with some areas that required re-seeding and mulching, clearing of clogged drains, and some areas of washout into cart paths. These minor deficiencies were communicated to and are closely addressed/monitored by the Concessionaire. Additionally, the asphalt surface of the parking lot continues to function as a suitable landfill cover system, providing an exposure barrier between the public and subsurface materials. Any observed cracks are surficial and do not penetrate through the full asphalt cap.

## 2.2 Groundwater Monitoring

In accordance with the NYSDEC Part 360 Permit No. 2-6006-00014/00013 and the NYSDEC letter dated January 7, 2020, groundwater sampling requirements have been modified to be conducted on a biennial basis. The preceding groundwater sampling event was completed in April 2021. Therefore, the biennial groundwater sampling event was conducted on April 25 to 26, 2023.

Results from the groundwater sampling event indicate that groundwater flow direction and elevation have remained consistent across the Site. The analytical results for samples collected during the April 2023 event indicate that the groundwater in certain locations beneath Site

contains volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, ammonia, sulfate, and cyanide above NYSDEC Ambient Water Quality Standards (AWQS). With the exception of cyanide, the April 2023 event detections of VOCs, SVOCs, metals, and phenolics are generally consistent in location and/or concentration with previous sampling events. The presence of cyanide is generally consistent with other previous post-closure monitoring events, however, exceedances of the AWQS were only reported during the 2023 sampling event at two sampling locations (PZ-15 and GMW-10).

The report summarizing sampling methodology and locations, analytical results, conclusions and recommendations is included in Appendix B.

## 2.3 Landfill Gas Monitoring

In accordance with NYSDEC Part 360 Permit No. 2-6006-00014/00013, the PCCCP, and the Landfill Gas Management Plan dated 2013, annual and quarterly monitoring is required for offsite and perimeter LFG monitoring points during the post-closure period. In addition to the LFG monitoring wells located within the interior and exterior of the golf course, passive LFG vents stationed in the interior of the golf course were also monitored. LFG monitoring included the collection of oxygen ($O_2$), carbon monoxide (CO), methane (percent lower explosive limit [LEL], percent methane by volume), hydrogen sulfide ($H_2S$), VOCs, well pressure, humidity, air flow, vacuum pressure, and/or temperature measurements. LFG data was collected utilizing a Landtek GEM 5000 Plus with temperature probe, photoionization detector (PID), and a TSI Velocicalc. All equipment was calibrated prior to commencing the monitoring events.

LFG monitoring was conducted on the following dates:

- March 28 to 30, 2023
- June 27 to 28, 2023

The Q1 and Q2 2023 monitoring reports are provided in Appendix C. In general, the LFG monitoring results are consistent with previous post-closure monitoring events and suggests that LFG conditions are stable.

## 2.4 Piezometer Monitoring

In accordance with the October 2013 Landfill Gas Management Plan and the October 2013 PCCCP, monthly monitoring of piezometers is required. During each monitoring event, groundwater levels were measured using an electronic groundwater level meter. Piezometer monitoring was conducted on the following dates:

- January 31, 2023
- February 24, 2023

- March 29, 2023
- April 24, 2023
- May 22, 2023
- June 27, 2023

The Piezometer Monitoring Reports for the aforementioned dates are provided in Appendix D. The piezometer monitoring results indicate that all of the piezometers are in functional condition and there was sufficient groundwater elevation to inhibit methane migration beyond the landfill boundaries.

## 2.5 Settlement Plate Monitoring

Settlement plate monitoring was performed to detect and monitor the rate of settlement that may occur due to solid waste decomposition and was first conducted in 2013. Settlement plate monitoring was performed by GEI on March 29, 2023, in accordance with NYSDEC Part 360 Permit No. 2-6006-00014/00013, the PCCCP, and NYSDEC letter dated January 7, 2020, providing approval to modify the monitoring frequency from quarterly to annually.

The nine settlement plates were surveyed by New York State Licensed Land Surveyor Contractors Line and Grade South (Elmsford, NY). The following data was recorded for each settlement plate:

- Riser elevation
- Settlement
- Cumulative settlement (feet and inches)

Following performance and review of the March 2023 results, GEI recommended terminating all future settlement plate monitoring. Since 2013, the cumulative settlement was negligible, ranging from 0.00 ft to -0.30 ft across all nine plates. Based on these minor fluctuations in elevation, NYSDEC approved to terminate all future monitoring on June 15, 2023, as long as the former landfill continues to be utilized and maintained in its current condition as a golf course.

The March 2023 Annual Settlement Plate Monitoring Report, which includes the results of all previous settlement plate monitoring events, is provided in Appendix E. The NYSDEC letter approving termination of annual settlement plate monitoring is also included in Appendix E.

## 2.6 Sub-Slab Depressurization System Monitoring

In accordance with the October 2013 PCCCP, NYSDEC Part 360 Permit No. 2-6006-00014/00013, and the Landfill Gas Management Plan dated 2013, routine monitoring, operations, and maintenance of the sub-slab depressurization and combustible gas

(CG) monitoring systems is required to be performed on a quarterly basis during the post-closure monitoring period. A site-specific Operations, Maintenance, and Monitoring (OM&M) Manual was developed to address the requirements of the 2013 LFG Management Plan, including a comprehensive review and inventory of SSD and CG system design and construction. SSD and CG system OM&M is conducted on a quarterly basis in the Community Park Comfort Station, Golf Course Maintenance Building, Golf Course Comfort Station, the Cart Storage Barn, and the Golf Course Clubhouse.

SSD and CG system monitoring was conducted on the following dates:

- March 28, 2023
- June 26, 2023

Reports from the SSD and CG system monitoring events on the aforementioned dates are provided in Appendix F. Occasional readings from few SSDS points have detected a positive pressure gradient, which is believed to be associated with seasonal variations such as rise and fall of the water table. With the exception of these discrete anomalous pressure readings, the SSD systems are operating as intended and are overall maintaining negative pressure conditions beneath the building slabs, and thus no methane and very low levels of VOCs have been detected in the ambient air of the buildings.

All CG sensors were communicating with their respective control panels and registered ambient methane readings of 0.0% LEL. No elevated readings or alarm conditions were observed during the post-closure monitoring period.

# 3. Incidental Infrastructure Maintenance and Repairs

There were no infrastructure maintenance or repair activities conducted during this post-closure monitoring period related to the SSD and CG systems located in the Community Park Comfort Station, Golf Course Maintenance Building, Golf Course Comfort Station, the Cart Storage Barn, or the Golf Course Clubhouse.

The monitoring ports for certain LFG monitoring wells were noted to be damaged. The extent of damage is minimal and is primarily from cracked tubing leading out of the J-plugs for collecting measurements. In order to minimize future interference of ambient air during LFG monitoring, GEI will replace the cracked tubing containing holes with a more flexible tubing. These damaged monitoring ports are intended to be replaced during the Q3 2023 Landfill Gas Monitoring event.

Additionally, during the Q1 cover system inspection, two sections of fencing located along the fence line bounding the park and golf course were noted to be damaged. The damaged fencing along the northern portion of the fence was repaired by the Concessionaire by the time of the Q2 inspection. The damaged area along the southern fence line currently contains a temporary fence panel, however, a permanent repair is still required to be addressed by the Concessionaire.

# 4. References

Ecology and Environmental Engineering, P.C. "Ferry Point Park East Landfill Gas Management Plan." Originally submitted October 2011, Revised May 2012, August 2012, and October 15, 2013.

New York State Department of Environmental Conservation. Article 27, Title 7; 6NYCRR 360: Solid Waste Management Permit No. 2-6006-00014/00013/2-6006-00014/00016, Effective Date May 21, 2014. Special Condition No. 35 – Ferry Point Park East Post Construction Custodial Care Plan.

New York City Department of Parks and Recreation. "Ferry Point Park East Post Construction Custodial Care Plan." October 2013.

# Appendix A

## Cover System and Infrastructure Inspection Reports

April 7, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: Quarterly Final Cover System & Infrastructure Inspection - Quarter 1, 2023 (Report No. 28)**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the final cover system monitoring event conducted on March 30, 2023, at the Ferry Point Park Golf Course. Quarterly final cover system monitoring is conducted to observe and report vegetative cover conditions, cover drainage system, erosion damage, and settlement, in compliance with Section 3.3.2.1 of the October 2013 *Post Construction Custodial Care Plan*

During this inspection event, no cover system settlement was observed, and the cover drainage system appeared to be in good condition, with the exception of two area drains, across the Site.

Below is a summary of the observations denoted during the cover system inspection, with observed areas illustrated on **Figure 1**. A photo log documenting observed Quarter 1, 2023 cover system site conditions is attached:

- The Concessionaire was in the process of conducting annual vent trench maintenance at Hole 6 during the inspection (Photo 1). New mulch is expected to be delivered in the coming week, per the Concessionaire.

- Small animal burrows were noted in two locations (Photo 2). The Concessionaire was aware of these burrow locations and is set to address


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530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

these locations by replacing the cover material and seed or sod the areas. Sod is made available from the onsite sod-farm.

- Areas of sparse vegetation and bare soil were observed in multiple locations throughout the Site, including the area where the Grandstands and media platforms were previously erected (Photo 3). These areas require vegetative stabilization; the Concessionaire was notified and will be addressing the noted locations.

- Walking and maintenance cart sand paths were observed throughout the golf course, with few requiring maintenance due to washout and erosion (Photo 4). The Concessionaire has been made aware of these washouts and understand they are responsible for preventing and correcting any sand erosion and washout in these sand paths.

- Two area drains were noted to be clogged with topsoil near Hole 1 and 15 (Photo 5). The Concessionaire stated that clogged area drains are addressed on a weekly basis.

- Previously reseeded areas in the spring and winter area showing vegetative regeneration (Photo 6).

- The outfall along the East River, adjacent to the Whitestone Bridge, was inspected during high tide. Debris and sediment were noted in the area around the structure (Photo 7 and 8).

- In the Ferry Point Community Park, along the fence line that bounds the park and golf course, a section of temporary fence is still present after being previously vandalized (Photo 9). Another area of the black fence is partially downed and requires repair (Photo 10). The Concessionaire was made aware and is to repair these areas of fencing.

Much of the vegetation is dormant due to the season, therefore new areas of limited, dormant, or no vegetation were noted by GEI during the cover system inspection. Please refer to previous reports which document areas with continued limited, dormant, or no vegetation.

Per the direction of previous reports, GEI communicated all field observations to the Concessionaire. The Concessionaire assured they will continue to monitor vegetative conditions on Site. Areas outside of the Concessionaire's maintenance responsibility shall be addressed by New York City Department of Parks & Recreation Maintenance and Operations (NYCDPR M&O).

If you have any questions, please feel free to contact me at (347) 514–3861.

Quarterly Final Cover System & Infrastructure Inspection - Quarter 1, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013
Bronx, NY

Sincerely,

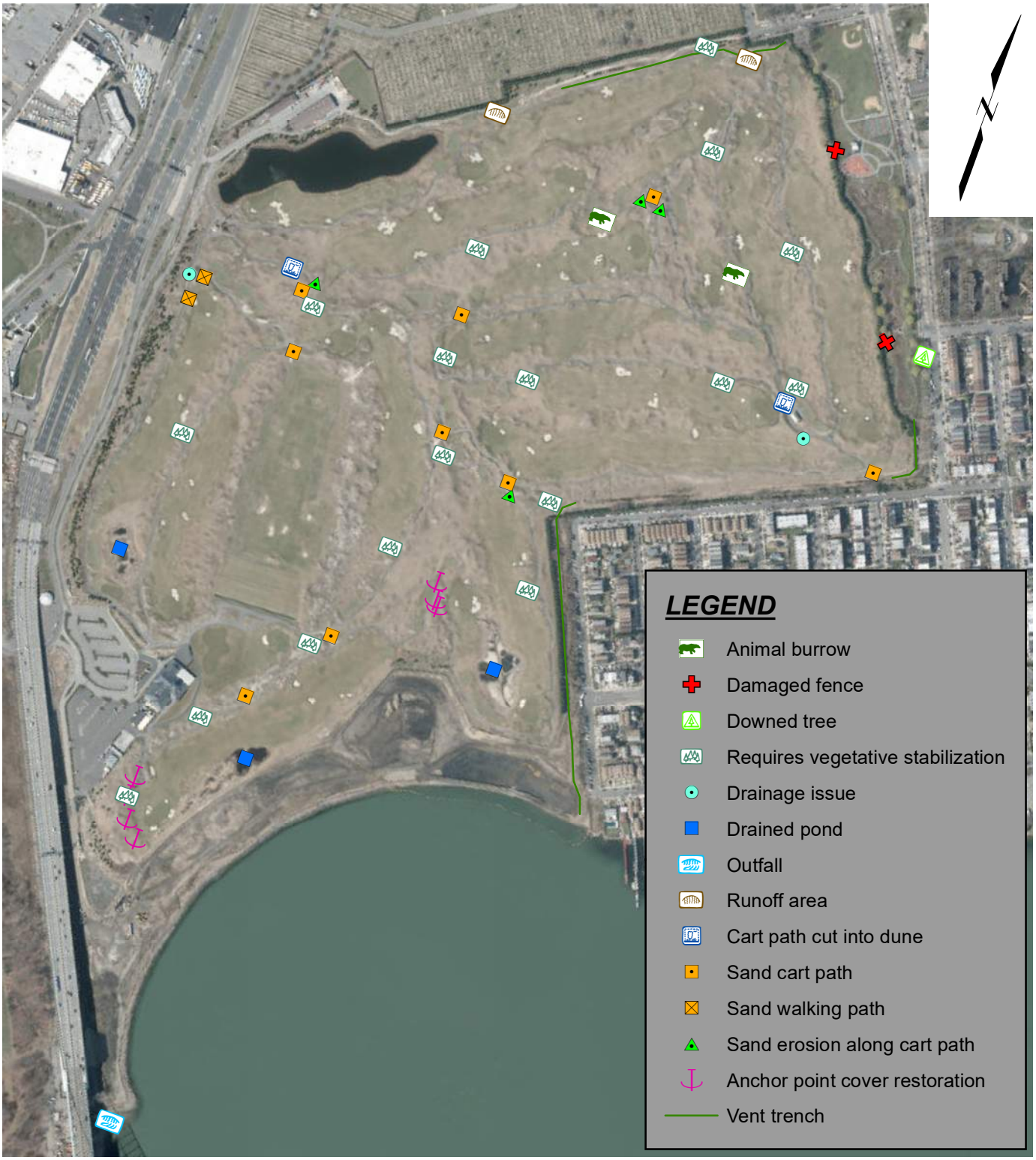
GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Site Map with Inspection Observations
Photo Log of Final Cover System Observations
Cover System Inspection Summary Table

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 450 900
SCALE: 1 " = 620 '

Ferry Point Park
Bronx, New York
Cover Inspection Report

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

QUATER 1
INSPECTION LOCATIONS

Project: 2204594

March 2023

Fig. 1

Photo Log
Quarterly Final Cover System Infrastructure Inspection - Quarter 1, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013



Photo 1: Looking northeast, the Concessionaire began the annual vent trench maintenance. New mulch is expected to be delivered in the coming week.



Photo 2: Looking southeast, animal burrow present at Hole 11. Also noted at Hole 5.



Photo 3: Looking southwest, previous area of Grandstands and media platforms with sparse vegetation (multiple locations, as illustrated on Figure 1).



Photo 4: Looking northeast, area of sand path washout onto paved cart path.



Photo 5: Looking southwest, area drain clogged with topsoil. Clogged drains present at Hole 1 and 15.



Photo 6: Looking southeast, previously reseeded area showing vegetative regeneration.



Photo 7: Looking northwest, condition of the outfall during high tide.



Photo 8: Looking northwest, debris and sediment present around the outfall location.



Photo 9: Looking southwest, temporary fencing present after previous vandalism.



Photo 10: Looking southwest, area of damaged fencing.

**Cover System Inspection Summary Table**

**Date: As of 3/30/2023**

| Deficiency | Location(s) | Photo No. | Notification & Resolution | | |
|---|---|---|---|---|---|
| | | | Concessionaire | NYCDPR M&O | Expected Completion |
| Vent trench mulch | 1 | 1 | x | | Currently being addressed |
| Animal burrow | 2 | 2 | x | | Addressed on rolling basis |
| Sparse vegetation | 17 | 3 | x | | Addressed on rolling basis |
| Sand erosion along cart path | 4 | 4 | x | | Addressed on rolling basis |
| Clogged area drains | 2 | 5 | x | | Addressed on rolling basis |
| Outfall structure | 1 | 7 & 8 | | x | TBD |
| Other: Community Park fence repair | 2 | 9 & 10 | x | | TBD |
| Other: | N/A | | | | |

July 14, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

**Re: Quarterly Final Cover System & Infrastructure Inspection - Quarter 2, 2023 (Report No. 29)**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

Dear Ms. Catalanotto:

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the final cover system monitoring event conducted on June 26 and 27, 2023, at the Ferry Point Park Golf Course. Quarterly final cover system monitoring is conducted to observe and report vegetative cover conditions, cover drainage system conditions, erosion damage, and settlement, in compliance with Section 3.3.2.1 of the October 2013 *Post Construction Custodial Care Plan.*

During this inspection event, no cover system settlement was observed, and the cover drainage system appeared to be in good condition, with the exception of six (6) area drains across the Site.

Below is a summary of the observations denoted during the cover system inspection, with observed areas illustrated on **Figure 1**. A photo log documenting observed Quarter 2, 2023 cover system site conditions is attached:

- Since the Quarter 1 inspection, the vent trench along Hole 6 was observed with new mulch (Photo 1). The Concessionaire stated new mulch was added in April of 2023.

- No animal burrows were noted during this inspection event. However, the Concessionaire addresses animal burrows on an as-need basis by replacing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the cover material and seed or sod the areas. Sod is made available from the onsite sod-farm.

- Areas of sparse vegetation and bare soil were observed in few locations throughout the Site, including the area near the Clubhouse and driving range (Photo 3). These areas require vegetative stabilization; the Concessionaire was notified and will be addressing the noted locations.

- Walking and maintenance cart sand paths were observed throughout the golf course, with few requiring maintenance due to washout and erosion (Photo 4). The Concessionaire has been made aware of these washouts and understand they are responsible for preventing and correcting any sand erosion and washout in these sand paths.

- Six (6) area drains were noted to be clogged with topsoil in various locations around the golf course, illustrated on Figure 1 (Photo 5). The Concessionaire stated that clogged area drains are addressed on a weekly basis.

- Previously re-seeded areas in the spring are showing vegetative regeneration (Photo 6).

- The outfall along the East River, adjacent to the Whitestone Bridge, was inspected during low and high tide. Debris and sediment were noted in the area around the structure (Photo 7 and 8).

- In the Ferry Point Community Park, along the fence line that bounds the park and golf course, a section of temporary fence is still present after being previously vandalized (Photo 9). A previously downed area of fence has been repaired (Photo 10). The Concessionaire was made aware and is to repair these areas of fencing.

Per the direction of previous reports, GEI communicated all field observations to the Concessionaire. The Concessionaire assured they will continue to monitor drainage and vegetative conditions on Site. Areas outside of the Concessionaire's maintenance responsibility shall be addressed by New York City Department of Parks & Recreation Maintenance and Operations (NYCDPR M&O).

If you have any questions, please feel free to contact me at (347) 514–3861.


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Quarterly Final Cover System & Infrastructure Inspection - Quarter 2, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013
Bronx, NY

Sincerely,

GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Site Map with Inspection Observations
Photo Log of Final Cover System Observations
Cover System Inspection Summary Table

c: K. Zias, NYCDPR
K. McCarty, GEI




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 450 900
SCALE: 1 " = 620 '

Ferry Point Park
Bronx, New York
Cover Inspection Report

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

QUATER 2
INSPECTION LOCATIONS

Project: 2204594

July 2023

Fig. 1

Photo Log
Quarterly Final Cover System Infrastructure Inspection - Quarter 2, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013



Photo 1: Looking northeast, the Concessionaire replaced the vent trench mulch in April 2023.



Photo 2: Looking northwest, well maintained sand cart path adjacent to Hole 12.



Photo 3: Looking west, area fronting the Clubhouse requiring vegetation stabilization.



Photo 4: Looking north, area of sand path washout onto paved cart path.



Photo 5: Looking southwest, area drain clogged with topsoil. Clogged drains present at Hole 1 and 15.



Photo 6: Looking southwest, previously reseeded area showing vegetative regeneration.



Photo 7: Looking northwest, condition of the outfall during high tide.



Photo 8: Looking northwest, condition of the outfall during low tide.



Photo 9: Looking southwest, temporary fencing present after previous vandalism.



Photo 10: Looking southwest, area of previously downed fence, now repaired.

**Cover System Inspection Summary Table**

**Date: As of 6/26/2023**

| Deficiency | Location(s) | Photo No. | Notification & Resolution | | |
|---|---|---|---|---|---|
| | | | Concessionaire | NYCDPR M&O | Expected Completion |
| Vent trench mulch | None | 1 | x | | New mulch added in April 2023 |
| Animal burrow | None | | x | | Addressed on rolling basis |
| Sparse vegetation | 3 | 3 | x | | Addressed on rolling basis |
| Sand erosion along cart path | 14 | 4 | x | | Addressed on rolling basis |
| Clogged area drains | 6 | 5 | x | | Addressed on rolling basis |
| Outfall structure | None | 7 & 8 | | x | |
| Other: Community Park fence repair | 1 | 9 & 10 | x | | TBD |
| Other: | N/A | | | | |

July 14, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

**Re: First (1 of 2) Semi-Annual 2023 Parking Lot Pavement Inspection Report**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

Dear Ms. Catalanotto:

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the parking lot asphalt inspection event conducted in June 2023 at the Ferry Point Park Golf Course. Semi-annual parking lot inspections assess the condition of the asphalt surface in the Ferry Point Park Golf Course (Golf Course) Clubhouse parking lot and determine if the asphalt surface is functioning as an effective landfill cover system. Inspections are conducted in compliance with Sections 3.3.2 and 3.4 of the October 2013 *Post Construction Custodial Care Plan* and Paragraph 6, Appendix A of NYSDEC Order of Consent, Case No. R2-20100521-172 dated January 10, 2011.

On June 27, 2023, GEI mobilized to Site to conduct the first (1 of 2) 2023 semi-annual asphalt inspection of the Clubhouse parking lot. The last semi-annual asphalt inspection was completed in December 2022. Observations noted during the June 2023 inspection event are included below:

- The majority of the Golf Course Clubhouse Parking Lot was accessible and visible, except for Location 22. Location 22 was inaccessible due to the placement of storage units. This observation is consistent with the asphalt cover inspections dating back to June 2019.

- Longitudinal cracking was observed in the asphalt surface in the locations noted on Figure 2. The majority of crack depths ranged between 0.25 and


GEI Consultants, Inc.
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4.00 inches, and the majority of crack widths ranged between 0.125 and 1.50 inches.

Based on observations from the June 2023 inspection, GEI concludes that the Clubhouse Parking Lot asphalt surface is functioning as a suitable landfill cover system, providing an exposure barrier between the public and subsurface materials. The observed crack depths and widths appear to be surficial in nature and do not penetrate through the full asphalt cap. Additionally, a minimum of two (2) feet of clean material is located underneath the asphalt surface and above the landfill surface in the northern portion of the Clubhouse Parking Lot where the cracks were observed.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

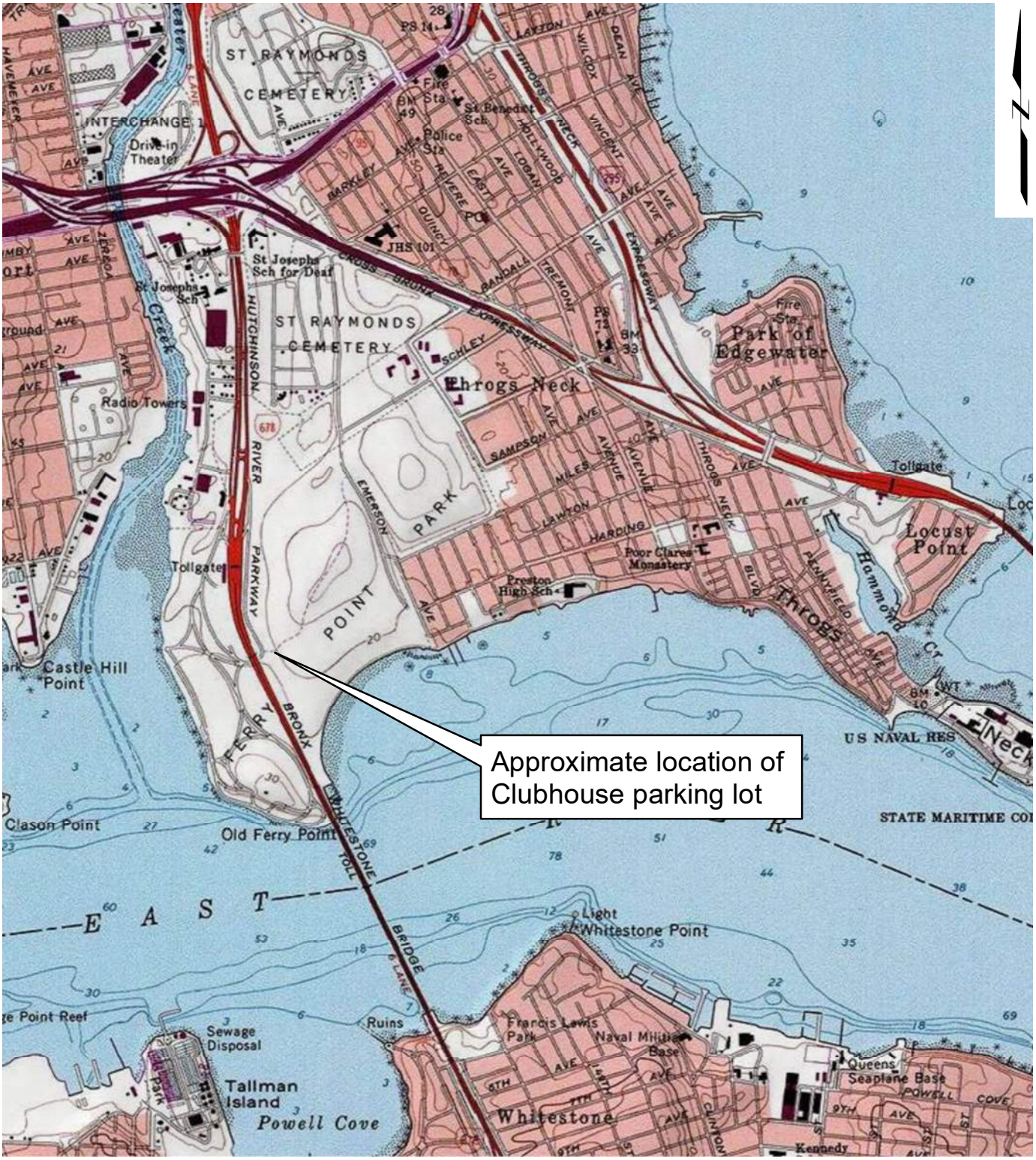
GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Site Location Map
Figure 2 – Observation Location Map
Table 1 - Summary of Asphalt Crack Measurements
Photographic Log

c: K. Zias, NYCDPR
K. McCarty, GEI

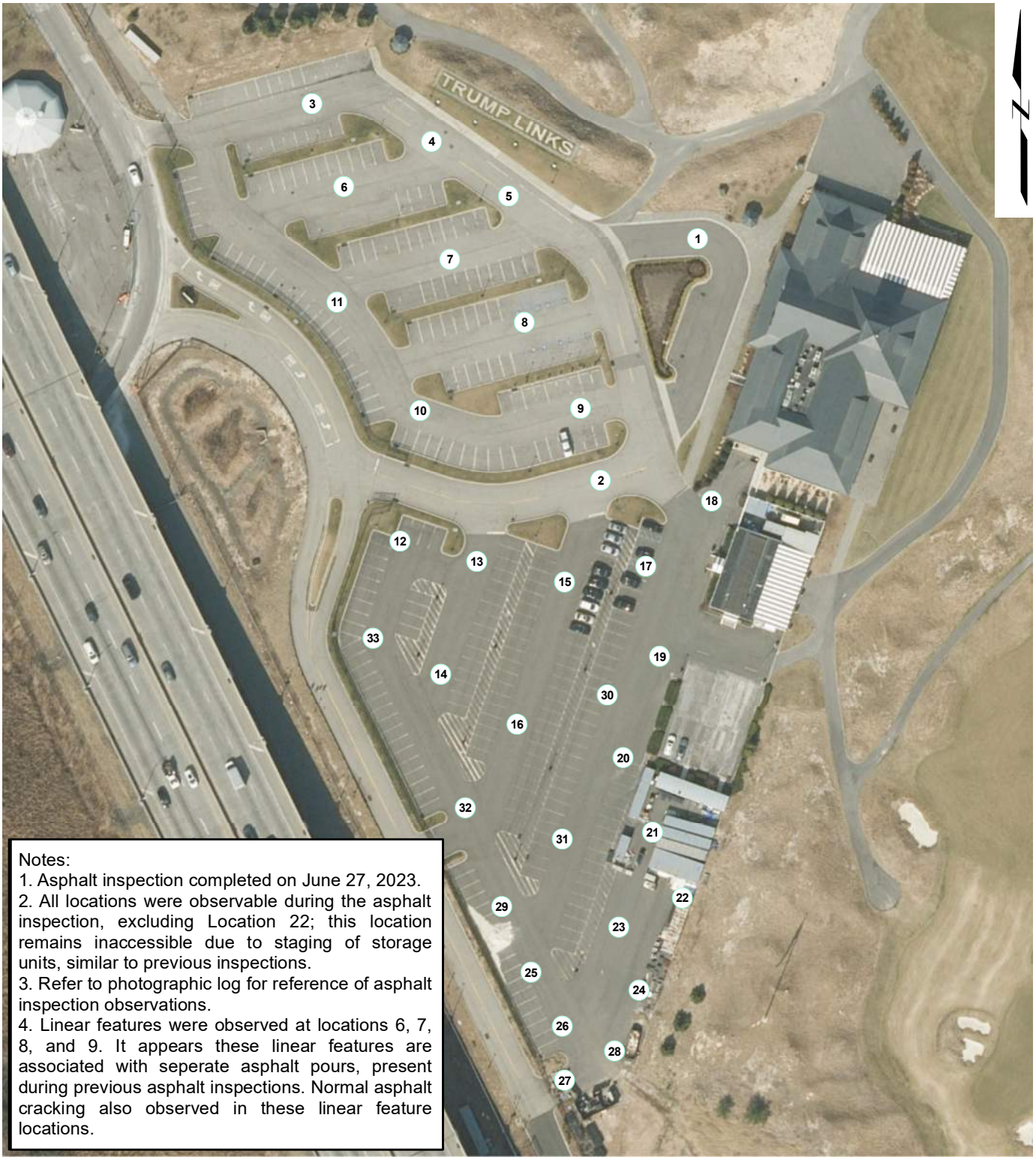



***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 1,400 2,800
SCALE: 1 " = 2,000 '

| | | |
|---|---|---|
| Ferry Point Park<br>Bronx, New York<br>Semi-Annual Parking Lot Pavement Inspection | GEI Consultants | SITE LOCATION |
| New York City Department of Parks & Recreation (NYCDPR)<br>Queens, NY | Project: 2204594 | July 2023 Fig. 1 |

B:\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\Reports\Asphalt Inspections\GEI Inspections\First Half 2023\Figure 1 - Site Location.mxd




Notes:
1. Asphalt inspection completed on June 27, 2023.
2. All locations were observable during the asphalt inspection, excluding Location 22; this location remains inaccessible due to staging of storage units, similar to previous inspections.
3. Refer to photographic log for reference of asphalt inspection observations.
4. Linear features were observed at locations 6, 7, 8, and 9. It appears these linear features are associated with seperate asphalt pours, present during previous asphalt inspections. Normal asphalt cracking also observed in these linear feature locations.

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 80 160
SCALE: 1 " = 110 '

Ferry Point Park
Bronx, New York
Semi-Annual Parking Lot Pavement Inspection

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

ASPHALT SURFACE CRACK LOCATIONS

Project: 2204594 | July 2023 | Fig. 2

B:\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\Reports\Asphalt Inspections\GEI Inspections\First Half 2023\Figure 2 - Asphalt Surface Crack Locations.mxd

Table 1
Summary of Asphalt Crack Measurements
June 26, 2023
Ferry Point Park Golf Course
Bronx, NY

| Crack ID | Crack Width (in) | Crack Depth (in) | Solid Bottom | Notes |
|---|---|---|---|---|
| 1 | 0.125 - 0.25 | 0.125 - 0.50 | Y | |
| 2 | 0.125 - 0.50 | 0.125 - 3.00 | Y | |
| 3 | 0.125 - 0.50 | 0.125 - 2.125 | Y | |
| 4 | 0.125 - 0.50 | 0.125 - 2.00 | Y | |
| 5 | 0.125 - 0.50 | 0.125 - 3.00 | Y | |
| 6 | 0.125 - 0.50 | 0.125 - 1.25 | Y | |
| 7 | 0.125 - 0.25 | 0.125 - 2.00 | Y | |
| 8 | 0.125 - 0.50 | 0.125 - 1.75 | Y | |
| 9 | 0.125 - 1.50 | 0.125 - 2.75 | Y | |
| 10 | 0.125 - 0.75 | 0.125 - 2.125 | Y | |
| 11 | 0.125 - 1.50 | 0.125 - 4.00 | Y | |
| 12 | 0.125 - 0.50 | 0.125 - 2.25 | Y | |
| 13 | 0.125 - 0.50 | 0.125 - 1.50 | Y | |
| 14 | 0.125 - 0.50 | 0.125 - 2.00 | Y | |
| 15 | 0.125 - 0.50 | 0.125 - 2.50 | Y | |
| 16 | 0.125 - 0.50 | 0.125 - 1.50 | Y | |
| 17 | 0.125 - 0.50 | 0.125 - 2.00 | Y | |
| 18 | 0.125 - 1.125 | 0.125 - 3.00 | Y | |
| 19 | 0.125 - 0.25 | 0.125 - 1.50 | Y | |
| 20 | 0.125 - 1.00 | 0.125 - 1.125 | Y | |
| 21 | 0.125 - 0.50 | 0.125 - 1.50 | Y | |
| 22 | - | - | - | Inaccessible - Covered by storage containers |
| 23 | 0.125 - 0.50 | 0.125 - 2.25 | Y | |
| 24 | 0.125 - 0.75 | 0.125 - 2.25 | Y | |
| 25 | 0.125 - 0.50 | 0.125 - 2.00 | Y | |
| 26 | 0.125 - 1.00 | 0.125 - 1.00 | Y | |
| 27 | 0.125 - 1.50 | 0.125 - 2.00 | Y | |
| 28 | 0.125 - 1.50 | 0.125 - 3.50 | Y | |
| 29 | 0.125 - 1.00 | 0.125 - 2.00 | Y | |
| 30 | 0.125 - 0.50 | 0.125 - 2.00 | Y | |
| 31 | 0.125 - 1.00 | 0.125 - 2.00 | Y | |
| 32 | 0.125 - 0.50 | 0.125 - 1.75 | Y | |
| 33 | 0.125 - 0.50 | 0.125 - 2.50 | Y | |

# Photographic Log



| Photo 1 | Location 1 | 6/27/2023 |
|---|---|---|



| Photo 2 | Location 6 | 6/27/2023 |
|---|---|---|



| Photo 3 | Location 9 | 6/27/2023 |
|---|---|---|

# Photographic Log



| Photo 4 | Location 13 | 6/27/2023 |
|---|---|---|



| Photo 5 | Location 16 | 6/27/2023 |
|---|---|---|



| Photo 6 | Location 18 | 6/27/2023 |
|---|---|---|

# Photographic Log



| Photo 7 | Location 24 | 6/26/2023 |
|---|---|---|



| Photo 8 | Location 27 | 6/26/2023 |
|---|---|---|



| Photo 9 | Location 31 | 6/27/2023 |
|---|---|---|

# Appendix B

## Groundwater Sampling Summary Report – 2023 Sampling Event

## NYSDEC Groundwater Sampling Reduction in Frequency Letter

August 9, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: Groundwater Sampling Summary Report – 2023 Sampling Event**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the groundwater sampling event conducted on April 25 - 26, 2023, at the Ferry Point Park Golf Course. Groundwater sampling was performed in compliance with the New York State Department of Environmental Conservation (NYSDEC) Permit No. 2-6006-00014/00013, the October 2013 *Post Construction Custodial Care Plan*, and the NYSDEC letter dated January 7, 2020, in which the groundwater monitoring frequency was approved to be reduced from annually to biennially.

## Groundwater Sampling Methodology

GEI mobilized to the Ferry Point Golf Course on April 25 – 26, 2023 to collect groundwater samples from three (3) piezometers and five (5) groundwater monitoring wells (**Figure 1**). Consistent with previous monitoring events, PZ-01 and PZ-02 were sampled in place of historic monitoring wells GMW-3 and GMW-4 due to their abandonment during golf course construction activities. Additionally, PZ-15 was sampled in place of GMW-6 due to heavily overgrown vegetation and the inability to locate the historic monitoring well. These piezometers were previously chosen and sampled by Woodard & Curran during the 2018, 2019 and 2021 sampling events after confirmation that the piezometers are screened at similar intervals and elevations that the former groundwater monitoring wells were. GEI was also unable to locate GMW-8 and GMW-9, which were previously reported to be dry and unable to be sampled by Woodard & Curran during the 2018, 2019 and 2021 sampling events.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Prior to collecting groundwater samples at the accessible piezometers and monitoring wells, the depth to groundwater and the total well depths were measured at each of the locations using an interface probe attached to a measuring tape, accurate to 0.01 foot. A groundwater contour map is included as **Figure 2** and the groundwater elevation readings are provided on **Table 1**.

Following gauging, the groundwater monitoring wells and piezometers were sampled in accordance with the September 19, 2011 "Field Sampling Procedures for Ferry Point Site" Technical Memorandum prepared by Ecology & Environment Inc. Prior to sample collection, three (3) to five (5) well volumes were purged from the wells using a dedicated polyethylene bailer, with the purged water being stored in a 55-gallon drum staged on Site. Field parameter readings were monitored during purging activities and included measurements for temperature, pH, oxidation reduction potential (ORP), specific conductivity, dissolved oxygen (DO), and turbidity. Groundwater purge and sampling logs are included in **Appendix B**. The drum was disposed of off-site on June 27, 2023, at Dale Transfer Corporation in West Babylon, NY via AARCO Environmental Services. Drum disposal documentation is included in **Appendix C**.

Groundwater samples collected during the sampling event were properly transported to CHEMTECH, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory under chain-of-custody procedures and analyzed for the following:

- Total (unfiltered) and dissolved (lab-filtered) Target Analyte List (TAL) metals;
- Target Compound List (TCL) Semi-Volatile Organic Compounds (SVOCs);
- TCL Volatile Organic Compounds (VOCs);
- Alkalinity;
- Biological Oxygen Demand (BOD);
- Total Dissolved Solids (TDS);
- Chloride, bromide, sulfate, nitrate, nitrite;
- Color;
- Phenolics;
- Cyanide;
- Chemical Oxygen Demand (COD);
- pH;
- Hardness;
- Total Kjeldahl Nitrogen (TKN);
- Ammonia; and
- Total Organic Carbon (TOC).

In addition to the groundwater samples, quality assurance/quality control (QA/QC) samples including trip blanks, a field blank, a field duplicate, and a matrix spike/matrix spike duplicate (MS/MSD) were collected during the sampling event.

**Groundwater Analytical Results**

Groundwater analytical data is provided in **Table 2**, and the laboratory reports are included in **Appendix D**. Groundwater analytical results were compared to NYSDEC Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards (AWQS) for Class GA. The analytical results of groundwater samples are summarized below:

*Volatile Organic Compounds (VOCs)*

- Common laboratory contaminants, acetone, 2-Butanone, methylene chloride, and carbon disulfide, were detected in multiple groundwater samples (GMW-1, GMW-11, PZ-15, GMW-10, GMW-7, PZ-01, PZ-02, GMW-X [the duplicate sample of GMW-11], GMW-5, trip blank and field blank) but mostly at concentrations below their respective NYSDEC AWQS. Acetone was detected in exceedance of its AWQS in GMW-1.

- Numerous VOCs typical of landfill operations, including cis-1,2-Dichloroethene, 1,4-Dichlorobenzene, isopropylbenzene (cumene), and benzene were detected in groundwater samples collected from PZ-01, GMW-1, PZ-15, GMW-10, GMW-X (the duplicate sample of GMW-11), and at concentrations well below their respective NYSDEC AWQS.

- Trichloroethene was detected in PZ-01 and GMW-5 well below its NYSDEC AWQS. However, trichloroethene was also detected in the trip blank at similar levels to those reported at PZ-01 and GMW-5, indicating potential cross-contamination during the shipping and/or handling process. Trichloroethene has not been detected in any samples during the 2018, 2019 or 2021 sampling events.

- Chlorobenzene, a common waste byproduct from the production of chlorinated solvents and pesticides, was detected above the NYSDEC AWQS in PZ-15. Chlorobenzene was also detected in GMW-1 and GMW-10, but below the NYSDEC AWQS. This is consistent with previous sampling events.

*Semi-Volatile Organic Compounds (SVOCs)*

- Naphthalene, a contaminant typically found at or around landfills, was detected at GMW-11 and its duplicate, GMW-X, at levels in exceedance of

its NYSDEC AWQS. This is consistent with concentrations detected at this location during post-closure sampling events.

- Carbazole, generally released into the environment from sources such as waste incineration and/or rubber, petroleum, coal and wood combustion, was detected in GMW-11 and its duplicate, GMW-X, however, there is no NYSDEC AWQS criteria to be met for this compound.

*Metals – Total (unfiltered) and Dissolved (lab-filtered)*

- Total heavy metals including arsenic, cobalt, silver, and zinc were detected in various samples below their respective NYSDEC AWQS.
- Total antimony was detected above the NYSDEC AWQS in samples collected from PZ-01 and PZ-02. Antimony was also detected in GMW-11, GMW-1, GMW-10, and GMW-7 below the AWQS. Antimony was not detected in the dissolved phase.
- Barium was detected above its NYSDEC AWQS in PZ-02 (total), GMW-1 (total and dissolved) and PZ-15 (total). Barium (total and dissolved) was also detected in all other collected samples at concentrations below the AWQS.
- Total cadmium was detected above the NYSDEC AWQS in the sample collected from PZ-15. Cadmium was also detected in other locations both in the total and dissolved phase, but below its AWQS.
- The sample collected form PZ-15 had reported exceedances of total chromium above the NYSDEC AWQS. PZ-01, PZ-02, GMW-11, GMW-X (the duplicate sample of GMW-11), GMW-5, GMW-1, GMW-10, and GMW-7 all had chromium reported below its AWQS. Chromium in the dissolved phase was either non-detect or present in low levels.
- Total copper exceedances of the AWQS were detected in PZ-01 and PZ-15 samples and below the AWQS in the dissolved phase. Copper was also detected in other samples below the AWQS (total and dissolved).
- Total iron was detected above its NYSDEC AWQS in all groundwater samples. Dissolved iron was only present in PZ-01 and GMW-1 in exceedance of its respective AWQS.
- Total lead was reported above its AWQS in all samples except GMW-5, however dissolved lead was non-detect in all collected samples.
- Samples collected from PZ-01, PZ-02, GMW-11, GMW-X (the duplicate sample of GMW-11), PZ-15 and GMW-10 detected total manganese above its AWQS, but only in exceedance in the dissolved phase in PZ-01 and GMW-10.

- Total mercury was detected above its NYSDEC AWQS in PZ-02 and PZ-15, with detections below the AWQS in several other samples. Dissolved mercury was non-detect in all collected samples.
- PZ-15 reported a concentration for total nickel above the AWQS but non-detect in the dissolved phase.
- Sodium was reported above its respective NYSDEC AWQS (total and dissolved) for all groundwater samples excluding GMW-5 and GMW-10.

*Phenolics*

- Phenolics were detected in GMW-11 and its duplicate sample, GMW-X, however there is no NYSDEC AWQS to be met. Phenolics were non-detect in all other groundwater samples.

*Cyanide*

- Cyanide was detected above its NYSDEC AWQS in PZ-15 and GMW-10. In prior sampling events, cyanide concentrations were either non-detect or less than 10 ug/l in the aforementioned locations. Cyanide was also present in all other groundwater samples below the AWQS. The presence of cyanide is generally consistent with other previous post-closure monitoring events, however, exceedances of the AWQS were only reported during the 2023 sampling event.

*Anions*

- Bromide was detected in PZ-02, GMW-1 and PZ-15 at concentrations below its respective AWQS.
- Chloride was detected in all samples collected at concentrations below its respective AWQS.
- Nitrate was detected in PZ-01, GMW-11, PZ-15 and GMW-7 at concentrations below its respective AWQS.
- Sulfate was detected in GMW-11 and its duplicate (GMW-X) at concentrations exceeding its AWQS. Sulfate was also detected in all other samples at concentrations below the AWQS.

## Conclusions

Results from the groundwater sampling event conducted on April 25-26, 2023, indicate that groundwater flow direction and elevation have remained consistent across the Site. A review of the groundwater contours included in Figure 4 from the 2021 sampling event indicate that the groundwater elevation and flow are consistent with 2023 data.

The analytical results for samples collected during the April 2023 sampling event indicate that the groundwater in certain locations beneath Site contains VOCs, SVOCs, metals, ammonia, sulfate and cyanide above NYSDEC AWQS. With the exception of cyanide, the April 2023 event detections of VOCs, SVOCs, metals, and phenolics are generally consistent in location and/or concentration with previous sampling events. GEI suggests continued monitoring of cyanide concentrations for exceedances during future sampling events.

Similar to the 2021 sampling event, chlorobenzene was detected in PZ-15 at a concentration exceeding the NYSDEC AWQS. The concentration of chlorobenzene detected at this location during the April 2023 event is overall consistent with the previous sampling events conducted in 2021 and 2019. Other VOCs such as acetone, 2-Butanone, methylene chloride, and carbon disulfide were also detected, however, these compounds are known to be laboratory contaminants.

One or more metals (total [unfiltered] and dissolved [lab-filtered]) were detected in exceedance of their respective NYSDEC AWQS in all samples collected across the Site. The reported elevated metal concentrations for the 2023 event are consistent with locations and concentrations with previous post-closure sampling events.

Certain SVOCs (including Dimethylphthalate, Di-n-butylphthalate, Acenaphthene) were detected during the 2021 sample event but are now non-detect.

The results of samples collected from PZ-01, PZ-02, and PZ-15 during the 2023 sampling event are consistent with the results reported for the 2021 and 2019 sample events, suggesting they are still acceptable sample location substitutions for missing/abandoned ground water monitoring wells GMW-3, GMW-4, and GMW-6.

Based on the results of the most recent groundwater sampling event and review of previous events, GEI recommends to NYCDPR that the following requests be made to NYSDEC for future post-closure groundwater quality monitoring events:

1. Terminate VOC monitoring from all sampling locations except PZ-15 where chlorobenzene continues to be detected at concentrations in exceedance of its respective AWQS of 5 ug/l. All other locations have either been reported as non-detect or below the AWQS during the 2019, 2021 and 2023 sampling events.

2. Terminate SVOC monitoring from all sampling locations except GMW-11 where naphthalene continues to be detected at concentrations either just below or in exceedance of its respective AWQS of 10 ug/l. All other locations have either been reported as non-detect or below the AWQS during the 2019, 2021 and 2023 sampling events.


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3. Terminate total (unfiltered) metals monitoring from all sampling locations. It is suspected that the total metals concentrations are likely associated with high turbidity (as noted in the sampling logs) and particulates in the monitoring wells/piezometers and does not reflect accurate groundwater concentrations.

4. Continue groundwater analysis of dissolved (lab-filtered) metals, general chemistry, phenolics, anions, and cyanide for all sampling locations.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

GEI CONSULTANTS, INC.



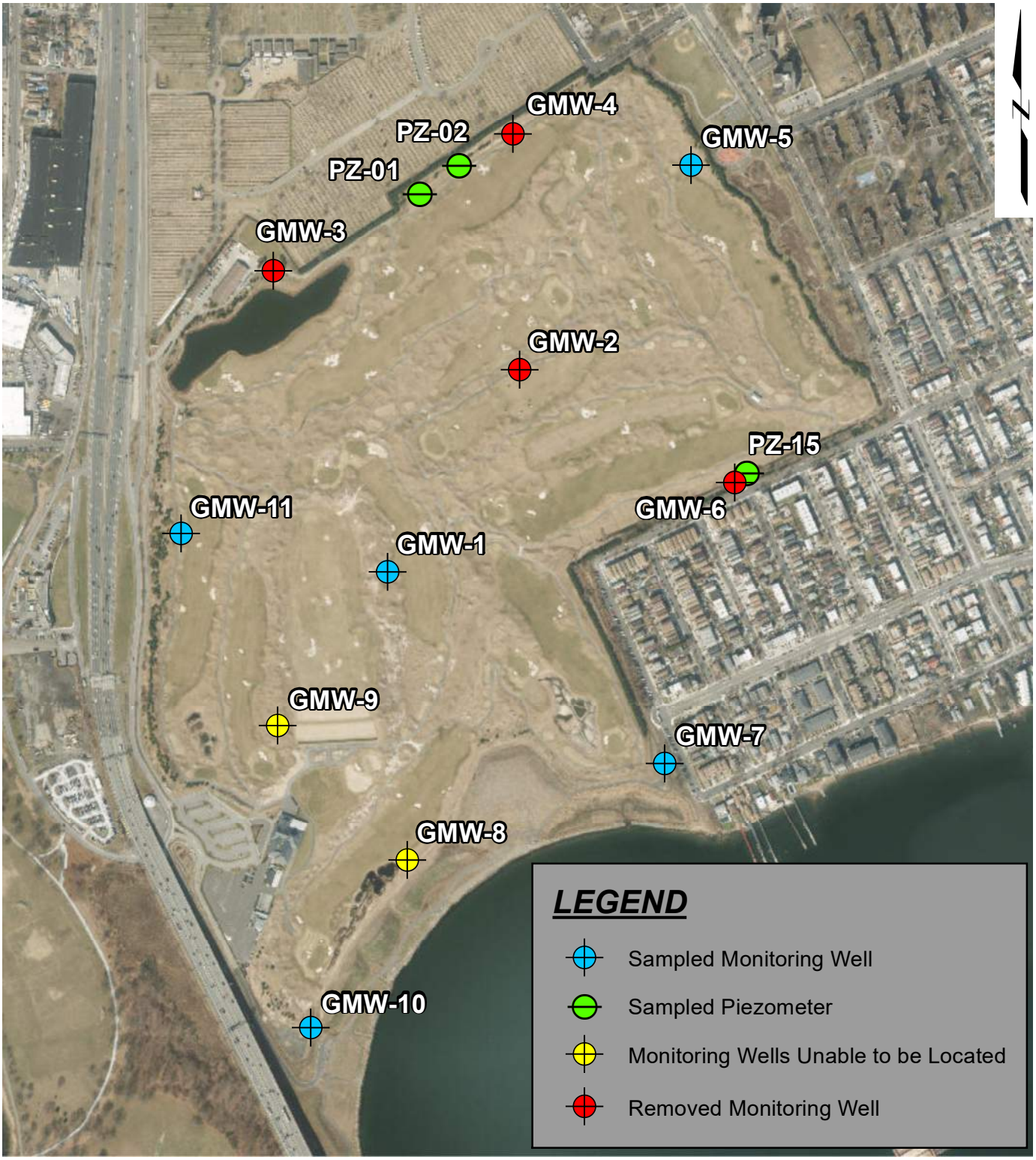
Stacey Ng, P.G
Project Manager

Enclosures:
**Figure 1** – Groundwater Sample Location Plan
**Figure 2** – April 2023 Groundwater Contour Map

**Table 1** – Summary of April 25-26, 2023, Piezometer and Groundwater Well Gauging Results
**Table 2** – Summary of Groundwater Analytical Results
**Appendix A** – NYSDEC Letter to Reduce Groundwater Monitoring Frequency
**Appendix B** – Groundwater Sampling Forms
**Appendix C** – Drum Disposal Documentation
**Appendix D** – Laboratory Reports

c: K. Zias, NYCDPR
K. McCarty, GEI

# Figures




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 480 960
SCALE: 1 " = 656 '

| | | |
|---|---|---|
| Ferry Point Park<br>Bronx, New York<br>Groundwater Sampling | GEI Consultants | GROUNDWATER<br>MONTIORING LOCATIONS |
| New York City Department of Parks & Recreation (NYCDPR)<br>Queens, NY | Project: 2204594 | Fig. 1 |

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## LEGEND

- Monitoring Well
- Piezometer
- Groundwater Contour

**SOURCE:**
1. ESRI IMAGERY BASE MAP

0 130 260
SCALE:1" = 181 '

| | | |
|---|---|---|
| Ferry Point Park<br>Bronx, New York<br>Groundwater Sampling | GEI Consultants | APRIL 2023 GROUNDWATER CONTOUR MAP |
| New York City Department of Parks & Recreation (NYCDPR)<br>Queens, NY | Project 2204594 | Fig. 2 |

# Tables



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Table 1
Summary of April 24-26, 2023 Piezometer and Groundwater Well Gauging Results
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Monitoring Location ID | Top of Casing Elevation (feet) | Measured Depth to Water (ft bToC) | Groundwater Elevation (feet) |
|---|---|---|---|
| PZ-1 | 24.63 | 20.09 | 4.54 |
| PZ-2 | 23.49 | 19.92 | 3.57 |
| PZ-3 | 21.89 | 18.71 | 3.18 |
| PZ-4 | 21.10 | 16.53 | 4.57 |
| PZ-5 | 15.72 | 11.31 | 4.41 |
| PZ-6 | 16.73 | 9.78 | 6.95 |
| PZ-7 | 16.99 | 11.24 | 5.75 |
| PZ-8 | 17.87 | 9.12 | 8.75 |
| PZ-9 | 18.89 | 9.81 | 9.08 |
| PZ-10 | 18.59 | 9.98 | 8.61 |
| PZ-11 | 17.68 | Could not locate | |
| PZ-12 | 16.96 | 10.21 | 6.75 |
| PZ-13 | 9.67 | 2.60 | 7.07 |
| PZ-14 | 10.82 | 3.41 | 7.41 |
| PZ-15 | 9.26 | 3.11 | 6.15 |
| PZ-16 | 9.80 | 2.55 | 7.25 |
| PZ-17 | 9.38 | 2.65 | 6.73 |
| PZ-18 | 14.42 | 7.59 | 6.83 |
| PZ-19 | 16.29 | 9.26 | 7.03 |
| PZ-20 | 11.68 | 7.12 | 4.56 |
| PZ-21 | 14.46 | 11.96 | 2.50 |
| PZ-22 | 13.58 | 12.45 | 1.13 |
| PZ-23 | 16.46 | 12.92 | 3.54 |
| PZ-25 | 23.54 | 19.87 | 3.67 |
| GMW-1 | 39.59 | 26.81 | 12.78 |
| GMW-2 | 33.22 | Well Lost | |
| GMW-3 | 24.55 | Well Lost | |
| GMW-4 | 20.08 | Well Lost | |
| GMW-5 | 22.28 | 6.40 | 15.88 |
| GMW-6 | 7.73 | Well Lost | |
| GMW-7 | 12.58 | 8.98 | 3.60 |
| GMW-8 | 17.33 | Could not locate | |
| GMW-9 | 29.94 | Could not locate | |
| GMW-10 | 13.49 | 9.99 | 3.50 |
| GMW-11 | 31.98 | 15.36 | 16.62 |

ft bToC - feet below top of casing
Could not locate PZ-11 (within Community Park) due to overgrown vegetation

**Table 2**
Summary of 2023 Post-Closure Ground Water Analytical Results
Ferry Point Park Golf Course
New York City Department of Parks and Recreation

| Sample ID | NY TOGS Class GA AWQS | PZ-01 | PZ-02 | GMW-11 | GMW-X | GMW-5 | TRIP BLANK | GMW-1 | PZ-15 | GMW-10 | GMW-7 | TB-2 | FB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 |
| **Matrix** | | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water |
| **Units** | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| **Volatile Organic Compounds (VOCs)** | | | | | | | | | | | | | |
| Dichlorodifluoromethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichlorotrifluoroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 50 | **17.7** | **5.5** | 5 U | **2.6** J | **9.9** | **2.4** J | **280** | **10.9** | **6.4** | **2.8** J | 5 U | **2.4** J |
| Carbon Disulfide | 60 | 1 U | 1 U | **0.61** J | **0.72** J | 1 U | 1 U | 1 U | **0.35** J | 1 U | 1 U | 1 U | 1 U |
| Methyl tert-butyl Ether | 10 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Acetate | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene Chloride | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.68** J |
| trans-1,2-Dichloroethene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | NS | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 50 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **1.9** J | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 5 | **0.22** J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 7 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylcyclohexane | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Benzene | 1 | 1 U | 1 U | 1 U | **0.21** J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 0.6 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 5 | **0.5** J | 1 U | 1 U | 1 U | **0.77** J | **0.6** J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 4-Methyl-2-Pentanone | NS | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| t-1,3-Dichloropropene | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Hexanone | NS | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | 0.0006 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **3.3** | **12.5** | **0.37** J | 1 U | 1 U | 1 U |
| Ethyl Benzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m/p-Xylenes | NS | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| o-Xylene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Table 2**
Summary of 2023 Post-Closure Ground Water Analytical Results
Ferry Point Park Golf Course
New York City Department of Parks and Recreation

| Sample ID | NY TOGS Class GA AWQS | PZ-01 | PZ-02 | GMW-11 | GMW-X | GMW-5 | TRIP BLANK | GMW-1 | PZ-15 | GMW-10 | GMW-7 | TB-2 | FB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 |
| **Matrix** | | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water |
| **Units** | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Bromoform | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.44** J | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.88** J | **1.1** | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-Chloropropane | 0.04 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **Semi-Volatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | |
| Benzaldehyde | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Phenol | 1 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| bis(2-Chloroethyl)ether | 1 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Chlorophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Methylphenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,2-oxybis(1-Chloropropane) | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Acetophenone | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 3+4-Methylphenols | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| n-Nitroso-di-n-propylamine | NS | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.6 U | -- | 2.5 U | 2.5 U | 2.5 U | 2.5 U | -- | 2.5 U |
| Hexachloroethane | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Nitrobenzene | 0.4 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Isophorone | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Nitrophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,4-Dimethylphenol | 1 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| bis(2-Chloroethoxy)methane | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,4-Dichlorophenol | 1 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Naphthalene | 10 | 5 U | 5.1 U | **11.8** | **11.6** | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4-Chloroaniline | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Hexachlorobutadiene | 0.5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Caprolactam | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| 4-Chloro-3-methylphenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Methylnaphthalene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Hexachlorocyclopentadiene | 5 | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| 2,4,6-Trichlorophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,4,5-Trichlorophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 1,1-Biphenyl | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Chloronaphthalene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Nitroaniline | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Dimethylphthalate | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Acenaphthylene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,6-Dinitrotoluene | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 3-Nitroaniline | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Acenaphthene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |

**Table 2**
Summary of 2023 Post-Closure Ground Water Analytical Results
Ferry Point Park Golf Course
New York City Department of Parks and Recreation

| Sample ID | NY TOGS Class GA AWQS | PZ-01 | PZ-02 | GMW-11 | GMW-X | GMW-5 | TRIP BLANK | GMW-1 | PZ-15 | GMW-10 | GMW-7 | TB-2 | FB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 |
| **Matrix** | | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water |
| **Units** | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| 2,4-Dinitrophenol | 1 | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| 4-Nitrophenol | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Dibenzofuran | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,4-Dinitrotoluene | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Diethylphthalate | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4-Chlorophenyl-phenylether | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Fluorene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4-Nitroaniline | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4,6-Dinitro-2-methylphenol | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| n-Nitrosodiphenylamine | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4-Bromophenyl-phenylether | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Hexachlorobenzene | 0.04 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Atrazine | 7.5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Pentachlorophenol | 1 | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Phenanthrene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Anthracene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Carbazole | NS | 5 U | 5.1 U | **2.7** J | **3** J | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Di-n-butylphthalate | 50 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Fluoranthene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Pyrene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Butylbenzylphthalate | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 3,3-Dichlorobenzidine | 5 | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Benzo(a)anthracene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Chrysene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Bis(2-ethylhexyl)phthalate | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Di-n-octyl phthalate | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Benzo(b)fluoranthene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Benzo(k)fluoranthene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Benzo(a)pyrene | ND | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Indeno(1,2,3-cd)pyrene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Dibenzo(a,h)anthracene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Benzo(g,h,i)perylene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 1,2,4,5-Tetrachlorobenzene | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 1,4-Dioxane | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,3,4,6-Tetrachlorophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| **Total Metals (unfiltered)** | | | | | | | | | | | | | |
| Aluminum | NS | **2650** | **5240** | **19300** | **17500** | **873** | -- | **693** | **140000** | **561** | **2230** | -- | 50 U |
| Antimony | 3 | **3.47** J | **4.92** J | **2.22** J | 25 U | 25 U | -- | **2.29** J | 25 U | **2.86** J | **2.16** J | -- | 25 U |
| Arsenic | 25 | **6.06** J | **20.1** | **7.15** J | **7.38** J | 10 U | -- | 10 U | **15.2** | **6.65** J | 10 U | -- | 10 U |
| Barium | 1000 | **545** | **2380** | **254** | **234** | **36.6** J | -- | **2370** | **2260** | **392** | **290** | -- | 50 U |
| Beryllium | NS | **0.32** J | **0.92** J | **1.04** J | **0.92** J | 3 U | -- | **0.29** J | **6.6** | **0.2** J | 3 U | -- | 3 U |
| Cadmium | 5 | **2.96** J | **2.84** J | **0.49** J | **0.37** J | **3.51** | -- | **1.11** J | **11.9** | **0.7** J | **1.47** J | -- | 3 U |
| Calcium | NS | **129000** | **101000** | **91200** | **86100** | **67900** | -- | **123000** | **137000** | **153000** | **145000** | -- | **50.4** J |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 |
| **Matrix** | | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water |
| **Units** | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Chromium | 50 | **11.8** | **23.2** | **33** | **31.9** | **1.83** J | -- | **6.13** | **369** | **3.09** J | **9.98** | -- | **0.85** J |
| Cobalt | NS | **3.58** J | **12** J | **12.8** J | **12.1** J | 15 U | -- | **1.49** J | **170** | **1.45** J | **2.59** J | -- | 15 U |
| Copper | 200 | **351** | **186** | **92** | **76.1** | **13.3** | -- | **34.4** | **293** | **58.8** | **61.7** | -- | 10 U |
| Iron | 300 | **14000** | **35900** | **26200** | **25300** | **1930** | -- | **26700** | **239000** | **16500** | **4730** | -- | 50 U |
| Lead | 25 | **238** | **451** | **205** | **193** | **19.2** | -- | **45.7** | **170** | **66** | **49.5** | -- | 6 U |
| Magnesium | NS | **13100** | **29600** | **8300** | **7490** | **5990** | -- | **27400** | **69900** | **23700** | **26900** | -- | 1000 U |
| Manganese | 300 | **761** | **440** | **442** | **401** | **189** | -- | **174** | **8080** | **894** | **249** | -- | **0.88** J |
| Mercury | 0.7 | **0.39** | **0.74** | **0.57** | **0.49** | 0.2 U | -- | **0.21** | **0.87** | 0.2 U | **0.083** J | -- | 0.2 U |
| Nickel | 100 | **21.3** | **43.1** | **41.9** | **39.9** | **4.64** J | -- | **4.98** J | **564** | **12.2** J | **20** | -- | 20 U |
| Potassium | NS | **16600** | **42800** | **33100** | **33200** | **8000** | -- | **23900** | **47000** | **35300** | **20900** | -- | 1000 U |
| Selenium | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | -- | 10 U | **5.9** J | 10 U | 10 U | -- | 10 U |
| Silver | 50 | **1.43** J | **8.06** | **5.18** | **4.86** J | 5 U | -- | **4.96** J | **37.9** | 5 U | 5 U | -- | 5 U |
| Sodium | 20000 | **26500** | **129000** | **55800** | **56000** | **5930** | -- | **60900** | **29800** | **14400** | **32800** | -- | **240** J |
| Thallium | NS | 20 U | 20 U | 20 U | 20 U | 20 U | -- | 20 U | 20 U | 20 U | 20 U | -- | 20 U |
| Vanadium | NS | **8.59** J | **26.8** | **48.3** | **44.2** | **12.1** J | -- | **24** | **313** | **22.1** | **4.55** J | -- | 20 U |
| Zinc | 5000 | **592** | **1070** | **235** | **234** | **24.4** | -- | **98.8** | **519** | **86** | **185** | -- | **2.17** J |
| **Dissolved Metals (lab-filtered)** | | | | | | | | | | | | | |
| Aluminum | NS | **124** | **112** | **108** | **112** | 50 U | -- | **141** | **80.5** | **147** | **145** | -- | 50 U |
| Antimony | 3 | 25 U | 25 U | 25 U | 25 U | 25 U | -- | 25 U | 25 U | 25 U | 25 U | -- | 25 U |
| Arsenic | 25 | 10 U | 10 U | **3.95** J | 10 U | 10 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Barium | 1000 | **429** | **570** | **50** | **42.8** J | **15.7** J | -- | **1630** | **291** | **320** | **233** | -- | **9.56** J |
| Beryllium | NS | 3 U | 3 U | 3 U | 3 U | 3 U | -- | 3 U | 3 U | 3 U | 3 U | -- | 3 U |
| Cadmium | 5 | 3 U | 3 U | 3 U | 3 U | 3 U | -- | **0.11** J | 3 U | **0.11** J | **0.23** J | -- | **0.28** J |
| Calcium | NS | **117000** | **88200** | **83000** | **78700** | **13300** | -- | **104000** | **61300** | **146000** | **137000** | -- | **1900** |
| Chromium | 50 | 5 U | **1.29** J | **0.82** J | 5 U | 5 U | -- | **1.11** J | 5 U | 5 U | 5 U | -- | 5 U |
| Cobalt | NS | **0.81** J | **1.63** J | 15 U | 15 U | 15 U | -- | **0.47** J | **2.49** J | 15 U | **0.84** J | -- | 15 U |
| Copper | 200 | **25.4** | **28.3** | 10 U | 10 U | 10 U | -- | **35.7** | **10.4** | **23.9** | **22.3** | -- | 10 U |
| Iron | 300 | **646** | **92.2** | 50 U | 50 U | 50 U | -- | **361** | **62.4** | **27** J | **24.9** J | -- | **32.2** J |
| Lead | 25 | 6 U | 6 U | 6 U | 6 U | 6 U | -- | 6 U | 6 U | 6 U | 6 U | -- | 6 U |
| Magnesium | NS | **12900** | **23300** | **1920** | **1720** | **1360** | -- | **30100** | **43700** | **23900** | **25800** | -- | **41.9** J |
| Manganese | 300 | **433** | **228** | **6.06** J | **4.78** J | **35.9** | -- | **76.3** | **41.7** | **702** | **207** | -- | **31.6** |
| Mercury | 0.7 | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | 0.2 U |
| Nickel | 100 | **7.25** J | **9.28** J | **5.56** J | **6.8** J | **0.93** J | -- | **2.49** J | **14** J | **8.11** J | **8.17** J | -- | 20 U |
| Potassium | NS | **15900** | **31100** | **31500** | **31300** | **1530** | -- | **27200** | **30900** | **35200** | **20500** | -- | 1000 U |
| Selenium | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Silver | 50 | 5 U | **0.67** J | **0.74** J | 5 U | 5 U | -- | **0.7** J | **0.81** J | 5 U | 5 U | -- | 5 U |
| Sodium | 20000 | **29000** | **86200** | **58200** | **58100** | **1120** | -- | **69800** | **36400** | **15500** | **32800** | -- | **763** J |
| Thallium | NS | 20 U | 20 U | 20 U | 20 U | 20 U | -- | 20 U | 20 U | 20 U | 20 U | -- | 20 U |
| Vanadium | NS | 20 U | 20 U | **6.86** J | **7.02** J | 20 U | -- | 20 U | 20 U | 20 U | 20 U | -- | 20 U |
| Zinc | 5000 | **35.4** | **13.3** J | **3.56** J | **5.72** J | **1.85** J | -- | **10.9** J | **4.22** J | **17** J | **70.2** | -- | **21.4** |
| **General Chemistry (ug/L)** | | | | | | | | | | | | | |
| Hardness, Total | NS | **376000** | **374000** | **262000** | **246000** | **194000** | -- | **420000** | **630000** | **480000** | **473000** | -- | 126 U |
| pH | NS | **6.66** | **6.74** | **9.43** | **9.49** | **7.87** | -- | **6.85** | **6.71** | **6.72** | **7.02** | -- | **5.48** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 |
| **Matrix** | | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water |
| **Units** | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Chemical Oxygen Demand (COD) | NS | **140000** | **82000** | **55000** | **64000** | **126000** | -- | **160000** D | **190000** D | **114000** | **15000** | -- | 10000 U |
| Biological Oxygen Demand (BOD5) | NS | **26600** | **14300** | **6360** | **3540** | **6460** | -- | **95400** | **39200** | **8500** | **10200** | -- | 2000 U |
| Total Organic Carbon (TOC) | NS | **9900** | **17900** | **11000** | **11400** | **8900** | -- | **28100** D | **30400** D | **26400** D | **7900** | -- | **760** J |
| Total Kjiedahl Nitrogen (TKN) | NS | **5300** | **52600** D | **3500** | **4100** | **6900** | -- | **13000** D | **49600** D | **520** | **4700** | -- | 500 U |
| Total Dissolved Solids (TDS) | NS | **508000** | **736000** | **528000** | **538000** | **332000** | -- | **666000** | **773000** | **729000** | **658000** | -- | 10000 U |
| Ammonia as N | 2000 | **2600** D | **33800** D | **88** J | **210** | **210** | -- | **13300** D | **56800** D | **1600** | **1500** | -- | 100 U |
| Phenolics | NS | 50 U | 50 U | **19** J | **21** J | 50 U | -- | 50 U | 50 U | 50 U | 50 U | -- | 50 U |
| **Anions** | | | | | | | | | | | | | |
| Bromide | 2000 | 2000 U | **1200** J | 2000 U | **750** J | 2000 U | -- | **900** J | **970** J | 2000 U | 2000 U | -- | 2000 U |
| Chloride | 250000 | **33000** D | **138000** D | **33900** D | **33900** D | **5700** | -- | **44400** D | **38200** D | **19400** D | **21700** D | -- | 600 U |
| Nitrite | 1000 | 600 U | 600 U | 600 U | 600 U | 600 U | -- | 600 U | 600 U | 600 U | 600 U | -- | 600 U |
| Nitrate | 10000 | **200** J | 500 U | **250** J | **200** J | 500 U | -- | 500 U | **190** J | 500 U | **1700** | -- | 500 U |
| Sulfate | 250000 | **34900** | **9400** | **289000** D | **292000** D | **2900** J | -- | **1500** J | **3000** | **53000** D | **68000** D | -- | 3000 U |
| Nitrate+Nitrite | 10000 | **200** J | 1100 U | **250** J | **200** J | 1100 U | -- | 1100 U | **190** J | 1100 U | **1700** | -- | 1100 U |
| **Cyanide** | | | | | | | | | | | | | |
| Cyanide | 200 | **27** | **140** | **42** | **4.7** J | **2.7** J | -- | **35** | **340** | **220** | **10** | -- | **1.4** J |

**Notes**

**--** - Not analyzed

N (Organics) - Presumptive Evidence of a Compound

N (Inorganics) - The matrix spike recovery was outside control limits

NS - No Standard

**Bold** - Indicates a detected concentration

**Bold and shaded** - Indicates an exceedance of TOGS GA Ambient Water Quality Standards

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

Q - Indicates LCS control criteria did not meet requirements.

# Appendix A

NYSDEC Letter to Reduce Groundwater Monitoring Frequency

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Materials Management, Region 2**
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4996 I F: (718) 482-6391
www.dec.ny.gov

January 7, 2020

Marty Rowland, Ph.D., P.E.
Senior Project Manager for Environmental Remediation
New York City Department of Parks and Recreation
Central Project Division, Environmental Unit
Olmstead Center
Flushing Meadows
Corona Park
Flushing, NY 11368

Re: Ferry Point Park Golf Course
Permit No. 2-6006-00014/00013
Post-Closure Groundwater Monitoring
Request for Cessation for Groundwater Monitoring

Dear Mr. Rowland,

New York State Department of Environmental Conservation (Department) staff have reviewed your November 20, 2019 request to terminate the Ferry Point Golf Course post-closure groundwater monitoring program This request is based on the relatively consistent ground water elevation and flow direction, the laboratory results from ground water samples collected during both pre-closure and post closure monitoring over an eight-year period of monitoring events, and the lack of any potential direct receptors or routes of exposure associated with ground water at Ferry Point Park.

After careful review of the post-closure groundwater monitoring program, the laboratory results from ground water samples collected during both pre-closure and post closure monitoring over an eight-year period of monitoring events and specific circumstances and history of this site, the Department cannot grant this request but rather the following frequency reduction to the Ferry Point Golf Course groundwater monitoring program can be implemented:

1) Starting immediately, the Ferry Point Golf Course groundwater monitoring frequency can be reduced from annual to once every two years through 2030.

2) After 2030, the Ferry Point Golf Course groundwater monitoring frequency can be modified from once every two years to once every five years indefinitely as custodial care consistent with Part 363-9.6(b).

If you have any questions you may contact me at 718-482-4996.

Sincerely,

Kenneth B. Brezner

Kenneth B. Brezner, P.E.
Regional Material Management Engineer

ec: J. O'Connell/W. Frank, DEC R2, DMM
S. Southwell, DEC R2, DOW
K. Zias, NYCDPR
S. Laura, Woodard and Curran

FPP_Post-Closure_Groundwater_Monitoring_request_for_Cessation.2020-01-07.Letter.docx

# Appendix B

Groundwater Sampling Forms

## Low-Flow Groundwater Sampling Form

Project number and name: Ferry Point | Sampling personnel: S.M & E.S. (Proffered) | Sample date: 4/25/23 | Well ID: PZ-01

Well location description: _____

**Well Construction**

Well diameter: 2"
Well measurement point: _____
Roadbox condition: _____
Well screen interval: _____
Well depth: 22.54

**Sampling Information**

Initial depth to water: 21.12 Time: 08:03
Sample intake depth: 22
Pump type and ID: Bailer
Stabilized flow rate: _____

Stabilized flow rate = flow rate with no further drawdown

VOl = 0.22 gal
0.0 ppm outer
0.0 ppm inner

**Samples Collected**

| | |
|---|---|
| VOCs 8260 SIM | X |
| SVOCs 8270 SIM | X |
| Metals | X |
| M/E/E | |
| Nitrate/Sulfate | X |
| PCBs | |
| Other | X (WYS AWGS) |

**Field values at time of sample collection:**

| | | |
|---|---|---|
| Time: | 08:49 | |
| Sp.Cond. | 0.633 | uS/cm |
| DO | 18.2 | mg/L |
| ORP | 122 | mV |
| pH | 7.26 | s.u. |
| Temp. | 17.41 | °C |
| Turb. | 193 | NTU |

Depth to water: 21.12

| Cumulative Time (min.) | Volume ~~(L)~~ gal | Water depth (ft) | Temp. (°C) | Sp.Cond. (uS/cm) | D.O. ~~(mg/L)~~ % | pH (s.u.) | ORP (mV) | Turb. (NTU) |
|---|---|---|---|---|---|---|---|---|
| Typical Groundwater Values | | | 5 to 15 | 50 to 5000 | 0 to 4 | 5 to 7 | -100 to +500 | aim for <10 |
| 8:19 0 | 0.22 | 21.12 | 15.85 | 0.668 | 35.3 | 7.63 | 186 | 388 |
| 8:21 2 | 0.22 | 21.13 | 16.30 | 0.729 | 89.7 | 6.45 | 162 | 1000+ |
| 8:29 10 | 0.22 | 21.13 | 16.40 | 0.725 | 97.3 | 6.63 | 146 | 1000+ |
| 8:31 12 | 0.22 | 21.13 | 16.82 | 0.797 | 26.0 | 6.53 | 134 | 342 |
| 8:40 21 | 0.22 | 21.12 | 17.36 | 0.810 | 20.7 | 6.106 | 139 | 350 |

**Sample Information:**

Sample ID: PZ-01
Sample Date&Time: 4/25/23
Color: slightly murky (brown/gray sed)
Turbidity: 193
Field Filtered YES / NO
Analyses: _____
Filter type: _____
Odor/Sheen/NAPL: N/A
Duplicate Collected YES / NO
If yes, duplicate ID: _____
Purge water disposal? to ground drummed other: Treatment System

Well Volume Conversion:

| Diam. (in) | Factor (gal/ft) |
|---|---|
| 1 | 0.04 |
| 1.5 | 0.09 |
| 2 | 0.16 |
| 4 | 0.65 |
| 6 | 1.50 |

well volume =
3.14 x (r)^2 x 7.48 gal/ft
where r = 1/2 diameter in ft

Stabilization Criteria:
Sp.Cond. +/- 10%
DO +/- 10%
ORP +/- 10 mV
pH +/- 10%
Temp. +/- 10%
Turb. <10 NTU

**Guidance:**

1 Position tubing at midpoint of saturated screened interval
2 Minimize drop in water level and purge until parameters are stable
3 Disconnect flow thru cell during sampling
4 Call Project Manager if issues arise (e.g. stabilization takes more than 2 hrs, well goes dry, odd data).
5 For VPH and VOC samples, if stabilization flow rate is less than 200 ml/min, contact PM

Notes: _____

# Low-Flow Groundwater Sampling Form

Project number and name: Ferry Point | Sampling personnel: S.M & F.S (proffered) | Sample date: 4/25/23 | Well ID: PZ-02

Well location description: _____

**Well Construction**

Well diameter: 2"
Well measurement point: _____
Roadbox condition: _____
Well screen interval: _____
Well depth: 22.75

**Sampling Information**

Initial depth to water: 19.93 Time: 9:30
Sample intake depth: _____
Pump type and ID: bailer
Stabilized flow rate: _____

Stabilized flow rate = flow rate with no further drawdown

VOl = 0.46 gal
outer cap 0.0 ppm
inner cap 0.0 ppm

**Samples Collected**

| | |
|---|---|
| VOCs 8260 SIM | X |
| SVOCs 8270 SIM | X |
| Metals | X |
| M/E/E | |
| Nitrate/Sulfate | X |
| PCBs | |
| Other | X |

NYS AWQS

**Field values at time of sample collection:**

Time: 09:53
Sp.Cond. 1.12 uS/cm
DO 22.6 mg/L
ORP 49 mV
pH 6.52 s.u.
Temp. 18.25 °C
Turb. 348 NTU

Depth to water: 19.96

| Cumulative Time (min.) | Volume (L) | Water depth (ft) | Temp. (°C) | Sp.Cond. (uS/cm) | D.O. (mg/L) | pH (s.u.) | ORP (mV) | Turb. (NTU) |
|---|---|---|---|---|---|---|---|---|
| Typical Groundwater Values | | 19.93 | 5 to 15 | 50 to 5000 | 0 to 4 | 5 to 7 | -100 to +500 | aim for <10 |
| 9:36 0 | 0.5 | 21.0 | 19.05 | 0.936 | 105.6 | 6.79 | 17 | 17.5 |
| 9:38 2 | 0.5 | 19.96 | 18.71 | 1.05 | 42.3 | 6.53 | 19 | 182 |
| 9:40 4 | 0.5 | 19.96 | 18.43 | 1.05 | 20.1 | 6.50 | 21 | 452 |
| 9:43 7 | 0.5 | 19.94 | 18.56 | 1.05 | 20.5 | 6.50 | 39 | 627 |
| 9:46 10 | 0.5 | 19.95 | 18.38 | 1.33 | 9.02 | 6.54 | 45 | 225 |

**Sample Information:**

Sample ID: PZ-02
Sample Date&Time: 4/25/23 09:53
Color: murky (brown, gray)
Turbidity: 348
Field Filtered YES / (NO) Analyses: _____
Filter type: _____
Odor/Sheen/NAPL: N/A
Duplicate Collected YES / (NO)
If yes, duplicate ID: _____
Purge water disposal? to ground (drummed) other: Treatment System

Well Volume Conversion:

| Diam. (in) | Factor (gal/ft) |
|---|---|
| 1 | 0.04 |
| 1.5 | 0.09 |
| 2 | 0.16 |
| 4 | 0.65 |
| 6 | 1.50 |

well volume =
3.14 x (r)^2 x 7.48 gal/ft
where r = 1/2 diameter in ft

Stabilization Criteria:
Sp.Cond. +/- 10%
DO +/- 10%
ORP +/- 10 mV
pH +/- 10%
Temp. +/- 10%
Turb. <10 NTU

**Guidance:**

1 Position tubing at midpoint of saturated screened interval
2 Minimize drop in water level and purge until parameters are stable
3 Disconnect flow thru cell during sampling
4 Call Project Manager if issues arise (e.g. stabilization takes more than 2 hrs, well goes dry, odd data).
5 For VPH and VOC samples, if stabilization flow rate is less than 200 ml/min, contact PM

Notes: _____

# Low-Flow Groundwater Sampling Form

Project number and name: Ferry Point | Sampling personnel: S.M. & E.S. (Preferred) | Sample date: 4/26/23 | Well ID: PZ-15

Well location description: _____

**Well Construction**

Well diameter: 2"
Well measurement point: _____
Roadbox condition: _____
Well screen interval: _____
Well depth: 10.20

**Sampling Information**

Initial depth to water: 2.21 Time: 9:27
Sample intake depth: _____
Pump type and ID: Bailer
Stabilized flow rate: _____

Stabilized flow rate = flow rate with no further drawdown

Vol. = 1.30 gal
inner cap - 0.0 ppm
outer cap - 0.0 ppm

**Samples Collected**

| | |
|---|---|
| VOCs 8260 SIM | X |
| SVOCs 8270 SIM | X |
| Metals | X |
| M/E/E | |
| Nitrate/Sulfate | X |
| PCBs | |
| Other | X |

N/S AWQS

**Field values at time of sample collection:**

Time: 9:54
Sp.Cond. 2.19 uS/cm
DO 27.9 mg/L
ORP 37 mV
pH 6.71 s.u.
Temp. 11.39 °C
Turb. 1000+ NTU

Depth to water: _____

| Cumulative Time (min.) | Volume (L) | Water depth (ft) | Temp. (°C) | Sp.Cond. (uS/cm) | D.O. (mg/L) | pH (s.u.) | ORP (mV) | Turb. (NTU) |
|---|---|---|---|---|---|---|---|---|
| Typical Groundwater Values | | | 5 to 15 | 50 to 5000 | 0 to 4 | 5 to 7 | -100 to +500 | aim for <10 |
| 9:34 0 | 1.3 | 6.18 | 12.96 | 2.13 | 19.7 | 6.64 | 51 | 112 |
| 9:38 4 | 1.3 | 7.49 | 12.06 | 2.20 | 21.6 | 6.61 | 37 | 88.7 |
| 9:45 11 | 1.3 | 8.52 | 11.48 | 2.22 | 100.0 | 6.81 | 41 | 1000+ |

**Sample Information:**

Sample ID: PZ-15
Sample Date&Time: 4/26/23
Color: murky (brown-gray)
Turbidity: 1000+
Field Filtered YES / NO Analyses: _____
Filter type: _____
Odor/Sheen/NAPL _____
Duplicate Collected YES / NO
If yes, duplicate ID: _____
Purge water disposal? to ground drummed other: Treatment System

Well Volume Conversion:

| Diam. (in) | Factor (gal/ft) |
|---|---|
| 1 | 0.04 |
| 1.5 | 0.09 |
| 2 | 0.16 |
| 4 | 0.65 |
| 6 | 1.50 |

well volume =
3.14 x (r)^2 x 7.48 gal/ft
where r = 1/2 diameter in ft

Stabilization Criteria:
Sp.Cond. +/- 10%
DO +/- 10%
ORP +/- 10 mV
pH +/- 10%
Temp. +/- 10%
Turb. <10 NTU

**Guidance:**

1 Position tubing at midpoint of saturated screened interval
2 Minimize drop in water level and purge until parameters are stable
3 Disconnect flow thru cell during sampling
4 Call Project Manager if issues arise (e.g. stabilization takes more than 2 hrs, well goes dry, odd data).
5 For VPH and VOC samples, if stabilization flow rate is less than 200 ml/min, contact PM

Notes: _____

## Low-Flow Groundwater Sampling Form

Project number and name: Ferry Point | Sampling personnel: S.M. & F.S. (Prefferred) | Sample date: 4/26/23 | Well ID: GMW-1

Well location description:

**Well Construction**

Well diameter: 2"
Well measurement point:
Roadbox condition:
Well screen interval:
Well depth: 29.30

**Sampling Information**

Initial depth to water: 26.81 Time: 8:05
Sample intake depth:
Pump type and ID: Bailer
Stabilized flow rate:

Stabilized flow rate = flow rate with no further drawdown

vol - 0.4 gal
inner cap - 0.0ppm
outer cap - 0.7ppm

**Samples Collected**

| | |
|---|---|
| VOCs 8260 SIM | X |
| SVOCs 8270 SIM | X |
| Metals | X |
| M/E/E | |
| Nitrate/Sulfate | X |
| PCBs | |
| Other | X 1/4" AVGS |

**Field values at time of sample collection:**

Time: 8:36
Sp.Cond. 1.58 uS/cm
DO 23.7 %
ORP 15 mV
pH 6.98 s.u.
Temp. 14.02 °C
Turb. 83 NTU

Depth to water: 26.65

| Cumulative Time (min.) | Volume (L) gal | Water depth (ft) | Temp. (°C) | Sp.Cond. (uS/cm) | D.O. % (mg/L) | pH (s.u.) | ORP (mV) | Turb. (NTU) |
|---|---|---|---|---|---|---|---|---|
| Typical Groundwater Values | | | 5 to 15 | 50 to 5000 | 0 to 4 | 5 to 7 | -100 to +500 | aim for <10 |
| 0 (8:14) | 0.5 | 26.70 | 13.97 | 1.43 | 39.7 | 6.93 | 8 | 38.8 |
| 5 (8:19) | 0.5 | 26.65 | 13.66 | 1.56 | 71.9 | 6.89 | 23 | 69.0 |
| 9 (8:23) | 0.5 | 26.66 | 13.79 | 1.56 | 25.8 | 6.90 | 22 | 108 |
| 15 (8:29) | 0.5 | 26.65 | 13.86 | 1.57 | 26.7 | 6.90 | 22 | 78.7 |

Notes: rusty casing. clumpy product

**Sample Information:**

Sample ID: GMW-1
Sample Date&Time: 4/26/23
Color: murky (brown-gray)
Turbidity: 83
Field Filtered YES / NO Analyses:
Filter type:
Odor/Sheen/NAPL: floating - some rusty product (?)
Duplicate Collected YES / NO
If yes, duplicate ID:
Purge water disposal? to ground drummed other: Treatment System

Well Volume Conversion:

| Diam. (in) | Factor (gal/ft) |
|---|---|
| 1 | 0.04 |
| 1.5 | 0.09 |
| 2 | 0.16 |
| 4 | 0.65 |
| 6 | 1.50 |

well volume =
3.14 x (r)^2 x 7.48 gal/ft
where r = 1/2 diameter in ft

Stabilization Criteria:
Sp.Cond. +/- 10%
DO +/- 10%
ORP +/- 10 mV
pH +/- 10%
Temp. +/- 10%
Turb. <10 NTU

**Guidance:**

1 Position tubing at midpoint of saturated screened interval
2 Minimize drop in water level and purge until parameters are stable
3 Disconnect flow thru cell during sampling
4 Call Project Manager if issues arise (e.g. stabilization takes more than 2 hrs, well goes dry, odd data).
5 For VPH and VOC samples, if stabilization flow rate is less than 200 ml/min, contact PM

**Low-Flow Groundwater Sampling Form**

Project number and name: Fury Point | Sampling personnel: S.M. & E.S. (Preffered) | Sample date: 4/25/23 | Well ID: GMW-5

Well location description: _____

**Well Construction**

Well diameter: 2"
Well measurement point: _____
Roadbox condition: _____
Well screen interval: _____
Well depth: 14.99

**Sampling Information**

Initial depth to water: 6.40' Time: 1:25
Sample intake depth: _____
Pump type and ID: bailer
Stabilized flow rate: _____
Stabilized flow rate = flow rate with no further drawdown
vol- 1.4 gallons
outer cap - 0.0 ppm
inner cap - 0.0 ppm

**Samples Collected**

| | |
|---|---|
| VOCs 8260 SIM | X |
| SVOCs 8270 SIM | X |
| Metals | X |
| M/E/E | |
| Nitrate/Sulfate | X |
| PCBs | |
| Other | X |

N/A MNAS

**Field values at time of sample collection:**

| | | | |
|---|---|---|---|
| Time: | 1:47 | | Depth to water: 7.00 |
| Sp.Cond. | 0.446 | uS/cm | |
| DO | 29.4 | mg/L | |
| ORP | -19 | mV | |
| pH | 8.18 | s.u. | |
| Temp. | 11.33 | °C | |
| Turb. | 10.3 | NTU | |

| Cumulative Time (min.) | Volume ~~(L)~~ gal | Water depth (ft) | Temp. (°C) | Sp.Cond. (uS/cm) | D.O. ~~(mg/L)~~ % | pH (s.u.) | ORP (mV) | Turb. (NTU) |
|---|---|---|---|---|---|---|---|---|
| Typical Groundwater Values | | | 5 to 15 | 50 to 5000 | 0 to 4 | 5 to 7 | -100 to +500 | aim for <10 |
| 1:27 0 | 1.50 | 6.90 | 14.36 | 0.418 | 20.5 | 8.26 | -34 | 18.3 |
| 1:32 5 | 1.50 | 7.26 | 12.94 | 0.449 | 44.1 | 8.31 | -30 | 27.6 |
| 1:37 12 | 1.50 | 7.44 | 12.37 | 0.453 | 10.8 | 8.09 | -27 | 10.2 |
| 1:42 16 | 1.50 | 7.40 | 11.72 | 0.441 | 32.5 | 8.14 | -15 | 10.5 |
| | | 7.50 | | | | | | |

Notes: Well casing filled w/ water ~1" below top of casing

**Sample Information:**

Sample ID: GMW-5
Sample Date&Time: 4/25/23
Color: murky (gray, brown)
Turbidity: 10.3
Field Filtered YES / NO
Analyses: _____
Filter type: _____
Odor/Sheen/NAPL: N/A
Duplicate Collected YES / NO
If yes, duplicate ID: _____
Purge water disposal? to ground drummed other: Treatment System

Well Volume Conversion:

| Diam. (in) | Factor (gal/ft) |
|---|---|
| 1 | 0.04 |
| 1.5 | 0.09 |
| 2 | 0.16 |
| 4 | 0.65 |
| 6 | 1.50 |

well volume =
3.14 x (r)^2 x 7.48 gal/ft
where r = 1/2 diameter in ft

Stabilization Criteria:
Sp.Cond. +/- 10%
DO +/- 10%
ORP +/- 10 mV
pH +/- 10%
Temp. +/- 10%
Turb. <10 NTU

**Guidance:**

1 Position tubing at midpoint of saturated screened interval
2 Minimize drop in water level and purge until parameters are stable
3 Disconnect flow thru cell during sampling
4 Call Project Manager if issues arise (e.g. stabilization takes more than 2 hrs, well goes dry, odd data).
5 For VPH and VOC samples, if stabilization flow rate is less than 200 ml/min, contact PM

## Low-Flow Groundwater Sampling Form

Project number and name: Kenny Point | Sampling personnel: S.M. & F.S. (Treffered) | Sample date: 4/26/23 | Well ID: GMW-7

Well location description: _____

**Well Construction**

Well diameter: 2"
Well measurement point: _____
Roadbox condition: _____
Well screen interval: _____
Well depth: 14.61

**Sampling Information**

Initial depth to water: 8.98 Time: 13:02
Sample intake depth: _____
Pump type and ID: Bailer
Stabilized flow rate: _____
Stabilized flow rate = flow rate with no further drawdown
Vol = 0.92 gal
inner PID = 0.0 ppm
outer PID = 0.0 ppm

**Samples Collected**

| | |
|---|---|
| VOCs 8260 SIM | X |
| SVOCs 8270 SIM | X |
| Metals | X |
| M/E/E | |
| Nitrate/Sulfate | X |
| PCBs | |
| Other | X NYS ANALYTES |

**Field values at time of sample collection:**

| | | |
|---|---|---|
| Time: | 13:21 | |
| Sp.Cond. | 1.18 | uS/cm |
| DO | 18.1 | % ~~mg/L~~ |
| ORP | 208 | mV |
| pH | 7.14 | s.u. |
| Temp. | 12.02 | °C |
| Turb. | 10.0 | NTU |

Depth to water: 9.00

| Cumulative Time (min.) | Volume ~~(L)~~ gal | Water depth (ft) | Temp. (°C) | Sp.Cond. (uS/cm) | D.O. ~~(mg/L)~~ % | pH (s.u.) | ORP (mV) | Turb. (NTU) |
|---|---|---|---|---|---|---|---|---|
| Typical Groundwater Values | | | 5 to 15 | 50 to 5000 | 0 to 4 | 5 to 7 | -100 to +500 | aim for <10 |
| 1308 0 | 1.0 | 8.98 | 13.63 | 1.18 | 13.6 | 7.30 | 208 | 48.1 |
| 1311 3 | 1.8 | 8.99 | 12.45 | 1.17 | 13.7 | 7.29 | 216 | 37.0 |
| 1314 6 | 1.8 | 9.00 | 12.24 | 1.17 | 14.3 | 7.11 | 217 | 15.6 |

Notes: Submerged - bail out to reach well plug

**Sample Information:**

Sample ID: GMW-7
Sample Date&Time: 4/26/23
Color: slightly cloudy
Turbidity: 10.0
Field Filtered YES / NO
Analyses: _____
Filter type: _____
Odor/Sheen/NAPL: _____
Duplicate Collected YES / NO
If yes, duplicate ID: _____
Purge water disposal? to ground drummed other: Treatment System

**Guidance:**

1 Position tubing at midpoint of saturated screened interval
2 Minimize drop in water level and purge until parameters are stable
3 Disconnect flow thru cell during sampling
4 Call Project Manager if issues arise (e.g. stabilization takes more than 2 hrs, well goes dry, odd data).
5 For VPH and VOC samples, if stabilization flow rate is less than 200 ml/min, contact PM

| Well Volume Conversion: | |
|---|---|
| Diam. (in) | Factor (gal/ft) |
| 1 | 0.04 |
| 1.5 | 0.09 |
| 2 | 0.16 |
| 4 | 0.65 |
| 6 | 1.50 |

well volume =
3.14 x (r)^2 x 7.48 gal/ft
where r = 1/2 diameter in ft

Stabilization Criteria:
Sp.Cond. +/- 10%
DO +/- 10%
ORP +/- 10 mV
pH +/- 10%
Temp. +/- 10%
Turb. <10 NTU

# Low-Flow Groundwater Sampling Form

Project number and name: Ferry Point | Sampling personnel: S.M. & F.S. (Preferred) | Sample date: 4/26/23 | Well ID: GMW-10

Well location description:

**Well Construction**

Well diameter: 2"
Well measurement point:
Roadbox condition:
Well screen interval:
Well depth: 17.42

**Sampling Information**

Initial depth to water: 9.99 Time: 10:55
Sample intake depth:
Pump type and ID: Bailer
Stabilized flow rate:
Stabilized flow rate = flow rate with no further drawdown

Vol. = 1.21 gal
inner cap - 0.0 ppm
outer cap - 0.0 ppm

**Samples Collected**

| | |
|---|---|
| VOCs 8260 SIM | X |
| SVOCs 8270 SIM | X |
| Metals | X |
| M/E/E | |
| Nitrate/Sulfate | X |
| PCBs | |
| Other | X |

LVS AWQS

**Field values at time of sample collection:**

Time: 11:16
Sp.Cond. 1.12 uS/cm
DO 11.1 / 5.1 mg/L
ORP mV
pH 6.80 s.u.
Temp. 12.64 °C
Turb. 111 NTU

Depth to water: 10.21

| Cumulative Time (min.) | Volume ~~(L)~~ gal | Water depth (ft) | Temp. (°C) | Sp.Cond. (uS/cm) | D.O. ~~(mg/L)~~ % | pH (s.u.) | ORP (mV) | Turb. (NTU) |
|---|---|---|---|---|---|---|---|---|
| Typical Groundwater Values | | | 5 to 15 | 50 to 5000 | 0 to 4 | 5 to 7 | -100 to +500 | aim for <10 |
| 11:00 0 | 1.25 | 10.16 | 12.77 | 1.11 | 22.5 | 7.14 | 64 | 186 |
| 11:04 4 | 1.25 | 10.20 | 12.59 | 1.10 | 15.6 | 6.85 | 55 | 64.2 |
| 11:08 8 | 1.25 | 10.23 | 12.42 | 1.13 | 21.7 | 6.93 | 43 | 107 |

**Sample Information:**

Sample ID: GMW-10
Sample Date&Time: 4/26/23
Color: murky (brown-gray)
Turbidity: 111
Field Filtered YES / NO
Analyses:
Filter type:
Odor/Sheen/NAPL:
Duplicate Collected YES / NO
If yes, duplicate ID: MS + MSD
Purge water disposal? to ground drummed other: Treatment System

Well Volume Conversion:

| Diam. (in) | Factor (gal/ft) |
|---|---|
| 1 | 0.04 |
| 1.5 | 0.09 |
| 2 | 0.16 |
| 4 | 0.65 |
| 6 | 1.50 |

well volume =
3.14 x (r)^2 x 7.48 gal/ft
where r = 1/2 diameter in ft

Stabilization Criteria:
Sp.Cond. +/- 10%
DO +/- 10%
ORP +/- 10 mV
pH +/- 10%
Temp. +/- 10%
Turb. <10 NTU

**Guidance:**

1 Position tubing at midpoint of saturated screened interval
2 Minimize drop in water level and purge until parameters are stable
3 Disconnect flow thru cell during sampling
4 Call Project Manager if issues arise (e.g. stabilization takes more than 2 hrs, well goes dry, odd data).
5 For VPH and VOC samples, if stabilization flow rate is less than 200 ml/min, contact PM

Notes:

8

## Low-Flow Groundwater Sampling Form

Project number and name: Ferry Point | Sampling personnel: S.M. + E.S. (Preferred) | Sample date: 4/25/23 | Well ID: GMW-11

Well location description: _____

**Well Construction**

Well diameter: 2"
Well measurement point: _____
Roadbox condition: _____
Well screen interval: _____
Well depth: 23.67

**Sampling Information**

Initial depth to water: 15.36 Time: 10:53
Sample intake depth: _____
Pump type and ID: Bailer
Stabilized flow rate: _____

Stabilized flow rate = flow rate with no further drawdown

VOL. = 1.36 gal
Outer cap - 0.0 ppm
Inner cap - 0.0 ppm

**Samples Collected**

| | |
|---|---|
| VOCs 8260 SIM | X |
| SVOCs 8270 SIM | X |
| Metals | X |
| M/E/E | |
| Nitrate/Sulfate | X |
| PCBs | |
| Other | X |

14 AWGS

**Field values at time of sample collection:**

| | | | |
|---|---|---|---|
| Time: | 11:52 | | Depth to water: 15.46 |
| Sp.Cond. | 0.833 | uS/cm | |
| DO | 55.5 | % mg/L | |
| ORP | -98 | mV | |
| pH | 9.95 | s.u. | |
| Temp. | 15.29 | °C | |
| Turb. | 582 | NTU | |

| Cumulative Time (min.) | Volume (L) gal | Water depth (ft) | Temp. (°C) | Sp.Cond. (uS/cm) | D.O. (mg/L) % | pH (s.u.) | ORP (mV) | Turb. (NTU) |
|---|---|---|---|---|---|---|---|---|
| Typical Groundwater Values | | | 5 to 15 | 50 to 5000 | 0 to 4 | 5 to 7 | -100 to +500 | aim for <10 |
| 11:00 0 | 1.50 | 15.39 | 15.97 | 0.825 | 101.6 | 9.91 | -114 | 35.2 |
| 11:09 9 | 1.50 | 15.29 | 15.77 | 0.816 | 31.8 | 9.93 | -95 | 421 |
| 11:22 22 | 1.50 | 15.42 | 15.53 | 0.829 | 112.8 | 10.10 | -106 | 293 |
| 11:32 32 | 1.50 | 15.45 | 15.34 | 0.838 | 19.7 | 10.07 | -109 | 795 |
| 11:47 47 | 1.50 | 15.45 | 16.40 | 0.828 | 19.4 | 10.04 | -107 | 516 |

**Sample Information:**

Sample ID: GMW-11
Sample Date&Time: 4/25/23 11:52
Color: murky (brown-gray)
Turbidity: 582
Field Filtered YES / (NO) Analyses: _____
Filter type: _____
Odor/Sheen/NAPL: sulfur-like odor
Duplicate Collected (YES) / NO
If yes, duplicate ID: GMW-X
Purge water disposal? to ground (drummed) other: Treatment System

Well Volume Conversion:

| Diam. (in) | Factor (gal/ft) |
|---|---|
| 1 | 0.04 |
| 1.5 | 0.09 |
| 2 | 0.16 |
| 4 | 0.65 |
| 6 | 1.50 |

well volume =
3.14 x (r)^2 x 7.48 gal/ft
where r = 1/2 diameter in ft

Stabilization Criteria:
Sp.Cond. +/- 10%
DO +/- 10%
ORP +/- 10 mV
pH +/- 10%
Temp. +/- 10%
Turb. <10 NTU

**Guidance:**

1 Position tubing at midpoint of saturated screened interval
2 Minimize drop in water level and purge until parameters are stable
3 Disconnect flow thru cell during sampling
4 Call Project Manager if issues arise (e.g. stabilization takes more than 2 hrs, well goes dry, odd data).
5 For VPH and VOC samples, if stabilization flow rate is less than 200 ml/min, contact PM

Notes: _____

# Appendix C

Drum Disposal Documentation

# NON-HAZARDOUS WASTE PROFILE

Job Number:

*Dale Transfer Corporation*
*129 Dale Street, West Babylon, NY 11704*
*Ph: 631-393-2882 Fx: 631-393-2884*

| | |
|---|---|
| Approved by: | Date: |
| Profile Number: | |

| **GENERATOR:** | **BILL TO/CLIENT:** | |
|---|---|---|
| Name: NYC Department of Parks and Recreation | Name: AARCO Environmental Services orp. | |
| Site Address: 500 Hutchinson River Parkway | Address: 50 Gear Avenue | |
| City/State/Zip: Bronx, NY 10465 | City/State/Zip: Lindenhurst, NY 11757 | |
| Technical Contact: Stacey Ng (GEI Consultants) | Email: Splofker@aarcoenvironmental.com | |
| Technical Ph: (347) 514-3861 | Contact: Steve Plofker | Ph: 631-586-5900 |

| **TRANSPORTER:** | |
|---|---|
| Name: AARCO Environmental Services Corp | Contact: Steve Plofker |
| Address: 50 Gear Avenue, Lindenhurst, NY 11757 | Phone: 631-586-5900 |
| Email: splofker@aarcoenvironmental.com | Fax: 631-586-5910 |

**WASTE DESCRIPTION:**

Purged groundwater from wells installed on current golf course (previously landfill)

**MANUFACTURING/PROCESS DESCRIPTION:**

**TYPE OF CONTAMINATION:**

Gasoline ☐ Diesel ☐ Fuel Oil (2,4,6) ☐ Hydraulic Oil ☐ Other: Landfill (low level
Kerosene ☐ Jet Fuel ☐ Motor Oil ☐ Used Oil ☐ VOC,SVOC, metals)

**CONTAMINATION SOURCE:**

UST ☐ Historic ☐ Other: Former landfill
AST ☐ Spill ☐

**SITE USAGE HISTORY:**

Industrial ☐ Residential ☐
Commercial ☐ Other: Former landfill, current golf cc

**PHYSICAL PROPERTIES:**

COLOR: cloudy, brown-grey
ODOR: ☐ None ☑ Mild ☐ Strong
Describe:

**PHYSICAL STATE:**

| | | | |
|---|---|---|---|
| Liquid | ☑ | Multi-layerd | ☐ |
| Semi-Solid | ☐ | Bi-layered | ☐ |
| Solid | ☐ | Singe Phase | ☐ |
| Powder | ☐ | Gas/Aerosol | ☐ |

**REACTIVITY:**

| | | |
|---|---|---|
| Total Cyanides | | ☑ None |
| Amenable Cyanides | | ☑ None |
| Reactive Sulfidies | | ☑ None |
| Shock Sensative | ☐ Yes | ☑ No |
| Generates Toxic fumes when mixed w/water, acid, or base | ☐ Yes | ☑ No |

**FLASH POINT:**

| | |
|---|---|
| < 100 | ☐ |
| ≥ 100 ≤ 140 | ☐ |
| > 140 ≤ 200 | ☐ |
| > 200 | ☐ |

**CORROSITIVITY:**

| | |
|---|---|
| ≤ 2.0 | ☐ |
| 2.01 - 5.0 | ☐ |
| 5.01 - 9.0 | ☑ |
| 9.01 - 12.49 | ☑ |
| ≥ 12.50 | ☐ |

**SHIPPING INFORMATION:**

Vactor ☐ Vac Truck ☐ Drums ☑
Other:
Anticipated Volume (Gallons/Tons) 55 gallons
One Time ☑ Week ☐ Month ☐
Quarter ☐ Year ☐ Other:

**CHEMICAL COMPOSITION/CHARACTERISTICS:**

| | |
|---|---|
| Groundwater | % 100 |
| | % |
| | % |

**REGULATORY INFORMATION:**

Proper Shipping Name: Non-hazardous well purge water

Analytical Attached: Yes ☑ No ☐ Lab: Chemtec

Disposition: Landfill ☐ Recycling ☑ Other: Disposal Facility

**Generator's Certification: I certify the material described above on this profile are Non-Hazardous therefore not subject to federal regulations for reporting disposal of hazardous waste.**

X Kay Zias
Authorized Signature

X Kay Zias
Print Name

X Director, ERU, NYCDPR
Title

X 6/26/2023
Date

**Table 2**

Summary of 2023 Post-Closure Ground Water Analytical Results

Ferry Point Park Golf Course

New York City Department of Parks and Recreation

| Sample ID | NY TOGS Class GA AWQS | PZ-01 | PZ-02 | GMW-11 | GMW-X | GMW-5 | TRIP BLANK | GMW-1 | PZ-15 | GMW-10 | GMW-7 | TB-2 | FB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** |
| **Matrix** | | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** |
| **Units** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** |
| **Volatile Organic Compounds (VOCs)** | | | | | | | | | | | | | |
| Dichlorodifluoromethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichlorotrifluoroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | NS | **17.7** | **5.5** | 5 U | **2.6** J | **9.9** | **2.4** J | **280** | **10.9** | **6.4** | **2.8** J | 5 U | **2.4** J |
| Carbon Disulfide | 60 | 1 U | 1 U | **0.61** J | **0.72** J | 1 U | 1 U | 1 U | **0.35** J | 1 U | 1 U | 1 U | 1 U |
| Methyl tert-butyl Ether | 10 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Acetate | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene Chloride | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.68** J |
| trans-1,2-Dichloroethene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | NS | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | NS | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **1.9** J | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 5 | **0.22** J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 7 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylcyclohexane | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Benzene | 1 | 1 U | 1 U | 1 U | **0.21** J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 0.6 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 5 | **0.5** J | 1 U | 1 U | 1 U | **0.77** J | **0.6** J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 4-Methyl-2-Pentanone | NS | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| t-1,3-Dichloropropene | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Hexanone | NS | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | 0.0006 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **3.3** | **12.5** | **0.37** J | 1 U | 1 U | 1 U |
| Ethyl Benzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m/p-Xylenes | NS | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| o-Xylene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

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Ferry Point Park Golf Course

New York City Department of Parks and Recreation

| Sample ID | NY TOGS Class GA AWQS | PZ-01 | PZ-02 | GMW-11 | GMW-X | GMW-5 | TRIP BLANK | GMW-1 | PZ-15 | GMW-10 | GMW-7 | TB-2 | FB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** |
| **Matrix** | | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** |
| **Units** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** |
| Bromoform | NS | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.44** J | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.88** J | **1.1** | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-Chloropropane | 0.04 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **Semi-Volatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | |
| Benzaldehyde | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Phenol | 1 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| bis(2-Chloroethyl)ether | 1 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Chlorophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Methylphenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,2-oxybis(1-Chloropropane) | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Acetophenone | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 3+4-Methylphenols | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| n-Nitroso-di-n-propylamine | NS | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.6 U | -- | 2.5 U | 2.5 U | 2.5 U | 2.5 U | -- | 2.5 U |
| Hexachloroethane | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Nitrobenzene | 0.4 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Isophorone | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Nitrophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,4-Dimethylphenol | 1 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| bis(2-Chloroethoxy)methane | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,4-Dichlorophenol | 1 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Naphthalene | 10 | 5 U | 5.1 U | **11.8** | **11.6** | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4-Chloroaniline | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Hexachlorobutadiene | 0.5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Caprolactam | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| 4-Chloro-3-methylphenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Methylnaphthalene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Hexachlorocyclopentadiene | 5 | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| 2,4,6-Trichlorophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,4,5-Trichlorophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 1,1-Biphenyl | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Chloronaphthalene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2-Nitroaniline | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Dimethylphthalate | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Acenaphthylene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,6-Dinitrotoluene | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 3-Nitroaniline | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Acenaphthene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |

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Ferry Point Park Golf Course

New York City Department of Parks and Recreation

| Sample ID | NY TOGS Class GA AWQS | PZ-01 | PZ-02 | GMW-11 | GMW-X | GMW-5 | TRIP BLANK | GMW-1 | PZ-15 | GMW-10 | GMW-7 | TB-2 | FB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** |
| **Matrix** | | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** |
| **Units** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** |
| 2,4-Dinitrophenol | 1 | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| 4-Nitrophenol | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Dibenzofuran | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,4-Dinitrotoluene | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Diethylphthalate | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4-Chlorophenyl-phenylether | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Fluorene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4-Nitroaniline | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4,6-Dinitro-2-methylphenol | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| n-Nitrosodiphenylamine | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 4-Bromophenyl-phenylether | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Hexachlorobenzene | 0.04 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Atrazine | 7.5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Pentachlorophenol | 1 | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Phenanthrene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Anthracene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Carbazole | NS | 5 U | 5.1 U | **2.7** J | **3** J | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Di-n-butylphthalate | 50 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Fluoranthene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Pyrene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Butylbenzylphthalate | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 3,3-Dichlorobenzidine | 5 | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Benzo(a)anthracene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Chrysene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Bis(2-ethylhexyl)phthalate | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Di-n-octyl phthalate | NS | 10 U | 10.1 U | 10.1 U | 10.1 U | 10.2 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Benzo(b)fluoranthene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Benzo(k)fluoranthene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Benzo(a)pyrene | ND | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Indeno(1,2,3-cd)pyrene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Dibenzo(a,h)anthracene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| Benzo(g,h,i)perylene | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 1,2,4,5-Tetrachlorobenzene | 5 | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 1,4-Dioxane | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| 2,3,4,6-Tetrachlorophenol | NS | 5 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | -- | 5 U | 5 U | 5 U | 5 U | -- | 5 U |
| **Metals** | | | | | | | | | | | | | |
| Aluminum | NS | **2650** | **5240** | **19300** | **17500** | **873** | -- | **693** | **140000** | **561** | **2230** | -- | 50 U |
| Antimony | 3 | **3.47** J | **4.92** J | **2.22** J | 25 U | 25 U | -- | **2.29** J | 25 U | **2.86** J | **2.16** J | -- | 25 U |
| Arsenic | 25 | **6.06** J | **20.1** | **7.15** J | **7.38** J | 10 U | -- | 10 U | **15.2** | **6.65** J | 10 U | -- | 10 U |
| Barium | 1000 | **545** | **2380** | **254** | **234** | **36.6** J | -- | **2370** | **2260** | **392** | **290** | -- | 50 U |
| Beryllium | NS | **0.32** J | **0.92** J | **1.04** J | **0.92** J | 3 U | -- | **0.29** J | **6.6** | **0.2** J | 3 U | -- | 3 U |
| Cadmium | 5 | **2.96** J | **2.84** J | **0.49** J | **0.37** J | **3.51** | -- | **1.11** J | **11.9** | **0.7** J | **1.47** J | -- | 3 U |
| Calcium | NS | **129000** | **101000** | **91200** | **86100** | **67900** | -- | **123000** | **137000** | **153000** | **145000** | -- | **50.4** J |

**Table 2**
Summary of 2023 Post-Closure Ground Water Analytical Results
Ferry Point Park Golf Course
New York City Department of Parks and Recreation

| Sample ID | NY TOGS Class GA AWQS | PZ-01 | PZ-02 | GMW-11 | GMW-X | GMW-5 | TRIP BLANK | GMW-1 | PZ-15 | GMW-10 | GMW-7 | TB-2 | FB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/25/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 | 4/26/2023 |
| **Matrix** | | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water | Water |
| **Units** | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Chromium | 50 | **11.8** | **23.2** | **33** | **31.9** | **1.83** J | -- | **6.13** | **369** | **3.09** J | **9.98** | -- | **0.85** J |
| Cobalt | NS | **3.58** J | **12** J | **12.8** J | **12.1** J | 15 U | -- | **1.49** J | **170** | **1.45** J | **2.59** J | -- | 15 U |
| Copper | 200 | **351** | **186** | **92** | **76.1** | **13.3** | -- | **34.4** | **293** | **58.8** | **61.7** | -- | 10 U |
| Iron | 300 | **14000** | **35900** | **26200** | **25300** | **1930** | -- | **26700** | **239000** | **16500** | **4730** | -- | 50 U |
| Lead | 25 | **238** | **451** | **205** | **193** | **19.2** | -- | **45.7** | **170** | **66** | **49.5** | -- | 6 U |
| Magnesium | NS | **13100** | **29600** | **8300** | **7490** | **5990** | -- | **27400** | **69900** | **23700** | **26900** | -- | 1000 U |
| Manganese | 300 | **761** | **440** | **442** | **401** | **189** | -- | **174** | **8080** | **894** | **249** | -- | **0.88** J |
| Mercury | 0.7 | **0.39** | **0.74** | **0.57** | **0.49** | 0.2 U | -- | **0.21** | **0.87** | 0.2 U | **0.083** J | -- | 0.2 U |
| Nickel | 100 | **21.3** | **43.1** | **41.9** | **39.9** | **4.64** J | -- | **4.98** J | **564** | **12.2** J | **20** | -- | 20 U |
| Potassium | NS | **16600** | **42800** | **33100** | **33200** | **8000** | -- | **23900** | **47000** | **35300** | **20900** | -- | 1000 U |
| Selenium | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | -- | 10 U | **5.9** J | 10 U | 10 U | -- | 10 U |
| Silver | 50 | **1.43** J | **8.06** | **5.18** | **4.86** J | 5 U | -- | **4.96** J | **37.9** | 5 U | 5 U | -- | 5 U |
| Sodium | 20000 | **26500** | **129000** | **55800** | **56000** | **5930** | -- | **60900** | **29800** | **14400** | **32800** | -- | **240** J |
| Thallium | NS | 20 U | 20 U | 20 U | 20 U | 20 U | -- | 20 U | 20 U | 20 U | 20 U | -- | 20 U |
| Vanadium | NS | **8.59** J | **26.8** | **48.3** | **44.2** | **12.1** J | -- | **24** | **313** | **22.1** | **4.55** J | -- | 20 U |
| Zinc | NS | **592** | **1070** | **235** | **234** | **24.4** | -- | **98.8** | **519** | **86** | **185** | -- | **2.17** J |
| **Dissolved Metals** | | | | | | | | | | | | | |
| Aluminum | NS | **124** | **112** | **108** | **112** | 50 U | -- | **141** | **80.5** | **147** | **145** | -- | 50 U |
| Antimony | 3 | 25 U | 25 U | 25 U | 25 U | 25 U | -- | 25 U | 25 U | 25 U | 25 U | -- | 25 U |
| Arsenic | 25 | 10 U | 10 U | **3.95** J | 10 U | 10 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Barium | 1000 | **429** | **570** | **50** | **42.8** J | **15.7** J | -- | **1630** | **291** | **320** | **233** | -- | **9.56** J |
| Beryllium | NS | 3 U | 3 U | 3 U | 3 U | 3 U | -- | 3 U | 3 U | 3 U | 3 U | -- | 3 U |
| Cadmium | 5 | 3 U | 3 U | 3 U | 3 U | 3 U | -- | **0.11** J | 3 U | **0.11** J | **0.23** J | -- | **0.28** J |
| Calcium | NS | **117000** | **88200** | **83000** | **78700** | **13300** | -- | **104000** | **61300** | **146000** | **137000** | -- | **1900** |
| Chromium | 50 | 5 U | **1.29** J | **0.82** J | 5 U | 5 U | -- | **1.11** J | 5 U | 5 U | 5 U | -- | 5 U |
| Cobalt | NS | **0.81** J | **1.63** J | 15 U | 15 U | 15 U | -- | **0.47** J | **2.49** J | 15 U | **0.84** J | -- | 15 U |
| Copper | 200 | **25.4** | **28.3** | 10 U | 10 U | 10 U | -- | **35.7** | **10.4** | **23.9** | **22.3** | -- | 10 U |
| Iron | 300 | **646** | **92.2** | 50 U | 50 U | 50 U | -- | **361** | **62.4** | **27** J | **24.9** J | -- | **32.2** J |
| Lead | 25 | 6 U | 6 U | 6 U | 6 U | 6 U | -- | 6 U | 6 U | 6 U | 6 U | -- | 6 U |
| Magnesium | NS | **12900** | **23300** | **1920** | **1720** | **1360** | -- | **30100** | **43700** | **23900** | **25800** | -- | **41.9** J |
| Manganese | 300 | **433** | **228** | **6.06** J | **4.78** J | **35.9** | -- | **76.3** | **41.7** | **702** | **207** | -- | **31.6** |
| Mercury | 0.7 | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | 0.2 U |
| Nickel | 100 | **7.25** J | **9.28** J | **5.56** J | **6.8** J | **0.93** J | -- | **2.49** J | **14** J | **8.11** J | **8.17** J | -- | 20 U |
| Potassium | NS | **15900** | **31100** | **31500** | **31300** | **1530** | -- | **27200** | **30900** | **35200** | **20500** | -- | 1000 U |
| Selenium | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | -- | 10 U | 10 U | 10 U | 10 U | -- | 10 U |
| Silver | 50 | 5 U | **0.67** J | **0.74** J | 5 U | 5 U | -- | **0.7** J | **0.81** J | 5 U | 5 U | -- | 5 U |
| Sodium | 20000 | **29000** | **86200** | **58200** | **58100** | **1120** | -- | **69800** | **36400** | **15500** | **32800** | -- | **763** J |
| Thallium | NS | 20 U | 20 U | 20 U | 20 U | 20 U | -- | 20 U | 20 U | 20 U | 20 U | -- | 20 U |
| Vanadium | NS | 20 U | 20 U | **6.86** J | **7.02** J | 20 U | -- | 20 U | 20 U | 20 U | 20 U | -- | 20 U |
| Zinc | NS | **35.4** | **13.3** J | **3.56** J | **5.72** J | **1.85** J | -- | **10.9** J | **4.22** J | **17** J | **70.2** | -- | **21.4** |
| **General Chemistry (ug/L)** | | | | | | | | | | | | | |
| Hardness, Total | NS | **376000** | **374000** | **262000** | **246000** | **194000** | -- | **420000** | **630000** | **480000** | **473000** | -- | 126 U |
| pH | NS | **6.66** | **6.74** | **9.43** | **9.49** | **7.87** | -- | **6.85** | **6.71** | **6.72** | **7.02** | -- | **5.48** |

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Summary of 2023 Post-Closure Ground Water Analytical Results

Ferry Point Park Golf Course

New York City Department of Parks and Recreation

| Sample ID | NY TOGS Class GA AWQS | PZ-01 | PZ-02 | GMW-11 | GMW-X | GMW-5 | TRIP BLANK | GMW-1 | PZ-15 | GMW-10 | GMW-7 | TB-2 | FB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Date** | | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/25/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** | **4/26/2023** |
| **Matrix** | | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** | **Water** |
| **Units** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** | **ug/l** |
| Chemical Oxygen Demand (COD) | NS | **140000** | **82000** | **55000** | **64000** | **126000** | -- | **160000** D | **190000** D | **114000** | **15000** | -- | 10000 U |
| Biological Oxygen Demand (BOD5) | NS | **26600** | **14300** | **6360** | **3540** | **6460** | -- | **95400** | **39200** | **8500** | **10200** | -- | 2000 U |
| Total Organic Carbon (TOC) | NS | **9900** | **17900** | **11000** | **11400** | **8900** | -- | **28100** D | **30400** D | **26400** D | **7900** | -- | **760** J |
| Total Kjiedahl Nitrogen (TKN) | NS | **5300** | **52600** D | **3500** | **4100** | **6900** | -- | **13000** D | **49600** D | **520** | **4700** | -- | 500 U |
| Total Dissolved Solids (TDS) | NS | **508000** | **736000** | **528000** | **538000** | **332000** | -- | **666000** | **773000** | **729000** | **658000** | -- | 10000 U |
| Ammonia as N | NS | **2600** D | **33800** D | **88** J | **210** | **210** | -- | **13300** D | **56800** D | **1600** | **1500** | -- | 100 U |
| Phenolics | NS | 50 U | 50 U | **19** J | **21** J | 50 U | -- | 50 U | 50 U | 50 U | 50 U | -- | 50 U |
| **Anions** | | | | | | | | | | | | | |
| Bromide | NS | 2000 U | **1200** J | 2000 U | **750** J | 2000 U | -- | **900** J | **970** J | 2000 U | 2000 U | -- | 2000 U |
| Chloride | NS | **33000** D | **138000** D | **33900** D | **33900** D | **5700** | -- | **44400** D | **38200** D | **19400** D | **21700** D | -- | 600 U |
| Nitrite | 1000 | 600 U | 600 U | 600 U | 600 U | 600 U | -- | 600 U | 600 U | 600 U | 600 U | -- | 600 U |
| Nitrate | NS | **200** J | 500 U | **250** J | **200** J | 500 U | -- | 500 U | **190** J | 500 U | **1700** | -- | 500 U |
| Sulfate | NS | **34900** | **9400** | **289000** D | **292000** D | **2900** J | -- | **1500** J | **3000** | **53000** D | **68000** D | -- | 3000 U |
| Nitrate+Nitrite | NS | **200** J | 1100 U | **250** J | **200** J | 1100 U | -- | 1100 U | **190** J | 1100 U | **1700** | -- | 1100 U |
| **Cyanide** | | | | | | | | | | | | | |
| Cyanide | 200 | **27** | **140** | **42** | **4.7** J | **2.7** J | -- | **35** | **340** | **220** | **10** | -- | **1.4** J |

**Notes**

**-- -** Not analyzed

N (Organics) - Presumptive Evidence of a Compound

N (Inorganics) - The matrix spike recovery was outside control limits

NS - No Standard

**Bold** - Indicates a detected concentration

**Bold and shaded** - Indicates an exceedance of TOGS GA Ambient Water Quality Standards

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

Q - Indicates LCS control criteria did not meet requirements.

Please print or type.
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|
| | 1 | 631-586-5900 | NHWM219453 |

**GENERATOR**

5. Generator's Name and Mailing Address
NYC DEPT. OF PARKS & RECREATION – CAPITAL PROJECTS - ENVIRONMENTAL REMEDIATION UNIT – OLMSTED CENTER
117-02 ROOSEVELT AVENUE
CORONA, NY 11368
Generator's Phone:

Generator's Site Address (if different than mailing address)
500 HUTCHINSON RIVER PARKWAY
THE BRONX, NY 10465

6. Transporter 1 Company Name
AARCO ENVIRONMENTAL SERVICES
U.S. EPA ID Number
NYR000107326

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
DALE TRANSFER CORP.
129 DALE STREET, WEST BABYLON NY 11704
Facility's Phone: 631-393-2882
U.S. EPA ID Number
N/A

| | 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. |
|---|---|---|---|---|---|
| 1. | NON-REGULATED LIQUIDS (PURGED GROUNDWATER) | 001 | DM | 400 | P |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |

13. Special Handling Instructions and Additional Information
1. APPROVAL # 2023-553 (.00/.x.55.)
JOB# 219453 TRUCK: B470

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Savanna Marino as agent for NYCDPR
Signature: X Savanna Marino
Month: 06 Day: 27 Year: 23

**INT'L**

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Date leaving U.S.:
Transporter Signature (for exports only):

**TRANSPORTER**

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bryan Booth
Signature: Bryan Booth
Month: 06 Day: 27 Year: 23
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
U.S. EPA ID Number
17b. Alternate Facility (or Generator)
Facility's Phone:
Month: Day: Year:
17c. Signature of Alternate Facility (or Generator)

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name:
Signature:
Month: Day: Yea

Printed in USA by GC Labels
1-800-997-6966

DESIGNATED FACILITY TO GENERATOR

Reorder Part# MANIFEST-C6NH
913-897-6966

# Appendix D

CHEMTECH Laboratory Reports

CHEMTECH

# DATA PACKAGE

VOLATILE ORGANICS
GENERAL CHEMISTRY
METALS
SEMI-VOLATILE ORGANICS

**PROJECT NAME : FERRY POINT**

**GEI CONSULTANTS, INC., P.C.**

**530 7th Ave, Suite 2007**

**New York, NY - 10018**

**Phone No: 212-845-9965**

**ORDER ID : O2495**

**ATTENTION : Stacey Ng**

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

**Laboratory Certification ID # 20012**

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# Cover Page

**Order ID :** O2495

**Project ID :** Ferry Point

**Client :** GEI Consultants, Inc., P.C.

| Lab Sample Number | Client Sample Number |
|---|---|
| O2495-01 | PZ-01 |
| O2495-02 | PZ-01 |
| O2495-03 | PZ-02 |
| O2495-04 | PZ-02 |
| O2495-05 | GMW-11 |
| O2495-06 | GMW-11 |
| O2495-07 | GMW-X |
| O2495-08 | GMW-X |
| O2495-09 | GMW-5 |
| O2495-10 | GMW-5 |
| O2495-11 | TRIP-BLANK |

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : N. N. Pandya

APPROVED
*By Nimisha Pandya QA/QC Supervisor at 10:43 am, May 09, 2023*
Date: 5/9/2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2495**
**Test Name: VOC-TCLVOA-10**

**A. Number of Samples and Date of Receipt:**
11 Water samples were received on 04/25/2023.

**B. Parameters**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

**C. Analytical Techniques:**
The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UIThe analysis of VOC-TCLVOA-10 was based on method 8260D.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank Spike Duplicate met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .

The Continuous Calibration File ID VX035415.D met the requirements except for 2-Butanone is failing marginally Low therefore no corrective action taken.

The Tuning criteria met requirements.

**E. Additional Comments:**
Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

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Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <20% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 20% for the Initial Calibration curve for SW-846 analysis.

**F. Manual Integration Comments:**
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

**APPROVED**
*By Sohil Jodhani, QA/QC Director at 9:05 am, Jul 12, 2023*

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# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2495**
**Test Name: SVOC-TCL BNA -20**

**A. Number of Samples and Date of Receipt:**
11 Water samples were received on 04/25/2023.

**B. Parameters**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for SVOC-TCL BNA -20.

**C. Analytical Techniques:**
The samples were analyzed on instrument BNA_F using GC Column DB-UI 8270D which is 20 meters, 0.18 mm ID, 0.36 um dfThe analysis of SVOC-TCL BNA -20 was based on method 8270E and extraction was done based on method 3510.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank Spike Duplicate met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.

The % RSD is greater than 20% in the Initial Calibration method (Method 8270-BF042123.M) for Benzaldehyde,this compound is passing on Quadratic regression.

The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

**E. Additional Comments:**
The Form 6 is not included in the data package because the Initial Calibration was performed using 8 points.

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Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

**F. Manual Integration Comments:**
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

**APPROVED**
*By Nimisha Pandya QA/QC Supervisor at 10:43 am, May 09, 2023*

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# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2495**
**Test Name: Dissolved ICP-TAL Metals,Metals ICP-TAL,Dissolved Mercury,Mercury**

**A. Number of Samples and Date of Receipt:**
11 Water samples were received on 04/25/2023.

**B. Parameters:**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for Dissolved ICP-TAL Metals,Metals ICP-TAL,Dissolved Mercury,Mercury.

**C. Analytical Techniques:**
The analysis of Dissolved ICP-TAL Metals,Metals ICP-TAL was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of Dissolved Mercury,Mercury was based on method 7470A.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (GMW-5MS) analysis met criteria for all samples except for Sodium due to both chemicals interference during digestion and unknow sample matrix interference.
The Matrix Spike Duplicate (GMW-5MSD) analysis met criteria for all samples except for Iron, Sodium due to both chemicals interference during digestion and unknow sample matrix interference.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

**E. Additional Comments:**
In analytical sequence LB125255, The % recovery was outside of acceptance limit for Vanadium of CCV05 and for Barium, Vanadium of CCV06 but, no any samples associated under these CCVs.
Sample -O2495-01, O2495-03, O2495-05, O2495-07, O2495-09 were analyzed as Total Metal and sample -O2495-02, O2495-04, O2495-06, O2495-08, O2495-10 were analyzed as Dissolve Metal.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

**APPROVED**

*By Nimisha Pandya QA/QC Supervisor at 10:46 am, May 09, 2023*

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# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2495**
**Test Name:**
**pH,Alkalinity,Cyanide,TOC,Phenolics,TKN,Ammonia,TDS,COD,BOD5,Anions Group1**

**A. Number of Samples and Date of Receipt:**
11 Water samples were received on 04/25/2023.

**B. Parameters:**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for pH, Alkalinity, Cyanide, TOC, Phenolics, TKN, Ammonia, TDS, COD, BOD5, Anions Group1.

**C. Analytical Techniques:**
The analysis of Anions Group1 was based on method 300.0, The analysis of Phenolics was based on method 420.1, The analysis of Cyanide was based on method 9012B, The analysis of pH was based on method 9040C, The analysis of TOC was based on method 9060A, The analysis of Alkalinity was based on method SM2320 B, The analysis of TDS was based on method SM2540 C, The analysis of TKN was based on method SM4500 N Org B or C, The analysis of Ammonia was based on method SM4500-NH3, The analysis of BOD5 was based on method SM5210 B and The analysis of COD was based on method SM5220 D.

**D. QA/ QC Samples:**
The Holding Times were met for all samples except for GMW-11 of pH, for GMW-5 of pH.for GMW-X of pH.for PZ-01 of pH.for PZ-02 of pH as samples were receive out of hold.
Sample PZ-01 was diluted due to high concentrations for Ammonia as N,Chloride & Sample PZ-02 was diluted due to high concentrations for Ammonia as N,TKN,Chloride & Sample GMW-11 was diluted due to high concentrations for Chloride,Sulfate & Sample GMW-X was diluted due to high concentrations for Chloride,Sulfate.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (GMW-7MS) analysis met criteria for all samples except for Ammonia as N and Phenolics due to matrix interferences.
The Matrix Spike Duplicate (GMW-7MSD) analysis met criteria for all samples except for Ammonia as N and Phenolics due to matrix interferences.
The Blank analysis did not indicate the presence of lab contamination.

**E. Additional Comments:**

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

APPROVED
By Nimisha Pandya QA/QC Supervisor at 10:46 am, May 09, 2023

# DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| **J** | Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL). |
| **U** | Indicates the analyte was analyzed for, but not detected. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **E** | Indicates the reported value is estimated because of the presence of interference |
| **M** | Indicates Duplicate injection precision not met. |
| **N** | Indicates the spiked sample recovery is not within control limits. |
| **S** | Indicates the reported value was determined by the Method of Standard Addition (MSA). |
| * | Indicates that the duplicate analysis is not within control limits. |
| + | Indicates the correlation coefficient for the MSA is less than 0.995. |
| **D** | Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range. |
| **M** | Method qualifiers<br>**"P"** for ICP instrument<br>**"PM"** for ICP when Microwave Digestion is used<br>**"CV"** for Manual Cold Vapor AA<br>**"AV"** for automated Cold Vapor AA<br>**"CA"** for MIDI-Distillation Spectrophotometric<br>**"AS"** for Semi –Automated Spectrophotometric<br>**"C"** for Manual Spectrophotometric<br>**"T"** for Titrimetric<br>**"NR"** for analyte not required to be analyzed |
| **OR** | Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **Q** | Indicates the LCS did not meet the control limits requirements |
| H | Sample Analysis Out Of Hold Time |

## DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| Value | If the result is a value greater than or equal to the detection limit, report the value |
| **U** | Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **J** | Indicates an estimated value**.** This flag is used:<br>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)<br>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others. |
| **B** | Indicates the analyte was found in the blank as well as the sample report as "12 B". |
| **E** | Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **D** | This flag identifies all compounds identified in an analysis at a secondary dilution factor. |
| **P** | This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P". |
| **N** | This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used. |
| **A** | This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product. |
| **Q** | Indicates the LCS did not meet the control limits requirements |

## APPENDIX A

## QA REVIEW GENERAL DOCUMENTATION

**Project #:** O2495

| | Completed |
|---|---|
| **For thorough review, the report must have the following:** | |
| **GENERAL:** | |
| **Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)** | ✓ |
| **Check chain-of-custody for proper relinquish/return of samples** | ✓ |
| **Is the chain of custody signed and complete** | ✓ |
| **Check internal chain-of-custody for proper relinquish/return of samples /sample extracts** | ✓ |
| **Collect information for each project id from server. Were all requirements followed** | ✓ |
| **COVER PAGE:** | |
| **Do numbers of samples correspond to the number of samples in the Chain of Custody on login page** | ✓ |
| **Do lab numbers and client Ids on cover page agree with the Chain of Custody** | ✓ |
| **CHAIN OF CUSTODY:** | |
| **Do requested analyses on Chain of Custody agree with form I results** | ✓ |
| **Do requested analyses on Chain of Custody agree with the log-in page** | ✓ |
| **Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody** | ✓ |
| **Were the samples received within hold time** | ✓ |
| **Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle** | ✓ |
| **ANALYTICAL:** | |
| **Was method requirement followed?** | ✓ |
| **Was client requirement followed?** | ✓ |
| **Does the case narrative summarize all QC failure?** | ✓ |
| **All runlogs and manual integration are reviewed for requirements** | ✓ |
| **All manual calculations and /or hand notations verified** | ✓ |

**1st Level QA Review Signature:** SOHIL JODHANI **Date:** 05/09/2023

**2nd Level QA Review Signature:** N. N. Pandya

APPROVED
By Nimisha Pandya QA/QC Supervisor at 10:47 am, May 09, 2023

**Date:**

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O2495 | **OrderDate:** | 4/25/2023 3:22:44 PM |
| **Client:** | GEI Consultants, Inc., P.C. | **Project:** | Ferry Point |
| **Contact:** | Stacey Ng | **Location:** | N11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O2495-01** | **PZ-01** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 04/27/23 | |
| **O2495-03** | **PZ-02** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 04/28/23 | |
| **O2495-05** | **GMW-11** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 04/29/23 | |
| **O2495-07** | **GMW-X** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 04/29/23 | |
| **O2495-09** | **GMW-5** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 04/27/23 | |
| **O2495-11** | **TRIP-BLANK** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 04/27/23 | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

| Sample ID | Client ID | Matrix | Parameter | | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Client ID:** | **PZ-01** | | | | | | | | |
| O2495-01 | PZ-01 | Water | Acetone | | 17.7 | | 1.20 | 5.00 | ug/L |
| O2495-01 | PZ-01 | Water | cis-1,2-Dichloroethene | | 0.22 | J | 0.20 | 1.00 | ug/L |
| O2495-01 | PZ-01 | Water | Trichloroethene | | 0.50 | J | 0.26 | 1.00 | ug/L |
| | | | **Total Voc :** | | 18.4 | | | | |
| O2495-01 | PZ-01 | Water | Sulfur dioxide | * | 7.90 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 7.90 | | | | |
| | | | **Total Concentration:** | | 26.3 | | | | |
| **Client ID:** | **PZ-02** | | | | | | | | |
| O2495-03 | PZ-02 | Water | Acetone | | 5.50 | | 1.20 | 5.00 | ug/L |
| | | | **Total Voc :** | | 5.50 | | | | |
| O2495-03 | PZ-02 | Water | Diisopropyl ether | * | 0.21 | J | 0.12 | 1.00 | ug/L |
| | | | **Total Tics :** | | 0.21 | | | | |
| | | | **Total Concentration:** | | 5.71 | | | | |
| **Client ID:** | **GMW-11** | | | | | | | | |
| O2495-05 | GMW-11 | Water | Carbon Disulfide | | 0.61 | J | 0.27 | 1.00 | ug/L |
| | | | **Total Voc :** | | 0.61 | | | | |
| O2495-05 | GMW-11 | Water | Azulene | * | 20.3 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 20.3 | | | | |
| | | | **Total Concentration:** | | 20.9 | | | | |
| **Client ID:** | **GMW-X** | | | | | | | | |
| O2495-07 | GMW-X | Water | Acetone | | 2.60 | J | 1.20 | 5.00 | ug/L |
| O2495-07 | GMW-X | Water | Carbon Disulfide | | 0.72 | J | 0.27 | 1.00 | ug/L |
| O2495-07 | GMW-X | Water | Benzene | | 0.21 | J | 0.12 | 1.00 | ug/L |
| | | | **Total Voc :** | | 3.53 | | | | |
| O2495-07 | GMW-X | Water | Azulene | * | 21.5 | J | 0 | 0 | ug/L |
| O2495-07 | GMW-X | Water | Sulfur dioxide | * | 5.90 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 27.4 | | | | |
| | | | **Total Concentration:** | | 30.9 | | | | |
| **Client ID:** | **GMW-5** | | | | | | | | |
| O2495-09 | GMW-5 | Water | Acetone | | 9.90 | | 1.20 | 5.00 | ug/L |
| O2495-09 | GMW-5 | Water | Trichloroethene | | 0.77 | J | 0.26 | 1.00 | ug/L |
| | | | **Total Voc :** | | 10.7 | | | | |
| O2495-09 | GMW-5 | Water | Sulfur dioxide | * | 10.6 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 10.6 | | | | |
| | | | **Total Concentration:** | | 21.3 | | | | |
| **Client ID:** | **TRIP-BLANK** | | | | | | | | |
| O2495-11 | TRIP-BLANK | Water | Acetone | | 2.40 | J | 1.20 | 5.00 | ug/L |
| O2495-11 | TRIP-BLANK | Water | Trichloroethene | | 0.60 | J | 0.26 | 1.00 | ug/L |
| | | | **Total Voc :** | | 3.00 | | | | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| O2495-11 | TRIP-BLANK | Water | Sulfur dioxide | * 18.6 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | 18.6 | | | | |
| | | | **Total Concentration:** | 21.6 | | | | |

# SAMPLE DATA

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035353.D | 1 | | 04/27/23 19:50 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 17.7 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | J | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | J | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035353.D | 1 | | 04/27/23 19:50 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.6 | | 74 - 125 | 99% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.3 | | 75 - 124 | 101% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.3 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 48.1 | | 64 - 133 | 96% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 225000 | 5.556 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 368000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 328000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 145000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 7.90 | J | | 1.26 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035353.D | 1 | | 04/27/23 19:50 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035404.D | 1 | | 04/28/23 20:21 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 5.50 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035404.D | 1 | | 04/28/23 20:21 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.4 | | 74 - 125 | 99% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 49.9 | | 75 - 124 | 100% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.7 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 51.6 | | 64 - 133 | 103% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 238000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 395000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 363000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 173000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 108-20-3 | Diisopropyl ether | 0.21 | J | | 3.76 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035404.D | 1 | | 04/28/23 20:21 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035422.D | 1 | | 04/29/23 14:34 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.61 | J | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035422.D | 1 | | 04/29/23 14:34 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.7 | | 74 - 125 | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.0 | | 75 - 124 | 102% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.4 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 51.5 | | 64 - 133 | 103% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 256000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 415000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 376000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 179000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 000275-51-4 | Azulene | 20.3 | J | | 13.8 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035422.D | 1 | | 04/29/23 14:34 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035423.D | 1 | | 04/29/23 14:57 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.60 | J | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.72 | J | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.21 | J | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035423.D | 1 | | 04/29/23 14:57 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.0 | | 74 - 125 | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.7 | | 75 - 124 | 101% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.1 | | 86 - 113 | 100% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 49.6 | | 64 - 133 | 99% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 246000 | 5.556 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 401000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 355000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 167000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 5.90 | J | | 1.26 | ug/L |
| 000275-51-4 | Azulene | 21.5 | J | | 13.8 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035423.D | 1 | | 04/29/23 14:57 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035348.D | 1 | | 04/27/23 17:54 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 9.90 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.77 | J | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035348.D | 1 | | 04/27/23 17:54 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.3 | | 74 - 125 | 99% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 49.2 | | 75 - 124 | 98% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.3 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 49.4 | | 64 - 133 | 99% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 232000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 382000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 344000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 157000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 10.6 | J | | 1.26 | ug/L |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035348.D | 1 | | 04/27/23 17:54 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | TRIP-BLANK | SDG No.: | O2495 |
| Lab Sample ID: | O2495-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035349.D | 1 | | 04/27/23 18:17 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.40 | J | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.60 | J | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | TRIP-BLANK | SDG No.: | O2495 |
| Lab Sample ID: | O2495-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035349.D | 1 | | 04/27/23 18:17 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 50.2 | | 74 - 125 | 100% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.1 | | 75 - 124 | 100% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.9 | | 86 - 113 | 102% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 51.4 | | 64 - 133 | 103% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 224000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 369000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 343000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 160000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 18.6 | J | | 1.25 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | TRIP-BLANK | SDG No.: | O2495 |
| Lab Sample ID: | O2495-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035349.D | 1 | | 04/27/23 18:17 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# QC SUMMARY

## Surrogate Summary

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low

| Lab Sample ID | Client ID | Parameter | Spike | Result | RecoveryQual | Limits Low | Limits High |
|---|---|---|---|---|---|---|---|
| O2495-01 | PZ-01 | 1,2-Dichloroethane-d4 | 50 | 49.6 | 99 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.3 | 101 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.3 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 48.1 | 96 | 64 | 133 |
| O2495-03 | PZ-02 | 1,2-Dichloroethane-d4 | 50 | 49.4 | 99 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 49.9 | 100 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.7 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 51.6 | 103 | 64 | 133 |
| O2495-05 | GMW-11 | 1,2-Dichloroethane-d4 | 50 | 48.7 | 97 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.0 | 102 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.5 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 51.5 | 103 | 64 | 133 |
| O2495-07 | GMW-X | 1,2-Dichloroethane-d4 | 50 | 48.0 | 96 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.6 | 101 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.1 | 100 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.6 | 99 | 64 | 133 |
| O2495-09 | GMW-5 | 1,2-Dichloroethane-d4 | 50 | 49.3 | 99 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 49.2 | 98 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.3 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.4 | 99 | 64 | 133 |
| O2495-11 | TRIP-BLANK | 1,2-Dichloroethane-d4 | 50 | 50.2 | 100 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.1 | 100 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.9 | 102 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 51.4 | 103 | 64 | 133 |
| VX0427WBL01 | VX0427WBL01 | 1,2-Dichloroethane-d4 | 50 | 48.6 | 97 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 49.8 | 100 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.8 | 102 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.5 | 99 | 64 | 133 |
| VX0427WBS01 | VX0427WBS01 | 1,2-Dichloroethane-d4 | 50 | 46.7 | 93 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 49.4 | 99 | 75 | 124 |
| | | Toluene-d8 | 50 | 48.6 | 97 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 48.9 | 98 | 64 | 133 |
| VX0428WBL01 | VX0428WBL01 | 1,2-Dichloroethane-d4 | 50 | 50.1 | 100 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.9 | 102 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.7 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 51.5 | 103 | 64 | 133 |
| VX0428WBS01 | VX0428WBS01 | 1,2-Dichloroethane-d4 | 50 | 52.8 | 106 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 54.6 | 109 | 75 | 124 |
| | | Toluene-d8 | 50 | 53.7 | 107 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 54.6 | 109 | 64 | 133 |
| VX0429WBL01 | VX0429WBL01 | 1,2-Dichloroethane-d4 | 50 | 48.0 | 96 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.1 | 100 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.3 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 50.8 | 102 | 64 | 133 |
| VX0429WBS01 | VX0429WBS01 | 1,2-Dichloroethane-d4 | 50 | 51.7 | 103 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 54.8 | 110 | 75 | 124 |
| | | Toluene-d8 | 50 | 53.0 | 106 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 53.9 | 108 | 64 | 133 |
| VX0429WBSD0 | VX0429WBSD01 | 1,2-Dichloroethane-d4 | 50 | 50.4 | 101 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 52.9 | 106 | 75 | 124 |
| | | Toluene-d8 | 50 | 51.5 | 103 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 52.7 | 105 | 64 | 133 |

**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low **Datafile :** VX035330.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0427WBS01 | Dichlorodifluoromethane | 20 | 17.1 | ug/L | 86 | | | 69 | 116 | |
| | Chloromethane | 20 | 15.5 | ug/L | 78 | | | 65 | 116 | |
| | Vinyl chloride | 20 | 16.0 | ug/L | 80 | | | 65 | 117 | |
| | Bromomethane | 20 | 16.8 | ug/L | 84 | | | 42 | 173 | |
| | Chloroethane | 20 | 16.2 | ug/L | 81 | | | 44 | 165 | |
| | Trichlorofluoromethane | 20 | 16.7 | ug/L | 84 | | | 73 | 115 | |
| | 1,1,2-Trichlorotrifluoroethane | 20 | 16.7 | ug/L | 84 | | | 80 | 112 | |
| | 1,1-Dichloroethene | 20 | 16.3 | ug/L | 81 | | | 74 | 110 | |
| | Acetone | 100 | 78.3 | ug/L | 78 | | | 60 | 125 | |
| | Carbon disulfide | 20 | 15.7 | ug/L | 79 | | | 64 | 112 | |
| | Methyl tert-butyl Ether | 20 | 17.1 | ug/L | 86 | | | 78 | 114 | |
| | Methyl Acetate | 20 | 16.5 | ug/L | 83 | | | 67 | 125 | |
| | Methylene Chloride | 20 | 15.5 | ug/L | 78 | | | 72 | 114 | |
| | trans-1,2-Dichloroethene | 20 | 16.5 | ug/L | 83 | | | 75 | 108 | |
| | 1,1-Dichloroethane | 20 | 16.5 | ug/L | 83 | | | 78 | 112 | |
| | Cyclohexane | 20 | 16.9 | ug/L | 85 | | | 75 | 110 | |
| | 2-Butanone | 100 | 82.0 | ug/L | 82 | | | 65 | 122 | |
| | Carbon Tetrachloride | 20 | 17.1 | ug/L | 86 | | | 77 | 113 | |
| | cis-1,2-Dichloroethene | 20 | 16.6 | ug/L | 83 | | | 77 | 110 | |
| | Bromochloromethane | 20 | 17.1 | ug/L | 86 | | | 70 | 124 | |
| | Chloroform | 20 | 17.0 | ug/L | 85 | | | 79 | 113 | |
| | 1,1,1-Trichloroethane | 20 | 16.6 | ug/L | 83 | | | 80 | 108 | |
| | Methylcyclohexane | 20 | 16.8 | ug/L | 84 | | | 72 | 115 | |
| | Benzene | 20 | 16.7 | ug/L | 84 | | | 82 | 109 | |
| | 1,2-Dichloroethane | 20 | 16.9 | ug/L | 85 | | | 80 | 115 | |
| | Trichloroethene | 20 | 17.1 | ug/L | 86 | | | 77 | 113 | |
| | 1,2-Dichloropropane | 20 | 17.0 | ug/L | 85 | | | 83 | 111 | |
| | Bromodichloromethane | 20 | 16.8 | ug/L | 84 | | | 83 | 110 | |
| | 4-Methyl-2-Pentanone | 100 | 84.8 | ug/L | 85 | | | 74 | 118 | |
| | Toluene | 20 | 17.2 | ug/L | 86 | | | 82 | 110 | |
| | t-1,3-Dichloropropene | 20 | 17.5 | ug/L | 88 | | | 79 | 110 | |
| | cis-1,3-Dichloropropene | 20 | 17.4 | ug/L | 87 | | | 82 | 110 | |
| | 1,1,2-Trichloroethane | 20 | 16.9 | ug/L | 85 | | | 83 | 112 | |
| | 2-Hexanone | 100 | 86.7 | ug/L | 87 | | | 73 | 117 | |
| | Dibromochloromethane | 20 | 17.3 | ug/L | 86 | | | 82 | 110 | |
| | 1,2-Dibromoethane | 20 | 17.2 | ug/L | 86 | | | 81 | 110 | |
| | Tetrachloroethene | 20 | 17.6 | ug/L | 88 | | | 67 | 123 | |
| | Chlorobenzene | 20 | 16.7 | ug/L | 84 | | | 82 | 109 | |
| | Ethyl Benzene | 20 | 17.1 | ug/L | 86 | | | 83 | 109 | |
| | m/p-Xylenes | 40 | 34.6 | ug/L | 86 | | | 82 | 110 | |
| | o-Xylene | 20 | 17.4 | ug/L | 87 | | | 83 | 109 | |
| | Styrene | 20 | 17.7 | ug/L | 89 | | | 80 | 111 | |
| | Bromoform | 20 | 16.6 | ug/L | 83 | | | 79 | 109 | |
| | Isopropylbenzene | 20 | 17.9 | ug/L | 90 | | | 83 | 112 | |
| | 1,1,2,2-Tetrachloroethane | 20 | 17.3 | ug/L | 86 | | | 76 | 118 | |
| | 1,3-Dichlorobenzene | 20 | 17.3 | ug/L | 86 | | | 82 | 108 | |
| | 1,4-Dichlorobenzene | 20 | 16.6 | ug/L | 83 | | | 82 | 107 | |
| | 1,2-Dichlorobenzene | 20 | 17.2 | ug/L | 86 | | | 82 | 109 | |
| | 1,2-Dibromo-3-Chloropropane | 20 | 17.1 | ug/L | 86 | | | 68 | 112 | |

CHEMTECH

**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low **Datafile :** VX035330.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0427WBS01 | 1,2,4-Trichlorobenzene | 20 | 17.2 | ug/L | 86 | | | 74 | 114 | |
| | 1,2,3-Trichlorobenzene | 20 | 17.0 | ug/L | 85 | | | 77 | 113 | |

## Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
## SW-846

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low **Datafile :** VX035382.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0428WBS01 | Dichlorodifluoromethane | 20 | 20.2 | ug/L | 101 | | | 69 | 116 | |
| | Chloromethane | 20 | 17.6 | ug/L | 88 | | | 65 | 116 | |
| | Vinyl chloride | 20 | 18.5 | ug/L | 93 | | | 65 | 117 | |
| | Bromomethane | 20 | 18.1 | ug/L | 91 | | | 42 | 173 | |
| | Chloroethane | 20 | 18.3 | ug/L | 92 | | | 44 | 165 | |
| | Trichlorofluoromethane | 20 | 20.2 | ug/L | 101 | | | 73 | 115 | |
| | 1,1,2-Trichlorotrifluoroethane | 20 | 19.5 | ug/L | 98 | | | 80 | 112 | |
| | 1,1-Dichloroethene | 20 | 19.0 | ug/L | 95 | | | 74 | 110 | |
| | Acetone | 100 | 99.6 | ug/L | 100 | | | 60 | 125 | |
| | Carbon disulfide | 20 | 18.4 | ug/L | 92 | | | 64 | 112 | |
| | Methyl tert-butyl Ether | 20 | 20.2 | ug/L | 101 | | | 78 | 114 | |
| | Methyl Acetate | 20 | 19.1 | ug/L | 96 | | | 67 | 125 | |
| | Methylene Chloride | 20 | 17.8 | ug/L | 89 | | | 72 | 114 | |
| | trans-1,2-Dichloroethene | 20 | 19.4 | ug/L | 97 | | | 75 | 108 | |
| | 1,1-Dichloroethane | 20 | 19.6 | ug/L | 98 | | | 78 | 112 | |
| | Cyclohexane | 20 | 19.3 | ug/L | 97 | | | 75 | 110 | |
| | 2-Butanone | 100 | 95.6 | ug/L | 96 | | | 65 | 122 | |
| | Carbon Tetrachloride | 20 | 20.8 | ug/L | 104 | | | 77 | 113 | |
| | cis-1,2-Dichloroethene | 20 | 19.4 | ug/L | 97 | | | 77 | 110 | |
| | Bromochloromethane | 20 | 20.6 | ug/L | 103 | | | 70 | 124 | |
| | Chloroform | 20 | 20.4 | ug/L | 102 | | | 79 | 113 | |
| | 1,1,1-Trichloroethane | 20 | 20.3 | ug/L | 102 | | | 80 | 108 | |
| | Methylcyclohexane | 20 | 19.4 | ug/L | 97 | | | 72 | 115 | |
| | Benzene | 20 | 19.9 | ug/L | 100 | | | 82 | 109 | |
| | 1,2-Dichloroethane | 20 | 20.3 | ug/L | 102 | | | 80 | 115 | |
| | Trichloroethene | 20 | 20.2 | ug/L | 101 | | | 77 | 113 | |
| | 1,2-Dichloropropane | 20 | 20.2 | ug/L | 101 | | | 83 | 111 | |
| | Bromodichloromethane | 20 | 20.6 | ug/L | 103 | | | 83 | 110 | |
| | 4-Methyl-2-Pentanone | 100 | 98.8 | ug/L | 99 | | | 74 | 118 | |
| | Toluene | 20 | 20.3 | ug/L | 102 | | | 82 | 110 | |
| | t-1,3-Dichloropropene | 20 | 20.8 | ug/L | 104 | | | 79 | 110 | |
| | cis-1,3-Dichloropropene | 20 | 20.9 | ug/L | 104 | | | 82 | 110 | |
| | 1,1,2-Trichloroethane | 20 | 20.3 | ug/L | 102 | | | 83 | 112 | |
| | 2-Hexanone | 100 | 100 | ug/L | 100 | | | 73 | 117 | |
| | Dibromochloromethane | 20 | 21.0 | ug/L | 105 | | | 82 | 110 | |
| | 1,2-Dibromoethane | 20 | 20.6 | ug/L | 103 | | | 81 | 110 | |
| | Tetrachloroethene | 20 | 20.0 | ug/L | 100 | | | 67 | 123 | |
| | Chlorobenzene | 20 | 19.7 | ug/L | 99 | | | 82 | 109 | |
| | Ethyl Benzene | 20 | 20.3 | ug/L | 102 | | | 83 | 109 | |
| | m/p-Xylenes | 40 | 40.5 | ug/L | 101 | | | 82 | 110 | |
| | o-Xylene | 20 | 20.5 | ug/L | 103 | | | 83 | 109 | |
| | Styrene | 20 | 20.9 | ug/L | 104 | | | 80 | 111 | |
| | Bromoform | 20 | 20.9 | ug/L | 104 | | | 79 | 109 | |
| | Isopropylbenzene | 20 | 21.0 | ug/L | 105 | | | 83 | 112 | |
| | 1,1,2,2-Tetrachloroethane | 20 | 20.8 | ug/L | 104 | | | 76 | 118 | |
| | 1,3-Dichlorobenzene | 20 | 20.4 | ug/L | 102 | | | 82 | 108 | |
| | 1,4-Dichlorobenzene | 20 | 19.5 | ug/L | 98 | | | 82 | 107 | |
| | 1,2-Dichlorobenzene | 20 | 20.0 | ug/L | 100 | | | 82 | 109 | |
| | 1,2-Dibromo-3-Chloropropane | 20 | 21.1 | ug/L | 106 | | | 68 | 112 | |

CHEMTECH

**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low **Datafile :** VX035382.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0428WBS01 | 1,2,4-Trichlorobenzene | 20 | 20.4 | ug/L | 102 | | | 74 | 114 | |
| | 1,2,3-Trichlorobenzene | 20 | 20.0 | ug/L | 100 | | | 77 | 113 | |

CHEMTECH

**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2495
**Client:** GEI Consultants, Inc., P.C.
**Analytical Method:** SW8260-Low **Datafile :** VX035418.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0429WBS01 | Dichlorodifluoromethane | 20 | 19.0 | ug/L | 95 | | | 69 | 116 | |
| | Chloromethane | 20 | 16.7 | ug/L | 84 | | | 65 | 116 | |
| | Vinyl chloride | 20 | 17.6 | ug/L | 88 | | | 65 | 117 | |
| | Bromomethane | 20 | 17.7 | ug/L | 89 | | | 42 | 173 | |
| | Chloroethane | 20 | 18.5 | ug/L | 93 | | | 44 | 165 | |
| | Trichlorofluoromethane | 20 | 18.8 | ug/L | 94 | | | 73 | 115 | |
| | 1,1,2-Trichlorotrifluoroethane | 20 | 18.7 | ug/L | 94 | | | 80 | 112 | |
| | 1,1-Dichloroethene | 20 | 18.1 | ug/L | 91 | | | 74 | 110 | |
| | Acetone | 100 | 88.8 | ug/L | 89 | | | 60 | 125 | |
| | Carbon disulfide | 20 | 17.3 | ug/L | 86 | | | 64 | 112 | |
| | Methyl tert-butyl Ether | 20 | 19.2 | ug/L | 96 | | | 78 | 114 | |
| | Methyl Acetate | 20 | 17.8 | ug/L | 89 | | | 67 | 125 | |
| | Methylene Chloride | 20 | 17.2 | ug/L | 86 | | | 72 | 114 | |
| | trans-1,2-Dichloroethene | 20 | 18.7 | ug/L | 94 | | | 75 | 108 | |
| | 1,1-Dichloroethane | 20 | 18.8 | ug/L | 94 | | | 78 | 112 | |
| | Cyclohexane | 20 | 18.5 | ug/L | 93 | | | 75 | 110 | |
| | 2-Butanone | 100 | 86.6 | ug/L | 87 | | | 65 | 122 | |
| | Carbon Tetrachloride | 20 | 19.7 | ug/L | 99 | | | 77 | 113 | |
| | cis-1,2-Dichloroethene | 20 | 18.8 | ug/L | 94 | | | 77 | 110 | |
| | Bromochloromethane | 20 | 22.2 | ug/L | 111 | | | 70 | 124 | |
| | Chloroform | 20 | 19.4 | ug/L | 97 | | | 79 | 113 | |
| | 1,1,1-Trichloroethane | 20 | 19.3 | ug/L | 97 | | | 80 | 108 | |
| | Methylcyclohexane | 20 | 18.4 | ug/L | 92 | | | 72 | 115 | |
| | Benzene | 20 | 18.9 | ug/L | 95 | | | 82 | 109 | |
| | 1,2-Dichloroethane | 20 | 19.1 | ug/L | 96 | | | 80 | 115 | |
| | Trichloroethene | 20 | 19.3 | ug/L | 97 | | | 77 | 113 | |
| | 1,2-Dichloropropane | 20 | 19.3 | ug/L | 97 | | | 83 | 111 | |
| | Bromodichloromethane | 20 | 19.5 | ug/L | 98 | | | 83 | 110 | |
| | 4-Methyl-2-Pentanone | 100 | 91.5 | ug/L | 92 | | | 74 | 118 | |
| | Toluene | 20 | 19.2 | ug/L | 96 | | | 82 | 110 | |
| | t-1,3-Dichloropropene | 20 | 19.9 | ug/L | 100 | | | 79 | 110 | |
| | cis-1,3-Dichloropropene | 20 | 19.9 | ug/L | 100 | | | 82 | 110 | |
| | 1,1,2-Trichloroethane | 20 | 19.0 | ug/L | 95 | | | 83 | 112 | |
| | 2-Hexanone | 100 | 91.5 | ug/L | 92 | | | 73 | 117 | |
| | Dibromochloromethane | 20 | 19.9 | ug/L | 100 | | | 82 | 110 | |
| | 1,2-Dibromoethane | 20 | 19.4 | ug/L | 97 | | | 81 | 110 | |
| | Tetrachloroethene | 20 | 18.9 | ug/L | 95 | | | 67 | 123 | |
| | Chlorobenzene | 20 | 18.8 | ug/L | 94 | | | 82 | 109 | |
| | Ethyl Benzene | 20 | 19.3 | ug/L | 97 | | | 83 | 109 | |
| | m/p-Xylenes | 40 | 38.8 | ug/L | 97 | | | 82 | 110 | |
| | o-Xylene | 20 | 19.7 | ug/L | 99 | | | 83 | 109 | |
| | Styrene | 20 | 19.5 | ug/L | 98 | | | 80 | 111 | |
| | Bromoform | 20 | 19.8 | ug/L | 99 | | | 79 | 109 | |
| | Isopropylbenzene | 20 | 20.2 | ug/L | 101 | | | 83 | 112 | |
| | 1,1,2,2-Tetrachloroethane | 20 | 19.2 | ug/L | 96 | | | 76 | 118 | |
| | 1,3-Dichlorobenzene | 20 | 19.2 | ug/L | 96 | | | 82 | 108 | |
| | 1,4-Dichlorobenzene | 20 | 18.7 | ug/L | 94 | | | 82 | 107 | |
| | 1,2-Dichlorobenzene | 20 | 19.1 | ug/L | 96 | | | 82 | 109 | |
| | 1,2-Dibromo-3-Chloropropane | 20 | 18.6 | ug/L | 93 | | | 68 | 112 | |

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**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low **Datafile :** VX035418.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0429WBS01 | 1,2,4-Trichlorobenzene | 20 | 18.7 | ug/L | 94 | | | 74 | 114 | |
| | 1,2,3-Trichlorobenzene | 20 | 18.5 | ug/L | 93 | | | 77 | 113 | |

**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low **Datafile :** VX035419.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0429WBSD01 | Dichlorodifluoromethane | 20 | 18.1 | ug/L | 91 | 4 | | 69 | 116 | 20 |
| | Chloromethane | 20 | 16.1 | ug/L | 81 | 4 | | 65 | 116 | 20 |
| | Vinyl chloride | 20 | 16.8 | ug/L | 84 | 5 | | 65 | 117 | 20 |
| | Bromomethane | 20 | 17.4 | ug/L | 87 | 2 | | 42 | 173 | 20 |
| | Chloroethane | 20 | 17.1 | ug/L | 86 | 8 | | 44 | 165 | 20 |
| | Trichlorofluoromethane | 20 | 18.4 | ug/L | 92 | 2 | | 73 | 115 | 20 |
| | 1,1,2-Trichlorotrifluoroethane | 20 | 18.5 | ug/L | 93 | 1 | | 80 | 112 | 20 |
| | 1,1-Dichloroethene | 20 | 17.4 | ug/L | 87 | 4 | | 74 | 110 | 20 |
| | Acetone | 100 | 87.3 | ug/L | 87 | 2 | | 60 | 125 | 20 |
| | Carbon disulfide | 20 | 16.6 | ug/L | 83 | 4 | | 64 | 112 | 20 |
| | Methyl tert-butyl Ether | 20 | 19.1 | ug/L | 96 | 0 | | 78 | 114 | 20 |
| | Methyl Acetate | 20 | 18.0 | ug/L | 90 | 1 | | 67 | 125 | 20 |
| | Methylene Chloride | 20 | 16.7 | ug/L | 84 | 2 | | 72 | 114 | 20 |
| | trans-1,2-Dichloroethene | 20 | 18.1 | ug/L | 91 | 3 | | 75 | 108 | 20 |
| | 1,1-Dichloroethane | 20 | 18.3 | ug/L | 92 | 2 | | 78 | 112 | 20 |
| | Cyclohexane | 20 | 17.7 | ug/L | 89 | 4 | | 75 | 110 | 20 |
| | 2-Butanone | 100 | 86.5 | ug/L | 87 | 0 | | 65 | 122 | 20 |
| | Carbon Tetrachloride | 20 | 19.1 | ug/L | 96 | 3 | | 77 | 113 | 20 |
| | cis-1,2-Dichloroethene | 20 | 18.1 | ug/L | 91 | 3 | | 77 | 110 | 20 |
| | Bromochloromethane | 20 | 20.8 | ug/L | 104 | 7 | | 70 | 124 | 20 |
| | Chloroform | 20 | 18.7 | ug/L | 94 | 3 | | 79 | 113 | 20 |
| | 1,1,1-Trichloroethane | 20 | 18.6 | ug/L | 93 | 4 | | 80 | 108 | 20 |
| | Methylcyclohexane | 20 | 18.0 | ug/L | 90 | 2 | | 72 | 115 | 20 |
| | Benzene | 20 | 18.4 | ug/L | 92 | 3 | | 82 | 109 | 20 |
| | 1,2-Dichloroethane | 20 | 18.8 | ug/L | 94 | 2 | | 80 | 115 | 20 |
| | Trichloroethene | 20 | 18.5 | ug/L | 93 | 4 | | 77 | 113 | 20 |
| | 1,2-Dichloropropane | 20 | 18.8 | ug/L | 94 | 3 | | 83 | 111 | 20 |
| | Bromodichloromethane | 20 | 19.4 | ug/L | 97 | 1 | | 83 | 110 | 20 |
| | 4-Methyl-2-Pentanone | 100 | 92.5 | ug/L | 93 | 1 | | 74 | 118 | 20 |
| | Toluene | 20 | 18.6 | ug/L | 93 | 3 | | 82 | 110 | 20 |
| | t-1,3-Dichloropropene | 20 | 20.0 | ug/L | 100 | 0 | | 79 | 110 | 20 |
| | cis-1,3-Dichloropropene | 20 | 19.6 | ug/L | 98 | 2 | | 82 | 110 | 20 |
| | 1,1,2-Trichloroethane | 20 | 19.4 | ug/L | 97 | 2 | | 83 | 112 | 20 |
| | 2-Hexanone | 100 | 91.8 | ug/L | 92 | 0 | | 73 | 117 | 20 |
| | Dibromochloromethane | 20 | 19.7 | ug/L | 99 | 1 | | 82 | 110 | 20 |
| | 1,2-Dibromoethane | 20 | 19.9 | ug/L | 100 | 3 | | 81 | 110 | 20 |
| | Tetrachloroethene | 20 | 18.8 | ug/L | 94 | 1 | | 67 | 123 | 20 |
| | Chlorobenzene | 20 | 18.5 | ug/L | 93 | 1 | | 82 | 109 | 20 |
| | Ethyl Benzene | 20 | 19.1 | ug/L | 96 | 1 | | 83 | 109 | 20 |
| | m/p-Xylenes | 40 | 38.6 | ug/L | 97 | 0 | | 82 | 110 | 20 |
| | o-Xylene | 20 | 19.6 | ug/L | 98 | 1 | | 83 | 109 | 20 |
| | Styrene | 20 | 19.6 | ug/L | 98 | 0 | | 80 | 111 | 20 |
| | Bromoform | 20 | 20.1 | ug/L | 101 | 2 | | 79 | 109 | 20 |
| | Isopropylbenzene | 20 | 19.9 | ug/L | 100 | 1 | | 83 | 112 | 20 |
| | 1,1,2,2-Tetrachloroethane | 20 | 19.5 | ug/L | 98 | 2 | | 76 | 118 | 20 |
| | 1,3-Dichlorobenzene | 20 | 19.3 | ug/L | 97 | 1 | | 82 | 108 | 20 |
| | 1,4-Dichlorobenzene | 20 | 18.3 | ug/L | 92 | 2 | | 82 | 107 | 20 |
| | 1,2-Dichlorobenzene | 20 | 19.0 | ug/L | 95 | 1 | | 82 | 109 | 20 |
| | 1,2-Dibromo-3-Chloropropane | 20 | 18.6 | ug/L | 93 | 0 | | 68 | 112 | 20 |

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**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low **Datafile :** VX035419.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0429WBSD01 | 1,2,4-Trichlorobenzene | 20 | 18.9 | ug/L | 95 | 1 | | 74 | 114 | 20 |
| | 1,2,3-Trichlorobenzene | 20 | 19.3 | ug/L | 97 | 4 | | 77 | 113 | 20 |

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# VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX0427WBL01

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035329.D Lab Sample ID: VX0427WBL01

Date Analyzed: 04/27/2023 Time Analyzed: 10:29

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| VX0427WBS01 | VX0427WBS01 | VX035330.D | 04/27/2023 |
| GMW-5 | O2495-09 | VX035348.D | 04/27/2023 |
| TRIP-BLANK | O2495-11 | VX035349.D | 04/27/2023 |
| PZ-01 | O2495-01 | VX035353.D | 04/27/2023 |

COMMENTS:

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# VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX0428WBL01

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035381.D Lab Sample ID: VX0428WBL01

Date Analyzed: 04/28/2023 Time Analyzed: 11:21

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| VX0428WBS01 | VX0428WBS01 | VX035382.D | 04/28/2023 |
| PZ-02 | O2495-03 | VX035404.D | 04/28/2023 |

COMMENTS:

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# VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX0429WBL01

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035417.D Lab Sample ID: VX0429WBL01

Date Analyzed: 04/29/2023 Time Analyzed: 12:36

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| VX0429WBS01 | VX0429WBS01 | VX035418.D | 04/29/2023 |
| VX0429WBSD01 | VX0429WBSD01 | VX035419.D | 04/29/2023 |
| GMW-11 | O2495-05 | VX035422.D | 04/29/2023 |
| GMW-X | O2495-07 | VX035423.D | 04/29/2023 |

COMMENTS:

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# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035269.D BFB Injection Date: 04/25/2023

Instrument ID: MSVOA_X BFB Injection Time: 08:57

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.5 |
| 75 | 30.0 - 60.0% of mass 95 | 49.1 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 7 |
| 173 | Less than 2.0% of mass 174 | 0.5 ( 0.6 ) 1 |
| 174 | 50.0 - 100.0% of mass 95 | 75.5 |
| 175 | 5.0 - 9.0% of mass 174 | 5.9 ( 7.8 ) 1 |
| 176 | 95.0 - 101.0% of mass 174 | 75.2 ( 99.5 ) 1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.1 ( 6.7 ) 2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| VSTDICC001 | VSTDICC001 | VX035272.D | 04/25/2023 | 10:37 |
| VSTDICC005 | VSTDICC005 | VX035273.D | 04/25/2023 | 11:00 |
| VSTDICC020 | VSTDICC020 | VX035274.D | 04/25/2023 | 11:23 |
| VSTDICCC050 | VSTDICCC050 | VX035275.D | 04/25/2023 | 11:46 |
| VSTDICC150 | VSTDICC150 | VX035277.D | 04/25/2023 | 12:32 |
| VSTDICC100 | VSTDICC100 | VX035279.D | 04/25/2023 | 13:21 |

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# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035326.D BFB Injection Date: 04/27/2023

Instrument ID: MSVOA_X BFB Injection Time: 08:28

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.6 |
| 75 | 30.0 - 60.0% of mass 95 | 48.1 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0.2 ( 0.3 ) 1 |
| 174 | 50.0 - 100.0% of mass 95 | 75.9 |
| 175 | 5.0 - 9.0% of mass 174 | 6 ( 7.9 ) 1 |
| 176 | 95.0 - 101.0% of mass 174 | 72.8 ( 95.9 ) 1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.9 ( 6.7 ) 2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| VSTDCCC050 | VSTDCCC050 | VX035327.D | 04/27/2023 | 09:40 |
| VX0427WBL01 | VX0427WBL01 | VX035329.D | 04/27/2023 | 10:29 |
| VX0427WBS01 | VX0427WBS01 | VX035330.D | 04/27/2023 | 10:52 |
| GMW-5 | O2495-09 | VX035348.D | 04/27/2023 | 17:54 |
| TRIP-BLANK | O2495-11 | VX035349.D | 04/27/2023 | 18:17 |
| PZ-01 | O2495-01 | VX035353.D | 04/27/2023 | 19:50 |

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# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035378.D BFB Injection Date: 04/28/2023

Instrument ID: MSVOA_X BFB Injection Time: 10:03

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.2 |
| 75 | 30.0 - 60.0% of mass 95 | 50.5 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.7 |
| 173 | Less than 2.0% of mass 174 | 0.4 ( 0.5 ) 1 |
| 174 | 50.0 - 100.0% of mass 95 | 76.7 |
| 175 | 5.0 - 9.0% of mass 174 | 5.8 ( 7.5 ) 1 |
| 176 | 95.0 - 101.0% of mass 174 | 73.7 ( 96.1 ) 1 |
| 177 | 5.0 - 9.0% of mass 176 | 5 ( 6.8 ) 2 |

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| VSTDCCC050 | VSTDCCC050 | VX035379.D | 04/28/2023 | 10:31 |
| VX0428WBL01 | VX0428WBL01 | VX035381.D | 04/28/2023 | 11:21 |
| VX0428WBS01 | VX0428WBS01 | VX035382.D | 04/28/2023 | 11:44 |
| PZ-02 | O2495-03 | VX035404.D | 04/28/2023 | 20:21 |

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035414.D BFB Injection Date: 04/29/2023

Instrument ID: MSVOA_X BFB Injection Time: 11:13

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 16.5 |
| 75 | 30.0 - 60.0% of mass 95 | 48.7 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0.3 ( 0.4 ) 1 |
| 174 | 50.0 - 100.0% of mass 95 | 79.2 |
| 175 | 5.0 - 9.0% of mass 174 | 5.9 ( 7.4 ) 1 |
| 176 | 95.0 - 101.0% of mass 174 | 76.8 ( 97 ) 1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 6.2 ) 2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| VSTDCCC050 | VSTDCCC050 | VX035415.D | 04/29/2023 | 11:44 |
| VX0429WBL01 | VX0429WBL01 | VX035417.D | 04/29/2023 | 12:36 |
| VX0429WBS01 | VX0429WBS01 | VX035418.D | 04/29/2023 | 12:59 |
| VX0429WBSD01 | VX0429WBSD01 | VX035419.D | 04/29/2023 | 13:25 |
| GMW-11 | O2495-05 | VX035422.D | 04/29/2023 | 14:34 |
| GMW-X | O2495-07 | VX035423.D | 04/29/2023 | 14:57 |

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## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035327.D Date Analyzed: 04/27/2023

Instrument ID: MSVOA_X Time Analyzed: 09:40

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 296701 | 5.55 | 462567 | 6.76 | 410355 | 10.06 |
| UPPER LIMIT | 593402 | 6.05 | 925134 | 7.257 | 820710 | 10.555 |
| LOWER LIMIT | 148351 | 5.05 | 231284 | 6.257 | 205178 | 9.555 |
| EPA SAMPLE NO. | | | | | | |
| PZ-01 | 225496 | 5.56 | 367679 | 6.76 | 327989 | 10.06 |
| GMW-5 | 231525 | 5.55 | 382487 | 6.76 | 343993 | 10.06 |
| TRIP-BLANK | 224211 | 5.55 | 369366 | 6.76 | 342746 | 10.06 |
| VX0427WBL01 | 250831 | 5.55 | 410206 | 6.76 | 369675 | 10.06 |
| VX0427WBS01 | 295038 | 5.55 | 458100 | 6.76 | 405076 | 10.06 |

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035327.D Date Analyzed: 04/27/2023

Instrument ID: MSVOA_X Time Analyzed: 09:40

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS4 AREA # | RT # | | | | |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 207220 | 12.024 | | | | |
| UPPER LIMIT | 414440 | 12.524 | | | | |
| LOWER LIMIT | 103610 | 11.524 | | | | |
| EPA SAMPLE NO. | | | | | | |
| PZ-01 | 145355 | 12.02 | | | | |
| GMW-5 | 157240 | 12.02 | | | | |
| TRIP-BLANK | 159589 | 12.02 | | | | |
| VX0427WBL01 | 172799 | 12.02 | | | | |
| VX0427WBS01 | 199849 | 12.02 | | | | |

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

**# Column used to flag values outside QC limits with an asterisk.**
*** Values outside of QC limits.**

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## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035379.D Date Analyzed: 04/28/2023

Instrument ID: MSVOA_X Time Analyzed: 10:31

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 261150 | 5.55 | 399192 | 6.76 | 353705 | 10.06 |
| UPPER LIMIT | 522300 | 6.05 | 798384 | 7.257 | 707410 | 10.555 |
| LOWER LIMIT | 130575 | 5.05 | 199596 | 6.257 | 176853 | 9.555 |
| EPA SAMPLE NO. | | | | | | |
| PZ-02 | 238419 | 5.55 | 394894 | 6.76 | 363087 | 10.06 |
| VX0428WBL01 | 223220 | 5.55 | 366670 | 6.76 | 331319 | 10.06 |
| VX0428WBS01 | 288171 | 5.55 | 446481 | 6.76 | 395148 | 10.06 |

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035379.D Date Analyzed: 04/28/2023

Instrument ID: MSVOA_X Time Analyzed: 10:31

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS4 AREA # | RT # | | | | |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 177369 | 12.024 | | | | |
| UPPER LIMIT | 354738 | 12.524 | | | | |
| LOWER LIMIT | 88684.5 | 11.524 | | | | |
| EPA SAMPLE NO. | | | | | | |
| PZ-02 | 173207 | 12.02 | | | | |
| VX0428WBL01 | 156787 | 12.02 | | | | |
| VX0428WBS01 | 195798 | 12.02 | | | | |

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

**# Column used to flag values outside QC limits with an asterisk.**
*** Values outside of QC limits.**

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## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035415.D Date Analyzed: 04/29/2023

Instrument ID: MSVOA_X Time Analyzed: 11:44

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 285341 | 5.54 | 436930 | 6.76 | 380748 | 10.05 |
| UPPER LIMIT | 570682 | 6.044 | 873860 | 7.257 | 761496 | 10.549 |
| LOWER LIMIT | 142671 | 5.044 | 218465 | 6.257 | 190374 | 9.549 |
| EPA SAMPLE NO. | | | | | | |
| GMW-11 | 255672 | 5.55 | 415401 | 6.76 | 375783 | 10.06 |
| GMW-X | 245800 | 5.56 | 400537 | 6.76 | 355066 | 10.06 |
| VX0429WBL01 | 258992 | 5.55 | 421873 | 6.76 | 380863 | 10.06 |
| VX0429WBS01 | 300917 | 5.55 | 468999 | 6.76 | 416096 | 10.06 |
| VX0429WBSD01 | 274595 | 5.55 | 424456 | 6.76 | 373456 | 10.06 |

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: VX035415.D Date Analyzed: 04/29/2023

Instrument ID: MSVOA_X Time Analyzed: 11:44

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS4 AREA # | RT # | | | | |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 189139 | 12.018 | | | | |
| UPPER LIMIT | 378278 | 12.518 | | | | |
| LOWER LIMIT | 94569.5 | 11.518 | | | | |
| EPA SAMPLE NO. | | | | | | |
| GMW-11 | 179310 | 12.02 | | | | |
| GMW-X | 166692 | 12.02 | | | | |
| VX0429WBL01 | 178613 | 12.02 | | | | |
| VX0429WBS01 | 203044 | 12.02 | | | | |
| VX0429WBSD01 | 185885 | 12.02 | | | | |

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

**# Column used to flag values outside QC limits with an asterisk.**
*** Values outside of QC limits.**

# QC SAMPLE DATA

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0427WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0427WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035329.D | 1 | | 04/27/23 10:29 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0427WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0427WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035329.D | 1 | | 04/27/23 10:29 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.6 | | 74 - 125 | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 49.8 | | 75 - 124 | 100% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.8 | | 86 - 113 | 102% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 49.5 | | 64 - 133 | 99% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 251000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 410000 | 6.757 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 370000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 173000 | 12.024 | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0427WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0427WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035329.D | 1 | | 04/27/23 10:29 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0428WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0428WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035381.D | 1 | | 04/28/23 11:21 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0428WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0428WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035381.D | 1 | | 04/28/23 11:21 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 50.1 | | 74 - 125 | 100% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.9 | | 75 - 124 | 102% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.7 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 51.5 | | 64 - 133 | 103% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 223000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 367000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 331000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 157000 | 12.024 | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0428WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0428WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035381.D | 1 | | 04/28/23 11:21 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035417.D | 1 | | 04/29/23 12:36 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035417.D | 1 | | 04/29/23 12:36 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.0 | | 74 - 125 | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.1 | | 75 - 124 | 100% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.3 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 50.8 | | 64 - 133 | 102% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 259000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 422000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 381000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 179000 | 12.024 | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBL01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035417.D | 1 | | 04/29/23 12:36 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0427WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0427WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035330.D | 1 | | 04/27/23 10:52 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 17.1 | | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 15.5 | | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 16.0 | | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 16.8 | | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 16.2 | | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 16.7 | | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 16.7 | | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 16.3 | | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 78.3 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 15.7 | | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 17.1 | | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 16.5 | | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 15.5 | | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 16.5 | | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 16.5 | | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 16.9 | | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 82.0 | | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 17.1 | | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 16.6 | | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 17.1 | | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 17.0 | | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 16.6 | | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 16.8 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 16.7 | | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 16.9 | | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 17.1 | | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 17.0 | | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 16.8 | | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 84.8 | | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 17.2 | | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 17.5 | | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 17.4 | | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0427WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0427WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035330.D | 1 | | 04/27/23 10:52 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 16.9 | | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 86.7 | | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 17.3 | | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 17.2 | | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 17.6 | | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 16.7 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 17.1 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 34.6 | | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 17.4 | | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 17.7 | | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 16.6 | | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 17.9 | | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 17.3 | | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 17.3 | | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 16.6 | | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 17.2 | | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 17.1 | | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 17.2 | | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 17.0 | | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 46.7 | | 74 - 125 | 93% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 49.4 | | 75 - 124 | 99% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 48.6 | | 86 - 113 | 97% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 48.9 | | 64 - 133 | 98% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 295000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 458000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 405000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 200000 | 12.024 | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0427WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0427WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035330.D | 1 | | 04/27/23 10:52 | VX042723 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0428WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0428WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035382.D | 1 | | 04/28/23 11:44 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 20.2 | | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 17.6 | | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 18.5 | | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 18.1 | | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 18.3 | | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 20.2 | | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 19.5 | | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 19.0 | | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 99.6 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 18.4 | | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 20.2 | | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 19.1 | | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 17.8 | | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 19.4 | | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 19.6 | | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 19.3 | | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 95.6 | | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 20.8 | | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 19.4 | | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 20.6 | | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 20.4 | | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 20.3 | | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 19.4 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 19.9 | | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 20.3 | | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 20.2 | | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 20.2 | | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 20.6 | | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 98.8 | | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 20.3 | | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 20.8 | | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 20.9 | | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0428WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0428WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035382.D | 1 | | 04/28/23 11:44 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 20.3 | | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 100 | | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 21.0 | | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 20.6 | | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 20.0 | | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 19.7 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 20.3 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 40.5 | | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 20.5 | | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 20.9 | | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 20.9 | | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 21.0 | | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 20.8 | | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 20.4 | | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 19.5 | | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 20.0 | | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 21.1 | | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 20.4 | | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 20.0 | | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 52.8 | | 74 - 125 | 106% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 54.6 | | 75 - 124 | 109% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 53.7 | | 86 - 113 | 107% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 54.6 | | 64 - 133 | 109% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 288000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 446000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 395000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 196000 | 12.024 | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0428WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0428WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035382.D | 1 | | 04/28/23 11:44 | VX042823 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035418.D | 1 | | 04/29/23 12:59 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 19.0 | | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 16.7 | | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 17.6 | | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 17.7 | | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 18.5 | | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 18.8 | | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 18.7 | | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 18.1 | | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 88.8 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 17.3 | | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 19.2 | | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 17.8 | | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 17.2 | | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 18.7 | | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 18.8 | | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 18.5 | | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 86.6 | | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 19.7 | | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 18.8 | | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 22.2 | | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 19.4 | | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 19.3 | | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 18.4 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 18.9 | | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 19.1 | | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 19.3 | | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 19.3 | | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 19.5 | | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 91.5 | | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 19.2 | | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 19.9 | | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 19.9 | | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035418.D | 1 | | 04/29/23 12:59 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 19.0 | | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 91.5 | | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 19.9 | | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 19.4 | | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 18.9 | | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 18.8 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 19.3 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 38.8 | | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 19.7 | | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 19.5 | | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 19.8 | | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 20.2 | | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 19.2 | | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 19.2 | | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 18.7 | | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 19.1 | | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 18.6 | | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 18.7 | | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 18.5 | | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 51.7 | | 74 - 125 | 103% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 54.8 | | 75 - 124 | 110% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 53.0 | | 86 - 113 | 106% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 53.9 | | 64 - 133 | 108% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 301000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 469000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 416000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 203000 | 12.018 | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBS01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035418.D | 1 | | 04/29/23 12:59 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBSD01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBSD01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035419.D | 1 | | 04/29/23 13:25 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 18.1 | | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 16.1 | | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 16.8 | | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 17.4 | | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 17.1 | | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 18.4 | | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 18.5 | | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 17.4 | | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 87.3 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 16.6 | | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 19.1 | | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 18.0 | | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 16.7 | | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 18.1 | | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 18.3 | | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 17.7 | | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 86.5 | | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 19.1 | | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 18.1 | | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 20.8 | | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 18.7 | | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 18.6 | | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 18.0 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 18.4 | | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 18.8 | | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 18.5 | | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 18.8 | | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 19.4 | | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 92.5 | | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 18.6 | | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 20.0 | | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 19.6 | | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBSD01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBSD01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035419.D | 1 | | 04/29/23 13:25 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 19.4 | | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 91.8 | | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 19.7 | | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 19.9 | | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 18.8 | | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 18.5 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 19.1 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 38.6 | | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 19.6 | | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 19.6 | | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 20.1 | | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 19.9 | | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 19.5 | | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 19.3 | | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 18.3 | | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 19.0 | | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 18.6 | | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 18.9 | | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 19.3 | | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 50.4 | | 74 - 125 | 101% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 52.9 | | 75 - 124 | 106% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 51.4 | | 86 - 113 | 103% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 52.7 | | 64 - 133 | 105% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 275000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 424000 | 6.757 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 373000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 186000 | 12.024 | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0429WBSD01 | SDG No.: | O2495 |
| Lab Sample ID: | VX0429WBSD01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035419.D | 1 | | 04/29/23 13:25 | VX042923 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# CALIBRATION SUMMARY

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: MSVOA_X Calibration Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Calibration Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID: RRF001 = VX035272.D RRF005 = VX035273.D RRF020 = VX035274.D
RRF050 = VX035275.D RRF150 = VX035277.D RRF100 = VX035279.D

| COMPOUND | RRF001 | RRF005 | RRF020 | RRF050 | RRF150 | RRF100 | $\overline{RRF}$ | % RSD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.488 | 0.488 | 0.515 | 0.550 | 0.543 | 0.589 | 0.529 | 7.5 |
| Chloromethane | 0.521 | 0.467 | 0.445 | 0.473 | 0.484 | 0.498 | 0.481 | 5.4 |
| Vinyl Chloride | 0.485 | 0.479 | 0.449 | 0.478 | 0.488 | 0.518 | 0.483 | 4.6 |
| Bromomethane | | 0.316 | 0.307 | 0.317 | 0.328 | 0.336 | 0.321 | 3.5 |
| Chloroethane | 0.332 | 0.268 | 0.264 | 0.277 | 0.268 | 0.285 | 0.282 | 9 |
| Trichlorofluoromethane | 0.848 | 0.740 | 0.719 | 0.732 | 0.713 | 0.778 | 0.755 | 6.8 |
| 1,1,2-Trichlorotrifluoroethane | 0.562 | 0.496 | 0.459 | 0.493 | 0.483 | 0.532 | 0.504 | 7.3 |
| 1,1-Dichloroethene | 0.545 | 0.475 | 0.444 | 0.471 | 0.475 | 0.504 | 0.486 | 7.2 |
| Acetone | 0.310 | 0.255 | 0.247 | 0.253 | 0.237 | 0.270 | 0.262 | 9.9 |
| Carbon Disulfide | 1.168 | 1.018 | 1.053 | 1.182 | 1.259 | 1.304 | 1.164 | 9.6 |
| Methyl tert-butyl Ether | 1.731 | 1.674 | 1.558 | 1.657 | 1.649 | 1.727 | 1.666 | 3.8 |
| Methyl Acetate | 1.071 | 0.953 | 0.968 | 1.022 | 1.018 | 1.048 | 1.013 | 4.5 |
| Methylene Chloride | 0.840 | 0.588 | 0.536 | 0.539 | 0.536 | 0.565 | 0.601 | 19.8 |
| trans-1,2-Dichloroethene | 0.567 | 0.535 | 0.488 | 0.514 | 0.515 | 0.546 | 0.527 | 5.2 |
| 1,1-Dichloroethane | 0.982 | 0.949 | 0.895 | 0.949 | 0.944 | 0.997 | 0.953 | 3.7 |
| Cyclohexane | | 0.842 | 0.832 | 0.855 | 0.841 | 0.909 | 0.856 | 3.6 |
| 2-Butanone | 0.395 | 0.386 | 0.365 | 0.382 | 0.373 | 0.394 | 0.382 | 3.1 |
| Carbon Tetrachloride | 0.427 | 0.412 | 0.429 | 0.466 | 0.485 | 0.511 | 0.455 | 8.5 |
| cis-1,2-Dichloroethene | 0.713 | 0.600 | 0.569 | 0.598 | 0.606 | 0.634 | 0.620 | 8.1 |
| Bromochloromethane | 0.364 | 0.421 | 0.404 | 0.415 | 0.417 | 0.414 | 0.406 | 5.2 |
| Chloroform | 0.969 | 0.967 | 0.924 | 0.960 | 0.950 | 0.999 | 0.962 | 2.6 |
| 1,1,1-Trichloroethane | 0.848 | 0.797 | 0.778 | 0.851 | 0.874 | 0.908 | 0.843 | 5.7 |
| Methylcyclohexane | 0.593 | 0.561 | 0.550 | 0.580 | 0.579 | 0.637 | 0.583 | 5.2 |
| Benzene | 1.473 | 1.386 | 1.313 | 1.345 | 1.325 | 1.406 | 1.375 | 4.3 |
| 1,2-Dichloroethane | 0.514 | 0.498 | 0.464 | 0.482 | 0.479 | 0.504 | 0.490 | 3.8 |
| Trichloroethene | 0.391 | 0.383 | 0.358 | 0.372 | 0.372 | 0.395 | 0.379 | 3.6 |
| 1,2-Dichloropropane | 0.366 | 0.335 | 0.325 | 0.344 | 0.344 | 0.364 | 0.347 | 4.7 |
| Bromodichloromethane | 0.404 | 0.406 | 0.406 | 0.455 | 0.470 | 0.490 | 0.438 | 8.7 |
| 4-Methyl-2-Pentanone | 0.465 | 0.459 | 0.439 | 0.454 | 0.434 | 0.461 | 0.452 | 2.8 |
| Toluene | 0.911 | 0.880 | 0.829 | 0.864 | 0.845 | 0.899 | 0.871 | 3.6 |
| t-1,3-Dichloropropene | 0.351 | 0.368 | 0.434 | 0.496 | 0.539 | 0.559 | 0.458 | 19.1 |
| cis-1,3-Dichloropropene | 0.419 | 0.459 | 0.496 | 0.553 | 0.577 | 0.603 | 0.518 | 13.8 |
| 1,1,2-Trichloroethane | 0.382 | 0.344 | 0.326 | 0.343 | 0.336 | 0.352 | 0.347 | 5.6 |

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

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# VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: MSVOA_X Calibration Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Calibration Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID: RRF001 = VX035272.D RRF005 = VX035273.D RRF020 = VX035274.D
RRF050 = VX035275.D RRF150 = VX035277.D RRF100 = VX035279.D

| COMPOUND | RRF001 | RRF005 | RRF020 | RRF050 | RRF150 | RRF100 | $\overline{RRF}$ | % RSD |
|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | 0.339 | 0.342 | 0.332 | 0.347 | 0.322 | 0.354 | 0.339 | 3.3 |
| Dibromochloromethane | 0.271 | 0.290 | 0.315 | 0.355 | 0.375 | 0.390 | 0.333 | 14.4 |
| 1,2-Dibromoethane | 0.355 | 0.347 | 0.345 | 0.362 | 0.361 | 0.379 | 0.358 | 3.4 |
| Tetrachloroethene | 0.447 | 0.394 | 0.356 | 0.363 | 0.351 | 0.386 | 0.383 | 9.4 |
| Chlorobenzene | 1.214 | 1.127 | 0.997 | 1.030 | 1.022 | 1.101 | 1.082 | 7.6 |
| Ethyl Benzene | 1.993 | 1.874 | 1.739 | 1.854 | 1.811 | 1.969 | 1.873 | 5.1 |
| m/p-Xylenes | 0.731 | 0.731 | 0.679 | 0.710 | 0.697 | 0.760 | 0.718 | 4 |
| o-Xylene | 0.705 | 0.717 | 0.669 | 0.697 | 0.690 | 0.745 | 0.704 | 3.7 |
| Styrene | 1.078 | 1.132 | 1.088 | 1.154 | 1.147 | 1.248 | 1.141 | 5.3 |
| Bromoform | 0.213 | 0.219 | 0.234 | 0.279 | 0.306 | 0.321 | 0.262 | 17.7 |
| Isopropylbenzene | 3.616 | 3.740 | 3.546 | 3.603 | 3.607 | 3.818 | 3.655 | 2.8 |
| 1,1,2,2-Tetrachloroethane | 1.225 | 1.172 | 1.082 | 1.102 | 1.085 | 1.142 | 1.134 | 5 |
| 1,3-Dichlorobenzene | 1.794 | 1.735 | 1.619 | 1.675 | 1.721 | 1.816 | 1.727 | 4.3 |
| 1,4-Dichlorobenzene | 2.166 | 1.837 | 1.637 | 1.681 | 1.706 | 1.834 | 1.810 | 10.6 |
| 1,2-Dichlorobenzene | 2.007 | 1.786 | 1.599 | 1.632 | 1.600 | 1.738 | 1.727 | 9.1 |
| 1,2-Dibromo-3-Chloropropane | 0.202 | 0.192 | 0.214 | 0.238 | 0.261 | 0.258 | 0.227 | 12.8 |
| 1,2,4-Trichlorobenzene | 1.123 | 0.998 | 1.002 | 1.058 | 1.132 | 1.201 | 1.085 | 7.4 |
| 1,2,3-Trichlorobenzene | 1.181 | 1.071 | 1.004 | 1.046 | 1.098 | 1.156 | 1.093 | 6.1 |
| 1,2-Dichloroethane-d4 | | 0.633 | 0.613 | 0.597 | 0.573 | 0.600 | 0.603 | 3.7 |
| Dibromofluoromethane | | 0.302 | 0.309 | 0.308 | 0.297 | 0.318 | 0.307 | 2.6 |
| Toluene-d8 | | 1.179 | 1.191 | 1.167 | 1.087 | 1.165 | 1.158 | 3.5 |
| 4-Bromofluorobenzene | | 0.428 | 0.442 | 0.436 | 0.421 | 0.450 | 0.435 | 2.6 |

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: MSVOA_X Calibration Date/Time: 04/27/2023 09:40

Lab File ID: VX035327.D Init. Calib. Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.529 | 0.482 | | -8.89 | 20 |
| Chloromethane | 0.481 | 0.397 | 0.1 | -17.46 | 20 |
| Vinyl Chloride | 0.483 | 0.415 | | -14.08 | 20 |
| Bromomethane | 0.321 | 0.282 | | -12.15 | 20 |
| Chloroethane | 0.282 | 0.237 | | -15.96 | 20 |
| Trichlorofluoromethane | 0.755 | 0.666 | | -11.79 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 0.504 | 0.445 | | -11.71 | 20 |
| 1,1-Dichloroethene | 0.486 | 0.422 | | -13.17 | 20 |
| Acetone | 0.262 | 0.217 | | -17.18 | 20 |
| Carbon Disulfide | 1.164 | 1.050 | | -9.79 | 20 |
| Methyl tert-butyl Ether | 1.666 | 1.487 | | -10.74 | 20 |
| Methyl Acetate | 1.013 | 0.866 | | -14.51 | 20 |
| Methylene Chloride | 0.601 | 0.487 | | -18.97 | 20 |
| trans-1,2-Dichloroethene | 0.527 | 0.464 | | -11.95 | 20 |
| 1,1-Dichloroethane | 0.953 | 0.839 | 0.1 | -11.96 | 20 |
| Cyclohexane | 0.856 | 0.748 | | -12.62 | 20 |
| 2-Butanone | 0.382 | 0.327 | | -14.4 | 20 |
| Carbon Tetrachloride | 0.455 | 0.426 | | -6.37 | 20 |
| cis-1,2-Dichloroethene | 0.620 | 0.534 | | -13.87 | 20 |
| Bromochloromethane | 0.406 | 0.399 | | -1.72 | 20 |
| Chloroform | 0.962 | 0.862 | | -10.4 | 20 |
| 1,1,1-Trichloroethane | 0.843 | 0.757 | | -10.2 | 20 |
| Methylcyclohexane | 0.583 | 0.517 | | -11.32 | 20 |
| Benzene | 1.375 | 1.203 | | -12.51 | 20 |
| 1,2-Dichloroethane | 0.490 | 0.434 | | -11.43 | 20 |
| Trichloroethene | 0.379 | 0.340 | | -10.29 | 20 |
| 1,2-Dichloropropane | 0.347 | 0.309 | | -10.95 | 20 |
| Bromodichloromethane | 0.438 | 0.413 | | -5.71 | 20 |
| 4-Methyl-2-Pentanone | 0.452 | 0.389 | | -13.94 | 20 |
| Toluene | 0.871 | 0.775 | | -11.02 | 20 |
| t-1,3-Dichloropropene | 0.458 | 0.460 | | 0.44 | 20 |
| cis-1,3-Dichloropropene | 0.518 | 0.507 | | -2.12 | 20 |
| 1,1,2-Trichloroethane | 0.347 | 0.308 | | -11.24 | 20 |
| 2-Hexanone | 0.339 | 0.301 | | -11.21 | 20 |
| Dibromochloromethane | 0.333 | 0.324 | | -2.7 | 20 |
| 1,2-Dibromoethane | 0.358 | 0.326 | | -8.94 | 20 |
| Tetrachloroethene | 0.383 | 0.341 | | -10.97 | 20 |
| Chlorobenzene | 1.082 | 0.935 | 0.3 | -13.59 | 20 |
| Ethyl Benzene | 1.873 | 1.674 | | -10.63 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

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## VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: MSVOA_X Calibration Date/Time: 04/27/2023 09:40

Lab File ID: VX035327.D Init. Calib. Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| m/p-Xylenes | 0.718 | 0.646 | | -10.03 | 20 |
| o-Xylene | 0.704 | 0.637 | | -9.52 | 20 |
| Styrene | 1.141 | 1.049 | | -8.06 | 20 |
| Bromoform | 0.262 | 0.261 | 0.1 | -0.38 | 20 |
| Isopropylbenzene | 3.655 | 3.314 | | -9.33 | 20 |
| 1,1,2,2-Tetrachloroethane | 1.134 | 0.999 | 0.3 | -11.9 | 20 |
| 1,3-Dichlorobenzene | 1.727 | 1.556 | | -9.9 | 20 |
| 1,4-Dichlorobenzene | 1.810 | 1.548 | | -14.48 | 20 |
| 1,2-Dichlorobenzene | 1.727 | 1.511 | | -12.51 | 20 |
| 1,2-Dibromo-3-Chloropropane | 0.227 | 0.213 | | -6.17 | 20 |
| 1,2,4-Trichlorobenzene | 1.085 | 1.017 | | -6.27 | 20 |
| 1,2,3-Trichlorobenzene | 1.093 | 0.973 | | -10.98 | 20 |
| 1,2-Dichloroethane-d4 | 0.603 | 0.564 | | -6.47 | 20 |
| Dibromofluoromethane | 0.307 | 0.298 | | -2.93 | 20 |
| Toluene-d8 | 1.158 | 1.112 | | -3.97 | 20 |
| 4-Bromofluorobenzene | 0.435 | 0.427 | | -1.84 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: MSVOA_X Calibration Date/Time: 04/28/2023 10:31

Lab File ID: VX035379.D Init. Calib. Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.529 | 0.542 | | 2.46 | 20 |
| Chloromethane | 0.481 | 0.417 | 0.1 | -13.31 | 20 |
| Vinyl Chloride | 0.483 | 0.445 | | -7.87 | 20 |
| Bromomethane | 0.321 | 0.283 | | -11.84 | 20 |
| Chloroethane | 0.282 | 0.257 | | -8.86 | 20 |
| Trichlorofluoromethane | 0.755 | 0.748 | | -0.93 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 0.504 | 0.503 | | -0.2 | 20 |
| 1,1-Dichloroethene | 0.486 | 0.463 | | -4.73 | 20 |
| Acetone | 0.262 | 0.258 | | -1.53 | 20 |
| Carbon Disulfide | 1.164 | 1.105 | | -5.07 | 20 |
| Methyl tert-butyl Ether | 1.666 | 1.641 | | -1.5 | 20 |
| Methyl Acetate | 1.013 | 0.945 | | -6.71 | 20 |
| Methylene Chloride | 0.601 | 0.523 | | -12.98 | 20 |
| trans-1,2-Dichloroethene | 0.527 | 0.504 | | -4.36 | 20 |
| 1,1-Dichloroethane | 0.953 | 0.921 | 0.1 | -3.36 | 20 |
| Cyclohexane | 0.856 | 0.815 | | -4.79 | 20 |
| 2-Butanone | 0.382 | 0.350 | | -8.38 | 20 |
| Carbon Tetrachloride | 0.455 | 0.487 | | 7.03 | 20 |
| cis-1,2-Dichloroethene | 0.620 | 0.591 | | -4.68 | 20 |
| Bromochloromethane | 0.406 | 0.397 | | -2.22 | 20 |
| Chloroform | 0.962 | 0.958 | | -0.42 | 20 |
| 1,1,1-Trichloroethane | 0.843 | 0.846 | | 0.36 | 20 |
| Methylcyclohexane | 0.583 | 0.583 | | 0 | 20 |
| Benzene | 1.375 | 1.348 | | -1.96 | 20 |
| 1,2-Dichloroethane | 0.490 | 0.493 | | 0.61 | 20 |
| Trichloroethene | 0.379 | 0.380 | | 0.26 | 20 |
| 1,2-Dichloropropane | 0.347 | 0.346 | | -0.29 | 20 |
| Bromodichloromethane | 0.438 | 0.463 | | 5.71 | 20 |
| 4-Methyl-2-Pentanone | 0.452 | 0.431 | | -4.65 | 20 |
| Toluene | 0.871 | 0.869 | | -0.23 | 20 |
| t-1,3-Dichloropropene | 0.458 | 0.516 | | 12.66 | 20 |
| cis-1,3-Dichloropropene | 0.518 | 0.562 | | 8.49 | 20 |
| 1,1,2-Trichloroethane | 0.347 | 0.343 | | -1.15 | 20 |
| 2-Hexanone | 0.339 | 0.328 | | -3.24 | 20 |
| Dibromochloromethane | 0.333 | 0.369 | | 10.81 | 20 |
| 1,2-Dibromoethane | 0.358 | 0.361 | | 0.84 | 20 |
| Tetrachloroethene | 0.383 | 0.379 | | -1.04 | 20 |
| Chlorobenzene | 1.082 | 1.054 | 0.3 | -2.59 | 20 |
| Ethyl Benzene | 1.873 | 1.894 | | 1.12 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

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## VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: MSVOA_X Calibration Date/Time: 04/28/2023 10:31

Lab File ID: VX035379.D Init. Calib. Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| m/p-Xylenes | 0.718 | 0.727 | | 1.25 | 20 |
| o-Xylene | 0.704 | 0.718 | | 1.99 | 20 |
| Styrene | 1.141 | 1.189 | | 4.21 | 20 |
| Bromoform | 0.262 | 0.290 | 0.1 | 10.69 | 20 |
| Isopropylbenzene | 3.655 | 3.772 | | 3.2 | 20 |
| 1,1,2,2-Tetrachloroethane | 1.134 | 1.106 | 0.3 | -2.47 | 20 |
| 1,3-Dichlorobenzene | 1.727 | 1.750 | | 1.33 | 20 |
| 1,4-Dichlorobenzene | 1.810 | 1.744 | | -3.65 | 20 |
| 1,2-Dichlorobenzene | 1.727 | 1.702 | | -1.45 | 20 |
| 1,2-Dibromo-3-Chloropropane | 0.227 | 0.237 | | 4.41 | 20 |
| 1,2,4-Trichlorobenzene | 1.085 | 1.121 | | 3.32 | 20 |
| 1,2,3-Trichlorobenzene | 1.093 | 1.100 | | 0.64 | 20 |
| 1,2-Dichloroethane-d4 | 0.603 | 0.607 | | 0.66 | 20 |
| Dibromofluoromethane | 0.307 | 0.332 | | 8.14 | 20 |
| Toluene-d8 | 1.158 | 1.204 | | 3.97 | 20 |
| 4-Bromofluorobenzene | 0.435 | 0.468 | | 7.59 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: MSVOA_X Calibration Date/Time: 04/29/2023 11:44

Lab File ID: VX035415.D Init. Calib. Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.529 | 0.492 | | -6.99 | 20 |
| Chloromethane | 0.481 | 0.393 | 0.1 | -18.3 | 20 |
| Vinyl Chloride | 0.483 | 0.421 | | -12.84 | 20 |
| Bromomethane | 0.321 | 0.275 | | -14.33 | 20 |
| Chloroethane | 0.282 | 0.247 | | -12.41 | 20 |
| Trichlorofluoromethane | 0.755 | 0.697 | | -7.68 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 0.504 | 0.472 | | -6.35 | 20 |
| 1,1-Dichloroethene | 0.486 | 0.445 | | -8.44 | 20 |
| Acetone | 0.262 | 0.227 | | -13.36 | 20 |
| Carbon Disulfide | 1.164 | 1.041 | | -10.57 | 20 |
| Methyl tert-butyl Ether | 1.666 | 1.542 | | -7.44 | 20 |
| Methyl Acetate | 1.013 | 0.838 | | -17.27 | 20 |
| Methylene Chloride | 0.601 | 0.502 | | -16.47 | 20 |
| trans-1,2-Dichloroethene | 0.527 | 0.473 | | -10.25 | 20 |
| 1,1-Dichloroethane | 0.953 | 0.877 | 0.1 | -7.97 | 20 |
| Cyclohexane | 0.856 | 0.764 | | -10.75 | 20 |
| 2-Butanone | 0.382 | 0.304 | | -20.42 | 20 |
| Carbon Tetrachloride | 0.455 | 0.461 | | 1.32 | 20 |
| cis-1,2-Dichloroethene | 0.620 | 0.572 | | -7.74 | 20 |
| Bromochloromethane | 0.406 | 0.385 | | -5.17 | 20 |
| Chloroform | 0.962 | 0.904 | | -6.03 | 20 |
| 1,1,1-Trichloroethane | 0.843 | 0.810 | | -3.91 | 20 |
| Methylcyclohexane | 0.583 | 0.547 | | -6.18 | 20 |
| Benzene | 1.375 | 1.268 | | -7.78 | 20 |
| 1,2-Dichloroethane | 0.490 | 0.452 | | -7.76 | 20 |
| Trichloroethene | 0.379 | 0.360 | | -5.01 | 20 |
| 1,2-Dichloropropane | 0.347 | 0.330 | | -4.9 | 20 |
| Bromodichloromethane | 0.438 | 0.439 | | 0.23 | 20 |
| 4-Methyl-2-Pentanone | 0.452 | 0.378 | | -16.37 | 20 |
| Toluene | 0.871 | 0.810 | | -7 | 20 |
| t-1,3-Dichloropropene | 0.458 | 0.482 | | 5.24 | 20 |
| cis-1,3-Dichloropropene | 0.518 | 0.535 | | 3.28 | 20 |
| 1,1,2-Trichloroethane | 0.347 | 0.323 | | -6.92 | 20 |
| 2-Hexanone | 0.339 | 0.285 | | -15.93 | 20 |
| Dibromochloromethane | 0.333 | 0.344 | | 3.3 | 20 |
| 1,2-Dibromoethane | 0.358 | 0.337 | | -5.87 | 20 |
| Tetrachloroethene | 0.383 | 0.364 | | -4.96 | 20 |
| Chlorobenzene | 1.082 | 1.014 | 0.3 | -6.28 | 20 |
| Ethyl Benzene | 1.873 | 1.783 | | -4.8 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

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## VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: MSVOA_X Calibration Date/Time: 04/29/2023 11:44

Lab File ID: VX035415.D Init. Calib. Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| m/p-Xylenes | 0.718 | 0.685 | | -4.6 | 20 |
| o-Xylene | 0.704 | 0.675 | | -4.12 | 20 |
| Styrene | 1.141 | 1.115 | | -2.28 | 20 |
| Bromoform | 0.262 | 0.276 | 0.1 | 5.34 | 20 |
| Isopropylbenzene | 3.655 | 3.586 | | -1.89 | 20 |
| 1,1,2,2-Tetrachloroethane | 1.134 | 1.024 | 0.3 | -9.7 | 20 |
| 1,3-Dichlorobenzene | 1.727 | 1.660 | | -3.88 | 20 |
| 1,4-Dichlorobenzene | 1.810 | 1.646 | | -9.06 | 20 |
| 1,2-Dichlorobenzene | 1.727 | 1.603 | | -7.18 | 20 |
| 1,2-Dibromo-3-Chloropropane | 0.227 | 0.216 | | -4.85 | 20 |
| 1,2,4-Trichlorobenzene | 1.085 | 1.064 | | -1.93 | 20 |
| 1,2,3-Trichlorobenzene | 1.093 | 1.028 | | -5.95 | 20 |
| 1,2-Dichloroethane-d4 | 0.603 | 0.499 | | -17.25 | 20 |
| Dibromofluoromethane | 0.307 | 0.279 | | -9.12 | 20 |
| Toluene-d8 | 1.158 | 1.006 | | -13.13 | 20 |
| 4-Bromofluorobenzene | 0.435 | 0.378 | | -13.1 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O2495 | **OrderDate:** | 4/25/2023 3:22:44 PM |
| **Client:** | GEI Consultants, Inc., P.C. | **Project:** | Ferry Point |
| **Contact:** | Stacey Ng | **Location:** | N11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O2495-01** | **PZ-01** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/26/23 | 04/28/23 | |
| **O2495-03** | **PZ-02** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/26/23 | 05/01/23 | |
| **O2495-05** | **GMW-11** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/26/23 | 05/01/23 | |
| **O2495-07** | **GMW-X** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/26/23 | 04/28/23 | |
| **O2495-09** | **GMW-5** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/26/23 | 04/27/23 | |

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# Hit Summary Sheet
## SW-846

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

| Sample ID | Client ID | | Parameter | | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Client ID : PZ-01** | | | | | | | | | |
| O2495-01 | PZ-01 | WATER | 1-Docosene | * | 8.700 | J | 0 | 0 | ug/L |
| O2495-01 | PZ-01 | WATER | Benzophenone | * | 2.300 | J | 0 | 0 | ug/L |
| O2495-01 | PZ-01 | WATER | Hexadecane | * | 3.500 | J | 0 | 0 | ug/L |
| O2495-01 | PZ-01 | WATER | n-Hexadecanoic acid | * | 16.900 | J | 0 | 0 | ug/L |
| O2495-01 | PZ-01 | WATER | Octadecanoic acid | * | 28.500 | J | 0 | 0 | ug/L |
| O2495-01 | PZ-01 | WATER | Supraene | * | 2.700 | J | 0 | 0 | ug/L |
| O2495-01 | PZ-01 | WATER | unknown16.233 | * | 2.500 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | **65.10** | | | | |
| | | | **Total Concentration:** | | **65.10** | | | | |
| **Client ID : PZ-02** | | | | | | | | | |
| O2495-03 | PZ-02 | WATER | 1-Tetracosene | * | 5.500 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | 3,5-Dimethoxy-4-hydroxycinnam | * | 2.300 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | 3-Eicosene, (E)- | * | 4.800 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | Benzophenone | * | 7.600 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | Eicosane | * | 3.800 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | Eicosane, 7-hexyl- | * | 6.300 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | Hexacosane | * | 6.500 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | n-Hexadecanoic acid | * | 34.200 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | Nonadecane | * | 5.200 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | Octadecane, 2-methyl- | * | 5.400 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | Octadecanoic acid | * | 21.300 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | Pentadecanoic acid | * | 61.600 | J | 0 | 0 | ug/L |
| O2495-03 | PZ-02 | WATER | unknown7.451 | * | 3.900 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | **168.40** | | | | |
| | | | **Total Concentration:** | | **168.40** | | | | |
| **Client ID : GMW-11** | | | | | | | | | |
| O2495-05 | GMW-11 | WATER | Naphthalene | | 11.800 | | 1.7 | 5.1 | ug/L |
| O2495-05 | GMW-11 | WATER | Carbazole | | 2.700 | J | 1.7 | 5.1 | ug/L |
| | | | **Total Svoc :** | | **14.50** | | | | |
| O2495-05 | GMW-11 | WATER | (+)-2-Bornanone | * | 2.200 | J | 0 | 0 | ug/L |
| O2495-05 | GMW-11 | WATER | Benzophenone | * | 8.900 | J | 0 | 0 | ug/L |
| O2495-05 | GMW-11 | WATER | n-Hexadecanoic acid | * | 8.000 | J | 0 | 0 | ug/L |
| O2495-05 | GMW-11 | WATER | Octadecanoic acid | * | 9.300 | J | 0 | 0 | ug/L |
| O2495-05 | GMW-11 | WATER | Pentadecane | * | 2.300 | J | 0 | 0 | ug/L |
| O2495-05 | GMW-11 | WATER | Squalene | * | 2.300 | J | 0 | 0 | ug/L |
| O2495-05 | GMW-11 | WATER | Trifluoroacetoxy hexadecane | * | 5.300 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | **38.30** | | | | |
| | | | **Total Concentration:** | | **52.80** | | | | |

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# Hit Summary Sheet
**SW-846**



**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

| Sample ID | Client ID | | Parameter | | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Client ID : GMW-X** | | | | | | | | | |
| O2495-07 | GMW-X | WATER | Naphthalene | | 11.600 | | 1.7 | 5.1 | ug/L |
| O2495-07 | GMW-X | WATER | Carbazole | | 3.000 | J | 1.7 | 5.1 | ug/L |
| | | | **Total Svoc :** | | | | **14.60** | | |
| O2495-07 | GMW-X | WATER | Dehydroabietic acid | * | 3.300 | J | 0 | 0 | ug/L |
| O2495-07 | GMW-X | WATER | Benzophenone | * | 8.300 | J | 0 | 0 | ug/L |
| O2495-07 | GMW-X | WATER | n-Hexadecanoic acid | * | 13.200 | J | 0 | 0 | ug/L |
| O2495-07 | GMW-X | WATER | Octadecanoic acid | * | 8.300 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | | | **33.10** | | |
| | | | **Total Concentration:** | | | | **47.70** | | |
| **Client ID : GMW-5** | | | | | | | | | |
| O2495-09 | GMW-5 | WATER | Benzophenone | * | 6.500 | J | 0 | 0 | ug/L |
| O2495-09 | GMW-5 | WATER | n-Hexadecanoic acid | * | 14.700 | J | 0 | 0 | ug/L |
| O2495-09 | GMW-5 | WATER | Octadecanoic acid | * | 24.400 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | | | **45.60** | | |
| | | | **Total Concentration:** | | | | **45.60** | | |

# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133122.D | 1 | 04/26/23 09:15 | 04/28/23 14:26 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.0 | U | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.00 | U | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.00 | U | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.00 | U | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.00 | U | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 5.00 | U | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.0 | U | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 5.00 | U | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.00 | U | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.00 | U | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.00 | U | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.00 | U | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | U | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.00 | U | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.0 | U | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.00 | U | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.00 | U | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.00 | U | 2.10 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133122.D | 1 | 04/26/23 09:15 | 04/28/23 14:26 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.0 | U | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.0 | U | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 5.00 | U | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.00 | U | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 5.00 | U | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.00 | U | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.00 | U | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.0 | U | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.00 | U | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.00 | U | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 5.00 | U | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.0 | U | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 5.00 | U | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 5.00 | U | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.00 | U | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.00 | U | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.0 | U | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.00 | U | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.0 | U | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.00 | U | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.00 | U | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133122.D | 1 | 04/26/23 09:15 | 04/28/23 14:26 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.00 | U | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.00 | U | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 54.1 | | 10 - 139 | 36% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 32.0 | | 10 - 134 | 21% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 82.8 | | 49 - 133 | 83% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 87.5 | | 52 - 132 | 87% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 120 | | 45 - 141 | 80% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 87.4 | | 45 - 142 | 87% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 167000 | 6.734 | | | |
| 1146-65-2 | Naphthalene-d8 | 669000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 342000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 610000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 347000 | 13.88 | | | |
| 1520-96-3 | Perylene-d12 | 351000 | 15.304 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 000119-61-9 | Benzophenone | 2.30 | J | | 10.5 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 16.9 | J | | 11.8 | ug/L |
| 000057-11-4 | Octadecanoic acid | 28.5 | J | | 12.6 | ug/L |
| 001599-67-3 | 1-Docosene | 8.70 | J | | 14.5 | ug/L |
| 007683-64-9 | Supraene | 2.70 | J | | 14.7 | ug/L |
| 000544-76-3 | Hexadecane | 3.50 | J | | 15.7 | ug/L |
| | unknown16.233 | 2.50 | J | | 16.2 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133122.D | 1 | 04/26/23 09:15 | 04/28/23 14:26 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133150.D | 1 | 04/26/23 09:15 | 05/01/23 12:16 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.1 | U | 3.30 | 10.1 | ug/L |
| 108-95-2 | Phenol | 5.10 | U | 1.50 | 5.10 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.10 | U | 1.70 | 5.10 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.10 | U | 1.40 | 5.10 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.10 | U | 2.10 | 5.10 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.10 | U | 2.30 | 5.10 | ug/L |
| 98-86-2 | Acetophenone | 5.10 | U | 1.80 | 5.10 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.1 | U | 2.20 | 10.1 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.10 | U | 1.70 | 5.10 | ug/L |
| 98-95-3 | Nitrobenzene | 5.10 | U | 1.70 | 5.10 | ug/L |
| 78-59-1 | Isophorone | 5.10 | U | 1.70 | 5.10 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.10 | U | 2.40 | 5.10 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.10 | U | 3.00 | 5.10 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.10 | U | 2.10 | 5.10 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.10 | U | 1.70 | 5.10 | ug/L |
| 91-20-3 | Naphthalene | 5.10 | U | 1.70 | 5.10 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.10 | U | 2.60 | 5.10 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 105-60-2 | Caprolactam | 10.1 | U | 3.50 | 10.1 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.10 | U | 1.80 | 5.10 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.10 | U | 2.30 | 5.10 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.1 | U | 5.80 | 10.1 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.10 | U | 1.50 | 5.10 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.10 | U | 1.60 | 5.10 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.10 | U | 1.80 | 5.10 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.10 | U | 1.60 | 5.10 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.10 | U | 1.90 | 5.10 | ug/L |
| 208-96-8 | Acenaphthylene | 5.10 | U | 2.20 | 5.10 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.10 | U | 2.10 | 5.10 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133150.D | 1 | 04/26/23 09:15 | 05/01/23 12:16 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 83-32-9 | Acenaphthene | 5.10 | U | 1.70 | 5.10 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.1 | U | 5.50 | 10.1 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.1 | U | 2.80 | 10.1 | ug/L |
| 132-64-9 | Dibenzofuran | 5.10 | U | 1.60 | 5.10 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.10 | U | 2.60 | 5.10 | ug/L |
| 84-66-2 | Diethylphthalate | 5.10 | U | 2.10 | 5.10 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.10 | U | 2.20 | 5.10 | ug/L |
| 86-73-7 | Fluorene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.1 | U | 1.80 | 10.1 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.10 | U | 2.00 | 5.10 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.10 | U | 2.00 | 5.10 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 1912-24-9 | Atrazine | 5.10 | U | 3.50 | 5.10 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.1 | U | 2.60 | 10.1 | ug/L |
| 85-01-8 | Phenanthrene | 5.10 | U | 2.00 | 5.10 | ug/L |
| 120-12-7 | Anthracene | 5.10 | U | 2.30 | 5.10 | ug/L |
| 86-74-8 | Carbazole | 5.10 | U | 1.70 | 5.10 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.10 | U | 2.40 | 5.10 | ug/L |
| 206-44-0 | Fluoranthene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 129-00-0 | Pyrene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.10 | U | 2.80 | 5.10 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.1 | U | 5.40 | 10.1 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.10 | U | 1.50 | 5.10 | ug/L |
| 218-01-9 | Chrysene | 5.10 | U | 1.60 | 5.10 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.10 | U | 3.00 | 5.10 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.1 | U | 3.20 | 10.1 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.10 | U | 1.50 | 5.10 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.10 | U | 2.70 | 5.10 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.10 | U | 2.00 | 5.10 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133150.D | 1 | 04/26/23 09:15 | 05/01/23 12:16 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.10 | U | 2.50 | 5.10 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.10 | U | 1.30 | 5.10 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 55.0 | | 10 - 139 | 37% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 32.4 | | 10 - 134 | 22% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 79.4 | | 49 - 133 | 79% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 78.1 | | 52 - 132 | 78% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 113 | | 45 - 141 | 75% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 79.4 | | 45 - 142 | 79% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 199000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 807000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 429000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 766000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 409000 | 13.88 | | | |
| 1520-96-3 | Perylene-d12 | 407000 | 15.304 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| | unknown7.451 | 3.90 | J | | 7.45 | ug/L |
| 000119-61-9 | Benzophenone | 7.60 | J | | 10.5 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 34.2 | J | | 11.8 | ug/L |
| 087345-53-7 | 3,5-Dimethoxy-4-hydroxycinnamalde | 2.30 | J | | 11.9 | ug/L |
| 000057-11-4 | Octadecanoic acid | 21.3 | J | | 12.6 | ug/L |
| 001002-84-2 | Pentadecanoic acid | 61.6 | J | | 12.6 | ug/L |
| 000629-92-5 | Nonadecane | 5.20 | J | | 13.5 | ug/L |
| 074685-33-9 | 3-Eicosene, (E)- | 4.80 | J | | 13.8 | ug/L |
| 055333-99-8 | Eicosane, 7-hexyl- | 6.30 | J | | 14.1 | ug/L |
| 010192-32-2 | 1-Tetracosene | 5.50 | J | | 14.5 | ug/L |
| 000630-01-3 | Hexacosane | 6.50 | J | | 14.6 | ug/L |
| 001560-88-9 | Octadecane, 2-methyl- | 5.40 | J | | 15.1 | ug/L |
| 000112-95-8 | Eicosane | 3.80 | J | | 15.7 | ug/L |

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# Report of Analysis

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|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133150.D | 1 | 04/26/23 09:15 | 05/01/23 12:16 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133160.D | 1 | 04/26/23 09:15 | 05/01/23 17:34 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.1 | U | 3.30 | 10.1 | ug/L |
| 108-95-2 | Phenol | 5.10 | U | 1.50 | 5.10 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.10 | U | 1.70 | 5.10 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.10 | U | 1.40 | 5.10 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.10 | U | 2.10 | 5.10 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.10 | U | 2.30 | 5.10 | ug/L |
| 98-86-2 | Acetophenone | 5.10 | U | 1.80 | 5.10 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.1 | U | 2.20 | 10.1 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.10 | U | 1.70 | 5.10 | ug/L |
| 98-95-3 | Nitrobenzene | 5.10 | U | 1.70 | 5.10 | ug/L |
| 78-59-1 | Isophorone | 5.10 | U | 1.70 | 5.10 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.10 | U | 2.40 | 5.10 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.10 | U | 3.00 | 5.10 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.10 | U | 2.10 | 5.10 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.10 | U | 1.70 | 5.10 | ug/L |
| 91-20-3 | Naphthalene | 11.8 | | 1.70 | 5.10 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.10 | U | 2.60 | 5.10 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 105-60-2 | Caprolactam | 10.1 | U | 3.50 | 10.1 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.10 | U | 1.80 | 5.10 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.10 | U | 2.30 | 5.10 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.1 | U | 5.80 | 10.1 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.10 | U | 1.50 | 5.10 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.10 | U | 1.60 | 5.10 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.10 | U | 1.80 | 5.10 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.10 | U | 1.60 | 5.10 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.10 | U | 1.90 | 5.10 | ug/L |
| 208-96-8 | Acenaphthylene | 5.10 | U | 2.20 | 5.10 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.10 | U | 2.10 | 5.10 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133160.D | 1 | 04/26/23 09:15 | 05/01/23 17:34 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 83-32-9 | Acenaphthene | 5.10 | U | 1.70 | 5.10 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.1 | U | 5.50 | 10.1 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.1 | U | 2.80 | 10.1 | ug/L |
| 132-64-9 | Dibenzofuran | 5.10 | U | 1.60 | 5.10 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.10 | U | 2.60 | 5.10 | ug/L |
| 84-66-2 | Diethylphthalate | 5.10 | U | 2.10 | 5.10 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.10 | U | 2.20 | 5.10 | ug/L |
| 86-73-7 | Fluorene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.1 | U | 1.80 | 10.1 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.10 | U | 2.00 | 5.10 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.10 | U | 2.00 | 5.10 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 1912-24-9 | Atrazine | 5.10 | U | 3.50 | 5.10 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.1 | U | 2.60 | 10.1 | ug/L |
| 85-01-8 | Phenanthrene | 5.10 | U | 2.00 | 5.10 | ug/L |
| 120-12-7 | Anthracene | 5.10 | U | 2.30 | 5.10 | ug/L |
| 86-74-8 | Carbazole | 2.70 | J | 1.70 | 5.10 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.10 | U | 2.40 | 5.10 | ug/L |
| 206-44-0 | Fluoranthene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 129-00-0 | Pyrene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.10 | U | 2.80 | 5.10 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.1 | U | 5.40 | 10.1 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.10 | U | 1.50 | 5.10 | ug/L |
| 218-01-9 | Chrysene | 5.10 | U | 1.60 | 5.10 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.10 | U | 3.00 | 5.10 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.1 | U | 3.20 | 10.1 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.10 | U | 1.50 | 5.10 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.10 | U | 2.70 | 5.10 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.10 | U | 2.00 | 5.10 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : N | PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133160.D | 1 | 04/26/23 09:15 | 05/01/23 17:34 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.10 | U | 2.50 | 5.10 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.10 | U | 1.30 | 5.10 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 56.7 | | 10 - 139 | 38% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 33.9 | | 10 - 134 | 23% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 82.7 | | 49 - 133 | 83% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 80.5 | | 52 - 132 | 80% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 120 | | 45 - 141 | 80% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 93.6 | | 45 - 142 | 94% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 183000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 760000 | 8.01 | | | |
| 15067-26-2 | Acenaphthene-d10 | 401000 | 9.763 | | | |
| 1517-22-2 | Phenanthrene-d10 | 730000 | 11.245 | | | |
| 1719-03-5 | Chrysene-d12 | 377000 | 13.88 | | | |
| 1520-96-3 | Perylene-d12 | 370000 | 15.298 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 000464-49-3 | (+)-2-Bornanone | 2.20 | J | | 7.76 | ug/L |
| 000119-61-9 | Benzophenone | 8.90 | J | | 10.5 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 8.00 | J | | 11.8 | ug/L |
| 000057-11-4 | Octadecanoic acid | 9.30 | J | | 12.6 | ug/L |
| 000629-62-9 | Pentadecane | 2.30 | J | | 13.7 | ug/L |
| 006222-03-3 | Trifluoroacetoxy hexadecane | 5.30 | J | | 13.8 | ug/L |
| 000111-02-4 | Squalene | 2.30 | J | | 14.7 | ug/L |

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# Report of Analysis

| | | | | | |
|---|---|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | | | Date Collected: | 04/25/23 |
| Project: | Ferry Point | | | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | | | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | | | Matrix: | Water |
| Analytical Method: | SW8270 | | | % Solid: | 0 |
| Sample Wt/Vol: | 990 | Units: | mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | | | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | | | Decanted : N | Level : | LOW |
| Injection Volume : | | | GPC Factor : 1.0 | GPC Cleanup : N | PH : |
| Prep Method : | SW3510C | | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133160.D | 1 | 04/26/23 09:15 | 05/01/23 17:34 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133136.D | 1 | 04/26/23 09:15 | 04/28/23 22:58 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.1 | U | 3.30 | 10.1 | ug/L |
| 108-95-2 | Phenol | 5.10 | U | 1.50 | 5.10 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.10 | U | 1.70 | 5.10 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.10 | U | 1.40 | 5.10 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.10 | U | 2.10 | 5.10 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.10 | U | 2.30 | 5.10 | ug/L |
| 98-86-2 | Acetophenone | 5.10 | U | 1.80 | 5.10 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.1 | U | 2.20 | 10.1 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.10 | U | 1.70 | 5.10 | ug/L |
| 98-95-3 | Nitrobenzene | 5.10 | U | 1.70 | 5.10 | ug/L |
| 78-59-1 | Isophorone | 5.10 | U | 1.70 | 5.10 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.10 | U | 2.40 | 5.10 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.10 | U | 3.00 | 5.10 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.10 | U | 2.10 | 5.10 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.10 | U | 1.70 | 5.10 | ug/L |
| 91-20-3 | Naphthalene | 11.6 | | 1.70 | 5.10 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.10 | U | 2.60 | 5.10 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 105-60-2 | Caprolactam | 10.1 | U | 3.50 | 10.1 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.10 | U | 1.80 | 5.10 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.10 | U | 2.30 | 5.10 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.1 | U | 5.80 | 10.1 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.10 | U | 1.50 | 5.10 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.10 | U | 1.60 | 5.10 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.10 | U | 1.80 | 5.10 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.10 | U | 1.60 | 5.10 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.10 | U | 1.90 | 5.10 | ug/L |
| 208-96-8 | Acenaphthylene | 5.10 | U | 2.20 | 5.10 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.10 | U | 2.10 | 5.10 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133136.D | 1 | 04/26/23 09:15 | 04/28/23 22:58 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 83-32-9 | Acenaphthene | 5.10 | U | 1.70 | 5.10 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.1 | U | 5.50 | 10.1 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.1 | U | 2.80 | 10.1 | ug/L |
| 132-64-9 | Dibenzofuran | 5.10 | U | 1.60 | 5.10 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.10 | U | 2.60 | 5.10 | ug/L |
| 84-66-2 | Diethylphthalate | 5.10 | U | 2.10 | 5.10 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.10 | U | 2.20 | 5.10 | ug/L |
| 86-73-7 | Fluorene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.1 | U | 1.80 | 10.1 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.10 | U | 2.00 | 5.10 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.10 | U | 2.00 | 5.10 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 1912-24-9 | Atrazine | 5.10 | U | 3.50 | 5.10 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.1 | U | 2.60 | 10.1 | ug/L |
| 85-01-8 | Phenanthrene | 5.10 | U | 2.00 | 5.10 | ug/L |
| 120-12-7 | Anthracene | 5.10 | U | 2.30 | 5.10 | ug/L |
| 86-74-8 | Carbazole | 3.00 | J | 1.70 | 5.10 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.10 | U | 2.40 | 5.10 | ug/L |
| 206-44-0 | Fluoranthene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 129-00-0 | Pyrene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.10 | U | 2.80 | 5.10 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.1 | U | 5.40 | 10.1 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.10 | U | 1.50 | 5.10 | ug/L |
| 218-01-9 | Chrysene | 5.10 | U | 1.60 | 5.10 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.10 | U | 3.00 | 5.10 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.1 | U | 3.20 | 10.1 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.10 | U | 1.50 | 5.10 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.10 | U | 2.70 | 5.10 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.10 | U | 2.00 | 5.10 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 990 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133136.D | 1 | 04/26/23 09:15 | 04/28/23 22:58 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.10 | U | 2.50 | 5.10 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.10 | U | 1.30 | 5.10 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 53.5 | | 10 - 139 | 36% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 31.8 | | 10 - 134 | 21% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 79.5 | | 49 - 133 | 79% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 81.0 | | 52 - 132 | 81% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 118 | | 45 - 141 | 79% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 68.5 | | 45 - 142 | 68% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 179000 | 6.734 | | | |
| 1146-65-2 | Naphthalene-d8 | 741000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 377000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 677000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 502000 | 13.88 | | | |
| 1520-96-3 | Perylene-d12 | 380000 | 15.304 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 000119-61-9 | Benzophenone | 8.30 | J | | 10.5 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 13.2 | J | | 11.8 | ug/L |
| 000057-11-4 | Octadecanoic acid | 8.30 | J | | 12.6 | ug/L |
| 001740-19-8 | Dehydroabietic acid | 3.30 | J | | 13.7 | ug/L |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-09 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 980 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133099.D | 1 | 04/26/23 09:15 | 04/27/23 14:50 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.2 | U | 3.30 | 10.2 | ug/L |
| 108-95-2 | Phenol | 5.10 | U | 1.50 | 5.10 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.10 | U | 1.70 | 5.10 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.10 | U | 1.40 | 5.10 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.10 | U | 2.10 | 5.10 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.10 | U | 2.30 | 5.10 | ug/L |
| 98-86-2 | Acetophenone | 5.10 | U | 1.80 | 5.10 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.2 | U | 2.20 | 10.2 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.60 | U | 2.00 | 2.60 | ug/L |
| 67-72-1 | Hexachloroethane | 5.10 | U | 1.70 | 5.10 | ug/L |
| 98-95-3 | Nitrobenzene | 5.10 | U | 1.80 | 5.10 | ug/L |
| 78-59-1 | Isophorone | 5.10 | U | 1.70 | 5.10 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.10 | U | 2.40 | 5.10 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.10 | U | 3.00 | 5.10 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.10 | U | 2.10 | 5.10 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.10 | U | 1.70 | 5.10 | ug/L |
| 91-20-3 | Naphthalene | 5.10 | U | 1.70 | 5.10 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.10 | U | 2.60 | 5.10 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.10 | U | 2.00 | 5.10 | ug/L |
| 105-60-2 | Caprolactam | 10.2 | U | 3.50 | 10.2 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.10 | U | 1.80 | 5.10 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.10 | U | 2.30 | 5.10 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.2 | U | 5.90 | 10.2 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.10 | U | 1.60 | 5.10 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.10 | U | 1.60 | 5.10 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.10 | U | 1.80 | 5.10 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.10 | U | 1.60 | 5.10 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.10 | U | 1.90 | 5.10 | ug/L |
| 208-96-8 | Acenaphthylene | 5.10 | U | 2.20 | 5.10 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.10 | U | 2.10 | 5.10 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-09 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 980 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133099.D | 1 | 04/26/23 09:15 | 04/27/23 14:50 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 83-32-9 | Acenaphthene | 5.10 | U | 1.80 | 5.10 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.2 | U | 5.60 | 10.2 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.2 | U | 2.90 | 10.2 | ug/L |
| 132-64-9 | Dibenzofuran | 5.10 | U | 1.60 | 5.10 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.10 | U | 2.60 | 5.10 | ug/L |
| 84-66-2 | Diethylphthalate | 5.10 | U | 2.10 | 5.10 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.10 | U | 2.30 | 5.10 | ug/L |
| 86-73-7 | Fluorene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.10 | U | 2.40 | 5.10 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.2 | U | 1.80 | 10.2 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.10 | U | 2.00 | 5.10 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.10 | U | 2.00 | 5.10 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 1912-24-9 | Atrazine | 5.10 | U | 3.60 | 5.10 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.2 | U | 2.60 | 10.2 | ug/L |
| 85-01-8 | Phenanthrene | 5.10 | U | 2.00 | 5.10 | ug/L |
| 120-12-7 | Anthracene | 5.10 | U | 2.30 | 5.10 | ug/L |
| 86-74-8 | Carbazole | 5.10 | U | 1.70 | 5.10 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.10 | U | 2.40 | 5.10 | ug/L |
| 206-44-0 | Fluoranthene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 129-00-0 | Pyrene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.10 | U | 2.90 | 5.10 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.2 | U | 5.50 | 10.2 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.10 | U | 1.50 | 5.10 | ug/L |
| 218-01-9 | Chrysene | 5.10 | U | 1.60 | 5.10 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.10 | U | 3.00 | 5.10 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.2 | U | 3.20 | 10.2 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.10 | U | 1.50 | 5.10 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.10 | U | 1.90 | 5.10 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.10 | U | 2.80 | 5.10 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.10 | U | 2.00 | 5.10 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-09 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 980 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133099.D | 1 | 04/26/23 09:15 | 04/27/23 14:50 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.10 | U | 2.00 | 5.10 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.10 | U | 2.10 | 5.10 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.10 | U | 2.50 | 5.10 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.10 | U | 1.30 | 5.10 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 54.5 | | 10 - 139 | 36% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 34.0 | | 10 - 134 | 23% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 76.8 | | 49 - 133 | 77% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 79.6 | | 52 - 132 | 80% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 123 | | 45 - 141 | 82% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 77.1 | | 45 - 142 | 77% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 226000 | 6.734 | | | |
| 1146-65-2 | Naphthalene-d8 | 938000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 495000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 866000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 522000 | 13.886 | | | |
| 1520-96-3 | Perylene-d12 | 439000 | 15.304 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 000119-61-9 | Benzophenone | 6.50 | J | | 10.5 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 14.7 | J | | 11.8 | ug/L |
| 000057-11-4 | Octadecanoic acid | 24.4 | J | | 12.6 | ug/L |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# QC SUMMARY

## Surrogate Summary

**SW-846**

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E

| Lab Sample ID | Client ID | Parameter | Spike (PPM) | Result (PPM) | Recovery (%) | Qual | Limits (%) Low | High |
|---|---|---|---|---|---|---|---|---|
| O2495-01 | PZ-01 | 2-Fluorophenol | 150 | 54.1 | 36 | | 10 | 139 |
| | | Phenol-d6 | 150 | 32.0 | 21 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 82.8 | 83 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 87.5 | 87 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 120 | 80 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 87.4 | 87 | | 45 | 142 |
| O2495-03 | PZ-02 | 2-Fluorophenol | 150 | 55.0 | 37 | | 10 | 139 |
| | | Phenol-d6 | 150 | 32.4 | 22 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 79.4 | 79 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 78.1 | 78 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 113 | 75 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 79.4 | 79 | | 45 | 142 |
| O2495-05 | GMW-11 | 2-Fluorophenol | 150 | 56.7 | 38 | | 10 | 139 |
| | | Phenol-d6 | 150 | 33.9 | 23 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 82.7 | 83 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 80.5 | 80 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 120 | 80 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 93.6 | 94 | | 45 | 142 |
| O2495-07 | GMW-X | 2-Fluorophenol | 150 | 53.5 | 36 | | 10 | 139 |
| | | Phenol-d6 | 150 | 31.8 | 21 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 79.5 | 79 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 81.0 | 81 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 118 | 79 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 68.5 | 68 | | 45 | 142 |
| O2495-09 | GMW-5 | 2-Fluorophenol | 150 | 54.5 | 36 | | 10 | 139 |
| | | Phenol-d6 | 150 | 34.0 | 23 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 76.8 | 77 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 79.6 | 80 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 123 | 82 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 77.1 | 77 | | 45 | 142 |
| PB152410BL | PB152410BL | 2-Fluorophenol | 150 | 120 | 80 | | 10 | 139 |
| | | Phenol-d6 | 150 | 118 | 79 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 73.2 | 73 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 75.3 | 75 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 117 | 78 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 69.1 | 69 | | 45 | 142 |
| PB152410BS | PB152410BS | 2-Fluorophenol | 150 | 123 | 82 | | 10 | 139 |
| | | Phenol-d6 | 150 | 119 | 79 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 81.5 | 82 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 81.8 | 82 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 127 | 85 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 80.2 | 80 | | 45 | 142 |
| PB152410BSD | PB152410BSD | 2-Fluorophenol | 150 | 122 | 82 | | 10 | 139 |
| | | Phenol-d6 | 150 | 119 | 79 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 80.4 | 80 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 82.7 | 83 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 126 | 84 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 80.4 | 80 | | 45 | 142 |

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# Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846



**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E **DataFile:** BF133094.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | RPD Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PB152410BS | Benzaldehyde | 50 | 44.6 | ug/L | 89 | | | | 21 | 131 | |
| | Phenol | 50 | 38.9 | ug/L | 78 | | | | 66 | 118 | |
| | bis(2-Chloroethyl)ether | 50 | 41.9 | ug/L | 84 | | | | 62 | 103 | |
| | 2-Chlorophenol | 50 | 45.2 | ug/L | 90 | | | | 70 | 117 | |
| | 2-Methylphenol | 50 | 41.5 | ug/L | 83 | | | | 69 | 109 | |
| | 2,2-oxybis(1-Chloropropane) | 50 | 39.3 | ug/L | 79 | | | | 52 | 103 | |
| | Acetophenone | 50 | 43.0 | ug/L | 86 | | | | 60 | 104 | |
| | 3+4-Methylphenols | 50 | 40.6 | ug/L | 81 | | | | 67 | 106 | |
| | N-Nitroso-di-n-propylamine | 50 | 37.8 | ug/L | 76 | | | | 57 | 107 | |
| | Hexachloroethane | 50 | 43.9 | ug/L | 88 | | | | 60 | 105 | |
| | Nitrobenzene | 50 | 40.7 | ug/L | 81 | | | | 58 | 106 | |
| | Isophorone | 50 | 39.4 | ug/L | 79 | | | | 61 | 102 | |
| | 2-Nitrophenol | 50 | 46.4 | ug/L | 93 | | | | 70 | 115 | |
| | 2,4-Dimethylphenol | 50 | 43.4 | ug/L | 87 | | | | 67 | 130 | |
| | bis(2-Chloroethoxy)methane | 50 | 39.8 | ug/L | 80 | | | | 58 | 109 | |
| | 2,4-Dichlorophenol | 50 | 42.4 | ug/L | 85 | | | | 66 | 115 | |
| | Naphthalene | 50 | 40.6 | ug/L | 81 | | | | 64 | 107 | |
| | 4-Chloroaniline | 50 | 23.1 | ug/L | 46 | | | | 10 | 85 | |
| | Hexachlorobutadiene | 50 | 42.2 | ug/L | 84 | | | | 56 | 102 | |
| | Caprolactam | 50 | 46.5 | ug/L | 93 | | | | 47 | 129 | |
| | 4-Chloro-3-methylphenol | 50 | 42.7 | ug/L | 85 | | | | 65 | 114 | |
| | 2-Methylnaphthalene | 50 | 40.0 | ug/L | 80 | | | | 64 | 107 | |
| | Hexachlorocyclopentadiene | 100 | 90.7 | ug/L | 91 | | | | 49 | 132 | |
| | 2,4,6-Trichlorophenol | 50 | 41.8 | ug/L | 84 | | | | 61 | 110 | |
| | 2,4,5-Trichlorophenol | 50 | 39.3 | ug/L | 79 | | | | 70 | 106 | |
| | 1,1-Biphenyl | 50 | 40.7 | ug/L | 81 | | | | 72 | 98 | |
| | 2-Chloronaphthalene | 50 | 41.5 | ug/L | 83 | | | | 59 | 106 | |
| | 2-Nitroaniline | 50 | 40.6 | ug/L | 81 | | | | 58 | 107 | |
| | Dimethylphthalate | 50 | 40.5 | ug/L | 81 | | | | 64 | 103 | |
| | Acenaphthylene | 50 | 40.3 | ug/L | 81 | | | | 65 | 108 | |
| | 2,6-Dinitrotoluene | 50 | 42.6 | ug/L | 85 | | | | 64 | 110 | |
| | 3-Nitroaniline | 50 | 31.9 | ug/L | 64 | | | | 28 | 100 | |
| | Acenaphthene | 50 | 44.9 | ug/L | 90 | | | | 59 | 113 | |
| | 2,4-Dinitrophenol | 100 | 100 | ug/L | 100 | | | | 48 | 129 | |
| | 4-Nitrophenol | 100 | 90.0 | ug/L | 90 | | | | 54 | 119 | |
| | Dibenzofuran | 50 | 39.9 | ug/L | 80 | | | | 65 | 106 | |
| | 2,4-Dinitrotoluene | 50 | 45.3 | ug/L | 91 | | | | 60 | 115 | |
| | Diethylphthalate | 50 | 40.4 | ug/L | 81 | | | | 63 | 105 | |
| | 4-Chlorophenyl-phenylether | 50 | 39.8 | ug/L | 80 | | | | 61 | 104 | |
| | Fluorene | 50 | 40.6 | ug/L | 81 | | | | 64 | 107 | |
| | 4-Nitroaniline | 50 | 46.5 | ug/L | 93 | | | | 57 | 103 | |
| | 4,6-Dinitro-2-methylphenol | 50 | 48.2 | ug/L | 96 | | | | 62 | 132 | |
| | N-Nitrosodiphenylamine | 50 | 39.6 | ug/L | 79 | | | | 61 | 109 | |
| | 4-Bromophenyl-phenylether | 50 | 39.6 | ug/L | 79 | | | | 73 | 103 | |
| | Hexachlorobenzene | 50 | 43.8 | ug/L | 88 | | | | 73 | 106 | |
| | Atrazine | 50 | 45.8 | ug/L | 92 | | | | 52 | 134 | |

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# Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846



**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E **DataFile:** BF133094.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | RPD Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PB152410BS | Pentachlorophenol | 100 | 77.0 | ug/L | 77 | | | | 65 | 112 | |
| | Phenanthrene | 50 | 40.7 | ug/L | 81 | | | | 62 | 109 | |
| | Anthracene | 50 | 40.4 | ug/L | 81 | | | | 65 | 110 | |
| | Carbazole | 50 | 42.7 | ug/L | 85 | | | | 62 | 106 | |
| | Di-n-butylphthalate | 50 | 42.6 | ug/L | 85 | | | | 64 | 106 | |
| | Fluoranthene | 50 | 42.1 | ug/L | 84 | | | | 64 | 110 | |
| | Pyrene | 50 | 39.1 | ug/L | 78 | | | | 71 | 103 | |
| | Butylbenzylphthalate | 50 | 46.9 | ug/L | 94 | | | | 61 | 105 | |
| | 3,3-Dichlorobenzidine | 50 | 41.6 | ug/L | 83 | | | | 30 | 96 | |
| | Benzo(a)anthracene | 50 | 40.6 | ug/L | 81 | | | | 62 | 107 | |
| | Chrysene | 50 | 40.0 | ug/L | 80 | | | | 61 | 108 | |
| | bis(2-Ethylhexyl)phthalate | 50 | 42.7 | ug/L | 85 | | | | 59 | 110 | |
| | Di-n-octyl phthalate | 50 | 49.0 | ug/L | 98 | | | | 55 | 116 | |
| | Benzo(b)fluoranthene | 50 | 45.4 | ug/L | 91 | | | | 64 | 111 | |
| | Benzo(k)fluoranthene | 50 | 43.2 | ug/L | 86 | | | | 64 | 113 | |
| | Benzo(a)pyrene | 50 | 40.1 | ug/L | 80 | | | | 72 | 131 | |
| | Indeno(1,2,3-cd)pyrene | 50 | 45.1 | ug/L | 90 | | | | 72 | 105 | |
| | Dibenz(a,h)anthracene | 50 | 45.0 | ug/L | 90 | | | | 63 | 117 | |
| | Benzo(g,h,i)perylene | 50 | 45.8 | ug/L | 92 | | | | 61 | 120 | |
| | 1,2,4,5-Tetrachlorobenzene | 50 | 40.5 | ug/L | 81 | | | | 72 | 101 | |
| | 1,4-Dioxane | 50 | 33.5 | ug/L | 67 | | | | 38 | 125 | |
| | 2,3,4,6-Tetrachlorophenol | 50 | 43.4 | ug/L | 87 | | | | 63 | 116 | |

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# Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846

**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E **DataFile:** BF133095.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | RPD Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PB152410BSD | Benzaldehyde | 50 | 43.3 | ug/L | 87 | 3 | | | 21 | 131 | 20 |
| | Phenol | 50 | 38.8 | ug/L | 78 | 0 | | | 66 | 118 | 20 |
| | bis(2-Chloroethyl)ether | 50 | 41.0 | ug/L | 82 | 2 | | | 62 | 103 | 20 |
| | 2-Chlorophenol | 50 | 44.3 | ug/L | 89 | 2 | | | 70 | 117 | 20 |
| | 2-Methylphenol | 50 | 42.1 | ug/L | 84 | 1 | | | 69 | 109 | 20 |
| | 2,2-oxybis(1-Chloropropane) | 50 | 38.4 | ug/L | 77 | 2 | | | 52 | 103 | 20 |
| | Acetophenone | 50 | 42.9 | ug/L | 86 | 0 | | | 60 | 104 | 20 |
| | 3+4-Methylphenols | 50 | 41.1 | ug/L | 82 | 1 | | | 67 | 106 | 20 |
| | N-Nitroso-di-n-propylamine | 50 | 38.0 | ug/L | 76 | 1 | | | 57 | 107 | 20 |
| | Hexachloroethane | 50 | 43.5 | ug/L | 87 | 1 | | | 60 | 105 | 20 |
| | Nitrobenzene | 50 | 40.3 | ug/L | 81 | 1 | | | 58 | 106 | 20 |
| | Isophorone | 50 | 38.9 | ug/L | 78 | 1 | | | 61 | 102 | 20 |
| | 2-Nitrophenol | 50 | 46.4 | ug/L | 93 | 0 | | | 70 | 115 | 20 |
| | 2,4-Dimethylphenol | 50 | 43.1 | ug/L | 86 | 1 | | | 67 | 130 | 20 |
| | bis(2-Chloroethoxy)methane | 50 | 39.2 | ug/L | 78 | 2 | | | 58 | 109 | 20 |
| | 2,4-Dichlorophenol | 50 | 43.0 | ug/L | 86 | 1 | | | 66 | 115 | 20 |
| | Naphthalene | 50 | 42.0 | ug/L | 84 | 3 | | | 64 | 107 | 20 |
| | 4-Chloroaniline | 50 | 23.6 | ug/L | 47 | 2 | | | 10 | 85 | 20 |
| | Hexachlorobutadiene | 50 | 42.4 | ug/L | 85 | 0 | | | 56 | 102 | 20 |
| | Caprolactam | 50 | 46.9 | ug/L | 94 | 1 | | | 47 | 129 | 20 |
| | 4-Chloro-3-methylphenol | 50 | 43.0 | ug/L | 86 | 1 | | | 65 | 114 | 20 |
| | 2-Methylnaphthalene | 50 | 39.7 | ug/L | 79 | 1 | | | 64 | 107 | 20 |
| | Hexachlorocyclopentadiene | 100 | 92.6 | ug/L | 93 | 2 | | | 49 | 132 | 20 |
| | 2,4,6-Trichlorophenol | 50 | 42.2 | ug/L | 84 | 1 | | | 61 | 110 | 20 |
| | 2,4,5-Trichlorophenol | 50 | 40.2 | ug/L | 80 | 2 | | | 70 | 106 | 20 |
| | 1,1-Biphenyl | 50 | 40.8 | ug/L | 82 | 0 | | | 72 | 98 | 20 |
| | 2-Chloronaphthalene | 50 | 41.8 | ug/L | 84 | 1 | | | 59 | 106 | 20 |
| | 2-Nitroaniline | 50 | 40.1 | ug/L | 80 | 1 | | | 58 | 107 | 20 |
| | Dimethylphthalate | 50 | 40.4 | ug/L | 81 | 0 | | | 64 | 103 | 20 |
| | Acenaphthylene | 50 | 40.5 | ug/L | 81 | 0 | | | 65 | 108 | 20 |
| | 2,6-Dinitrotoluene | 50 | 42.3 | ug/L | 85 | 1 | | | 64 | 110 | 20 |
| | 3-Nitroaniline | 50 | 32.0 | ug/L | 64 | 0 | | | 28 | 100 | 20 |
| | Acenaphthene | 50 | 45.0 | ug/L | 90 | 0 | | | 59 | 113 | 20 |
| | 2,4-Dinitrophenol | 100 | 110 | ug/L | 110 | 10 | | | 48 | 129 | 20 |
| | 4-Nitrophenol | 100 | 91.3 | ug/L | 91 | 1 | | | 54 | 119 | 20 |
| | Dibenzofuran | 50 | 39.8 | ug/L | 80 | 0 | | | 65 | 106 | 20 |
| | 2,4-Dinitrotoluene | 50 | 45.0 | ug/L | 90 | 1 | | | 60 | 115 | 20 |
| | Diethylphthalate | 50 | 40.6 | ug/L | 81 | 0 | | | 63 | 105 | 20 |
| | 4-Chlorophenyl-phenylether | 50 | 39.9 | ug/L | 80 | 0 | | | 61 | 104 | 20 |
| | Fluorene | 50 | 40.7 | ug/L | 81 | 0 | | | 64 | 107 | 20 |
| | 4-Nitroaniline | 50 | 46.5 | ug/L | 93 | 0 | | | 57 | 103 | 20 |
| | 4,6-Dinitro-2-methylphenol | 50 | 48.2 | ug/L | 96 | 0 | | | 62 | 132 | 20 |
| | N-Nitrosodiphenylamine | 50 | 39.9 | ug/L | 80 | 1 | | | 61 | 109 | 20 |
| | 4-Bromophenyl-phenylether | 50 | 40.0 | ug/L | 80 | 1 | | | 73 | 103 | 20 |
| | Hexachlorobenzene | 50 | 43.3 | ug/L | 87 | 1 | | | 73 | 106 | 20 |
| | Atrazine | 50 | 46.5 | ug/L | 93 | 2 | | | 52 | 134 | 20 |

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# Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846



**SDG No.:** O2495

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E **DataFile:** BF133095.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | RPD Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PB152410BSD | Pentachlorophenol | 100 | 75.7 | ug/L | 76 | 2 | | | 65 | 112 | 20 |
| | Phenanthrene | 50 | 40.8 | ug/L | 82 | 0 | | | 62 | 109 | 20 |
| | Anthracene | 50 | 40.6 | ug/L | 81 | 0 | | | 65 | 110 | 20 |
| | Carbazole | 50 | 42.5 | ug/L | 85 | 0 | | | 62 | 106 | 20 |
| | Di-n-butylphthalate | 50 | 42.2 | ug/L | 84 | 1 | | | 64 | 106 | 20 |
| | Fluoranthene | 50 | 42.3 | ug/L | 85 | 0 | | | 64 | 110 | 20 |
| | Pyrene | 50 | 39.4 | ug/L | 79 | 1 | | | 71 | 103 | 20 |
| | Butylbenzylphthalate | 50 | 47.4 | ug/L | 95 | 1 | | | 61 | 105 | 20 |
| | 3,3-Dichlorobenzidine | 50 | 42.1 | ug/L | 84 | 1 | | | 30 | 96 | 20 |
| | Benzo(a)anthracene | 50 | 40.5 | ug/L | 81 | 0 | | | 62 | 107 | 20 |
| | Chrysene | 50 | 40.2 | ug/L | 80 | 0 | | | 61 | 108 | 20 |
| | bis(2-Ethylhexyl)phthalate | 50 | 43.6 | ug/L | 87 | 2 | | | 59 | 110 | 20 |
| | Di-n-octyl phthalate | 50 | 48.6 | ug/L | 97 | 1 | | | 55 | 116 | 20 |
| | Benzo(b)fluoranthene | 50 | 45.6 | ug/L | 91 | 0 | | | 64 | 111 | 20 |
| | Benzo(k)fluoranthene | 50 | 43.4 | ug/L | 87 | 0 | | | 64 | 113 | 20 |
| | Benzo(a)pyrene | 50 | 40.6 | ug/L | 81 | 1 | | | 72 | 131 | 20 |
| | Indeno(1,2,3-cd)pyrene | 50 | 46.9 | ug/L | 94 | 4 | | | 72 | 105 | 20 |
| | Dibenz(a,h)anthracene | 50 | 47.1 | ug/L | 94 | 5 | | | 63 | 117 | 20 |
| | Benzo(g,h,i)perylene | 50 | 47.5 | ug/L | 95 | 4 | | | 61 | 120 | 20 |
| | 1,2,4,5-Tetrachlorobenzene | 50 | 41.0 | ug/L | 82 | 1 | | | 72 | 101 | 20 |
| | 1,4-Dioxane | 50 | 33.6 | ug/L | 67 | 0 | | | 38 | 125 | 20 |
| | 2,3,4,6-Tetrachlorophenol | 50 | 43.5 | ug/L | 87 | 0 | | | 63 | 116 | 20 |

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4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB152410BL

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

Lab File ID: BF133116.D Lab Sample ID: PB152410BL

Instrument ID: BNA_F Date Extracted: 04/26/2023

Matrix: (soil/water) Water Date Analyzed: 04/28/2023

Level: (low/med) LOW Time Analyzed: 11:18

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| PZ-01 | O2495-01 | BF133122.D | 04/28/2023 |
| GMW-X | O2495-07 | BF133136.D | 04/28/2023 |
| PZ-02 | O2495-03 | BF133150.D | 05/01/2023 |
| GMW-11 | O2495-05 | BF133160.D | 05/01/2023 |
| GMW-5 | O2495-09 | BF133099.D | 04/27/2023 |
| PB152410BS | PB152410BS | BF133094.D | 04/27/2023 |
| PB152410BSD | PB152410BSD | BF133095.D | 04/27/2023 |

COMMENTS:

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2495 SDG NO.: O2495

Lab File ID: BF132964.D DFTPP Injection Date: 04/21/2023

Instrument ID: BNA_F DFTPP Injection Time: 12:40

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 41.3 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 1.7 ) 1 |
| 69 | Mass 69 relative abundance | 36.7 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.5 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 45.8 |
| 197 | Less than 2.0% of mass 198 | 0.1 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.8 |
| 275 | 10.0 - 60.0% of mass 198 | 26.3 |
| 365 | Greater than 1% of mass 198 | 3.2 |
| 441 | Present, but less than mass 443 | 13.8 |
| 442 | Greater than 50% of mass 198 | 100 |
| 443 | 15.0 - 24.0% of mass 442 | 16.9 (18.9) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDICC2.5 | SSTDICC2.5 | BF132965.D | 04/21/2023 | 13:11 |
| SSTDICC005 | SSTDICC005 | BF132966.D | 04/21/2023 | 13:42 |
| SSTDICC010 | SSTDICC010 | BF132967.D | 04/21/2023 | 14:12 |
| SSTDICC020 | SSTDICC020 | BF132968.D | 04/21/2023 | 14:43 |
| SSTDICCC040 | SSTDICCC040 | BF132969.D | 04/21/2023 | 15:15 |
| SSTDICC050 | SSTDICC050 | BF132970.D | 04/21/2023 | 15:47 |
| SSTDICC060 | SSTDICC060 | BF132971.D | 04/21/2023 | 16:19 |
| SSTDICC080 | SSTDICC080 | BF132972.D | 04/21/2023 | 16:50 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2495 SDG NO.: O2495

Lab File ID: BF133089.D DFTPP Injection Date: 04/27/2023

Instrument ID: BNA_F DFTPP Injection Time: 09:29

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 39.3 |
| 68 | Less than 2.0% of mass 69 | 0.3 ( 0.9 ) 1 |
| 69 | Mass 69 relative abundance | 35.8 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.5 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 45.6 |
| 197 | Less than 2.0% of mass 198 | 1 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.6 |
| 275 | 10.0 - 60.0% of mass 198 | 27 |
| 365 | Greater than 1% of mass 198 | 3.3 |
| 441 | Present, but less than mass 443 | 15.1 |
| 442 | Greater than 50% of mass 198 | 100 |
| 443 | 15.0 - 24.0% of mass 442 | 17.6 ( 18 ) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133090.D | 04/27/2023 | 09:59 |
| PB152410BS | PB152410BS | BF133094.D | 04/27/2023 | 12:15 |
| PB152410BSD | PB152410BSD | BF133095.D | 04/27/2023 | 12:45 |
| GMW-5 | O2495-09 | BF133099.D | 04/27/2023 | 14:50 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2495 SDG NO.: O2495

Lab File ID: BF133112.D DFTPP Injection Date: 04/28/2023

Instrument ID: BNA_F DFTPP Injection Time: 09:14

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 35.7 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 1.9 ) 1 |
| 69 | Mass 69 relative abundance | 33.0 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.5 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 43.4 |
| 197 | Less than 2.0% of mass 198 | 0.0 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.6 |
| 275 | 10.0 - 60.0% of mass 198 | 27.8 |
| 365 | Greater than 1% of mass 198 | 3.3 |
| 441 | Present, but less than mass 443 | 16.6 |
| 442 | Greater than 50% of mass 198 | 100 |
| 443 | 15.0 - 24.0% of mass 442 | 18.4 (18.4) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133113.D | 04/28/2023 | 09:45 |
| PB152410BL | PB152410BL | BF133116.D | 04/28/2023 | 11:18 |
| PZ-01 | O2495-01 | BF133122.D | 04/28/2023 | 14:26 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2495 SDG NO.: O2495

Lab File ID: BF133123.D DFTPP Injection Date: 04/28/2023

Instrument ID: BNA_F DFTPP Injection Time: 15:46

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 34.4 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 2 ) 1 |
| 69 | Mass 69 relative abundance | 32.1 |
| 70 | Less than 2.0% of mass 69 | 0.1 ( 0.5 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 44.0 |
| 197 | Less than 2.0% of mass 198 | 0.0 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.5 |
| 275 | 10.0 - 60.0% of mass 198 | 27.5 |
| 365 | Greater than 1% of mass 198 | 3.8 |
| 441 | Present, but less than mass 443 | 17.7 |
| 442 | Greater than 50% of mass 198 | 100 |
| 443 | 15.0 - 24.0% of mass 442 | 18.4 (18.4) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133124.D | 04/28/2023 | 16:17 |
| GMW-X | O2495-07 | BF133136.D | 04/28/2023 | 22:58 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2495 SDG NO.: O2495

Lab File ID: BF133146.D DFTPP Injection Date: 05/01/2023

Instrument ID: BNA_F DFTPP Injection Time: 10:10

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 38.9 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 1.8 ) 1 |
| 69 | Mass 69 relative abundance | 34.4 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.7 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 45.9 |
| 197 | Less than 2.0% of mass 198 | 0.2 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.9 |
| 275 | 10.0 - 60.0% of mass 198 | 26 |
| 365 | Greater than 1% of mass 198 | 3.1 |
| 441 | Present, but less than mass 443 | 14.3 |
| 442 | Greater than 50% of mass 198 | 100 |
| 443 | 15.0 - 24.0% of mass 442 | 17 (18.7) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133147.D | 05/01/2023 | 10:41 |
| PZ-02 | O2495-03 | BF133150.D | 05/01/2023 | 12:16 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2495 SDG NO.: O2495

Lab File ID: BF133155.D DFTPP Injection Date: 05/01/2023

Instrument ID: BNA_F DFTPP Injection Time: 14:54

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 39.2 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 1.8 ) 1 |
| 69 | Mass 69 relative abundance | 34.1 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.6 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 45.8 |
| 197 | Less than 2.0% of mass 198 | 1 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.4 |
| 275 | 10.0 - 60.0% of mass 198 | 25.4 |
| 365 | Greater than 1% of mass 198 | 3.1 |
| 441 | Present, but less than mass 443 | 13.2 |
| 442 | Greater than 50% of mass 198 | 100 |
| 443 | 15.0 - 24.0% of mass 442 | 15.8 (18.4) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133156.D | 05/01/2023 | 15:25 |
| GMW-11 | O2495-05 | BF133160.D | 05/01/2023 | 17:34 |

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/27/2023

Lab File ID: BF133090.D Time Analyzed: 09:59

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 190486 | 6.74 | 734979 | 8.02 | 380778 | 9.78 |
| | UPPER LIMIT | 380972 | 7.24 | 1469960 | 8.522 | 761556 | 10.275 |
| | LOWER LIMIT | 95243 | 6.24 | 367490 | 7.522 | 190389 | 9.275 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-5 | 225876 | 6.73 | 938461 | 8.02 | 494838 | 9.77 |
| 02 | PB152410BS | 197994 | 6.74 | 795223 | 8.02 | 414621 | 9.78 |
| 03 | PB152410BSD | 191577 | 6.74 | 773308 | 8.02 | 399504 | 9.78 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/27/2023

Lab File ID: BF133090.D Time Analyzed: 09:59

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 697429 | 11.257 | 504844 | 13.898 | 446746 | 15.316 |
| | UPPER LIMIT | 1394860 | 11.757 | 1009690 | 14.398 | 893492 | 15.816 |
| | LOWER LIMIT | 348715 | 10.757 | 252422 | 13.398 | 223373 | 14.816 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-5 | 866281 | 11.25 | 521668 | 13.89 | 439486 | 15.30 |
| 02 | PB152410BS | 743732 | 11.26 | 522731 | 13.90 | 466023 | 15.31 |
| 03 | PB152410BSD | 723645 | 11.26 | 505662 | 13.89 | 444325 | 15.31 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/28/2023

Lab File ID: BF133113.D Time Analyzed: 09:45

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 198535 | 6.739 | 770653 | 8.02 | 402568 | 9.77 |
| | UPPER LIMIT | 397070 | 7.239 | 1541310 | 8.522 | 805136 | 10.274 |
| | LOWER LIMIT | 99267.5 | 6.239 | 385327 | 7.522 | 201284 | 9.274 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | PZ-01 | 166828 | 6.73 | 668752 | 8.02 | 341964 | 9.77 |
| 02 | PB152410BL | 216131 | 6.73 | 918056 | 8.02 | 498528 | 9.77 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/28/2023

Lab File ID: BF133113.D Time Analyzed: 09:45

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 728942 | 11.257 | 481262 | 13.892 | 419069 | 15.309 |
| | UPPER LIMIT | 1457880 | 11.757 | 962524 | 14.392 | 838138 | 15.809 |
| | LOWER LIMIT | 364471 | 10.757 | 240631 | 13.392 | 209535 | 14.809 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | PZ-01 | 610328 | 11.25 | 346614 | 13.88 | 350544 | 15.30 |
| 02 | PB152410BL | 925187 | 11.25 | 655772 | 13.89 | 589586 | 15.31 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/28/2023

Lab File ID: BF133124.D Time Analyzed: 16:17

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 169530 | 6.739 | 651406 | 8.02 | 331291 | 9.78 |
| | UPPER LIMIT | 339060 | 7.239 | 1302810 | 8.522 | 662582 | 10.275 |
| | LOWER LIMIT | 84765 | 6.239 | 325703 | 7.522 | 165646 | 9.275 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-X | 178728 | 6.73 | 741436 | 8.02 | 377443 | 9.77 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/28/2023

Lab File ID: BF133124.D Time Analyzed: 16:17

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 609324 | 11.251 | 433500 | 13.892 | 385479 | 15.309 |
| | UPPER LIMIT | 1218650 | 11.751 | 867000 | 14.392 | 770958 | 15.809 |
| | LOWER LIMIT | 304662 | 10.751 | 216750 | 13.392 | 192740 | 14.809 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-X | 676993 | 11.25 | 502251 | 13.88 | 380375 | 15.30 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/01/2023

Lab File ID: BF133147.D Time Analyzed: 10:41

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 217083 | 6.733 | 848696 | 8.02 | 437359 | 9.77 |
| | UPPER LIMIT | 434166 | 7.233 | 1697390 | 8.516 | 874718 | 10.269 |
| | LOWER LIMIT | 108542 | 6.233 | 424348 | 7.516 | 218680 | 9.269 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | PZ-02 | 199149 | 6.73 | 806970 | 8.02 | 428900 | 9.77 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/01/2023

Lab File ID: BF133147.D Time Analyzed: 10:41

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 726398 | 11.251 | 488634 | 13.892 | 431751 | 15.304 |
| | UPPER LIMIT | 1452800 | 11.751 | 977268 | 14.392 | 863502 | 15.804 |
| | LOWER LIMIT | 363199 | 10.751 | 244317 | 13.392 | 215876 | 14.804 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | PZ-02 | 765527 | 11.25 | 408531 | 13.88 | 406919 | 15.30 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/01/2023

Lab File ID: BF133156.D Time Analyzed: 15:25

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 201641 | 6.734 | 797320 | 8.02 | 409305 | 9.77 |
| | UPPER LIMIT | 403282 | 7.234 | 1594640 | 8.516 | 818610 | 10.269 |
| | LOWER LIMIT | 100821 | 6.234 | 398660 | 7.516 | 204653 | 9.269 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-11 | 183210 | 6.73 | 760278 | 8.01 | 400731 | 9.76 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG NO.: O2495

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/01/2023

Lab File ID: BF133156.D Time Analyzed: 15:25

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 709193 | 11.251 | 470586 | 13.886 | 409938 | 15.304 |
| | UPPER LIMIT | 1418390 | 11.751 | 941172 | 14.386 | 819876 | 15.804 |
| | LOWER LIMIT | 354597 | 10.751 | 235293 | 13.386 | 204969 | 14.804 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-11 | 730478 | 11.25 | 376793 | 13.88 | 369828 | 15.30 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

# QC SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BL | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BL | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133116.D | 1 | 04/26/23 09:15 | 04/28/23 11:18 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.0 | U | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.00 | U | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.00 | U | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.00 | U | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.00 | U | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 5.00 | U | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.0 | U | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 5.00 | U | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.00 | U | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.00 | U | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.00 | U | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.00 | U | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | U | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.00 | U | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.0 | U | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.00 | U | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.00 | U | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.00 | U | 2.10 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BL | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BL | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133116.D | 1 | 04/26/23 09:15 | 04/28/23 11:18 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.0 | U | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.0 | U | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 5.00 | U | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.00 | U | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 5.00 | U | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.00 | U | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.00 | U | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.0 | U | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.00 | U | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.00 | U | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 5.00 | U | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.0 | U | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 5.00 | U | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 5.00 | U | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.00 | U | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.00 | U | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.0 | U | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.00 | U | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.0 | U | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.00 | U | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.00 | U | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BL | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BL | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133116.D | 1 | 04/26/23 09:15 | 04/28/23 11:18 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.00 | U | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.00 | U | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 120 | | 10 - 139 | 80% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 118 | | 10 - 134 | 79% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 73.2 | | 49 - 133 | 73% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 75.3 | | 52 - 132 | 75% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 117 | | 45 - 141 | 78% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 69.1 | | 45 - 142 | 69% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 216000 | 6.734 | | | |
| 1146-65-2 | Naphthalene-d8 | 918000 | 8.022 | | | |
| 15067-26-2 | Acenaphthene-d10 | 499000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 925000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 656000 | 13.886 | | | |
| 1520-96-3 | Perylene-d12 | 590000 | 15.309 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 004744-10-9 | Propane, 1,1-dimethoxy- | 2.40 | J | | 2.12 | ug/L |
| 000123-42-2 | 2-Pentanone, 4-hydroxy-4-methyl- | 46.4 | A | | 4.95 | ug/L |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BS | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133094.D | 1 | 04/26/23 09:15 | 04/27/23 12:15 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 44.6 | | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 38.9 | | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 41.9 | | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 45.2 | | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 41.5 | | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 39.3 | | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 43.0 | | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 40.6 | | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 37.8 | | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 43.9 | | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 40.7 | | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 39.4 | | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 46.4 | | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 43.4 | | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 39.8 | | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 42.4 | | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 40.6 | | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 23.1 | | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 42.2 | | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 46.5 | | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 42.7 | | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 40.0 | | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 90.7 | E | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 41.8 | | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 39.3 | | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 40.7 | | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 41.5 | | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 40.6 | | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 40.5 | | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 40.3 | | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 42.6 | | 2.10 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BS | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133094.D | 1 | 04/26/23 09:15 | 04/27/23 12:15 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 31.9 | | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 44.9 | | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 100 | E | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 90.0 | E | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 39.9 | | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 45.3 | | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 40.4 | | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 39.8 | | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 40.6 | | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 46.5 | | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 48.2 | | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 39.6 | | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 39.6 | | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 43.8 | | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 45.8 | | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 77.0 | | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 40.7 | | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 40.4 | | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 42.7 | | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 42.6 | | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 42.1 | | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 39.1 | | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 46.9 | | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 41.6 | | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 40.6 | | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 40.0 | | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 42.7 | | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 49.0 | | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 45.4 | | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 43.2 | | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 40.1 | | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 45.1 | | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 45.0 | | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BS | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133094.D | 1 | 04/26/23 09:15 | 04/27/23 12:15 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 45.8 | | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 40.5 | | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 33.5 | | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 43.4 | | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 123 | | 10 - 139 | 82% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 119 | | 10 - 134 | 79% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 81.5 | | 49 - 133 | 82% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 81.8 | | 52 - 132 | 82% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 127 | | 45 - 141 | 85% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 80.2 | | 45 - 142 | 80% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 198000 | 6.74 | | | |
| 1146-65-2 | Naphthalene-d8 | 795000 | 8.022 | | | |
| 15067-26-2 | Acenaphthene-d10 | 415000 | 9.775 | | | |
| 1517-22-2 | Phenanthrene-d10 | 744000 | 11.257 | | | |
| 1719-03-5 | Chrysene-d12 | 523000 | 13.898 | | | |
| 1520-96-3 | Perylene-d12 | 466000 | 15.31 | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BSD | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BSD | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133095.D | 1 | 04/26/23 09:15 | 04/27/23 12:45 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 43.3 | | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 38.8 | | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 41.0 | | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 44.3 | | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 42.1 | | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 38.4 | | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 42.9 | | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 41.1 | | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 38.0 | | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 43.5 | | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 40.3 | | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 38.9 | | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 46.4 | | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 43.1 | | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 39.2 | | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 43.0 | | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 42.0 | | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 23.6 | | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 42.4 | | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 46.9 | | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 43.0 | | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 39.7 | | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 92.6 | E | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 42.2 | | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 40.2 | | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 40.8 | | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 41.8 | | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 40.1 | | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 40.4 | | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 40.5 | | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 42.3 | | 2.10 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BSD | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BSD | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133095.D | 1 | 04/26/23 09:15 | 04/27/23 12:45 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 32.0 | | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 45.0 | | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 110 | E | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 91.3 | E | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 39.8 | | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 45.0 | | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 40.6 | | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 39.9 | | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 40.7 | | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 46.5 | | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 48.2 | | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 39.9 | | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 40.0 | | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 43.3 | | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 46.5 | | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 75.7 | | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 40.8 | | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 40.6 | | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 42.5 | | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 42.2 | | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 42.3 | | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 39.4 | | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 47.4 | | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 42.1 | | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 40.5 | | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 40.2 | | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 43.6 | | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 48.6 | | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 45.6 | | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 43.4 | | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 40.6 | | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 46.9 | | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 47.1 | | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152410BSD | SDG No.: | O2495 |
| Lab Sample ID: | PB152410BSD | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133095.D | 1 | 04/26/23 09:15 | 04/27/23 12:45 | PB152410 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 47.5 | | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 41.0 | | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 33.6 | | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 43.5 | | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 122 | | 10 - 139 | 82% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 119 | | 10 - 134 | 79% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 80.4 | | 49 - 133 | 80% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 82.7 | | 52 - 132 | 83% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 126 | | 45 - 141 | 84% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 80.4 | | 45 - 142 | 80% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 192000 | 6.739 | | | |
| 1146-65-2 | Naphthalene-d8 | 773000 | 8.022 | | | |
| 15067-26-2 | Acenaphthene-d10 | 400000 | 9.775 | | | |
| 1517-22-2 | Phenanthrene-d10 | 724000 | 11.257 | | | |
| 1719-03-5 | Chrysene-d12 | 506000 | 13.892 | | | |
| 1520-96-3 | Perylene-d12 | 444000 | 15.309 | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# CALIBRATION SUMMARY

Response Factor Report BNA_F

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF042123.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
Last Update : Sat Apr 22 03:30:56 2023
Response Via : Initial Calibration

Calibration Files
2.5 =BF132965.D 5 =BF132966.D 10 =BF132967.D 20 =BF132968.D 40 =BF132969.D 50 =BF132970.D 60 =BF132971.D 80 =BF1329
72.D

| | | Compound | 2.5 | 5 | 10 | 20 | 40 | 50 | 60 | 80 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | 1,4-Dichlorobenzen... | ---------- | ISTD | ---------- | | | | | | | |
| 2) | | 1,4-Dioxane | | 0.714 | 0.644 | 0.646 | 0.612 | 0.569 | 0.575 | 0.539 | 0.614 | 9.67 |
| 3) | | Pyridine | | 1.675 | 1.643 | 1.752 | 1.673 | 1.573 | 1.614 | 1.488 | 1.631 | 5.17 |
| 4) | | n-Nitrosodimet... | | 0.933 | 0.888 | 0.890 | 0.847 | 0.789 | 0.804 | 0.765 | 0.845 | 7.30 |
| 5) | S | 2-Fluorophenol | | 1.587 | 1.456 | 1.437 | 1.322 | 1.200 | 1.180 | 1.085 | 1.324 | 13.53 |
| 6) | | Aniline | | 2.341 | 2.241 | 2.314 | 2.197 | 2.008 | 2.006 | 1.709 | 2.117 | 10.60 |
| 7) | S | Phenol-d6 | | 1.918 | 1.800 | 1.795 | 1.629 | 1.504 | 1.492 | 1.366 | 1.643 | 12.25 |
| 8) | | 2-Chlorophenol | | 1.575 | 1.485 | 1.479 | 1.354 | 1.225 | 1.208 | 1.084 | 1.344 | 13.31 |
| 9) | | Benzaldehyde | | | 1.115 | 1.002 | 0.762 | 0.683 | 0.640 | 0.545 | 0.791 | 28.00 |
| 10) | C | Phenol | | 2.117 | 1.981 | 1.990 | 1.822 | 1.664 | 1.643 | 1.474 | 1.813 | 12.70 |
| 11) | | bis(2-Chloroet... | | 1.563 | 1.433 | 1.459 | 1.366 | 1.265 | 1.252 | 1.185 | 1.360 | 9.85 |
| 12) | | 1,3-Dichlorobe... | | 1.682 | 1.566 | 1.562 | 1.426 | 1.310 | 1.287 | 1.171 | 1.429 | 12.82 |
| 13) | C | 1,4-Dichlorobe... | | 1.706 | 1.570 | 1.567 | 1.453 | 1.297 | 1.279 | 1.154 | 1.432 | 13.71 |
| 14) | | 1,2-Dichlorobe... | | 1.599 | 1.477 | 1.491 | 1.324 | 1.187 | 1.160 | 1.007 | 1.321 | 16.16 |
| 15) | | Benzyl Alcohol | | 1.293 | 1.244 | 1.263 | 1.180 | 1.060 | 1.020 | 0.886 | 1.135 | 13.27 |
| 16) | | 2,2'-oxybis(1-... | | 2.695 | 2.537 | 2.568 | 2.379 | 2.181 | 2.176 | 2.004 | 2.363 | 10.63 |
| 17) | | 2-Methylphenol | | 1.399 | 1.313 | 1.314 | 1.238 | 1.135 | 1.140 | 1.078 | 1.231 | 9.56 |
| 18) | | Hexachloroethane | | 0.562 | 0.541 | 0.544 | 0.500 | 0.465 | 0.454 | 0.419 | 0.498 | 10.80 |
| 19) | P | n-Nitroso-di-n... | 1.129 | 1.150 | 1.087 | 1.086 | 1.001 | 0.913 | 0.933 | 0.885 | 1.023 | 10.15 |
| 20) | | 3+4-Methylphenols | | 1.803 | 1.697 | 1.649 | 1.438 | 1.266 | 1.209 | 1.085 | 1.450 | 18.90 |
| 21) | I | Naphthalene-d8 | ---------- | ISTD | ---------- | | | | | | | |
| 22) | | Acetophenone | | 0.563 | 0.525 | 0.502 | 0.454 | 0.411 | 0.407 | 0.381 | 0.463 | 14.72 |
| 23) | S | Nitrobenzene-d5 | | 0.407 | 0.381 | 0.389 | 0.379 | 0.350 | 0.356 | 0.332 | 0.371 | 6.88 |
| 24) | | Nitrobenzene | | 0.411 | 0.391 | 0.396 | 0.382 | 0.359 | 0.357 | 0.331 | 0.375 | 7.29 |
| 25) | | Isophorone | | 0.754 | 0.706 | 0.717 | 0.710 | 0.665 | 0.696 | 0.677 | 0.704 | 4.09 |
| 26) | C | 2-Nitrophenol | | 0.172 | 0.172 | 0.187 | 0.192 | 0.181 | 0.186 | 0.179 | 0.181 | 4.15 |
| 27) | | 2,4-Dimethylph... | | 0.344 | 0.320 | 0.323 | 0.319 | 0.289 | 0.296 | 0.284 | 0.311 | 6.98 |
| 28) | | bis(2-Chloroet... | | 0.470 | 0.437 | 0.434 | 0.420 | 0.391 | 0.391 | 0.370 | 0.416 | 8.26 |
| 29) | C | 2,4-Dichloroph... | | 0.306 | 0.291 | 0.299 | 0.292 | 0.268 | 0.271 | 0.252 | 0.283 | 6.83 |
| 30) | | 1,2,4-Trichlor... | | 0.335 | 0.305 | 0.313 | 0.295 | 0.273 | 0.276 | 0.253 | 0.293 | 9.43 |
| 31) | | Naphthalene | | 1.196 | 1.094 | 1.079 | 1.011 | 0.898 | 0.910 | 0.811 | 1.000 | 13.40 |
| 32) | | Benzoic acid | | 0.144 | 0.152 | 0.181 | 0.211 | 0.214 | 0.224 | 0.217 | 0.192 | 17.13 |
| 33) | | 4-Chloroaniline | | 0.456 | 0.442 | 0.444 | 0.402 | 0.367 | 0.374 | 0.341 | 0.404 | 11.08 |
| 34) | C | Hexachlorobuta... | | 0.182 | 0.174 | 0.172 | 0.164 | 0.150 | 0.153 | 0.142 | 0.162 | 9.08 |
| 35) | | Caprolactam | | 0.096 | 0.093 | 0.097 | 0.100 | 0.092 | 0.097 | 0.092 | 0.095 | 3.23 |
| 36) | C | 4-Chloro-3-met... | | 0.330 | 0.317 | 0.316 | 0.312 | 0.284 | 0.298 | 0.278 | 0.305 | 6.30 |
| 37) | | 2-Methylnaphth... | | 0.823 | 0.760 | 0.739 | 0.689 | 0.614 | 0.616 | 0.545 | 0.684 | 14.25 |
| 38) | | 1-Methylnaphth... | | 0.776 | 0.702 | 0.692 | 0.641 | 0.578 | 0.575 | 0.513 | 0.640 | 14.21 |

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF042123.M

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 39) | I | Acenaphthene-d10 | ----------ISTD---------- | | | | | | | | |
| 40) | | 1,2,4,5-Tetrac... | 0.611 | 0.578 | 0.583 | 0.541 | 0.495 | 0.495 | 0.460 | 0.538 | 10.41 |
| 41) | P | Hexachlorocycl... | 0.286 | 0.296 | 0.334 | 0.334 | 0.313 | 0.324 | 0.307 | 0.314 | 5.86 |
| 42) | S | 2,4,6-Tribromo... | 0.211 | 0.203 | 0.214 | 0.208 | 0.191 | 0.197 | 0.184 | 0.201 | 5.42 |
| 43) | C | 2,4,6-Trichlor... | 0.396 | 0.372 | 0.396 | 0.381 | 0.353 | 0.363 | 0.343 | 0.372 | 5.54 |
| 44) | | 2,4,5-Trichlor... | 0.464 | 0.437 | 0.452 | 0.444 | 0.411 | 0.418 | 0.384 | 0.430 | 6.33 |
| 45) | S | 2-Fluorobiphenyl | 1.476 | 1.430 | 1.210 | 1.081 | 1.054 | 0.922 | 1.195 | | 18.41 |
| 46) | | 1,1'-Biphenyl | 1.887 | 1.771 | 1.752 | 1.598 | 1.440 | 1.390 | 1.263 | 1.586 | 14.48 |
| 47) | | 2-Chloronaphth... | 1.344 | 1.228 | 1.260 | 1.168 | 1.074 | 1.073 | 0.979 | 1.161 | 10.91 |
| 48) | | 2-Nitroaniline | 0.373 | 0.379 | 0.407 | 0.402 | 0.372 | 0.386 | 0.366 | 0.384 | 4.04 |
| 49) | | Acenaphthylene | 2.146 | 2.002 | 2.049 | 1.893 | 1.709 | 1.681 | 1.504 | 1.855 | 12.45 |
| 50) | | Dimethylphthalate | 1.577 | 1.470 | 1.496 | 1.409 | 1.289 | 1.296 | 1.226 | 1.395 | 9.19 |
| 51) | | 2,6-Dinitrotol... | 0.320 | 0.312 | 0.332 | 0.321 | 0.304 | 0.312 | 0.295 | 0.314 | 3.89 |
| 52) | C | Acenaphthene | 1.448 | 1.334 | 1.352 | 1.258 | 1.138 | 1.139 | 1.026 | 1.242 | 11.90 |
| 53) | | 3-Nitroaniline | 0.372 | 0.372 | 0.394 | 0.391 | 0.365 | 0.371 | 0.348 | 0.373 | 4.23 |
| 54) | P | 2,4-Dinitrophenol | 0.116 | 0.125 | 0.157 | 0.175 | 0.172 | 0.180 | 0.179 | 0.158 | 16.93 |
| 55) | | Dibenzofuran | 2.046 | 1.864 | 1.856 | 1.699 | 1.535 | 1.516 | 1.346 | 1.695 | 14.39 |
| 56) | P | 4-Nitrophenol | 0.282 | 0.281 | 0.303 | 0.309 | 0.286 | 0.285 | 0.278 | 0.289 | 4.10 |
| 57) | | 2,4-Dinitrotol... | 0.408 | 0.398 | 0.428 | 0.424 | 0.389 | 0.397 | 0.358 | 0.400 | 5.84 |
| 58) | | Fluorene | 1.579 | 1.434 | 1.383 | 1.209 | 1.094 | 1.055 | 0.937 | 1.241 | 18.65 |
| 59) | | 2,3,4,6-Tetrac... | 0.369 | 0.342 | 0.356 | 0.338 | 0.316 | 0.320 | 0.293 | 0.333 | 7.75 |
| 60) | | Diethylphthalate | 1.503 | 1.395 | 1.422 | 1.334 | 1.224 | 1.221 | 1.121 | 1.317 | 10.20 |
| 61) | | 4-Chlorophenyl... | 0.744 | 0.689 | 0.688 | 0.596 | 0.535 | 0.523 | 0.459 | 0.605 | 17.34 |
| 62) | | 4-Nitroaniline | 0.351 | 0.350 | 0.377 | 0.347 | 0.322 | 0.338 | 0.316 | 0.343 | 5.93 |
| 63) | | Azobenzene | 1.605 | 1.502 | 1.513 | 1.404 | 1.294 | 1.284 | 1.165 | 1.395 | 11.15 |
| 64) | I | Phenanthrene-d10 | ----------ISTD---------- | | | | | | | | |
| 65) | | 4,6-Dinitro-2-... | 0.094 | 0.105 | 0.125 | 0.134 | 0.128 | 0.131 | 0.131 | 0.121 | 12.81 |
| 66) | c | n-Nitrosodiphe... | 0.746 | 0.703 | 0.704 | 0.645 | 0.598 | 0.597 | 0.548 | 0.649 | 11.04 |
| 67) | | 4-Bromophenyl-... | 0.237 | 0.226 | 0.229 | 0.219 | 0.205 | 0.209 | 0.193 | 0.217 | 6.98 |
| 68) | | Hexachlorobenzene | 0.236 | 0.231 | 0.236 | 0.225 | 0.210 | 0.215 | 0.203 | 0.222 | 5.95 |
| 69) | | Atrazine | 0.203 | 0.199 | 0.197 | 0.194 | 0.174 | 0.177 | 0.164 | 0.187 | 8.05 |
| 70) | C | Pentachlorophenol | 0.150 | 0.154 | 0.164 | 0.170 | 0.156 | 0.161 | 0.153 | 0.158 | 4.43 |
| 71) | | Phenanthrene | 1.314 | 1.187 | 1.153 | 1.062 | 0.972 | 0.972 | 0.865 | 1.075 | 14.28 |
| 72) | | Anthracene | 1.314 | 1.214 | 1.194 | 1.099 | 0.992 | 0.999 | 0.888 | 1.100 | 13.59 |
| 73) | | Carbazole | 1.120 | 1.068 | 1.044 | 0.991 | 0.896 | 0.919 | 0.819 | 0.980 | 10.90 |
| 74) | | Di-n-butylphth... | 1.186 | 1.160 | 1.191 | 1.152 | 1.057 | 1.046 | 0.968 | 1.109 | 7.68 |
| 75) | C | Fluoranthene | 1.251 | 1.164 | 1.164 | 1.094 | 0.992 | 0.982 | 0.904 | 1.079 | 11.46 |
| 76) | I | Chrysene-d12 | ----------ISTD---------- | | | | | | | | |
| 77) | | Benzidine | 0.313 | 0.374 | 0.425 | 0.340 | 0.288 | 0.289 | | 0.338 | 15.86 |
| 78) | | Pyrene | 1.801 | 1.685 | 1.720 | 1.762 | 1.659 | 1.722 | 1.651 | 1.714 | 3.18 |
| 79) | S | Terphenyl-d14 | 1.290 | 1.208 | 1.208 | 1.173 | 1.078 | 1.119 | 1.041 | 1.160 | 7.41 |
| 80) | | Butylbenzylpht... | 0.487 | 0.516 | 0.592 | 0.665 | 0.639 | 0.679 | 0.671 | 0.607 | 12.86 |
| 81) | | Benzo(a)anthra... | 1.506 | 1.401 | 1.466 | 1.417 | 1.298 | 1.305 | 1.234 | 1.375 | 7.18 |
| 82) | | 3,3'-Dichlorob... | 0.375 | 0.382 | 0.423 | 0.411 | 0.374 | 0.382 | 0.312 | 0.380 | 9.23 |
| 83) | | Chrysene | 1.501 | 1.402 | 1.426 | 1.413 | 1.302 | 1.322 | 1.259 | 1.375 | 6.10 |
| 84) | | Bis(2-ethylhex... | 0.727 | 0.743 | 0.806 | 0.817 | 0.759 | 0.768 | 0.714 | 0.762 | 5.05 |
| 85) | c | Di-n-octyl pht... | 1.065 | 1.096 | 1.296 | 1.351 | 1.273 | 1.319 | 1.298 | 1.242 | 9.14 |

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF042123.M

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | I | Perylene-d12 | ----------ISTD---------- | | | | | | | |
| 87) | | Indeno(1,2,3-c... | 1.036 | 0.939 | 1.052 | 1.207 | 1.180 | 1.278 | 1.271 | 1.138 | 11.41 |
| 88) | | Benzo(b)fluora... | 1.321 | 1.257 | 1.295 | 1.334 | 1.247 | 1.223 | 1.230 | 1.272 | 3.48 |
| 89) | | Benzo(k)fluora... | 1.317 | 1.332 | 1.424 | 1.289 | 1.177 | 1.219 | 1.071 | 1.261 | 9.17 |
| 90) | C | Benzo(a)pyrene | 1.181 | 1.145 | 1.203 | 1.202 | 1.127 | 1.150 | 1.099 | 1.158 | 3.37 |
| 91) | | Dibenzo(a,h)an... | 0.856 | 0.786 | 0.885 | 1.022 | 0.980 | 1.065 | 1.047 | 0.949 | 11.27 |
| 92) | | Benzo(g,h,i)pe... | 0.827 | 0.732 | 0.853 | 1.005 | 0.989 | 1.077 | 1.075 | 0.937 | 14.29 |

(#) = Out of Range

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 04/27/2023 09:59

Lab File ID: BF133090.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.241 | | -6.3 | |
| Benzaldehyde | 0.791 | 0.741 | | -6.3 | |
| Phenol-d6 | 1.643 | 1.511 | | -8.0 | |
| Phenol | 1.813 | 1.632 | | -10.0 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.204 | | -11.5 | |
| 2-Chlorophenol | 1.344 | 1.259 | | -6.3 | |
| 2-Methylphenol | 1.231 | 1.179 | | -4.2 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 1.934 | | -18.2 | |
| Acetophenone | 0.463 | 0.430 | | -7.1 | |
| 3+4-Methylphenols | 1.450 | 1.343 | | -7.4 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.845 | 0.050 | -17.4 | |
| Nitrobenzene-d5 | 0.371 | 0.338 | | -8.9 | |
| Hexachloroethane | 0.498 | 0.452 | | -9.2 | |
| Nitrobenzene | 0.375 | 0.343 | | -8.5 | |
| Isophorone | 0.704 | 0.629 | | -10.7 | |
| 2-Nitrophenol | 0.181 | 0.184 | | 1.7 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.293 | | -5.8 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.373 | | -10.3 | |
| 2,4-Dichlorophenol | 0.283 | 0.273 | | -3.5 | 20.0 |
| Naphthalene | 1.000 | 0.936 | | -6.4 | |
| 4-Chloroaniline | 0.404 | 0.412 | | 2.0 | |
| Hexachlorobutadiene | 0.162 | 0.152 | | -6.2 | 20.0 |
| Caprolactam | 0.095 | 0.099 | | 4.2 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.294 | | -3.6 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.643 | | -6.0 | |
| Hexachlorocyclopentadiene | 0.314 | 0.291 | 0.050 | -7.3 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.347 | | -6.7 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.150 | | -3.8 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.423 | | -1.6 | |
| 1,1-Biphenyl | 1.586 | 1.475 | | -7.0 | |
| 2-Chloronaphthalene | 1.161 | 1.090 | | -6.1 | |
| 2-Nitroaniline | 0.384 | 0.370 | | -3.6 | |
| Dimethylphthalate | 1.395 | 1.319 | | -5.4 | |
| Acenaphthylene | 1.855 | 1.736 | | -6.4 | |
| 2,6-Dinitrotoluene | 0.314 | 0.312 | | -0.6 | |
| 3-Nitroaniline | 0.373 | 0.384 | | 2.9 | |
| Acenaphthene | 1.242 | 1.171 | | -5.7 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.180 | 0.050 | 13.9 | |
| 4-Nitrophenol | 0.289 | 0.292 | 0.050 | 1.0 | |
| Dibenzofuran | 1.695 | 1.588 | | -6.3 | |
| 2,4-Dinitrotoluene | 0.400 | 0.413 | | 3.3 | |

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 04/27/2023 09:59

Lab File ID: BF133090.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.254 | | -4.8 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.577 | | -4.6 | |
| Fluorene | 1.241 | 1.197 | | -3.5 | |
| 4-Nitroaniline | 0.343 | 0.383 | | 11.7 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.132 | | 9.1 | |
| n-Nitrosodiphenylamine | 0.649 | 0.597 | | -8.0 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.206 | | 2.5 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.199 | | -8.3 | |
| Hexachlorobenzene | 0.222 | 0.208 | | -6.3 | |
| Atrazine | 0.187 | 0.183 | | -2.1 | |
| Pentachlorophenol | 0.158 | 0.156 | | -1.3 | 20.0 |
| Phenanthrene | 1.075 | 1.003 | | -6.7 | |
| Anthracene | 1.100 | 1.033 | | -6.1 | |
| Carbazole | 0.980 | 0.947 | | -3.4 | |
| Di-n-butylphthalate | 1.109 | 1.087 | | -2.0 | |
| Fluoranthene | 1.079 | 1.054 | | -2.3 | 20.0 |
| Pyrene | 1.714 | 1.498 | | -12.6 | |
| Terphenyl-d14 | 1.160 | 1.009 | | -13.1 | |
| Butylbenzylphthalate | 0.607 | 0.637 | | 4.9 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.411 | | 8.2 | |
| Benzo(a)anthracene | 1.375 | 1.240 | | -9.8 | |
| Chrysene | 1.375 | 1.235 | | -10.2 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.739 | | -3.0 | |
| Di-n-octyl phthalate | 1.242 | 1.302 | | 4.8 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.182 | | -7.1 | |
| Benzo(k)fluoranthene | 1.261 | 1.204 | | -4.5 | |
| Benzo(a)pyrene | 1.158 | 1.083 | | -6.5 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.072 | | -5.8 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.896 | | -5.6 | |
| Benzo(g,h,i)perylene | 0.937 | 0.900 | | -3.9 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.495 | | -8.0 | |
| 1,4-Dioxane | 0.614 | 0.552 | | -10.1 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.328 | | -1.5 | |

All other compounds must meet a minimum RRF of 0.010.

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 04/28/2023 09:45

Lab File ID: BF133113.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.213 | | -8.4 | |
| Benzaldehyde | 0.791 | 0.737 | | -6.8 | |
| Phenol-d6 | 1.643 | 1.516 | | -7.7 | |
| Phenol | 1.813 | 1.635 | | -9.8 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.219 | | -10.4 | |
| 2-Chlorophenol | 1.344 | 1.249 | | -7.1 | |
| 2-Methylphenol | 1.231 | 1.193 | | -3.1 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 1.957 | | -17.2 | |
| Acetophenone | 0.463 | 0.435 | | -6.0 | |
| 3+4-Methylphenols | 1.450 | 1.373 | | -5.3 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.877 | 0.050 | -14.3 | |
| Nitrobenzene-d5 | 0.371 | 0.349 | | -5.9 | |
| Hexachloroethane | 0.498 | 0.459 | | -7.8 | |
| Nitrobenzene | 0.375 | 0.352 | | -6.1 | |
| Isophorone | 0.704 | 0.647 | | -8.1 | |
| 2-Nitrophenol | 0.181 | 0.188 | | 3.9 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.299 | | -3.9 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.373 | | -10.3 | |
| 2,4-Dichlorophenol | 0.283 | 0.276 | | -2.5 | 20.0 |
| Naphthalene | 1.000 | 0.944 | | -5.6 | |
| 4-Chloroaniline | 0.404 | 0.411 | | 1.7 | |
| Hexachlorobutadiene | 0.162 | 0.153 | | -5.6 | 20.0 |
| Caprolactam | 0.095 | 0.096 | | 1.1 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.300 | | -1.6 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.643 | | -6.0 | |
| Hexachlorocyclopentadiene | 0.314 | 0.293 | 0.050 | -6.7 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.357 | | -4.0 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.143 | | -4.4 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.417 | | -3.0 | |
| 1,1-Biphenyl | 1.586 | 1.462 | | -7.8 | |
| 2-Chloronaphthalene | 1.161 | 1.082 | | -6.8 | |
| 2-Nitroaniline | 0.384 | 0.363 | | -5.5 | |
| Dimethylphthalate | 1.395 | 1.316 | | -5.7 | |
| Acenaphthylene | 1.855 | 1.739 | | -6.3 | |
| 2,6-Dinitrotoluene | 0.314 | 0.309 | | -1.6 | |
| 3-Nitroaniline | 0.373 | 0.366 | | -1.9 | |
| Acenaphthene | 1.242 | 1.177 | | -5.2 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.170 | 0.050 | 7.6 | |
| 4-Nitrophenol | 0.289 | 0.275 | 0.050 | -4.8 | |
| Dibenzofuran | 1.695 | 1.575 | | -7.1 | |
| 2,4-Dinitrotoluene | 0.400 | 0.408 | | 2.0 | |

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 04/28/2023 09:45

Lab File ID: BF133113.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.232 | | -6.5 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.570 | | -5.8 | |
| Fluorene | 1.241 | 1.176 | | -5.2 | |
| 4-Nitroaniline | 0.343 | 0.363 | | 5.8 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.133 | | 9.9 | |
| n-Nitrosodiphenylamine | 0.649 | 0.598 | | -7.9 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.201 | | 0.0 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.197 | | -9.2 | |
| Hexachlorobenzene | 0.222 | 0.210 | | -5.4 | |
| Atrazine | 0.187 | 0.182 | | -2.7 | |
| Pentachlorophenol | 0.158 | 0.150 | | -5.1 | 20.0 |
| Phenanthrene | 1.075 | 0.979 | | -8.9 | |
| Anthracene | 1.100 | 1.001 | | -9.0 | |
| Carbazole | 0.980 | 0.916 | | -6.5 | |
| Di-n-butylphthalate | 1.109 | 1.047 | | -5.6 | |
| Fluoranthene | 1.079 | 1.007 | | -6.7 | 20.0 |
| Pyrene | 1.714 | 1.572 | | -8.3 | |
| Terphenyl-d14 | 1.160 | 1.041 | | -10.3 | |
| Butylbenzylphthalate | 0.607 | 0.658 | | 8.4 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.409 | | 7.6 | |
| Benzo(a)anthracene | 1.375 | 1.249 | | -9.2 | |
| Chrysene | 1.375 | 1.254 | | -8.8 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.755 | | -0.9 | |
| Di-n-octyl phthalate | 1.242 | 1.288 | | 3.7 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.240 | | -2.5 | |
| Benzo(k)fluoranthene | 1.261 | 1.126 | | -10.7 | |
| Benzo(a)pyrene | 1.158 | 1.084 | | -6.4 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.146 | | 0.7 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.947 | | -0.2 | |
| Benzo(g,h,i)perylene | 0.937 | 0.954 | | 1.8 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.499 | | -7.2 | |
| 1,4-Dioxane | 0.614 | 0.550 | | -10.4 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.310 | | -6.9 | |

All other compounds must meet a minimum RRF of 0.010.

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 04/28/2023 16:17

Lab File ID: BF133124.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.272 | | -3.9 | |
| Benzaldehyde | 0.791 | 0.738 | | -6.7 | |
| Phenol-d6 | 1.643 | 1.517 | | -7.7 | |
| Phenol | 1.813 | 1.606 | | -11.4 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.206 | | -11.3 | |
| 2-Chlorophenol | 1.344 | 1.256 | | -6.5 | |
| 2-Methylphenol | 1.231 | 1.141 | | -7.3 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 1.922 | | -18.7 | |
| Acetophenone | 0.463 | 0.428 | | -7.6 | |
| 3+4-Methylphenols | 1.450 | 1.336 | | -7.9 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.846 | 0.050 | -17.3 | |
| Nitrobenzene-d5 | 0.371 | 0.340 | | -8.4 | |
| Hexachloroethane | 0.498 | 0.450 | | -9.6 | |
| Nitrobenzene | 0.375 | 0.346 | | -7.7 | |
| Isophorone | 0.704 | 0.622 | | -11.6 | |
| 2-Nitrophenol | 0.181 | 0.185 | | 2.2 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.290 | | -6.8 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.371 | | -10.8 | |
| 2,4-Dichlorophenol | 0.283 | 0.272 | | -3.9 | 20.0 |
| Naphthalene | 1.000 | 0.957 | | -4.3 | |
| 4-Chloroaniline | 0.404 | 0.405 | | 0.2 | |
| Hexachlorobutadiene | 0.162 | 0.156 | | -3.7 | 20.0 |
| Caprolactam | 0.095 | 0.097 | | 2.1 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.288 | | -5.6 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.643 | | -6.0 | |
| Hexachlorocyclopentadiene | 0.314 | 0.287 | 0.050 | -8.6 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.363 | | -2.4 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.189 | | -0.5 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.417 | | -3.0 | |
| 1,1-Biphenyl | 1.586 | 1.490 | | -6.1 | |
| 2-Chloronaphthalene | 1.161 | 1.090 | | -6.1 | |
| 2-Nitroaniline | 0.384 | 0.356 | | -7.3 | |
| Dimethylphthalate | 1.395 | 1.332 | | -4.5 | |
| Acenaphthylene | 1.855 | 1.789 | | -3.6 | |
| 2,6-Dinitrotoluene | 0.314 | 0.314 | | 0.0 | |
| 3-Nitroaniline | 0.373 | 0.371 | | -0.5 | |
| Acenaphthene | 1.242 | 1.196 | | -3.7 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.173 | 0.050 | 9.5 | |
| 4-Nitrophenol | 0.289 | 0.282 | 0.050 | -2.4 | |
| Dibenzofuran | 1.695 | 1.613 | | -4.8 | |
| 2,4-Dinitrotoluene | 0.400 | 0.416 | | 4.0 | |

Form VII SV-1

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 04/28/2023 16:17

Lab File ID: BF133124.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.259 | | -4.4 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.587 | | -3.0 | |
| Fluorene | 1.241 | 1.224 | | -1.4 | |
| 4-Nitroaniline | 0.343 | 0.377 | | 9.9 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.130 | | 7.4 | |
| n-Nitrosodiphenylamine | 0.649 | 0.594 | | -8.5 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.205 | | 2.0 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.201 | | -7.4 | |
| Hexachlorobenzene | 0.222 | 0.208 | | -6.3 | |
| Atrazine | 0.187 | 0.181 | | -3.2 | |
| Pentachlorophenol | 0.158 | 0.151 | | -4.4 | 20.0 |
| Phenanthrene | 1.075 | 0.996 | | -7.3 | |
| Anthracene | 1.100 | 1.043 | | -5.2 | |
| Carbazole | 0.980 | 0.934 | | -4.7 | |
| Di-n-butylphthalate | 1.109 | 1.096 | | -1.2 | |
| Fluoranthene | 1.079 | 1.073 | | -0.6 | 20.0 |
| Pyrene | 1.714 | 1.518 | | -11.4 | |
| Terphenyl-d14 | 1.160 | 1.040 | | -10.3 | |
| Butylbenzylphthalate | 0.607 | 0.642 | | 5.8 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.405 | | 6.6 | |
| Benzo(a)anthracene | 1.375 | 1.253 | | -8.9 | |
| Chrysene | 1.375 | 1.271 | | -7.6 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.741 | | -2.8 | |
| Di-n-octyl phthalate | 1.242 | 1.246 | | 0.3 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.161 | | -8.7 | |
| Benzo(k)fluoranthene | 1.261 | 1.225 | | -2.9 | |
| Benzo(a)pyrene | 1.158 | 1.104 | | -4.7 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.199 | | 5.4 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.998 | | 5.2 | |
| Benzo(g,h,i)perylene | 0.937 | 1.005 | | 7.3 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.512 | | -4.8 | |
| 1,4-Dioxane | 0.614 | 0.587 | | -4.4 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.320 | | -3.9 | |

All other compounds must meet a minimum RRF of 0.010.

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 05/01/2023 10:41

Lab File ID: BF133147.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.247 | | -5.8 | |
| Benzaldehyde | 0.791 | 0.752 | | -4.9 | |
| Phenol-d6 | 1.643 | 1.550 | | -5.7 | |
| Phenol | 1.813 | 1.675 | | -7.6 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.268 | | -6.8 | |
| 2-Chlorophenol | 1.344 | 1.290 | | -4.0 | |
| 2-Methylphenol | 1.231 | 1.195 | | -2.9 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 2.033 | | -14.0 | |
| Acetophenone | 0.463 | 0.431 | | -6.9 | |
| 3+4-Methylphenols | 1.450 | 1.342 | | -7.4 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.874 | 0.050 | -14.6 | |
| Nitrobenzene-d5 | 0.371 | 0.348 | | -6.2 | |
| Hexachloroethane | 0.498 | 0.469 | | -5.8 | |
| Nitrobenzene | 0.375 | 0.354 | | -5.6 | |
| Isophorone | 0.704 | 0.652 | | -7.4 | |
| 2-Nitrophenol | 0.181 | 0.188 | | 3.9 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.301 | | -3.2 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.383 | | -7.9 | |
| 2,4-Dichlorophenol | 0.283 | 0.275 | | -2.8 | 20.0 |
| Naphthalene | 1.000 | 0.943 | | -5.7 | |
| 4-Chloroaniline | 0.404 | 0.412 | | 2.0 | |
| Hexachlorobutadiene | 0.162 | 0.152 | | -6.2 | 20.0 |
| Caprolactam | 0.095 | 0.096 | | 1.1 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.300 | | -1.6 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.638 | | -6.7 | |
| Hexachlorocyclopentadiene | 0.314 | 0.290 | 0.050 | -7.6 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.353 | | -5.1 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.110 | | -7.1 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.413 | | -4.0 | |
| 1,1-Biphenyl | 1.586 | 1.458 | | -8.1 | |
| 2-Chloronaphthalene | 1.161 | 1.089 | | -6.2 | |
| 2-Nitroaniline | 0.384 | 0.364 | | -5.2 | |
| Dimethylphthalate | 1.395 | 1.310 | | -6.1 | |
| Acenaphthylene | 1.855 | 1.719 | | -7.3 | |
| 2,6-Dinitrotoluene | 0.314 | 0.304 | | -3.2 | |
| 3-Nitroaniline | 0.373 | 0.366 | | -1.9 | |
| Acenaphthene | 1.242 | 1.165 | | -6.2 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.167 | 0.050 | 5.7 | |
| 4-Nitrophenol | 0.289 | 0.277 | 0.050 | -4.2 | |
| Dibenzofuran | 1.695 | 1.563 | | -7.8 | |
| 2,4-Dinitrotoluene | 0.400 | 0.394 | | -1.5 | |

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 05/01/2023 10:41

Lab File ID: BF133147.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.153 | | -12.5 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.537 | | -11.2 | |
| Fluorene | 1.241 | 1.098 | | -11.5 | |
| 4-Nitroaniline | 0.343 | 0.348 | | 1.5 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.130 | | 7.4 | |
| n-Nitrosodiphenylamine | 0.649 | 0.608 | | -6.3 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.186 | | -7.5 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.203 | | -6.5 | |
| Hexachlorobenzene | 0.222 | 0.214 | | -3.6 | |
| Atrazine | 0.187 | 0.181 | | -3.2 | |
| Pentachlorophenol | 0.158 | 0.156 | | -1.3 | 20.0 |
| Phenanthrene | 1.075 | 1.000 | | -7.0 | |
| Anthracene | 1.100 | 1.030 | | -6.4 | |
| Carbazole | 0.980 | 0.925 | | -5.6 | |
| Di-n-butylphthalate | 1.109 | 1.065 | | -4.0 | |
| Fluoranthene | 1.079 | 1.037 | | -3.9 | 20.0 |
| Pyrene | 1.714 | 1.573 | | -8.2 | |
| Terphenyl-d14 | 1.160 | 1.029 | | -11.3 | |
| Butylbenzylphthalate | 0.607 | 0.643 | | 5.9 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.394 | | 3.7 | |
| Benzo(a)anthracene | 1.375 | 1.271 | | -7.6 | |
| Chrysene | 1.375 | 1.286 | | -6.5 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.778 | | 2.1 | |
| Di-n-octyl phthalate | 1.242 | 1.340 | | 7.9 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.182 | | -7.1 | |
| Benzo(k)fluoranthene | 1.261 | 1.204 | | -4.5 | |
| Benzo(a)pyrene | 1.158 | 1.096 | | -5.4 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.118 | | -1.8 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.933 | | -1.7 | |
| Benzo(g,h,i)perylene | 0.937 | 0.949 | | 1.3 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.491 | | -8.7 | |
| 1,4-Dioxane | 0.614 | 0.578 | | -5.9 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.301 | | -9.6 | |

All other compounds must meet a minimum RRF of 0.010.

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 05/01/2023 15:25

Lab File ID: BF133156.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.266 | | -4.4 | |
| Benzaldehyde | 0.791 | 0.766 | | -3.2 | |
| Phenol-d6 | 1.643 | 1.586 | | -3.5 | |
| Phenol | 1.813 | 1.695 | | -6.5 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.281 | | -5.8 | |
| 2-Chlorophenol | 1.344 | 1.302 | | -3.1 | |
| 2-Methylphenol | 1.231 | 1.183 | | -3.9 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 2.102 | | -11.0 | |
| Acetophenone | 0.463 | 0.440 | | -5.0 | |
| 3+4-Methylphenols | 1.450 | 1.379 | | -4.9 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.897 | 0.050 | -12.3 | |
| Nitrobenzene-d5 | 0.371 | 0.357 | | -3.8 | |
| Hexachloroethane | 0.498 | 0.480 | | -3.6 | |
| Nitrobenzene | 0.375 | 0.363 | | -3.2 | |
| Isophorone | 0.704 | 0.663 | | -5.8 | |
| 2-Nitrophenol | 0.181 | 0.188 | | 3.9 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.301 | | -3.2 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.393 | | -5.5 | |
| 2,4-Dichlorophenol | 0.283 | 0.281 | | -0.7 | 20.0 |
| Naphthalene | 1.000 | 0.961 | | -3.9 | |
| 4-Chloroaniline | 0.404 | 0.422 | | 4.5 | |
| Hexachlorobutadiene | 0.162 | 0.158 | | -2.5 | 20.0 |
| Caprolactam | 0.095 | 0.100 | | 5.3 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.304 | | -0.3 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.664 | | -2.9 | |
| Hexachlorocyclopentadiene | 0.314 | 0.297 | 0.050 | -5.4 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.364 | | -2.2 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.159 | | -3.0 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.426 | | -0.9 | |
| 1,1-Biphenyl | 1.586 | 1.520 | | -4.2 | |
| 2-Chloronaphthalene | 1.161 | 1.121 | | -3.4 | |
| 2-Nitroaniline | 0.384 | 0.387 | | 0.8 | |
| Dimethylphthalate | 1.395 | 1.346 | | -3.5 | |
| Acenaphthylene | 1.855 | 1.818 | | -2.0 | |
| 2,6-Dinitrotoluene | 0.314 | 0.315 | | 0.3 | |
| 3-Nitroaniline | 0.373 | 0.382 | | 2.4 | |
| Acenaphthene | 1.242 | 1.096 | | -11.8 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.171 | 0.050 | 8.2 | |
| 4-Nitrophenol | 0.289 | 0.274 | 0.050 | -5.2 | |
| Dibenzofuran | 1.695 | 1.599 | | -5.7 | |
| 2,4-Dinitrotoluene | 0.400 | 0.409 | | 2.3 | |

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2495 SAS No.: O2495 SDG No.: O2495

Instrument ID: BNA_F Calibration Date/Time: 05/01/2023 15:25

Lab File ID: BF133156.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.220 | | -7.4 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.565 | | -6.6 | |
| Fluorene | 1.241 | 1.157 | | -6.8 | |
| 4-Nitroaniline | 0.343 | 0.357 | | 4.1 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.134 | | 10.7 | |
| n-Nitrosodiphenylamine | 0.649 | 0.617 | | -4.9 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.201 | | 0.0 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.210 | | -3.2 | |
| Hexachlorobenzene | 0.222 | 0.220 | | -0.9 | |
| Atrazine | 0.187 | 0.187 | | 0.0 | |
| Pentachlorophenol | 0.158 | 0.157 | | -0.6 | 20.0 |
| Phenanthrene | 1.075 | 1.017 | | -5.4 | |
| Anthracene | 1.100 | 1.053 | | -4.3 | |
| Carbazole | 0.980 | 0.945 | | -3.6 | |
| Di-n-butylphthalate | 1.109 | 1.096 | | -1.2 | |
| Fluoranthene | 1.079 | 1.048 | | -2.9 | 20.0 |
| Pyrene | 1.714 | 1.636 | | -4.6 | |
| Terphenyl-d14 | 1.160 | 1.108 | | -4.5 | |
| Butylbenzylphthalate | 0.607 | 0.715 | | 17.8 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.414 | | 8.9 | |
| Benzo(a)anthracene | 1.375 | 1.286 | | -6.5 | |
| Chrysene | 1.375 | 1.317 | | -4.2 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.811 | | 6.4 | |
| Di-n-octyl phthalate | 1.242 | 1.301 | | 4.8 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.253 | | -1.5 | |
| Benzo(k)fluoranthene | 1.261 | 1.182 | | -6.3 | |
| Benzo(a)pyrene | 1.158 | 1.123 | | -3.0 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.198 | | 5.3 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.998 | | 5.2 | |
| Benzo(g,h,i)perylene | 0.937 | 1.018 | | 8.6 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.504 | | -6.3 | |
| 1,4-Dioxane | 0.614 | 0.601 | | -2.1 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.321 | | -3.6 | |

All other compounds must meet a minimum RRF of 0.010.

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O2495 | **OrderDate:** | 4/25/2023 3:22:44 PM |
| **Client:** | GEI Consultants, Inc., P.C. | **Project:** | Ferry Point |
| **Contact:** | Stacey Ng | **Location:** | N11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O2495-01** | **PZ-01** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |
| | | | Metals ICP-TAL | 6010D | | 05/02/23 | 05/04/23 | |
| **O2495-02** | **PZ-01** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/02/23 | 05/04/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |
| **O2495-03** | **PZ-02** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |
| | | | Metals ICP-TAL | 6010D | | 05/02/23 | 05/03/23 | |
| **O2495-04** | **PZ-02** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/02/23 | 05/03/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |
| **O2495-05** | **GMW-11** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |
| | | | Metals ICP-TAL | 6010D | | 05/02/23 | 05/03/23 | |
| **O2495-06** | **GMW-11** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/02/23 | 05/03/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |
| **O2495-07** | **GMW-X** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |
| | | | Metals ICP-TAL | 6010D | | 05/02/23 | 05/03/23 | |
| **O2495-08** | **GMW-X** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/02/23 | 05/03/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |
| **O2495-09** | **GMW-5** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |

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# LAB CHRONICLE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Metals ICP-TAL | 6010D | | 05/02/23 | 05/02/23 | |
| **O2495-10** | **GMW-5** | **Water** | | | **04/25/23** | | | **04/25/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/02/23 | 05/03/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |

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# Hit Summary Sheet
## SW-846

**SDG No.:** O2495 **Order ID:** O2495

**Client:** GEI Consultants, Inc., P.C. **Project ID:** Ferry Point

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| **Client ID : PZ-01** | | | | | | | | |
| O2495-01 | PZ-01 | Water | Aluminum | 2650 | | 28.3 | 50.0 | ug/L |
| O2495-01 | PZ-01 | Water | Antimony | 3.47 | J | 2.06 | 25.0 | ug/L |
| O2495-01 | PZ-01 | Water | Arsenic | 6.06 | J | 3.48 | 10.0 | ug/L |
| O2495-01 | PZ-01 | Water | Barium | 545 | | 3.92 | 50.0 | ug/L |
| O2495-01 | PZ-01 | Water | Beryllium | 0.32 | J | 0.13 | 3.00 | ug/L |
| O2495-01 | PZ-01 | Water | Cadmium | 2.96 | J | 0.10 | 3.00 | ug/L |
| O2495-01 | PZ-01 | Water | Calcium | 129000 | | 47.7 | 1000 | ug/L |
| O2495-01 | PZ-01 | Water | Chromium | 11.8 | | 0.80 | 5.00 | ug/L |
| O2495-01 | PZ-01 | Water | Cobalt | 3.58 | J | 0.40 | 15.0 | ug/L |
| O2495-01 | PZ-01 | Water | Copper | 351 | | 7.07 | 10.0 | ug/L |
| O2495-01 | PZ-01 | Water | Iron | 14000 | | 18.5 | 50.0 | ug/L |
| O2495-01 | PZ-01 | Water | Lead | 238 | | 3.51 | 6.00 | ug/L |
| O2495-01 | PZ-01 | Water | Magnesium | 13100 | | 36.0 | 1000 | ug/L |
| O2495-01 | PZ-01 | Water | Manganese | 761 | | 0.68 | 10.0 | ug/L |
| O2495-01 | PZ-01 | Water | Mercury | 0.39 | | 0.078 | 0.20 | ug/L |
| O2495-01 | PZ-01 | Water | Nickel | 21.3 | | 0.85 | 20.0 | ug/L |
| O2495-01 | PZ-01 | Water | Potassium | 16600 | | 685 | 1000 | ug/L |
| O2495-01 | PZ-01 | Water | Silver | 1.43 | J | 0.66 | 5.00 | ug/L |
| O2495-01 | PZ-01 | Water | Sodium | 26500 | | 237 | 1000 | ug/L |
| O2495-01 | PZ-01 | Water | Vanadium | 8.59 | J | 3.01 | 20.0 | ug/L |
| O2495-01 | PZ-01 | Water | Zinc | 592 | | 1.75 | 20.0 | ug/L |
| O2495-01 | PZ-01 | Water | Hardness, Total | 376000 | | 267 | 6620 | ug/L |
| **Client ID : PZ-01** | | | | | | | | |
| O2495-02 | PZ-01 | Water | Aluminum | 124 | | 28.3 | 50.0 | ug/L |
| O2495-02 | PZ-01 | Water | Barium | 429 | | 3.92 | 50.0 | ug/L |
| O2495-02 | PZ-01 | Water | Calcium | 117000 | | 47.7 | 1000 | ug/L |
| O2495-02 | PZ-01 | Water | Cobalt | 0.81 | J | 0.40 | 15.0 | ug/L |
| O2495-02 | PZ-01 | Water | Copper | 25.4 | | 7.07 | 10.0 | ug/L |
| O2495-02 | PZ-01 | Water | Iron | 646 | | 18.5 | 50.0 | ug/L |
| O2495-02 | PZ-01 | Water | Magnesium | 12900 | | 36.0 | 1000 | ug/L |
| O2495-02 | PZ-01 | Water | Manganese | 433 | | 0.68 | 10.0 | ug/L |
| O2495-02 | PZ-01 | Water | Nickel | 7.25 | J | 0.85 | 20.0 | ug/L |
| O2495-02 | PZ-01 | Water | Potassium | 15900 | | 685 | 1000 | ug/L |
| O2495-02 | PZ-01 | Water | Sodium | 29000 | | 237 | 1000 | ug/L |
| O2495-02 | PZ-01 | Water | Zinc | 35.4 | | 1.75 | 20.0 | ug/L |
| **Client ID : PZ-02** | | | | | | | | |
| O2495-03 | PZ-02 | Water | Aluminum | 5240 | | 28.3 | 50.0 | ug/L |
| O2495-03 | PZ-02 | Water | Antimony | 4.92 | J | 2.06 | 25.0 | ug/L |

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# Hit Summary Sheet
**SW-846**



**SDG No.:** O2495 **Order ID:** O2495

**Client:** GEI Consultants, Inc., P.C. **Project ID:** Ferry Point

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| O2495-03 | PZ-02 | Water | Arsenic | 20.1 | | 3.48 | 10.0 | ug/L |
| O2495-03 | PZ-02 | Water | Barium | 2380 | | 3.92 | 50.0 | ug/L |
| O2495-03 | PZ-02 | Water | Beryllium | 0.92 | J | 0.13 | 3.00 | ug/L |
| O2495-03 | PZ-02 | Water | Cadmium | 2.84 | J | 0.10 | 3.00 | ug/L |
| O2495-03 | PZ-02 | Water | Calcium | 101000 | | 47.7 | 1000 | ug/L |
| O2495-03 | PZ-02 | Water | Chromium | 23.2 | | 0.80 | 5.00 | ug/L |
| O2495-03 | PZ-02 | Water | Cobalt | 12.0 | J | 0.40 | 15.0 | ug/L |
| O2495-03 | PZ-02 | Water | Copper | 186 | | 7.07 | 10.0 | ug/L |
| O2495-03 | PZ-02 | Water | Iron | 35900 | | 18.5 | 50.0 | ug/L |
| O2495-03 | PZ-02 | Water | Lead | 451 | | 3.51 | 6.00 | ug/L |
| O2495-03 | PZ-02 | Water | Magnesium | 29600 | | 36.0 | 1000 | ug/L |
| O2495-03 | PZ-02 | Water | Manganese | 440 | | 0.68 | 10.0 | ug/L |
| O2495-03 | PZ-02 | Water | Mercury | 0.74 | | 0.078 | 0.20 | ug/L |
| O2495-03 | PZ-02 | Water | Nickel | 43.1 | | 0.85 | 20.0 | ug/L |
| O2495-03 | PZ-02 | Water | Potassium | 42800 | | 685 | 1000 | ug/L |
| O2495-03 | PZ-02 | Water | Silver | 8.06 | | 0.66 | 5.00 | ug/L |
| O2495-03 | PZ-02 | Water | Sodium | 129000 | | 237 | 1000 | ug/L |
| O2495-03 | PZ-02 | Water | Vanadium | 26.8 | | 3.01 | 20.0 | ug/L |
| O2495-03 | PZ-02 | Water | Zinc | 1070 | | 1.75 | 20.0 | ug/L |
| O2495-03 | PZ-02 | Water | Hardness, Total | 374000 | | 267 | 6620 | ug/L |
| **Client ID :** | **PZ-02** | | | | | | | |
| O2495-04 | PZ-02 | Water | Aluminum | 112 | | 28.3 | 50.0 | ug/L |
| O2495-04 | PZ-02 | Water | Barium | 570 | | 3.92 | 50.0 | ug/L |
| O2495-04 | PZ-02 | Water | Calcium | 88200 | | 47.7 | 1000 | ug/L |
| O2495-04 | PZ-02 | Water | Chromium | 1.29 | J | 0.80 | 5.00 | ug/L |
| O2495-04 | PZ-02 | Water | Cobalt | 1.63 | J | 0.40 | 15.0 | ug/L |
| O2495-04 | PZ-02 | Water | Copper | 28.3 | | 7.07 | 10.0 | ug/L |
| O2495-04 | PZ-02 | Water | Iron | 92.2 | | 18.5 | 50.0 | ug/L |
| O2495-04 | PZ-02 | Water | Magnesium | 23300 | | 36.0 | 1000 | ug/L |
| O2495-04 | PZ-02 | Water | Manganese | 228 | | 0.68 | 10.0 | ug/L |
| O2495-04 | PZ-02 | Water | Nickel | 9.28 | J | 0.85 | 20.0 | ug/L |
| O2495-04 | PZ-02 | Water | Potassium | 31100 | | 685 | 1000 | ug/L |
| O2495-04 | PZ-02 | Water | Silver | 0.67 | J | 0.66 | 5.00 | ug/L |
| O2495-04 | PZ-02 | Water | Sodium | 86200 | | 237 | 1000 | ug/L |
| O2495-04 | PZ-02 | Water | Zinc | 13.3 | J | 1.75 | 20.0 | ug/L |
| **Client ID :** | **GMW-11** | | | | | | | |
| O2495-05 | GMW-11 | Water | Aluminum | 19300 | | 28.3 | 50.0 | ug/L |
| O2495-05 | GMW-11 | Water | Antimony | 2.22 | J | 2.06 | 25.0 | ug/L |
| O2495-05 | GMW-11 | Water | Arsenic | 7.15 | J | 3.48 | 10.0 | ug/L |
| O2495-05 | GMW-11 | Water | Barium | 254 | | 3.92 | 50.0 | ug/L |
| O2495-05 | GMW-11 | Water | Beryllium | 1.04 | J | 0.13 | 3.00 | ug/L |

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# Hit Summary Sheet
**SW-846**



**SDG No.:** O2495 **Order ID:** O2495

**Client:** GEI Consultants, Inc., P.C. **Project ID:** Ferry Point

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| O2495-05 | GMW-11 | Water | Cadmium | 0.49 | J | 0.10 | 3.00 | ug/L |
| O2495-05 | GMW-11 | Water | Calcium | 91200 | | 47.7 | 1000 | ug/L |
| O2495-05 | GMW-11 | Water | Chromium | 33.0 | | 0.80 | 5.00 | ug/L |
| O2495-05 | GMW-11 | Water | Cobalt | 12.8 | J | 0.40 | 15.0 | ug/L |
| O2495-05 | GMW-11 | Water | Copper | 92.0 | | 7.07 | 10.0 | ug/L |
| O2495-05 | GMW-11 | Water | Iron | 26200 | | 18.5 | 50.0 | ug/L |
| O2495-05 | GMW-11 | Water | Lead | 205 | | 3.51 | 6.00 | ug/L |
| O2495-05 | GMW-11 | Water | Magnesium | 8300 | | 36.0 | 1000 | ug/L |
| O2495-05 | GMW-11 | Water | Manganese | 442 | | 0.68 | 10.0 | ug/L |
| O2495-05 | GMW-11 | Water | Mercury | 0.57 | | 0.078 | 0.20 | ug/L |
| O2495-05 | GMW-11 | Water | Nickel | 41.9 | | 0.85 | 20.0 | ug/L |
| O2495-05 | GMW-11 | Water | Potassium | 33100 | | 685 | 1000 | ug/L |
| O2495-05 | GMW-11 | Water | Silver | 5.18 | | 0.66 | 5.00 | ug/L |
| O2495-05 | GMW-11 | Water | Sodium | 55800 | | 237 | 1000 | ug/L |
| O2495-05 | GMW-11 | Water | Vanadium | 48.3 | | 3.01 | 20.0 | ug/L |
| O2495-05 | GMW-11 | Water | Zinc | 235 | | 1.75 | 20.0 | ug/L |
| O2495-05 | GMW-11 | Water | Hardness, Total | 262000 | | 267 | 6620 | ug/L |
| **Client ID :** | **GMW-11** | | | | | | | |
| O2495-06 | GMW-11 | Water | Aluminum | 108 | | 28.3 | 50.0 | ug/L |
| O2495-06 | GMW-11 | Water | Arsenic | 3.95 | J | 3.48 | 10.0 | ug/L |
| O2495-06 | GMW-11 | Water | Barium | 50.0 | | 3.92 | 50.0 | ug/L |
| O2495-06 | GMW-11 | Water | Calcium | 83000 | | 47.7 | 1000 | ug/L |
| O2495-06 | GMW-11 | Water | Chromium | 0.82 | J | 0.80 | 5.00 | ug/L |
| O2495-06 | GMW-11 | Water | Magnesium | 1920 | | 36.0 | 1000 | ug/L |
| O2495-06 | GMW-11 | Water | Manganese | 6.06 | J | 0.68 | 10.0 | ug/L |
| O2495-06 | GMW-11 | Water | Nickel | 5.56 | J | 0.85 | 20.0 | ug/L |
| O2495-06 | GMW-11 | Water | Potassium | 31500 | | 685 | 1000 | ug/L |
| O2495-06 | GMW-11 | Water | Silver | 0.74 | J | 0.66 | 5.00 | ug/L |
| O2495-06 | GMW-11 | Water | Sodium | 58200 | | 237 | 1000 | ug/L |
| O2495-06 | GMW-11 | Water | Vanadium | 6.86 | J | 3.01 | 20.0 | ug/L |
| O2495-06 | GMW-11 | Water | Zinc | 3.56 | J | 1.75 | 20.0 | ug/L |
| **Client ID :** | **GMW-X** | | | | | | | |
| O2495-07 | GMW-X | Water | Aluminum | 17500 | | 28.3 | 50.0 | ug/L |
| O2495-07 | GMW-X | Water | Arsenic | 7.38 | J | 3.48 | 10.0 | ug/L |
| O2495-07 | GMW-X | Water | Barium | 234 | | 3.92 | 50.0 | ug/L |
| O2495-07 | GMW-X | Water | Beryllium | 0.92 | J | 0.13 | 3.00 | ug/L |
| O2495-07 | GMW-X | Water | Cadmium | 0.37 | J | 0.10 | 3.00 | ug/L |
| O2495-07 | GMW-X | Water | Calcium | 86100 | | 47.7 | 1000 | ug/L |
| O2495-07 | GMW-X | Water | Chromium | 31.9 | | 0.80 | 5.00 | ug/L |
| O2495-07 | GMW-X | Water | Cobalt | 12.1 | J | 0.40 | 15.0 | ug/L |
| O2495-07 | GMW-X | Water | Copper | 76.1 | | 7.07 | 10.0 | ug/L |

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# Hit Summary Sheet
**SW-846**



**SDG No.:** O2495 **Order ID:** O2495

**Client:** GEI Consultants, Inc., P.C. **Project ID:** Ferry Point

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| O2495-07 | GMW-X | Water | Iron | 25300 | | 18.5 | 50.0 | ug/L |
| O2495-07 | GMW-X | Water | Lead | 193 | | 3.51 | 6.00 | ug/L |
| O2495-07 | GMW-X | Water | Magnesium | 7490 | | 36.0 | 1000 | ug/L |
| O2495-07 | GMW-X | Water | Manganese | 401 | | 0.68 | 10.0 | ug/L |
| O2495-07 | GMW-X | Water | Mercury | 0.49 | | 0.078 | 0.20 | ug/L |
| O2495-07 | GMW-X | Water | Nickel | 39.9 | | 0.85 | 20.0 | ug/L |
| O2495-07 | GMW-X | Water | Potassium | 33200 | | 685 | 1000 | ug/L |
| O2495-07 | GMW-X | Water | Silver | 4.86 | J | 0.66 | 5.00 | ug/L |
| O2495-07 | GMW-X | Water | Sodium | 56000 | | 237 | 1000 | ug/L |
| O2495-07 | GMW-X | Water | Vanadium | 44.2 | | 3.01 | 20.0 | ug/L |
| O2495-07 | GMW-X | Water | Zinc | 234 | | 1.75 | 20.0 | ug/L |
| O2495-07 | GMW-X | Water | Hardness, Total | 246000 | | 267 | 6620 | ug/L |
| **Client ID :** | **GMW-X** | | | | | | | |
| O2495-08 | GMW-X | Water | Aluminum | 112 | | 28.3 | 50.0 | ug/L |
| O2495-08 | GMW-X | Water | Barium | 42.8 | J | 3.92 | 50.0 | ug/L |
| O2495-08 | GMW-X | Water | Calcium | 78700 | | 47.7 | 1000 | ug/L |
| O2495-08 | GMW-X | Water | Magnesium | 1720 | | 36.0 | 1000 | ug/L |
| O2495-08 | GMW-X | Water | Manganese | 4.78 | J | 0.68 | 10.0 | ug/L |
| O2495-08 | GMW-X | Water | Nickel | 6.80 | J | 0.85 | 20.0 | ug/L |
| O2495-08 | GMW-X | Water | Potassium | 31300 | | 685 | 1000 | ug/L |
| O2495-08 | GMW-X | Water | Sodium | 58100 | | 237 | 1000 | ug/L |
| O2495-08 | GMW-X | Water | Vanadium | 7.02 | J | 3.01 | 20.0 | ug/L |
| O2495-08 | GMW-X | Water | Zinc | 5.72 | J | 1.75 | 20.0 | ug/L |
| **Client ID :** | **GMW-5** | | | | | | | |
| O2495-09 | GMW-5 | Water | Aluminum | 873 | | 28.3 | 50.0 | ug/L |
| O2495-09 | GMW-5 | Water | Barium | 36.6 | J | 3.92 | 50.0 | ug/L |
| O2495-09 | GMW-5 | Water | Cadmium | 3.51 | | 0.10 | 3.00 | ug/L |
| O2495-09 | GMW-5 | Water | Calcium | 67900 | | 47.7 | 1000 | ug/L |
| O2495-09 | GMW-5 | Water | Chromium | 1.83 | J | 0.80 | 5.00 | ug/L |
| O2495-09 | GMW-5 | Water | Copper | 13.3 | | 7.07 | 10.0 | ug/L |
| O2495-09 | GMW-5 | Water | Iron | 1930 | | 18.5 | 50.0 | ug/L |
| O2495-09 | GMW-5 | Water | Lead | 19.2 | | 3.51 | 6.00 | ug/L |
| O2495-09 | GMW-5 | Water | Magnesium | 5990 | | 36.0 | 1000 | ug/L |
| O2495-09 | GMW-5 | Water | Manganese | 189 | | 0.68 | 10.0 | ug/L |
| O2495-09 | GMW-5 | Water | Nickel | 4.64 | J | 0.85 | 20.0 | ug/L |
| O2495-09 | GMW-5 | Water | Potassium | 8000 | | 685 | 1000 | ug/L |
| O2495-09 | GMW-5 | Water | Sodium | 5930 | | 237 | 1000 | ug/L |
| O2495-09 | GMW-5 | Water | Vanadium | 12.1 | J | 3.01 | 20.0 | ug/L |
| O2495-09 | GMW-5 | Water | Zinc | 24.4 | | 1.75 | 20.0 | ug/L |
| O2495-09 | GMW-5 | Water | Hardness, Total | 194000 | | 267 | 6620 | ug/L |

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# Hit Summary Sheet
**SW-846**

| | | | |
|---|---|---|---|
| **SDG No.:** | O2495 | **Order ID:** | O2495 |
| **Client:** | GEI Consultants, Inc., P.C. | **Project ID:** | Ferry Point |

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| **Client ID : GMW-5** | | | | | | | | |
| O2495-10 | GMW-5 | Water | Barium | 15.7 | J | 3.92 | 50.0 | ug/L |
| O2495-10 | GMW-5 | Water | Calcium | 13300 | | 47.7 | 1000 | ug/L |
| O2495-10 | GMW-5 | Water | Magnesium | 1360 | | 36.0 | 1000 | ug/L |
| O2495-10 | GMW-5 | Water | Manganese | 35.9 | | 0.68 | 10.0 | ug/L |
| O2495-10 | GMW-5 | Water | Nickel | 0.93 | J | 0.85 | 20.0 | ug/L |
| O2495-10 | GMW-5 | Water | Potassium | 1530 | | 685 | 1000 | ug/L |
| O2495-10 | GMW-5 | Water | Sodium | 1120 | | 237 | 1000 | ug/L |
| O2495-10 | GMW-5 | Water | Zinc | 1.85 | J | 1.75 | 20.0 | ug/L |

# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2650 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 3.47 | J | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 6.06 | J | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 545 | | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 0.32 | J | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 2.96 | J | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 129000 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 11.8 | | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 3.58 | J | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 351 | | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 376000 | | 1 | 267 | 6620 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 14000 | N | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 238 | | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 13100 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 761 | | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.39 | | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:32 | SW7470A | |
| 7440-02-0 | Nickel | 21.3 | | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 16600 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 1.43 | J | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 26500 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 8.59 | J | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 592 | | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:53 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-02 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 124 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 429 | | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 3.00 | U | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 117000 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 5.00 | U | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 0.81 | J | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 25.4 | | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 646 | N | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 12900 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 433 | | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:26 | SW7470A | |
| 7440-02-0 | Nickel | 7.25 | J | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 15900 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 29000 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 35.4 | | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/04/23 14:57 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | DISSOLVED METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 5240 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 4.92 | J | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 20.1 | | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 2380 | | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 0.92 | J | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 2.84 | J | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 101000 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 23.2 | | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 12.0 | J | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 186 | | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 374000 | | 1 | 267 | 6620 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 35900 | N | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 451 | | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 29600 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 440 | | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.74 | | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:34 | SW7470A | |
| 7440-02-0 | Nickel | 43.1 | | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 42800 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 8.06 | | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 129000 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 26.8 | | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 1070 | | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:34 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Gray | Clarity Before: | Clear | Texture: | |
| Color After: | Gray | Clarity After: | Clear | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-04 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 112 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 570 | | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 3.00 | U | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 88200 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 1.29 | J | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 1.63 | J | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 28.3 | | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 92.2 | N | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 23300 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 228 | | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:28 | SW7470A | |
| 7440-02-0 | Nickel | 9.28 | J | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 31100 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 0.67 | J | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 86200 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 13.3 | J | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:38 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | DISSOLVED METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 19300 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 2.22 | J | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 7.15 | J | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 254 | | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 1.04 | J | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 0.49 | J | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 91200 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 33.0 | | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 12.8 | J | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 92.0 | | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 262000 | | 1 | 267 | 6620 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 26200 | N | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 205 | | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 8300 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 442 | | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.57 | | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:36 | SW7470A | |
| 7440-02-0 | Nickel | 41.9 | | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 33100 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.18 | | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 55800 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 48.3 | | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 235 | | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:42 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Brown | Clarity Before: | Cloudy | Texture: | |
| Color After: | Brown | Clarity After: | Cloudy | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-06 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 108 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 3.95 | J | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 50.0 | | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 3.00 | U | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 83000 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 0.82 | J | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 15.0 | U | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 10.0 | U | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 50.0 | UN | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 1920 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 6.06 | J | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:31 | SW7470A | |
| 7440-02-0 | Nickel | 5.56 | J | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 31500 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 0.74 | J | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 58200 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 6.86 | J | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 3.56 | J | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:46 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | DISSOLVED METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 17500 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 7.38 | J | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 234 | | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 0.92 | J | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 0.37 | J | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 86100 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 31.9 | | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 12.1 | J | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 76.1 | | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 246000 | | 1 | 267 | 6620 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 25300 | N | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 193 | | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 7490 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 401 | | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.49 | | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:39 | SW7470A | |
| 7440-02-0 | Nickel | 39.9 | | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 33200 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 4.86 | J | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 56000 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 44.2 | | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 234 | | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:50 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Brown | Clarity Before: | Cloudy | Texture: | |
| Color After: | Brown | Clarity After: | Cloudy | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-08 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 112 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 42.8 | J | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 3.00 | U | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 78700 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 5.00 | U | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 15.0 | U | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 10.0 | U | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 50.0 | UN | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 1720 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 4.78 | J | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:33 | SW7470A | |
| 7440-02-0 | Nickel | 6.80 | J | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 31300 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 58100 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 7.02 | J | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 5.72 | J | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:54 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | DISSOLVED METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-09 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 873 | | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 36.6 | J | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 3.51 | | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 67900 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 1.83 | J | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 15.0 | U | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 13.3 | | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 194000 | | 1 | 267 | 6620 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 1930 | N | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 19.2 | | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 5990 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 189 | | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:41 | SW7470A | |
| 7440-02-0 | Nickel | 4.64 | J | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 8000 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 5930 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 12.1 | J | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 24.4 | | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/02/23 18:07 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-10 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 50.0 | U | 1 | 28.3 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 15.7 | J | 1 | 3.92 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 3.00 | U | 1 | 0.10 | 3.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 13300 | | 1 | 47.7 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 5.00 | U | 1 | 0.80 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 15.0 | U | 1 | 0.40 | 15.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 10.0 | U | 1 | 7.07 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 50.0 | UN | 1 | 18.5 | 50.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 1360 | | 1 | 36.0 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 35.9 | | 1 | 0.68 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:35 | SW7470A | |
| 7440-02-0 | Nickel | 0.93 | J | 1 | 0.85 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 1530 | | 1 | 685 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 1120 | N | 1 | 237 | 1000 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 1.85 | J | 1 | 1.75 | 20.0 | ug/L | 05/02/23 12:30 | 05/03/23 15:58 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | DISSOLVED METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

# METAL CALIBRATION DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV53 | Mercury | 4.39 | 4.0 | 110 | 90 - 110 | CV | 04/28/2023 | 13:11 | LB125204 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV79 | Mercury | 5.13 | 5.0 | 102 | 90 - 110 | CV | 04/28/2023 | 13:16 | LB125204 |
| CCV80 | Mercury | 4.98 | 5.0 | 100 | 90 - 110 | CV | 04/28/2023 | 13:43 | LB125204 |
| CCV81 | Mercury | 4.94 | 5.0 | 99 | 90 - 110 | CV | 04/28/2023 | 14:14 | LB125204 |
| CCV82 | Mercury | 5.03 | 5.0 | 101 | 90 - 110 | CV | 04/28/2023 | 14:30 | LB125204 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV58 | Mercury | 3.76 | 4.0 | 94 | 90 - 110 | CV | 05/02/2023 | 16:06 | LB125251 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV98 | Mercury | 4.81 | 5.0 | 96 | 90 - 110 | CV | 05/02/2023 | 16:10 | LB125251 |
| CCV99 | Mercury | 4.78 | 5.0 | 96 | 90 - 110 | CV | 05/02/2023 | 16:38 | LB125251 |
| CCV01 | Mercury | 4.71 | 5.0 | 94 | 90 - 110 | CV | 05/02/2023 | 17:05 | LB125251 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Aluminum | 2650 | 2500 | 106 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Antimony | 1020 | 1000 | 102 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Arsenic | 1090 | 1000 | 109 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Barium | 531 | 520 | 102 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Beryllium | 525 | 510 | 103 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Cadmium | 531 | 510 | 104 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Calcium | 10500 | 10000 | 105 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Chromium | 534 | 520 | 103 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Cobalt | 523 | 520 | 100 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Copper | 553 | 510 | 108 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Iron | 10600 | 10000 | 106 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Lead | 1060 | 1000 | 106 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Magnesium | 5980 | 6000 | 100 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Manganese | 532 | 520 | 102 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Nickel | 524 | 530 | 99 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Potassium | 10400 | 9900 | 105 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Selenium | 1100 | 1000 | 110 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Silver | 267 | 250 | 107 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Sodium | 9990 | 10000 | 100 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Thallium | 1090 | 1000 | 109 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Vanadium | 509 | 500 | 102 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |
| | Zinc | 1080 | 1000 | 108 | 90 - 110 | P | 05/02/2023 | 17:12 | LB125255 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV01 | Aluminum | 9720 | 10000 | 97 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Antimony | 4970 | 5000 | 100 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Arsenic | 4910 | 5000 | 98 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Barium | 9380 | 10000 | 94 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Beryllium | 241 | 250 | 96 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Cadmium | 2410 | 2500 | 96 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Calcium | 24100 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Chromium | 934 | 1000 | 93 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Cobalt | 2440 | 2500 | 98 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Copper | 1240 | 1250 | 99 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Iron | 4830 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Lead | 4870 | 5000 | 98 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Magnesium | 23000 | 25000 | 92 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Manganese | 2370 | 2500 | 95 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Nickel | 2450 | 2500 | 98 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Potassium | 24100 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Selenium | 5010 | 5000 | 100 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Silver | 1220 | 1250 | 98 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Sodium | 23300 | 25000 | 93 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Thallium | 4890 | 5000 | 98 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Vanadium | 2310 | 2500 | 92 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |
| | Zinc | 2460 | 2500 | 98 | 90 - 110 | P | 05/02/2023 | 17:31 | LB125255 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| LLCCV01 | Aluminum | 102 | 100 | 102 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Antimony | 48.7 | 50.0 | 97 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Arsenic | 21.8 | 20.0 | 109 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Barium | 98.2 | 100 | 98 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Beryllium | 6.31 | 6.0 | 105 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Cadmium | 6.35 | 6.0 | 106 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Calcium | 1960 | 2000 | 98 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Chromium | 9.99 | 10.0 | 100 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Cobalt | 29.1 | 30.0 | 97 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Copper | 22.9 | 20.0 | 115 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Iron | 99.2 | 100 | 99 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Lead | 13.4 | 12.0 | 112 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Magnesium | 2080 | 2000 | 104 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Manganese | 21.3 | 20.0 | 106 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Nickel | 39.0 | 40.0 | 98 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Potassium | 1930 | 2000 | 96 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Selenium | 21.0 | 20.0 | 105 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Silver | 10.7 | 10.0 | 107 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Sodium | 1830 | 2000 | 92 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Thallium | 40.2 | 40.0 | 101 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Vanadium | 36.9 | 40.0 | 92 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |
| | Zinc | 44.7 | 40.0 | 112 | 80 - 120 | P | 05/02/2023 | 17:35 | LB125255 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV02 | Aluminum | 9760 | 10000 | 98 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Antimony | 4990 | 5000 | 100 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Arsenic | 4930 | 5000 | 99 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Barium | 9480 | 10000 | 95 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Beryllium | 236 | 250 | 94 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Cadmium | 2410 | 2500 | 96 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Calcium | 24100 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Chromium | 973 | 1000 | 97 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Cobalt | 2430 | 2500 | 97 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Copper | 1240 | 1250 | 99 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Iron | 4800 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Lead | 4850 | 5000 | 97 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Magnesium | 25400 | 25000 | 102 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Manganese | 2370 | 2500 | 95 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Nickel | 2440 | 2500 | 98 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Potassium | 24100 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Selenium | 5030 | 5000 | 101 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Silver | 1200 | 1250 | 96 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Sodium | 22800 | 25000 | 91 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Thallium | 4850 | 5000 | 97 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Vanadium | 2310 | 2500 | 92 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| | Zinc | 2380 | 2500 | 95 | 90 - 110 | P | 05/02/2023 | 18:38 | LB125255 |
| CCV03 | Aluminum | 9600 | 10000 | 96 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Antimony | 5010 | 5000 | 100 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Arsenic | 4960 | 5000 | 99 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Barium | 9360 | 10000 | 94 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Beryllium | 237 | 250 | 95 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Cadmium | 2440 | 2500 | 97 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Calcium | 23900 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Chromium | 970 | 1000 | 97 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Cobalt | 2460 | 2500 | 98 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Copper | 1250 | 1250 | 100 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Iron | 4830 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Lead | 4900 | 5000 | 98 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV03 | Magnesium | 25200 | 25000 | 101 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Manganese | 2340 | 2500 | 94 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Nickel | 2460 | 2500 | 99 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Potassium | 24000 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Selenium | 5060 | 5000 | 101 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Silver | 1210 | 1250 | 97 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Sodium | 24600 | 25000 | 98 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Thallium | 4900 | 5000 | 98 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Vanadium | 2280 | 2500 | 91 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| | Zinc | 2410 | 2500 | 97 | 90 - 110 | P | 05/02/2023 | 19:25 | LB125255 |
| CCV04 | Aluminum | 9580 | 10000 | 96 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Antimony | 4810 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Arsenic | 4870 | 5000 | 97 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Barium | 9180 | 10000 | 92 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Beryllium | 238 | 250 | 95 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Cadmium | 2450 | 2500 | 98 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Calcium | 23900 | 25000 | 95 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Chromium | 1020 | 1000 | 102 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Cobalt | 2430 | 2500 | 97 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Copper | 1240 | 1250 | 99 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Iron | 4980 | 5000 | 100 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Lead | 4820 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Magnesium | 24600 | 25000 | 98 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Manganese | 2310 | 2500 | 92 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Nickel | 2400 | 2500 | 96 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Potassium | 25100 | 25000 | 100 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Selenium | 4870 | 5000 | 97 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Silver | 1250 | 1250 | 100 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Sodium | 27500 | 25000 | 110 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Thallium | 4810 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Vanadium | 2260 | 2500 | 90 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| | Zinc | 2550 | 2500 | 102 | 90 - 110 | P | 05/02/2023 | 20:11 | LB125255 |
| CCV05 | Aluminum | 9440 | 10000 | 94 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Antimony | 4710 | 5000 | 94 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV05 | Arsenic | 4780 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Barium | 9020 | 10000 | 90 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Beryllium | 234 | 250 | 93 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Cadmium | 2450 | 2500 | 98 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Calcium | 23500 | 25000 | 94 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Chromium | 977 | 1000 | 98 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Cobalt | 2420 | 2500 | 97 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Copper | 1230 | 1250 | 98 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Iron | 4700 | 5000 | 94 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Lead | 4800 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Magnesium | 24100 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Manganese | 2270 | 2500 | 91 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Nickel | 2380 | 2500 | 95 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Potassium | 23500 | 25000 | 94 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Selenium | 4750 | 5000 | 95 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Silver | 1180 | 1250 | 94 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Sodium | 25500 | 25000 | 102 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Thallium | 4780 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Vanadium | 2220 | 2500 | 89 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| | Zinc | 2410 | 2500 | 96 | 90 - 110 | P | 05/02/2023 | 20:57 | LB125255 |
| CCV06 | Aluminum | 9560 | 10000 | 96 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Antimony | 4640 | 5000 | 93 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Arsenic | 4750 | 5000 | 95 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Barium | 8890 | 10000 | 89 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Beryllium | 236 | 250 | 94 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Cadmium | 2430 | 2500 | 97 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Calcium | 23800 | 25000 | 95 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Chromium | 950 | 1000 | 95 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Cobalt | 2400 | 2500 | 96 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Copper | 1220 | 1250 | 98 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Iron | 4570 | 5000 | 91 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Lead | 4740 | 5000 | 95 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Magnesium | 24000 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Manganese | 2280 | 2500 | 91 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV06 | Nickel | 2350 | 2500 | 94 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Potassium | 23100 | 25000 | 92 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Selenium | 4700 | 5000 | 94 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Silver | 1150 | 1250 | 92 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Sodium | 24400 | 25000 | 98 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Thallium | 4720 | 5000 | 94 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Vanadium | 2210 | 2500 | 89 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| | Zinc | 2360 | 2500 | 94 | 90 - 110 | P | 05/02/2023 | 21:45 | LB125255 |
| CCV07 | Aluminum | 9730 | 10000 | 97 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Antimony | 4700 | 5000 | 94 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Arsenic | 4800 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Barium | 9070 | 10000 | 91 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Beryllium | 240 | 250 | 96 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Cadmium | 2460 | 2500 | 98 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Calcium | 24200 | 25000 | 97 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Chromium | 947 | 1000 | 95 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Cobalt | 2430 | 2500 | 97 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Copper | 1230 | 1250 | 99 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Iron | 4600 | 5000 | 92 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Lead | 4810 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Magnesium | 24300 | 25000 | 97 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Manganese | 2320 | 2500 | 93 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Nickel | 2380 | 2500 | 95 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Potassium | 23200 | 25000 | 93 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Selenium | 4740 | 5000 | 95 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Silver | 1150 | 1250 | 92 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Sodium | 23900 | 25000 | 96 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Thallium | 4810 | 5000 | 96 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Vanadium | 2250 | 2500 | 90 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |
| | Zinc | 2360 | 2500 | 94 | 90 - 110 | P | 05/02/2023 | 22:19 | LB125255 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Aluminum | 2610 | 2500 | 104 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Antimony | 1040 | 1000 | 104 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Arsenic | 1080 | 1000 | 108 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Barium | 555 | 520 | 107 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Beryllium | 515 | 510 | 101 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Cadmium | 521 | 510 | 102 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Calcium | 10100 | 10000 | 100 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Chromium | 492 | 520 | 95 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Cobalt | 524 | 520 | 101 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Copper | 548 | 510 | 108 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Iron | 9830 | 10000 | 98 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Lead | 1060 | 1000 | 106 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Magnesium | 6080 | 6000 | 101 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Manganese | 551 | 520 | 106 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Nickel | 530 | 530 | 100 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Potassium | 9740 | 9900 | 98 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Selenium | 1090 | 1000 | 109 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Silver | 239 | 250 | 96 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Sodium | 9080 | 10000 | 91 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Thallium | 1080 | 1000 | 108 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Vanadium | 509 | 500 | 102 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Zinc | 1050 | 1000 | 105 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV01 | Aluminum | 9750 | 10000 | 98 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Antimony | 5000 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Arsenic | 4870 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Barium | 10100 | 10000 | 101 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Beryllium | 238 | 250 | 95 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Cadmium | 2390 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Calcium | 23600 | 25000 | 95 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Chromium | 953 | 1000 | 95 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Cobalt | 2450 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Copper | 1230 | 1250 | 98 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Iron | 4840 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Lead | 4880 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Magnesium | 26300 | 25000 | 105 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Manganese | 2520 | 2500 | 101 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Nickel | 2470 | 2500 | 99 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Potassium | 24200 | 25000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Selenium | 4860 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Silver | 1130 | 1250 | 90 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Sodium | 25500 | 25000 | 102 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Thallium | 4870 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Vanadium | 2410 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Zinc | 2490 | 2500 | 99 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| LLCCV01 | Aluminum | 99.2 | 100 | 99 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Antimony | 53.9 | 50.0 | 108 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Arsenic | 23.0 | 20.0 | 115 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Barium | 112 | 100 | 112 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Beryllium | 6.29 | 6.0 | 105 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Cadmium | 6.52 | 6.0 | 109 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Calcium | 1950 | 2000 | 98 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Chromium | 9.71 | 10.0 | 97 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Cobalt | 30.8 | 30.0 | 103 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Copper | 23.6 | 20.0 | 118 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Iron | 104 | 100 | 104 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Lead | 12.7 | 12.0 | 106 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Magnesium | 2190 | 2000 | 109 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Manganese | 22.8 | 20.0 | 114 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Nickel | 40.9 | 40.0 | 102 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Potassium | 1940 | 2000 | 97 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Selenium | 22.2 | 20.0 | 111 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Silver | 10.9 | 10.0 | 109 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Sodium | 1720 | 2000 | 86 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Thallium | 43.2 | 40.0 | 108 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Vanadium | 40.7 | 40.0 | 102 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Zinc | 46.9 | 40.0 | 117 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV02 | Aluminum | 9680 | 10000 | 97 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Antimony | 5010 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Arsenic | 4820 | 5000 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Barium | 10100 | 10000 | 101 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Beryllium | 237 | 250 | 95 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Cadmium | 2330 | 2500 | 93 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Calcium | 23500 | 25000 | 94 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Chromium | 941 | 1000 | 94 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Cobalt | 2410 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Copper | 1210 | 1250 | 97 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Iron | 4750 | 5000 | 95 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Lead | 4810 | 5000 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Magnesium | 26400 | 25000 | 106 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Manganese | 2530 | 2500 | 101 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Nickel | 2450 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Potassium | 23900 | 25000 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Selenium | 4760 | 5000 | 95 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Silver | 1130 | 1250 | 90 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Sodium | 24700 | 25000 | 99 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Thallium | 4780 | 5000 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Vanadium | 2400 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Zinc | 2460 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| CCV03 | Aluminum | 9780 | 10000 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Antimony | 5290 | 5000 | 106 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Arsenic | 5000 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Barium | 10500 | 10000 | 105 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Beryllium | 237 | 250 | 95 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Cadmium | 2390 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Calcium | 23800 | 25000 | 95 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Chromium | 947 | 1000 | 95 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Cobalt | 2500 | 2500 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Copper | 1250 | 1250 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Iron | 5000 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Lead | 5000 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV03 | Magnesium | 27300 | 25000 | 109 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Manganese | 2610 | 2500 | 104 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Nickel | 2560 | 2500 | 103 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Potassium | 24600 | 25000 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Selenium | 4910 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Silver | 1150 | 1250 | 92 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Sodium | 25500 | 25000 | 102 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Thallium | 4930 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Vanadium | 2460 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Zinc | 2500 | 2500 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| CCV04 | Aluminum | 9900 | 10000 | 99 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Antimony | 5200 | 5000 | 104 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Arsenic | 4910 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Barium | 10500 | 10000 | 105 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Beryllium | 238 | 250 | 95 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Cadmium | 2340 | 2500 | 94 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Calcium | 23900 | 25000 | 96 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Chromium | 950 | 1000 | 95 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Cobalt | 2460 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Copper | 1230 | 1250 | 98 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Iron | 5020 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Lead | 4910 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Magnesium | 27400 | 25000 | 110 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Manganese | 2620 | 2500 | 105 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Nickel | 2510 | 2500 | 100 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Potassium | 24800 | 25000 | 99 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Selenium | 4830 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Silver | 1140 | 1250 | 92 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Sodium | 25500 | 25000 | 102 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Thallium | 4840 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Vanadium | 2460 | 2500 | 99 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Zinc | 2520 | 2500 | 101 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| CCV05 | Aluminum | 10100 | 10000 | 101 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Antimony | 5360 | 5000 | 107 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV05 | Arsenic | 5070 | 5000 | 101 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Barium | 10800 | 10000 | 108 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Beryllium | 244 | 250 | 98 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Cadmium | 2430 | 2500 | 97 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Calcium | 24400 | 25000 | 98 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Chromium | 911 | 1000 | 91 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Cobalt | 2550 | 2500 | 102 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Copper | 1270 | 1250 | 102 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Iron | 4940 | 5000 | 99 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Lead | 5090 | 5000 | 102 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Magnesium | 26000 | 25000 | 104 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Manganese | 2710 | 2500 | 108 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Nickel | 2610 | 2500 | 104 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Potassium | 24800 | 25000 | 99 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Selenium | 4980 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Silver | 1140 | 1250 | 91 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Sodium | 23300 | 25000 | 93 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Thallium | 5020 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Vanadium | 2530 | 2500 | 101 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Zinc | 2550 | 2500 | 102 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| CCV06 | Aluminum | 9940 | 10000 | 99 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Antimony | 5320 | 5000 | 106 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Arsenic | 5060 | 5000 | 101 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Barium | 10600 | 10000 | 106 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Beryllium | 243 | 250 | 97 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Cadmium | 2460 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Calcium | 24000 | 25000 | 96 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Chromium | 904 | 1000 | 90 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Cobalt | 2570 | 2500 | 103 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Copper | 1280 | 1250 | 102 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Iron | 4810 | 5000 | 96 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Lead | 5120 | 5000 | 102 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Magnesium | 25500 | 25000 | 102 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Manganese | 2670 | 2500 | 107 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV06 | Nickel | 2620 | 2500 | 105 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Potassium | 24200 | 25000 | 97 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Selenium | 4960 | 5000 | 99 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Silver | 1250 | 1250 | 100 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Sodium | 22500 | 25000 | 90 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Thallium | 5040 | 5000 | 101 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Vanadium | 2470 | 2500 | 99 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Zinc | 2560 | 2500 | 102 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Aluminum | 2590 | 2500 | 104 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Antimony | 1000 | 1000 | 100 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Arsenic | 1050 | 1000 | 105 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Barium | 525 | 520 | 101 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Beryllium | 524 | 510 | 103 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Cadmium | 518 | 510 | 102 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Calcium | 10200 | 10000 | 102 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Chromium | 521 | 520 | 100 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Cobalt | 509 | 520 | 98 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Copper | 535 | 510 | 105 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Iron | 9840 | 10000 | 98 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Lead | 1040 | 1000 | 104 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Magnesium | 6060 | 6000 | 101 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Manganese | 528 | 520 | 102 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Nickel | 511 | 530 | 96 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Potassium | 9650 | 9900 | 98 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Selenium | 1070 | 1000 | 107 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Silver | 253 | 250 | 101 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Sodium | 9520 | 10000 | 95 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Thallium | 1070 | 1000 | 107 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Vanadium | 508 | 500 | 102 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Zinc | 1030 | 1000 | 103 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV01 | Aluminum | 9590 | 10000 | 96 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Antimony | 5000 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Arsenic | 5100 | 5000 | 102 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Barium | 9860 | 10000 | 99 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Beryllium | 242 | 250 | 97 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Cadmium | 2390 | 2500 | 96 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Calcium | 23700 | 25000 | 95 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Chromium | 956 | 1000 | 96 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Cobalt | 2440 | 2500 | 98 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Copper | 1250 | 1250 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Iron | 4870 | 5000 | 97 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Lead | 4880 | 5000 | 98 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Magnesium | 24400 | 25000 | 98 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Manganese | 2500 | 2500 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Nickel | 2460 | 2500 | 99 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Potassium | 24200 | 25000 | 97 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Selenium | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Silver | 1250 | 1250 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Sodium | 23800 | 25000 | 95 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Thallium | 4870 | 5000 | 98 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Vanadium | 2410 | 2500 | 96 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Zinc | 2490 | 2500 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| LLCCV01 | Aluminum | 117 | 100 | 117 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Antimony | 51.3 | 50.0 | 103 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Arsenic | 20.4 | 20.0 | 102 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Barium | 104 | 100 | 104 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Beryllium | 6.34 | 6.0 | 106 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Cadmium | 6.31 | 6.0 | 105 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Calcium | 1920 | 2000 | 96 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Chromium | 9.72 | 10.0 | 97 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Cobalt | 29.1 | 30.0 | 97 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Copper | 23.5 | 20.0 | 117 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Iron | 100 | 100 | 100 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Lead | 13.7 | 12.0 | 114 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Magnesium | 2130 | 2000 | 106 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Manganese | 22.1 | 20.0 | 110 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Nickel | 38.9 | 40.0 | 97 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Potassium | 1910 | 2000 | 95 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Selenium | 18.9 | 20.0 | 95 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Silver | 10.5 | 10.0 | 105 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Sodium | 1810 | 2000 | 90 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Thallium | 40.9 | 40.0 | 102 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Vanadium | 39.2 | 40.0 | 98 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Zinc | 47.9 | 40.0 | 120 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV02 | Aluminum | 9700 | 10000 | 97 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Antimony | 5120 | 5000 | 102 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Arsenic | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Barium | 10100 | 10000 | 101 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Beryllium | 242 | 250 | 97 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Cadmium | 2420 | 2500 | 97 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Calcium | 23900 | 25000 | 96 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Chromium | 963 | 1000 | 96 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Cobalt | 2480 | 2500 | 99 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Copper | 1270 | 1250 | 102 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Iron | 4990 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Lead | 4970 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Magnesium | 25000 | 25000 | 100 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Manganese | 2570 | 2500 | 103 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Nickel | 2520 | 2500 | 101 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Potassium | 24900 | 25000 | 99 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Selenium | 5070 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Silver | 1350 | 1250 | 108 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Sodium | 24600 | 25000 | 98 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Thallium | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Vanadium | 2430 | 2500 | 97 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Zinc | 2540 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| CCV03 | Aluminum | 9720 | 10000 | 97 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Antimony | 5280 | 5000 | 106 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Arsenic | 5060 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Barium | 10200 | 10000 | 102 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Beryllium | 238 | 250 | 95 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Cadmium | 2440 | 2500 | 98 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Calcium | 23900 | 25000 | 95 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Chromium | 968 | 1000 | 97 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Cobalt | 2520 | 2500 | 101 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Copper | 1300 | 1250 | 104 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Iron | 5040 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Lead | 5030 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV03 | Magnesium | 24900 | 25000 | 100 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Manganese | 2570 | 2500 | 103 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Nickel | 2560 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Potassium | 25700 | 25000 | 103 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Selenium | 5220 | 5000 | 104 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Silver | 1370 | 1250 | 109 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Sodium | 23700 | 25000 | 95 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Thallium | 5010 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Vanadium | 2450 | 2500 | 98 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Zinc | 2580 | 2500 | 103 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| CCV04 | Aluminum | 9490 | 10000 | 95 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Antimony | 5230 | 5000 | 104 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Arsenic | 4980 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Barium | 9960 | 10000 | 100 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Beryllium | 239 | 250 | 96 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Cadmium | 2390 | 2500 | 96 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Calcium | 23300 | 25000 | 93 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Chromium | 967 | 1000 | 97 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Cobalt | 2480 | 2500 | 99 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Copper | 1290 | 1250 | 103 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Iron | 5010 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Lead | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Magnesium | 24400 | 25000 | 98 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Manganese | 2540 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Nickel | 2520 | 2500 | 101 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Potassium | 25100 | 25000 | 101 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Selenium | 5170 | 5000 | 103 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Silver | 1340 | 1250 | 107 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Sodium | 24700 | 25000 | 99 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Thallium | 4910 | 5000 | 98 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Vanadium | 2390 | 2500 | 95 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Zinc | 2580 | 2500 | 103 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| CCV05 | Aluminum | 9300 | 10000 | 93 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Antimony | 5360 | 5000 | 107 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV05 | Arsenic | 5030 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Barium | 10000 | 10000 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Beryllium | 230 | 250 | 92 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Cadmium | 2370 | 2500 | 95 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Calcium | 22800 | 25000 | 91 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Chromium | 927 | 1000 | 93 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Cobalt | 2490 | 2500 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Copper | 1310 | 1250 | 104 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Iron | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Lead | 4990 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Magnesium | 24100 | 25000 | 96 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Manganese | 2560 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Nickel | 2550 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Potassium | 25000 | 25000 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Selenium | 5300 | 5000 | 106 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Silver | 1330 | 1250 | 106 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Sodium | 23600 | 25000 | 94 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Thallium | 4930 | 5000 | 98 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Vanadium | 2360 | 2500 | 94 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Zinc | 2500 | 2500 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| CCV06 | Aluminum | 9500 | 10000 | 95 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Antimony | 5250 | 5000 | 105 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Arsenic | 4960 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Barium | 10100 | 10000 | 101 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Beryllium | 240 | 250 | 96 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Cadmium | 2370 | 2500 | 95 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Calcium | 23300 | 25000 | 93 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Chromium | 939 | 1000 | 94 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Cobalt | 2480 | 2500 | 99 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Copper | 1290 | 1250 | 103 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Iron | 5010 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Lead | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Magnesium | 24600 | 25000 | 98 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Manganese | 2620 | 2500 | 105 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV06 | Nickel | 2520 | 2500 | 101 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Potassium | 25200 | 25000 | 101 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Selenium | 5170 | 5000 | 103 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Silver | 1360 | 1250 | 108 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Sodium | 24100 | 25000 | 96 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Thallium | 4870 | 5000 | 97 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Vanadium | 2400 | 2500 | 96 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Zinc | 2600 | 2500 | 104 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Metals

## - 2b -
## CRDL STANDARD FOR AA & ICP

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:**

**Continuing Calibration Source:**

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CRA | Mercury | 0.21 | 0.2 | 105 | 40 - 160 | CV | 04/28/2023 | 13:20 | LB125204 |
| CRA | Mercury | 0.16 | 0.2 | 82 | 40 - 160 | CV | 05/02/2023 | 16:15 | LB125251 |
| CRI01 | Aluminum | 101 | 100 | 101 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Antimony | 52.7 | 50.0 | 105 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Arsenic | 22.5 | 20.0 | 112 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Barium | 102 | 100 | 102 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Beryllium | 6.58 | 6.0 | 110 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Cadmium | 6.72 | 6.0 | 112 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Calcium | 2030 | 2000 | 102 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Chromium | 9.97 | 10.0 | 100 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Cobalt | 30.5 | 30.0 | 102 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Copper | 23.8 | 20.0 | 119 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Iron | 99.5 | 100 | 100 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Lead | 14.1 | 12.0 | 118 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Magnesium | 2150 | 2000 | 107 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Manganese | 22.4 | 20.0 | 112 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Nickel | 40.5 | 40.0 | 101 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Potassium | 1990 | 2000 | 100 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Selenium | 21.7 | 20.0 | 109 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Silver | 10.8 | 10.0 | 108 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Sodium | 1900 | 2000 | 95 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Thallium | 41.3 | 40.0 | 103 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Vanadium | 37.8 | 40.0 | 95 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| | Zinc | 45.8 | 40.0 | 114 | 40 - 160 | P | 05/02/2023 | 17:20 | LB125255 |
| CRI01 | Aluminum | 120 | 100 | 120 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Antimony | 52.5 | 50.0 | 105 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Arsenic | 22.2 | 20.0 | 111 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Barium | 113 | 100 | 114 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Beryllium | 6.52 | 6.0 | 109 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Cadmium | 6.52 | 6.0 | 109 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Calcium | 1980 | 2000 | 99 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Chromium | 10.0 | 10.0 | 100 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Cobalt | 30.7 | 30.0 | 102 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Copper | 23.4 | 20.0 | 117 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Iron | 103 | 100 | 103 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |

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# Metals

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## CRDL STANDARD FOR AA & ICP

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Initial Calibration Source:**

**Continuing Calibration Source:**

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CRI01 | Lead | 12.8 | 12.0 | 107 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Magnesium | 2200 | 2000 | 110 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Manganese | 23.1 | 20.0 | 115 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Nickel | 40.7 | 40.0 | 102 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Potassium | 1950 | 2000 | 97 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Selenium | 23.3 | 20.0 | 117 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Silver | 11.5 | 10.0 | 116 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Sodium | 1750 | 2000 | 88 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Thallium | 42.6 | 40.0 | 106 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Vanadium | 43.5 | 40.0 | 109 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Zinc | 47.8 | 40.0 | 120 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| CRI01 | Aluminum | 98.1 | 100 | 98 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Antimony | 49.6 | 50.0 | 99 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Arsenic | 21.0 | 20.0 | 105 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Barium | 103 | 100 | 103 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Beryllium | 6.51 | 6.0 | 108 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Cadmium | 6.24 | 6.0 | 104 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Calcium | 1930 | 2000 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Chromium | 9.64 | 10.0 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Cobalt | 29.0 | 30.0 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Copper | 24.1 | 20.0 | 120 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Iron | 103 | 100 | 103 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Lead | 14.0 | 12.0 | 116 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Magnesium | 2140 | 2000 | 107 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Manganese | 21.9 | 20.0 | 110 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Nickel | 38.6 | 40.0 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Potassium | 1910 | 2000 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Selenium | 21.3 | 20.0 | 106 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Silver | 10.4 | 10.0 | 104 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Sodium | 1830 | 2000 | 91 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Thallium | 39.9 | 40.0 | 100 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Vanadium | 41.0 | 40.0 | 103 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Zinc | 48.4 | 40.0 | 121 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |

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## Metals

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### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICB53** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 13:14 | LB125204 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CCB79** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 13:18 | LB125204 |
| **CCB80** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 13:45 | LB125204 |
| **CCB81** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 14:16 | LB125204 |
| **CCB82** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 14:33 | LB125204 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICB58** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 05/02/2023 | 16:08 | LB125251 |

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# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CCB98** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 05/02/2023 | 16:13 | LB125251 |
| **CCB99** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 05/02/2023 | 16:40 | LB125251 |
| **CCB01** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 05/02/2023 | 17:07 | LB125251 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/02/2023 | 17:16 | LB125255 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/02/2023 | 17:16 | LB125255 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 17:16 | LB125255 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 17:16 | LB125255 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 17:16 | LB125255 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/02/2023 | 17:16 | LB125255 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 17:16 | LB125255 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 17:16 | LB125255 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 17:16 | LB125255 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 17:16 | LB125255 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 17:16 | LB125255 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/02/2023 | 17:39 | LB125255 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/02/2023 | 17:39 | LB125255 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 17:39 | LB125255 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 17:39 | LB125255 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 17:39 | LB125255 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/02/2023 | 17:39 | LB125255 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 17:39 | LB125255 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 17:39 | LB125255 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 17:39 | LB125255 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 17:39 | LB125255 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 17:39 | LB125255 |
| CCB02 | Aluminum | 100 | +/-100 | U | 100 | P | 05/02/2023 | 18:42 | LB125255 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/02/2023 | 18:42 | LB125255 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 18:42 | LB125255 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 18:42 | LB125255 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 18:42 | LB125255 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/02/2023 | 18:42 | LB125255 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 18:42 | LB125255 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 18:42 | LB125255 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 18:42 | LB125255 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB02 | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 18:42 | LB125255 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 18:42 | LB125255 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 18:42 | LB125255 |
| CCB03 | Aluminum | 100 | +/-100 | U | 100 | P | 05/02/2023 | 19:29 | LB125255 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/02/2023 | 19:29 | LB125255 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 19:29 | LB125255 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 19:29 | LB125255 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 19:29 | LB125255 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/02/2023 | 19:29 | LB125255 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 19:29 | LB125255 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 19:29 | LB125255 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 19:29 | LB125255 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 19:29 | LB125255 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 19:29 | LB125255 |
| CCB04 | Aluminum | 100 | +/-100 | U | 100 | P | 05/02/2023 | 20:15 | LB125255 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/02/2023 | 20:15 | LB125255 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 20:15 | LB125255 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 20:15 | LB125255 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 20:15 | LB125255 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/02/2023 | 20:15 | LB125255 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 20:15 | LB125255 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 20:15 | LB125255 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB04 | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 20:15 | LB125255 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 20:15 | LB125255 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 20:15 | LB125255 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 20:15 | LB125255 |
| CCB05 | Aluminum | 100 | +/-100 | U | 100 | P | 05/02/2023 | 21:01 | LB125255 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/02/2023 | 21:01 | LB125255 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 21:01 | LB125255 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 21:01 | LB125255 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 21:01 | LB125255 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/02/2023 | 21:01 | LB125255 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 21:01 | LB125255 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 21:01 | LB125255 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 21:01 | LB125255 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 21:01 | LB125255 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 21:01 | LB125255 |
| CCB06 | Aluminum | 100 | +/-100 | U | 100 | P | 05/02/2023 | 21:49 | LB125255 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/02/2023 | 21:49 | LB125255 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 21:49 | LB125255 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 21:49 | LB125255 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 21:49 | LB125255 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 21:49 | LB125255 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB06 | Iron | 100 | +/-100 | U | 100 | P | 05/02/2023 | 21:49 | LB125255 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 21:49 | LB125255 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 21:49 | LB125255 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 21:49 | LB125255 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 21:49 | LB125255 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 21:49 | LB125255 |
| CCB07 | Aluminum | 100 | +/-100 | U | 100 | P | 05/02/2023 | 22:22 | LB125255 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/02/2023 | 22:22 | LB125255 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 22:22 | LB125255 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/02/2023 | 22:22 | LB125255 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 22:22 | LB125255 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/02/2023 | 22:22 | LB125255 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 22:22 | LB125255 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 22:22 | LB125255 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/02/2023 | 22:22 | LB125255 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 22:22 | LB125255 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/02/2023 | 22:22 | LB125255 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:11 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:11 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 14:11 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 14:11 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:11 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:11 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:11 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:11 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Silver | 1.54 | +/-10.0 | J | 10.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:11 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:11 | LB125269 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:39 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:39 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 14:39 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 14:39 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:39 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:39 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:39 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:39 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Silver | 1.35 | +/-10.0 | J | 10.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:39 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:39 | LB125269 |
| CCB02 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 15:30 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 15:30 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 15:30 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 15:30 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 15:30 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 15:30 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 15:30 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 15:30 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 15:30 | LB125269 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB02 | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 15:30 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 15:30 | LB125269 |
| CCB03 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 16:43 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 16:43 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 16:43 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 16:43 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 16:43 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 16:43 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 16:43 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 16:43 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 16:43 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 16:43 | LB125269 |
| CCB04 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 17:34 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 17:34 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 17:34 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 17:34 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 17:34 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 17:34 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 17:34 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 17:34 | LB125269 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB04 | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 17:34 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Silver | 1.69 | +/-10.0 | J | 10.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 17:34 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 17:34 | LB125269 |
| CCB05 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 18:20 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 18:20 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 18:20 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 18:20 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 18:20 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 18:20 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 18:20 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 18:20 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 18:20 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 18:20 | LB125269 |
| CCB06 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 19:07 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 19:07 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 19:07 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 19:07 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 19:07 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 19:07 | LB125269 |

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# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB06 | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 19:07 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 19:07 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 19:07 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Silver | 2.29 | +/-10.0 | J | 10.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 19:07 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 19:07 | LB125269 |

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# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 13:47 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 13:47 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 13:47 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 13:47 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 13:47 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 13:47 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 13:47 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 13:47 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 13:47 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 13:47 | LB125287 |

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# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 14:18 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 14:18 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 14:18 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 14:18 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 14:18 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 14:18 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 14:18 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 14:18 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 14:18 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 14:18 | LB125287 |
| CCB02 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:09 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:09 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 15:09 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 15:09 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:09 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:09 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:09 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:09 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 15:09 | LB125287 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB02 | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:09 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:09 | LB125287 |
| CCB03 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:57 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:57 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 15:57 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 15:57 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:57 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:57 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:57 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:57 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Sodium | 1020 | +/-2000 | J | 2000 | P | 05/04/2023 | 15:57 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:57 | LB125287 |
| CCB04 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 16:55 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 16:55 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 16:55 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 16:55 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 16:55 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 16:55 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 16:55 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 16:55 | LB125287 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB04 | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 16:55 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 16:55 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 16:55 | LB125287 |
| CCB05 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 17:47 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 17:47 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 17:47 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 17:47 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 17:47 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 17:47 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 17:47 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 17:47 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 17:47 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 17:47 | LB125287 |
| CCB06 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 18:17 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 18:17 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 18:17 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 18:17 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 18:17 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 18:17 | LB125287 |

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# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB06 | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 18:17 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 18:17 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 18:17 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 18:17 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 18:17 | LB125287 |

**Metals**
**- 3b -**
**PREPARATION BLANK SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Instrument:** CV1

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|
| **PB152487BL** | | **WATER** | | **Batch Number:** | **PB152487** | | **Prep Date:** | **04/28/2023** | |
| | Mercury | 0.20 | <0.20 | U | 0.20 | CV | 04/28/2023 | 13:27 | LB125204 |

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|
| **PB152538BL** | | **WATER** | | **Batch Number:** | **PB152538** | | **Prep Date:** | **05/02/2023** | |
| | Mercury | 0.20 | <0.20 | U | 0.20 | CV | 05/02/2023 | 16:22 | LB125251 |

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# Metals
## - 3b -
## PREPARATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Instrument:** P4

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|
| **PB152420BL** | | **WATER** | | **Batch Number:** | **PB152420** | | **Prep Date:** | **05/02/2023** | |
| | Aluminum | 50.0 | <50.0 | U | 50.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Antimony | 25.0 | <25.0 | U | 25.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Arsenic | 10.0 | <10.0 | U | 10.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Barium | 50.0 | <50.0 | U | 50.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Beryllium | 3.00 | <3.00 | U | 3.00 | P | 05/02/2023 | 17:59 | LB125255 |
| | Cadmium | 3.00 | <3.00 | U | 3.00 | P | 05/02/2023 | 17:59 | LB125255 |
| | Calcium | 1000 | <1000 | U | 1000 | P | 05/02/2023 | 17:59 | LB125255 |
| | Chromium | 5.00 | <5.00 | U | 5.00 | P | 05/02/2023 | 17:59 | LB125255 |
| | Cobalt | 15.0 | <15.0 | U | 15.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Copper | 10.0 | <10.0 | U | 10.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Iron | 50.0 | <50.0 | U | 50.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Lead | 6.00 | <6.00 | U | 6.00 | P | 05/02/2023 | 17:59 | LB125255 |
| | Magnesium | 1000 | <1000 | U | 1000 | P | 05/02/2023 | 17:59 | LB125255 |
| | Manganese | 10.0 | <10.0 | U | 10.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Nickel | 20.0 | <20.0 | U | 20.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Potassium | 1000 | <1000 | U | 1000 | P | 05/02/2023 | 17:59 | LB125255 |
| | Selenium | 10.0 | <10.0 | U | 10.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Silver | 5.00 | <5.00 | U | 5.00 | P | 05/02/2023 | 17:59 | LB125255 |
| | Sodium | 1000 | <1000 | U | 1000 | P | 05/02/2023 | 17:59 | LB125255 |
| | Thallium | 20.0 | <20.0 | U | 20.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Vanadium | 20.0 | <20.0 | U | 20.0 | P | 05/02/2023 | 17:59 | LB125255 |
| | Zinc | 20.0 | <20.0 | U | 20.0 | P | 05/02/2023 | 17:59 | LB125255 |

# Metals
## - 4 -
## INTERFERENCE CHECK SAMPLE

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**ICS Source:** EPA **Instrument ID:** P4

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Low Limit (ug/L) | High Limit (ug/L) | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICSA01 | Aluminum | 256000 | 255000 | 100 | 216000 | 294000 | 05/02/2023 | 17:24 | LB125255 |
| | Antimony | 2.91 | | | -50 | 50 | 05/02/2023 | 17:24 | LB125255 |
| | Arsenic | 0.13 | | | -20 | 20 | 05/02/2023 | 17:24 | LB125255 |
| | Barium | 4.66 | 6.0 | 78 | -94 | 106 | 05/02/2023 | 17:24 | LB125255 |
| | Beryllium | 1.19 | | | -6 | 6 | 05/02/2023 | 17:24 | LB125255 |
| | Cadmium | 1.69 | 1.0 | 169 | -5 | 7 | 05/02/2023 | 17:24 | LB125255 |
| | Calcium | 241000 | 245000 | 98 | 208000 | 282000 | 05/02/2023 | 17:24 | LB125255 |
| | Chromium | 54.1 | 52.0 | 104 | 42 | 62 | 05/02/2023 | 17:24 | LB125255 |
| | Cobalt | 2.17 | | | -30 | 30 | 05/02/2023 | 17:24 | LB125255 |
| | Copper | 14.1 | 2.0 | 705 | -18 | 22 | 05/02/2023 | 17:24 | LB125255 |
| | Iron | 99600 | 101000 | 99 | 85600 | 116500 | 05/02/2023 | 17:24 | LB125255 |
| | Lead | 0.23 | | | -12 | 12 | 05/02/2023 | 17:24 | LB125255 |
| | Magnesium | 247000 | 255000 | 97 | 216000 | 294000 | 05/02/2023 | 17:24 | LB125255 |
| | Manganese | 11.5 | 7.0 | 164 | -13 | 27 | 05/02/2023 | 17:24 | LB125255 |
| | Nickel | 3.42 | 2.0 | 171 | -38 | 42 | 05/02/2023 | 17:24 | LB125255 |
| | Potassium | -45.3 | | | 0 | 0 | 05/02/2023 | 17:24 | LB125255 |
| | Selenium | -6.41 | | | -20 | 20 | 05/02/2023 | 17:24 | LB125255 |
| | Silver | 6.14 | | | -10 | 10 | 05/02/2023 | 17:24 | LB125255 |
| | Sodium | -27.0 | | | 0 | 0 | 05/02/2023 | 17:24 | LB125255 |
| | Thallium | -6.37 | | | -40 | 40 | 05/02/2023 | 17:24 | LB125255 |
| | Vanadium | 1.74 | | | -40 | 40 | 05/02/2023 | 17:24 | LB125255 |
| | Zinc | -4.47 | | | -40 | 40 | 05/02/2023 | 17:24 | LB125255 |
| ICSAB01 | Aluminum | 250000 | 247000 | 101 | 209000 | 285000 | 05/02/2023 | 17:27 | LB125255 |
| | Antimony | 593 | 618 | 96 | 525 | 711 | 05/02/2023 | 17:27 | LB125255 |
| | Arsenic | 104 | 104 | 100 | 88.4 | 120 | 05/02/2023 | 17:27 | LB125255 |
| | Barium | 499 | 537 | 93 | 437 | 637 | 05/02/2023 | 17:27 | LB125255 |
| | Beryllium | 499 | 495 | 101 | 420 | 570 | 05/02/2023 | 17:27 | LB125255 |
| | Cadmium | 996 | 972 | 102 | 826 | 1120 | 05/02/2023 | 17:27 | LB125255 |
| | Calcium | 236000 | 235000 | 100 | 199000 | 271000 | 05/02/2023 | 17:27 | LB125255 |
| | Chromium | 527 | 542 | 97 | 460 | 624 | 05/02/2023 | 17:27 | LB125255 |
| | Cobalt | 488 | 476 | 102 | 404 | 548 | 05/02/2023 | 17:27 | LB125255 |
| | Copper | 495 | 511 | 97 | 434 | 588 | 05/02/2023 | 17:27 | LB125255 |
| | Iron | 94900 | 99300 | 96 | 84400 | 114500 | 05/02/2023 | 17:27 | LB125255 |
| | Lead | 49.1 | 49.0 | 100 | 37 | 61 | 05/02/2023 | 17:27 | LB125255 |
| | Magnesium | 240000 | 248000 | 97 | 210000 | 286000 | 05/02/2023 | 17:27 | LB125255 |
| | Manganese | 490 | 507 | 97 | 430 | 584 | 05/02/2023 | 17:27 | LB125255 |
| | Nickel | 964 | 954 | 101 | 810 | 1100 | 05/02/2023 | 17:27 | LB125255 |
| | Potassium | -28.7 | | | 0 | 0 | 05/02/2023 | 17:27 | LB125255 |
| | Selenium | 42.0 | 46.0 | 91 | 26 | 66 | 05/02/2023 | 17:27 | LB125255 |
| | Silver | 214 | 201 | 106 | 170 | 232 | 05/02/2023 | 17:27 | LB125255 |
| | Sodium | -27.2 | | | 0 | 0 | 05/02/2023 | 17:27 | LB125255 |
| | Thallium | 91.1 | 108 | 84 | 68 | 148 | 05/02/2023 | 17:27 | LB125255 |
| | Vanadium | 467 | 491 | 95 | 417 | 565 | 05/02/2023 | 17:27 | LB125255 |
| | Zinc | 1020 | 952 | 107 | 809 | 1095 | 05/02/2023 | 17:27 | LB125255 |
| ICSA01 | Aluminum | 260000 | 255000 | 102 | 216000 | 294000 | 05/03/2023 | 14:19 | LB125269 |

# Metals
## - 4 -
## INTERFERENCE CHECK SAMPLE

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**ICS Source:** EPA **Instrument ID:** P4

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Low Limit (ug/L) | High Limit (ug/L) | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICSA01 | Antimony | 2.06 | | | -50 | 50 | 05/03/2023 | 14:19 | LB125269 |
| | Arsenic | -0.24 | | | -20 | 20 | 05/03/2023 | 14:19 | LB125269 |
| | Barium | 12.2 | 6.0 | 203 | -94 | 106 | 05/03/2023 | 14:19 | LB125269 |
| | Beryllium | 1.20 | | | -6 | 6 | 05/03/2023 | 14:19 | LB125269 |
| | Cadmium | 1.52 | 1.0 | 152 | -5 | 7 | 05/03/2023 | 14:19 | LB125269 |
| | Calcium | 245000 | 245000 | 100 | 208000 | 282000 | 05/03/2023 | 14:19 | LB125269 |
| | Chromium | 52.7 | 52.0 | 101 | 42 | 62 | 05/03/2023 | 14:19 | LB125269 |
| | Cobalt | 2.18 | | | -30 | 30 | 05/03/2023 | 14:19 | LB125269 |
| | Copper | 12.5 | 2.0 | 625 | -18 | 22 | 05/03/2023 | 14:19 | LB125269 |
| | Iron | 97400 | 101000 | 96 | 85600 | 116500 | 05/03/2023 | 14:19 | LB125269 |
| | Lead | -2.76 | | | -12 | 12 | 05/03/2023 | 14:19 | LB125269 |
| | Magnesium | 256000 | 255000 | 100 | 216000 | 294000 | 05/03/2023 | 14:19 | LB125269 |
| | Manganese | 12.3 | 7.0 | 176 | -13 | 27 | 05/03/2023 | 14:19 | LB125269 |
| | Nickel | 3.56 | 2.0 | 178 | -38 | 42 | 05/03/2023 | 14:19 | LB125269 |
| | Potassium | -84.5 | | | 0 | 0 | 05/03/2023 | 14:19 | LB125269 |
| | Selenium | 5.85 | | | -20 | 20 | 05/03/2023 | 14:19 | LB125269 |
| | Silver | 0.32 | | | -10 | 10 | 05/03/2023 | 14:19 | LB125269 |
| | Sodium | -96.6 | | | 0 | 0 | 05/03/2023 | 14:19 | LB125269 |
| | Thallium | -10.8 | | | -40 | 40 | 05/03/2023 | 14:19 | LB125269 |
| | Vanadium | 0.27 | | | -40 | 40 | 05/03/2023 | 14:19 | LB125269 |
| | Zinc | -3.16 | | | -40 | 40 | 05/03/2023 | 14:19 | LB125269 |
| ICSAB01 | Aluminum | 251000 | 247000 | 102 | 209000 | 285000 | 05/03/2023 | 14:23 | LB125269 |
| | Antimony | 610 | 618 | 99 | 525 | 711 | 05/03/2023 | 14:23 | LB125269 |
| | Arsenic | 105 | 104 | 101 | 88.4 | 120 | 05/03/2023 | 14:23 | LB125269 |
| | Barium | 535 | 537 | 100 | 437 | 637 | 05/03/2023 | 14:23 | LB125269 |
| | Beryllium | 493 | 495 | 100 | 420 | 570 | 05/03/2023 | 14:23 | LB125269 |
| | Cadmium | 999 | 972 | 103 | 826 | 1120 | 05/03/2023 | 14:23 | LB125269 |
| | Calcium | 237000 | 235000 | 101 | 199000 | 271000 | 05/03/2023 | 14:23 | LB125269 |
| | Chromium | 508 | 542 | 94 | 460 | 624 | 05/03/2023 | 14:23 | LB125269 |
| | Cobalt | 500 | 476 | 105 | 404 | 548 | 05/03/2023 | 14:23 | LB125269 |
| | Copper | 502 | 511 | 98 | 434 | 588 | 05/03/2023 | 14:23 | LB125269 |
| | Iron | 93500 | 99300 | 94 | 84400 | 114500 | 05/03/2023 | 14:23 | LB125269 |
| | Lead | 48.1 | 49.0 | 98 | 37 | 61 | 05/03/2023 | 14:23 | LB125269 |
| | Magnesium | 248000 | 248000 | 100 | 210000 | 286000 | 05/03/2023 | 14:23 | LB125269 |
| | Manganese | 519 | 507 | 102 | 430 | 584 | 05/03/2023 | 14:23 | LB125269 |
| | Nickel | 995 | 954 | 104 | 810 | 1100 | 05/03/2023 | 14:23 | LB125269 |
| | Potassium | -42.0 | | | 0 | 0 | 05/03/2023 | 14:23 | LB125269 |
| | Selenium | 51.6 | 46.0 | 112 | 26 | 66 | 05/03/2023 | 14:23 | LB125269 |
| | Silver | 193 | 201 | 96 | 170 | 232 | 05/03/2023 | 14:23 | LB125269 |
| | Sodium | -103 | | | 0 | 0 | 05/03/2023 | 14:23 | LB125269 |
| | Thallium | 95.8 | 108 | 89 | 68 | 148 | 05/03/2023 | 14:23 | LB125269 |
| | Vanadium | 482 | 491 | 98 | 417 | 565 | 05/03/2023 | 14:23 | LB125269 |
| | Zinc | 1020 | 952 | 107 | 809 | 1095 | 05/03/2023 | 14:23 | LB125269 |
| ICSA01 | Aluminum | 256000 | 255000 | 100 | 216000 | 294000 | 05/04/2023 | 13:55 | LB125287 |
| | Antimony | -0.32 | | | -50 | 50 | 05/04/2023 | 13:55 | LB125287 |

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# Metals
## - 4 -
## INTERFERENCE CHECK SAMPLE

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**ICS Source:** EPA **Instrument ID:** P4

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Low Limit (ug/L) | High Limit (ug/L) | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICSA01 | Arsenic | -0.91 | | | -20 | 20 | 05/04/2023 | 13:55 | LB125287 |
| | Barium | 7.84 | 6.0 | 131 | -94 | 106 | 05/04/2023 | 13:55 | LB125287 |
| | Beryllium | 1.32 | | | -6 | 6 | 05/04/2023 | 13:55 | LB125287 |
| | Cadmium | 2.32 | 1.0 | 232 | -5 | 7 | 05/04/2023 | 13:55 | LB125287 |
| | Calcium | 245000 | 245000 | 100 | 208000 | 282000 | 05/04/2023 | 13:55 | LB125287 |
| | Chromium | 55.1 | 52.0 | 106 | 42 | 62 | 05/04/2023 | 13:55 | LB125287 |
| | Cobalt | 1.81 | | | -30 | 30 | 05/04/2023 | 13:55 | LB125287 |
| | Copper | 2.82 | 2.0 | 141 | -18 | 22 | 05/04/2023 | 13:55 | LB125287 |
| | Iron | 96700 | 101000 | 96 | 85600 | 116500 | 05/04/2023 | 13:55 | LB125287 |
| | Lead | -1.13 | | | -12 | 12 | 05/04/2023 | 13:55 | LB125287 |
| | Magnesium | 256000 | 255000 | 100 | 216000 | 294000 | 05/04/2023 | 13:55 | LB125287 |
| | Manganese | 13.4 | 7.0 | 191 | -13 | 27 | 05/04/2023 | 13:55 | LB125287 |
| | Nickel | 3.31 | 2.0 | 166 | -38 | 42 | 05/04/2023 | 13:55 | LB125287 |
| | Potassium | -57.3 | | | 0 | 0 | 05/04/2023 | 13:55 | LB125287 |
| | Selenium | 2.64 | | | -20 | 20 | 05/04/2023 | 13:55 | LB125287 |
| | Silver | -0.32 | | | -10 | 10 | 05/04/2023 | 13:55 | LB125287 |
| | Sodium | -50.2 | | | 0 | 0 | 05/04/2023 | 13:55 | LB125287 |
| | Thallium | -6.74 | | | -40 | 40 | 05/04/2023 | 13:55 | LB125287 |
| | Vanadium | 3.92 | | | -40 | 40 | 05/04/2023 | 13:55 | LB125287 |
| | Zinc | -3.08 | | | -40 | 40 | 05/04/2023 | 13:55 | LB125287 |
| ICSAB01 | Aluminum | 260000 | 247000 | 105 | 209000 | 285000 | 05/04/2023 | 13:58 | LB125287 |
| | Antimony | 621 | 618 | 100 | 525 | 711 | 05/04/2023 | 13:58 | LB125287 |
| | Arsenic | 103 | 104 | 99 | 88.4 | 120 | 05/04/2023 | 13:58 | LB125287 |
| | Barium | 532 | 537 | 99 | 437 | 637 | 05/04/2023 | 13:58 | LB125287 |
| | Beryllium | 520 | 495 | 105 | 420 | 570 | 05/04/2023 | 13:58 | LB125287 |
| | Cadmium | 1030 | 972 | 106 | 826 | 1120 | 05/04/2023 | 13:58 | LB125287 |
| | Calcium | 249000 | 235000 | 106 | 199000 | 271000 | 05/04/2023 | 13:58 | LB125287 |
| | Chromium | 554 | 542 | 102 | 460 | 624 | 05/04/2023 | 13:58 | LB125287 |
| | Cobalt | 506 | 476 | 106 | 404 | 548 | 05/04/2023 | 13:58 | LB125287 |
| | Copper | 498 | 511 | 98 | 434 | 588 | 05/04/2023 | 13:58 | LB125287 |
| | Iron | 99700 | 99300 | 100 | 84400 | 114500 | 05/04/2023 | 13:58 | LB125287 |
| | Lead | 49.9 | 49.0 | 102 | 37 | 61 | 05/04/2023 | 13:58 | LB125287 |
| | Magnesium | 261000 | 248000 | 105 | 210000 | 286000 | 05/04/2023 | 13:58 | LB125287 |
| | Manganese | 529 | 507 | 104 | 430 | 584 | 05/04/2023 | 13:58 | LB125287 |
| | Nickel | 1010 | 954 | 106 | 810 | 1100 | 05/04/2023 | 13:58 | LB125287 |
| | Potassium | -92.0 | | | 0 | 0 | 05/04/2023 | 13:58 | LB125287 |
| | Selenium | 53.1 | 46.0 | 115 | 26 | 66 | 05/04/2023 | 13:58 | LB125287 |
| | Silver | 221 | 201 | 110 | 170 | 232 | 05/04/2023 | 13:58 | LB125287 |
| | Sodium | -54.2 | | | 0 | 0 | 05/04/2023 | 13:58 | LB125287 |
| | Thallium | 96.5 | 108 | 89 | 68 | 148 | 05/04/2023 | 13:58 | LB125287 |
| | Vanadium | 501 | 491 | 102 | 417 | 565 | 05/04/2023 | 13:58 | LB125287 |
| | Zinc | 1070 | 952 | 112 | 809 | 1095 | 05/04/2023 | 13:58 | LB125287 |

# METAL QC DATA

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# metals
## - 5a -
## MATRIX SPIKE SUMMARY

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2495

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2495 **sas no.:** O2495

**matrix:** Water **sample id:** O2495-09 **client id:** GMW-5MS

**Percent Solids for Sample:** NA **Spiked ID:** O2495-09MS **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 75 - 125 | 1810 | | 873 | | 1000 | 94 | | P |
| Antimony | ug/L | 75 - 125 | 377 | | 25.0 | U | 400 | 94 | | P |
| Arsenic | ug/L | 75 - 125 | 390 | | 10.0 | U | 400 | 98 | | P |
| Barium | ug/L | 75 - 125 | 127 | | 36.6 | J | 100 | 90 | | P |
| Beryllium | ug/L | 75 - 125 | 92.2 | | 3.00 | U | 100 | 92 | | P |
| Cadmium | ug/L | 75 - 125 | 95.7 | | 3.51 | | 100 | 92 | | P |
| Calcium | ug/L | 75 - 125 | 64300 | | 67900 | | 500 | -708 | | P |
| Chromium | ug/L | 75 - 125 | 188 | | 1.83 | J | 200 | 93 | | P |
| Cobalt | ug/L | 75 - 125 | 93.7 | | 15.0 | U | 100 | 94 | | P |
| Copper | ug/L | 75 - 125 | 153 | | 13.3 | | 150 | 93 | | P |
| Iron | ug/L | 75 - 125 | 3090 | | 1930 | | 1500 | 77 | | P |
| Lead | ug/L | 75 - 125 | 486 | | 19.2 | | 500 | 93 | | P |
| Magnesium | ug/L | 75 - 125 | 6380 | | 5990 | | 1000 | 40 | | P |
| Manganese | ug/L | 75 - 125 | 270 | | 189 | | 100 | 81 | | P |
| Nickel | ug/L | 75 - 125 | 236 | | 4.64 | J | 250 | 92 | | P |
| Potassium | ug/L | 75 - 125 | 12500 | | 8000 | | 5000 | 89 | | P |
| Selenium | ug/L | 75 - 125 | 958 | | 10.0 | U | 1000 | 96 | | P |
| Silver | ug/L | 75 - 125 | 35.5 | | 5.00 | U | 37.5 | 95 | | P |
| Sodium | ug/L | 75 - 125 | 6830 | | 5930 | | 1500 | 60 | N | P |
| Thallium | ug/L | 75 - 125 | 917 | | 20.0 | U | 1000 | 92 | | P |
| Vanadium | ug/L | 75 - 125 | 146 | | 12.1 | J | 150 | 89 | | P |
| Zinc | ug/L | 75 - 125 | 119 | | 24.4 | | 100 | 95 | | P |

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# metals
## - 5a -
## MATRIX SPIKE DUPLICATE SUMMARY

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2495

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2495 **sas no.:** O2495

**matrix:** Water **sample id:** O2495-09 **client id:** GMW-5MSD

**Percent Solids for Sample:** NA **Spiked ID:** O2495-09MSD **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 75 - 125 | 1940 | | 873 | | 1000 | 106 | | P |
| Antimony | ug/L | 75 - 125 | 386 | | 25.0 | U | 400 | 96 | | P |
| Arsenic | ug/L | 75 - 125 | 399 | | 10.0 | U | 400 | 100 | | P |
| Barium | ug/L | 75 - 125 | 136 | | 36.6 | J | 100 | 100 | | P |
| Beryllium | ug/L | 75 - 125 | 98.2 | | 3.00 | U | 100 | 98 | | P |
| Cadmium | ug/L | 75 - 125 | 98.1 | | 3.51 | | 100 | 95 | | P |
| Calcium | ug/L | 75 - 125 | 68600 | | 67900 | | 500 | 152 | | P |
| Chromium | ug/L | 75 - 125 | 186 | | 1.83 | J | 200 | 92 | | P |
| Cobalt | ug/L | 75 - 125 | 95.8 | | 15.0 | U | 100 | 96 | | P |
| Copper | ug/L | 75 - 125 | 157 | | 13.3 | | 150 | 96 | | P |
| Iron | ug/L | 75 - 125 | 3020 | | 1930 | | 1500 | 72 | N | P |
| Lead | ug/L | 75 - 125 | 498 | | 19.2 | | 500 | 96 | | P |
| Magnesium | ug/L | 75 - 125 | 6880 | | 5990 | | 1000 | 89 | | P |
| Manganese | ug/L | 75 - 125 | 289 | | 189 | | 100 | 100 | | P |
| Nickel | ug/L | 75 - 125 | 241 | | 4.64 | J | 250 | 95 | | P |
| Potassium | ug/L | 75 - 125 | 12200 | | 8000 | | 5000 | 84 | | P |
| Selenium | ug/L | 75 - 125 | 981 | | 10.0 | U | 1000 | 98 | | P |
| Silver | ug/L | 75 - 125 | 34.8 | | 5.00 | U | 37.5 | 93 | | P |
| Sodium | ug/L | 75 - 125 | 6740 | | 5930 | | 1500 | 54 | N | P |
| Thallium | ug/L | 75 - 125 | 940 | | 20.0 | U | 1000 | 94 | | P |
| Vanadium | ug/L | 75 - 125 | 158 | | 12.1 | J | 150 | 97 | | P |
| Zinc | ug/L | 75 - 125 | 117 | | 24.4 | | 100 | 93 | | P |

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**metals**
**- 5a -**
**MATRIX SPIKE SUMMARY**

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2495

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2495 **sas no.:** O2495

**matrix:** Water **sample id:** O2521-07 **client id:** GMW-7MS

**Percent Solids for Sample:** NA **Spiked ID:** O2521-09 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 75 - 125 | 4.62 | | 0.083 | J | 4.0 | 113 | | CV |

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**metals**
**- 5a -**
**MATRIX SPIKE DUPLICATE SUMMARY**

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2495

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2495 **sas no.:** O2495

**matrix:** Water **sample id:** O2521-07 **client id:** GMW-7MSD

**Percent Solids for Sample:** NA **Spiked ID:** O2521-10 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 75 - 125 | 4.36 | | 0.083 | J | 4.0 | 107 | | CV |

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**metals**
**- 5a -**
**MATRIX SPIKE SUMMARY**

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2495

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2495 **sas no.:** O2495

**matrix:** Water **sample id:** O2521-08 **client id:** GMW-7MS

**Percent Solids for Sample:** NA **Spiked ID:** O2521-11 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 75 - 125 | 3.61 | | 0.20 | U | 4.0 | 90 | | CV |

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**metals**
**- 5a -**
**MATRIX SPIKE DUPLICATE SUMMARY**

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2495

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2495 **sas no.:** O2495

**matrix:** Water **sample id:** O2521-08 **client id:** GMW-7MSD

**Percent Solids for Sample:** NA **Spiked ID:** O2521-12 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 75 - 125 | 3.50 | | 0.20 | U | 4.0 | 88 | | CV |

CHEMTECH

# Metals
## - 5b -
## POST DIGEST SPIKE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Matrix:** Water **Level:** LOW **Client ID:** GMW-5A

**Sample ID:** O2495-09 **Spiked ID:** O2495-09A

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Iron | ug/L | 75 - 125 | 3380 | | 1930 | | 1500 | 97 | | P |
| Sodium | ug/L | 75 - 125 | 7030 | | 5930 | | 1500 | 73 | | P |

## Metals

**- 6 -**

**DUPLICATE SAMPLE SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Matrix:** Water **Sample ID:** O2495-09 **Client ID:** GMW-5DUP

**Percent Solids for Sample:** NA **Duplicate ID** O2495-09DUP **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 20 | 873 | | 856 | | 2 | | P |
| Antimony | ug/L | 20 | 25.0 | U | 25.0 | U | | | P |
| Arsenic | ug/L | 20 | 10.0 | U | 4.37 | J | 200.0 | | P |
| Barium | ug/L | 20 | 36.6 | J | 36.3 | J | 1 | | P |
| Beryllium | ug/L | 20 | 3.00 | U | 3.00 | U | | | P |
| Cadmium | ug/L | 20 | 3.51 | | 3.42 | | 3 | | P |
| Calcium | ug/L | 20 | 67900 | | 66900 | | 1 | | P |
| Chromium | ug/L | 20 | 1.83 | J | 1.84 | J | 1 | | P |
| Cobalt | ug/L | 20 | 15.0 | U | 15.0 | U | | | P |
| Copper | ug/L | 20 | 13.3 | | 13.0 | | 2 | | P |
| Iron | ug/L | 20 | 1930 | | 1850 | | 4 | | P |
| Lead | ug/L | 20 | 19.2 | | 18.6 | | 3 | | P |
| Magnesium | ug/L | 20 | 5990 | | 5890 | | 2 | | P |
| Manganese | ug/L | 20 | 189 | | 186 | | 2 | | P |
| Nickel | ug/L | 20 | 4.64 | J | 4.53 | J | 2 | | P |
| Potassium | ug/L | 20 | 8000 | | 7690 | | 4 | | P |
| Selenium | ug/L | 20 | 10.0 | U | 10.0 | U | | | P |
| Silver | ug/L | 20 | 5.00 | U | 5.00 | U | | | P |
| Sodium | ug/L | 20 | 5930 | | 5640 | | 5 | | P |
| Thallium | ug/L | 20 | 20.0 | U | 20.0 | U | | | P |
| Vanadium | ug/L | 20 | 12.1 | J | 10.9 | J | 11 | | P |
| Zinc | ug/L | 20 | 24.4 | | 23.3 | | 5 | | P |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

## Metals

### - 6 -

### DUPLICATE SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Matrix:** Water **Sample ID:** O2495-09MS **Client ID:** GMW-5MSD

**Percent Solids for Sample:** NA **Duplicate ID** O2495-09MSD **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 20 | 1810 | | 1940 | | 7 | | P |
| Antimony | ug/L | 20 | 377 | | 386 | | 2 | | P |
| Arsenic | ug/L | 20 | 390 | | 399 | | 2 | | P |
| Barium | ug/L | 20 | 127 | | 136 | | 7 | | P |
| Beryllium | ug/L | 20 | 92.2 | | 98.2 | | 6 | | P |
| Cadmium | ug/L | 20 | 95.7 | | 98.1 | | 2 | | P |
| Calcium | ug/L | 20 | 64300 | | 68600 | | 6 | | P |
| Chromium | ug/L | 20 | 188 | | 186 | | 1 | | P |
| Cobalt | ug/L | 20 | 93.7 | | 95.8 | | 2 | | P |
| Copper | ug/L | 20 | 153 | | 157 | | 3 | | P |
| Iron | ug/L | 20 | 3090 | | 3020 | | 2 | | P |
| Lead | ug/L | 20 | 486 | | 498 | | 2 | | P |
| Magnesium | ug/L | 20 | 6380 | | 6880 | | 8 | | P |
| Manganese | ug/L | 20 | 270 | | 289 | | 7 | | P |
| Nickel | ug/L | 20 | 236 | | 241 | | 2 | | P |
| Potassium | ug/L | 20 | 12500 | | 12200 | | 2 | | P |
| Selenium | ug/L | 20 | 958 | | 981 | | 2 | | P |
| Silver | ug/L | 20 | 35.5 | | 34.8 | | 2 | | P |
| Sodium | ug/L | 20 | 6830 | | 6740 | | 1 | | P |
| Thallium | ug/L | 20 | 917 | | 940 | | 2 | | P |
| Vanadium | ug/L | 20 | 146 | | 158 | | 8 | | P |
| Zinc | ug/L | 20 | 119 | | 117 | | 2 | | P |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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## Metals

**- 6 -**

**DUPLICATE SAMPLE SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Matrix:** Water **Sample ID:** O2521-07 **Client ID:** GMW-7DUP

**Percent Solids for Sample:** NA **Duplicate ID** O2521-07DUP **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 20 | 0.083 | J | 0.090 | J | 8 | | CV |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

## Metals

**- 6 -**

**DUPLICATE SAMPLE SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Matrix:** Water **Sample ID:** O2521-08 **Client ID:** GMW-7DUP

**Percent Solids for Sample:** NA **Duplicate ID** O2521-08DUP **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 20 | 0.20 | U | 0.20 | U | | | CV |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

## Metals

**- 6 -**

**DUPLICATE SAMPLE SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Matrix:** Water **Sample ID:** O2521-09 **Client ID:** GMW-7MSD

**Percent Solids for Sample:** NA **Duplicate ID** O2521-10 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 20 | 4.62 | | 4.36 | | 6 | | CV |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

## Metals

**- 6 -**

**DUPLICATE SAMPLE SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Matrix:** Water **Sample ID:** O2521-11 **Client ID:** GMW-7MSD

**Percent Solids for Sample:** NA **Duplicate ID** O2521-12 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 20 | 3.61 | | 3.50 | | 3 | | CV |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

## Metals

- 7 -

## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|
| PB152420BS | | | | | | | |
| Aluminum | ug/L | 1000 | 981 | | 98 | 80 - 120 | P |
| Antimony | ug/L | 400 | 390 | | 98 | 80 - 120 | P |
| Arsenic | ug/L | 400 | 400 | | 100 | 80 - 120 | P |
| Barium | ug/L | 100 | 94.2 | | 94 | 80 - 120 | P |
| Beryllium | ug/L | 100 | 96.2 | | 96 | 80 - 120 | P |
| Cadmium | ug/L | 100 | 98.3 | | 98 | 80 - 120 | P |
| Calcium | ug/L | 500 | 496 | J | 99 | 80 - 120 | P |
| Chromium | ug/L | 200 | 188 | | 94 | 80 - 120 | P |
| Cobalt | ug/L | 100 | 97.5 | | 98 | 80 - 120 | P |
| Copper | ug/L | 150 | 158 | | 105 | 80 - 120 | P |
| Iron | ug/L | 1500 | 1440 | | 96 | 80 - 120 | P |
| Lead | ug/L | 500 | 497 | | 99 | 80 - 120 | P |
| Magnesium | ug/L | 1000 | 910 | J | 91 | 80 - 120 | P |
| Manganese | ug/L | 100 | 94.9 | | 95 | 80 - 120 | P |
| Nickel | ug/L | 250 | 246 | | 98 | 80 - 120 | P |
| Potassium | ug/L | 5000 | 4680 | | 94 | 80 - 120 | P |
| Selenium | ug/L | 1000 | 1030 | | 103 | 80 - 120 | P |
| Silver | ug/L | 37.5 | 36.4 | | 97 | 80 - 120 | P |
| Sodium | ug/L | 1500 | 1330 | | 89 | 80 - 120 | P |
| Thallium | ug/L | 1000 | 1010 | | 101 | 80 - 120 | P |
| Vanadium | ug/L | 150 | 136 | | 91 | 80 - 120 | P |
| Zinc | ug/L | 100 | 100 | | 100 | 80 - 120 | P |

## Metals

- 7 -

## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|
| PB152487BS | | | | | | | |
| Mercury | ug/L | 4.0 | 3.69 | | 92 | 80 - 120 | CV |

## Metals



### LABORATORY CONTROL SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

| Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|
| PB152538BS | | | | | | | |
| Mercury | ug/L | 4.0 | 3.53 | | 88 | 80 - 120 | CV |

# Metals

## -9 -

## ICP SERIAL DILUTIONS

SAMPLE NO.

GMW-5L

**Lab Name:** Chemtech Consulting Group **Contract:** GEIC06

**Lab Code:** CHEM **Lb No.:** lb125255 **Lab Sample ID :** O2495-09L **SDG No.:** O2495

**Matrix (soil/water):** Water **Level (low/med):** LOW

**Concentration Units:** ug/L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Aluminum | 873 | | 872 | | 0 | | P |
| Antimony | 25.0 | U | 125 | U | | | P |
| Arsenic | 10.0 | U | 50.0 | U | | | P |
| Barium | 36.6 | J | 32.6 | J | 11 | | P |
| Beryllium | 3.00 | U | 15.0 | U | | | P |
| Cadmium | 3.51 | | 3.44 | J | 2 | | P |
| Calcium | 67900 | | 69800 | | 3 | | P |
| Chromium | 1.83 | J | 25.0 | U | 100.0 | | P |
| Cobalt | 15.0 | U | 75.0 | U | | | P |
| Copper | 13.3 | | 50.0 | U | 100.0 | | P |
| Iron | 1930 | | 1950 | | 1 | | P |
| Lead | 19.2 | | 20.7 | J | 8 | | P |
| Magnesium | 5990 | | 6250 | | 4 | | P |
| Manganese | 189 | | 196 | | 3 | | P |
| Nickel | 4.64 | J | 5.01 | J | 8 | | P |
| Potassium | 8000 | | 7910 | | 1 | | P |
| Selenium | 10.0 | U | 50.0 | U | | | P |
| Silver | 5.00 | U | 25.0 | U | | | P |
| Sodium | 5930 | | 5810 | | 2 | | P |
| Thallium | 20.0 | U | 100 | U | | | P |
| Vanadium | 12.1 | J | 100 | U | 100.0 | | P |
| Zinc | 24.4 | | 23.8 | J | 2 | | P |

# Metals

## -9 -

## ICP SERIAL DILUTIONS

SAMPLE NO.

GMW-7L

**Lab Name:** Chemtech Consulting Group **Contract:** GEIC06

**Lab Code:** CHEM **Lb No.:** lb125204 **Lab Sample ID :** O2521-07L **SDG No.:** O2495

**Matrix (soil/water):** Water **Level (low/med):** LOW

**Concentration Units:** ug/L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Mercury | 0.083 | J | 1.00 | U | 100.0 | | CV |

# Metals

## -9 -

## ICP SERIAL DILUTIONS

SAMPLE NO.

GMW-7L

**Lab Name:** Chemtech Consulting Group **Contract:** GEIC06

**Lab Code:** CHEM **Lb No.:** lb125251 **Lab Sample ID :** O2521-08L **SDG No.:** O2495

**Matrix (soil/water):** Water **Level (low/med):** LOW

**Concentration Units:** ug/L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Mercury | 0.20 | U | 1.00 | U | | | CV |

# METAL PREPARATION & INSTRUMENT DATA

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# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: Al | Ca | Fe | Mg | Ag |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | -0.0002060 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 193.759 | 0.0000000 | 0.0000000 | -0.0000440 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000930 | 0.0000000 | 0.0000000 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | -0.0075970 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Copper | 224.700 | 0.0000000 | 0.0000000 | 0.0007850 | 0.0000000 | 0.0000000 |
| Iron | 240.488 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | -0.0000920 | 0.0000000 | 0.0000380 | 0.0000000 | 0.0000000 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | -0.0001440 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | -0.0001490 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.800 | 0.0000000 | 0.0000000 | 0.0001050 | 0.0000000 | 0.0000000 |

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# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: As | Ba | Be | Cd | Co |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 193.759 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0002870 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Copper | 224.700 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0009530 |
| Iron | 240.488 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0039600 |
| Lead | 220.353 | 0.0000000 | 0.0003170 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0003570 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0054900 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.800 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |

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# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: Cr | Cu | K | Mn | Mo |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | 0.0000000 | 0.0000590 | 0.0000000 | 0.0396900 |
| Antimony | 206.833 | 0.0122000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 193.759 | -0.0029000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0004900 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0000710 | -0.0003400 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000070 | 0.0002200 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0007860 |
| Copper | 224.700 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0006510 | 0.0020500 |
| Iron | 240.488 | 0.0000000 | 0.0000000 | 0.0000730 | 0.0000000 | -0.0015250 |
| Lead | 220.353 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0001400 | -0.0008600 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0007460 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0000120 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0017400 | -0.0100400 |
| Vanadium | 292.402 | -0.0025100 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0072000 |
| Zinc | 213.800 | 0.0000000 | 0.0009010 | 0.0000000 | 0.0000000 | 0.0000000 |

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# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: Na | Ni | Pb | Sb | Se |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | 0.0000000 | 0.0012800 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 193.759 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Copper | 224.700 | 0.0000000 | -0.0047000 | 0.0036100 | 0.0000000 | 0.0000000 |
| Iron | 240.488 | 0.0000000 | -0.0017000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | 0.0000000 | 0.0006580 | 0.0000000 | 0.0000000 | 0.0001290 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | 0.0003330 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.800 | 0.0000000 | 0.0067600 | 0.0000000 | 0.0000000 | 0.0000000 |

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# Metals
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## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2495 **SAS No.:** O2495

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: Sn | Ti | Tl | V | Zn |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | -0.0035600 | -0.0007970 | 0.0000000 | -0.0018900 | 0.0000000 |
| Arsenic | 193.759 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000000 | 0.0000630 | 0.0001280 | 0.0000000 | 0.0000000 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0001110 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0018800 | 0.0000000 | 0.0000000 | 0.0000000 |
| Copper | 224.700 | 0.0000000 | 0.0003840 | 0.0000000 | 0.0000000 | 0.0000000 |
| Iron | 240.488 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | 0.0000000 | -0.0003610 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | -0.0007420 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | -0.0039700 | 0.0000000 | -0.0115600 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | 0.0005320 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.800 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |

# METAL PREPARATION & ANALYICAL SUMMARY

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# Metals
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## SAMPLE PREPARATION SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Method:**

**Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | **PB152420** | | | | | | |
| O2495-01 | PZ-01 | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-02 | PZ-01 | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-03 | PZ-02 | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-04 | PZ-02 | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-05 | GMW-11 | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-06 | GMW-11 | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-07 | GMW-X | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-08 | GMW-X | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-09 | GMW-5 | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-09DUP | GMW-5DUP | DUP | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-09MS | GMW-5MS | MS | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-09MSD | GMW-5MSD | MSD | WATER | 05/02/2023 | 50.0 | 25.0 | |
| O2495-10 | GMW-5 | SAM | WATER | 05/02/2023 | 50.0 | 25.0 | |
| PB152420BL | PB152420BL | MB | WATER | 05/02/2023 | 50.0 | 25.0 | |
| PB152420BS | PB152420BS | LCS | WATER | 05/02/2023 | 50.0 | 25.0 | |

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# Metals
## - 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Method:**

**Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | **PB152487** | | | | | | |
| O2495-01 | PZ-01 | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2495-03 | PZ-02 | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2495-05 | GMW-11 | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2495-07 | GMW-X | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2495-09 | GMW-5 | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-07DUP | GMW-7DUP | DUP | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-09 | GMW-7MS | MS | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-10 | GMW-7MSD | MSD | WATER | 04/28/2023 | 30.0 | 30.0 | |
| PB152487BL | PB152487BL | MB | WATER | 04/28/2023 | 30.0 | 30.0 | |
| PB152487BS | PB152487BS | LCS | WATER | 04/28/2023 | 30.0 | 30.0 | |

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# Metals
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## SAMPLE PREPARATION SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Contract:** GEIC06 **Lab Code:** CHEM **Method:**

**Case No.:** O2495 **SAS No.:** O2495

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | **PB152538** | | | | | | |
| O2495-02 | PZ-01 | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2495-04 | PZ-02 | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2495-06 | GMW-11 | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2495-08 | GMW-X | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2495-10 | GMW-5 | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-08DUP | GMW-7DUP | DUP | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-11 | GMW-7MS | MS | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-12 | GMW-7MSD | MSD | WATER | 05/02/2023 | 30.0 | 30.0 | |
| PB152538BL | PB152538BL | MB | WATER | 05/02/2023 | 30.0 | 30.0 | |
| PB152538BS | PB152538BS | LCS | WATER | 05/02/2023 | 30.0 | 30.0 | |

**metals**
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**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2495 **Sas no.:** O2495 **Sdg no.:** O2495

**Instrument id number:** **Method:** **Run number:** LB125204

**Start date:** 04/28/2023 **End date:** 04/28/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1249 | HG |
| S0.2 | S0.2 | 1 | 1252 | HG |
| S2.5 | S2.5 | 1 | 1254 | HG |
| S5 | S5 | 1 | 1256 | HG |
| S7.5 | S7.5 | 1 | 1258 | HG |
| S10 | S10 | 1 | 1301 | HG |
| ICV53 | ICV53 | 1 | 1311 | HG |
| ICB53 | ICB53 | 1 | 1314 | HG |
| CCV79 | CCV79 | 1 | 1316 | HG |
| CCB79 | CCB79 | 1 | 1318 | HG |
| CRA | CRA | 1 | 1320 | HG |
| PB152487BL | PB152487BL | 1 | 1327 | HG |
| PB152487BS | PB152487BS | 1 | 1329 | HG |
| O2495-01 | PZ-01 | 1 | 1332 | HG |
| O2495-03 | PZ-02 | 1 | 1334 | HG |
| O2495-05 | GMW-11 | 1 | 1336 | HG |
| O2495-07 | GMW-X | 1 | 1339 | HG |
| O2495-09 | GMW-5 | 1 | 1341 | HG |
| CCV80 | CCV80 | 1 | 1343 | HG |
| CCB80 | CCB80 | 1 | 1345 | HG |
| O2521-07DUP | GMW-7DUP | 1 | 1401 | HG |
| O2521-09 | GMW-7MS | 1 | 1407 | HG |
| O2521-10 | GMW-7MSD | 1 | 1409 | HG |
| CCV81 | CCV81 | 1 | 1414 | HG |
| CCB81 | CCB81 | 1 | 1416 | HG |
| O2521-07L | GMW-7L | 5 | 1420 | HG |
| CCV82 | CCV82 | 1 | 1430 | HG |
| CCB82 | CCB82 | 1 | 1433 | HG |

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**metals**
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**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2495 **Sas no.:** O2495 **Sdg no.:** O2495

**Instrument id number:** **Method:** **Run number:** LB125251

**Start date:** 05/02/2023 **End date:** 05/02/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1551 | HG |
| S0.2 | S0.2 | 1 | 1554 | HG |
| S2.5 | S2.5 | 1 | 1556 | HG |
| S5 | S5 | 1 | 1558 | HG |
| S7.5 | S7.5 | 1 | 1601 | HG |
| S10 | S10 | 1 | 1603 | HG |
| ICV58 | ICV58 | 1 | 1606 | HG |
| ICB58 | ICB58 | 1 | 1608 | HG |
| CCV98 | CCV98 | 1 | 1610 | HG |
| CCB98 | CCB98 | 1 | 1613 | HG |
| CRA | CRA | 1 | 1615 | HG |
| PB152538BL | PB152538BL | 1 | 1622 | HG |
| PB152538BS | PB152538BS | 1 | 1624 | HG |
| O2495-02 | PZ-01 | 1 | 1626 | HG |
| O2495-04 | PZ-02 | 1 | 1628 | HG |
| O2495-06 | GMW-11 | 1 | 1631 | HG |
| O2495-08 | GMW-X | 1 | 1633 | HG |
| O2495-10 | GMW-5 | 1 | 1635 | HG |
| CCV99 | CCV99 | 1 | 1638 | HG |
| CCB99 | CCB99 | 1 | 1640 | HG |
| O2521-08DUP | GMW-7DUP | 1 | 1651 | HG |
| O2521-11 | GMW-7MS | 1 | 1653 | HG |
| O2521-12 | GMW-7MSD | 1 | 1656 | HG |
| O2521-08L | GMW-7L | 5 | 1700 | HG |
| CCV01 | CCV01 | 1 | 1705 | HG |
| CCB01 | CCB01 | 1 | 1707 | HG |

**metals**
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**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2495 **Sas no.:** O2495 **Sdg no.:** O2495

**Instrument id number:** **Method:** **Run number:** LB125255

**Start date:** 05/02/2023 **End date:** 05/02/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1627 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S1 | S1 | 1 | 1631 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S2 | S2 | 1 | 1635 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S3 | S3 | 1 | 1639 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S4 | S4 | 1 | 1643 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S5 | S5 | 1 | 1647 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICV01 | ICV01 | 1 | 1712 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICB01 | ICB01 | 1 | 1716 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CRI01 | CRI01 | 1 | 1720 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSA01 | ICSA01 | 1 | 1724 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSAB01 | ICSAB01 | 1 | 1727 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV01 | CCV01 | 1 | 1731 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| LLCCV01 | LLCCV01 | 1 | 1735 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB01 | CCB01 | 1 | 1739 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| PB152420BL | PB152420BL | 1 | 1759 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| PB152420BS | PB152420BS | 1 | 1803 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-09 | GMW-5 | 1 | 1807 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-09DUP | GMW-5DUP | 1 | 1811 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV02 | CCV02 | 1 | 1838 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB02 | CCB02 | 1 | 1842 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-09L | GMW-5L | 5 | 1847 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-09MS | GMW-5MS | 1 | 1851 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-09MSD | GMW-5MSD | 1 | 1855 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-09A | GMW-5A | 1 | 1859 | Fe,Na |
| CCV03 | CCV03 | 1 | 1925 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB03 | CCB03 | 1 | 1929 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV04 | CCV04 | 1 | 2011 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB04 | CCB04 | 1 | 2015 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV05 | CCV05 | 1 | 2057 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB05 | CCB05 | 1 | 2101 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV06 | CCV06 | 1 | 2145 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB06 | CCB06 | 1 | 2149 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV07 | CCV07 | 1 | 2219 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB07 | CCB07 | 1 | 2222 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |

**metals**
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**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2495 **Sas no.:** O2495 **Sdg no.:** O2495

**Instrument id number:** **Method:** **Run number:** LB125269

**Start date:** 05/03/2023 **End date:** 05/03/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1240 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S1 | S1 | 1 | 1244 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S2 | S2 | 1 | 1248 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S3 | S3 | 1 | 1252 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S4 | S4 | 1 | 1255 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S5 | S5 | 1 | 1259 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICV01 | ICV01 | 1 | 1404 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICB01 | ICB01 | 1 | 1411 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CRI01 | CRI01 | 1 | 1415 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSA01 | ICSA01 | 1 | 1419 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSAB01 | ICSAB01 | 1 | 1423 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV01 | CCV01 | 1 | 1431 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| LLCCV01 | LLCCV01 | 1 | 1435 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB01 | CCB01 | 1 | 1439 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV02 | CCV02 | 1 | 1521 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB02 | CCB02 | 1 | 1530 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-03 | PZ-02 | 1 | 1534 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-04 | PZ-02 | 1 | 1538 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-05 | GMW-11 | 1 | 1542 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-06 | GMW-11 | 1 | 1546 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-07 | GMW-X | 1 | 1550 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-08 | GMW-X | 1 | 1554 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-10 | GMW-5 | 1 | 1558 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV03 | CCV03 | 1 | 1639 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB03 | CCB03 | 1 | 1643 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV04 | CCV04 | 1 | 1730 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB04 | CCB04 | 1 | 1734 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV05 | CCV05 | 1 | 1816 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB05 | CCB05 | 1 | 1820 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV06 | CCV06 | 1 | 1903 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB06 | CCB06 | 1 | 1907 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |

**metals**
**- 14 -**
**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2495 **Sas no.:** O2495 **Sdg no.:** O2495

**Instrument id number:** **Method:** **Run number:** LB125287

**Start date:** 05/04/2023 **End date:** 05/04/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1318 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S1 | S1 | 1 | 1322 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S2 | S2 | 1 | 1326 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S3 | S3 | 1 | 1330 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S4 | S4 | 1 | 1333 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S5 | S5 | 1 | 1337 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICV01 | ICV01 | 1 | 1341 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICB01 | ICB01 | 1 | 1347 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CRI01 | CRI01 | 1 | 1351 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSA01 | ICSA01 | 1 | 1355 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSAB01 | ICSAB01 | 1 | 1358 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV01 | CCV01 | 1 | 1410 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| LLCCV01 | LLCCV01 | 1 | 1414 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB01 | CCB01 | 1 | 1418 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-01 | PZ-01 | 1 | 1453 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2495-02 | PZ-01 | 1 | 1457 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV02 | CCV02 | 1 | 1505 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB02 | CCB02 | 1 | 1509 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV03 | CCV03 | 1 | 1553 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB03 | CCB03 | 1 | 1557 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV04 | CCV04 | 1 | 1652 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB04 | CCB04 | 1 | 1655 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV05 | CCV05 | 1 | 1743 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB05 | CCB05 | 1 | 1747 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV06 | CCV06 | 1 | 1813 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB06 | CCB06 | 1 | 1817 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O2495 | **OrderDate:** | 4/25/2023 3:22:44 PM |
| **Client:** | GEI Consultants, Inc., P.C. | **Project:** | Ferry Point |
| **Contact:** | Stacey Ng | **Location:** | N11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O2495-01** | **PZ-01** | **WATER** | | | **04/25/23 08:49** | | | **04/25/23** |
| | | | Alkalinity | SM2320 B | | | 05/04/23 13:22 | |
| | | | Ammonia | SM4500-NH3 | | 05/01/23 | 05/02/23 12:25 | |
| | | | Anions Group1 | 300.0 | | | 04/26/23 15:20 | |
| | | | BOD5 | SM5210 B | | | 04/26/23 13:50 | |
| | | | COD | SM5220 D | | | 05/03/23 14:02 | |
| | | | Cyanide | 9012B | | 04/28/23 | 04/28/23 13:53 | |
| | | | pH | 9040C | | | 04/26/23 11:15 | |
| | | | Phenolics | 420.1 | | 04/27/23 | 04/27/23 11:46 | |
| | | | TDS | SM2540 C | | | 04/27/23 10:30 | |
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | | 05/03/23 | 05/04/23 11:11 | |
| | | | TOC | 9060A | | | 04/27/23 14:21 | |
| **O2495-01DL** | **PZ-01DL** | **WATER** | | | **04/25/23 08:49** | | | **04/25/23** |
| | | | Ammonia | SM4500-NH3 | | 05/01/23 | 05/02/23 13:54 | |
| | | | Anions Group1 | 300.0 | | | 04/27/23 11:48 | |

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# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **O2495-03** | **PZ-02** | **WATER** | | | **04/25/23 09:53** | | **04/25/23** |
| | | | Alkalinity | SM2320 B | | 05/04/23 13:29 | |
| | | | Ammonia | SM4500-NH3 | 05/01/23 | 05/02/23 13:04 | |
| | | | Anions Group1 | 300.0 | | 04/26/23 15:52 | |
| | | | BOD5 | SM5210 B | | 04/26/23 13:50 | |
| | | | COD | SM5220 D | | 05/03/23 14:02 | |
| | | | Cyanide | 9012B | 04/28/23 | 04/28/23 13:53 | |
| | | | pH | 9040C | | 04/26/23 11:20 | |
| | | | Phenolics | 420.1 | 04/27/23 | 04/27/23 11:46 | |
| | | | TDS | SM2540 C | | 04/27/23 10:30 | |
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | 05/03/23 | 05/04/23 11:11 | |
| | | | TOC | 9060A | | 04/27/23 19:20 | |
| **O2495-03DL** | **PZ-02DL** | **WATER** | | | **04/25/23 09:53** | | **04/25/23** |
| | | | Ammonia | SM4500-NH3 | 05/01/23 | 05/02/23 14:02 | |
| | | | Anions Group1 | 300.0 | | 04/27/23 12:20 | |
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | 05/03/23 | 05/04/23 12:20 | |
| **O2495-05** | **GMW-11** | **WATER** | | | **04/25/23 11:52** | | **04/25/23** |

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# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Alkalinity | SM2320 B | | 05/04/23 13:33 | |
| | | | Ammonia | SM4500-NH3 | 05/01/23 | 05/02/23 13:04 | |
| | | | Anions Group1 | 300.0 | | 04/26/23 16:25 | |
| | | | BOD5 | SM5210 B | | 04/26/23 13:50 | |
| | | | COD | SM5220 D | | 05/03/23 14:03 | |
| | | | Cyanide | 9012B | 04/28/23 | 04/28/23 13:53 | |
| | | | pH | 9040C | | 04/26/23 11:25 | |
| | | | Phenolics | 420.1 | 04/27/23 | 04/27/23 11:46 | |
| | | | TDS | SM2540 C | | 04/27/23 10:30 | |
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | 05/03/23 | 05/04/23 11:11 | |
| | | | TOC | 9060A | | 04/27/23 19:49 | |
| **O2495-05DL** | **GMW-11DL** | **WATER** | | | **04/25/23 11:52** | | **04/25/23** |
| | | | Anions Group1 | 300.0 | | 04/27/23 12:53 | |
| **O2495-07** | **GMW-X** | **WATER** | | | **04/25/23 11:52** | | **04/25/23** |
| | | | Alkalinity | SM2320 B | | 05/04/23 13:36 | |
| | | | Ammonia | SM4500-NH3 | 05/01/23 | 05/02/23 13:04 | |
| | | | Anions Group1 | 300.0 | | 04/26/23 16:57 | |
| | | | BOD5 | SM5210 B | | 04/26/23 13:50 | |
| | | | COD | SM5220 D | | 05/03/23 14:03 | |

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# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Cyanide | 9012B | | 04/28/23 | 04/28/23 13:53 |
| | | | pH | 9040C | | | 04/26/23 11:30 |
| | | | Phenolics | 420.1 | | 04/27/23 | 04/27/23 11:46 |
| | | | TDS | SM2540 C | | | 04/27/23 10:30 |
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | | 05/03/23 | 05/04/23 11:11 |
| | | | TOC | 9060A | | | 04/27/23 20:18 |
| **O2495-07DL** | **GMW-XDL** | **WATER** | | | **04/25/23 11:52** | | **04/25/23** |
| | | | Anions Group1 | 300.0 | | | 04/27/23 13:26 |
| **O2495-09** | **GMW-5** | **WATER** | | | **04/25/23 13:47** | | **04/25/23** |
| | | | Alkalinity | SM2320 B | | | 05/04/23 13:40 |
| | | | Ammonia | SM4500-NH3 | | 05/01/23 | 05/02/23 13:04 |
| | | | Anions Group1 | 300.0 | | | 04/26/23 17:30 |
| | | | BOD5 | SM5210 B | | | 04/26/23 13:50 |
| | | | COD | SM5220 D | | | 05/03/23 14:04 |
| | | | Cyanide | 9012B | | 04/28/23 | 04/28/23 13:53 |
| | | | pH | 9040C | | | 04/26/23 11:32 |
| | | | Phenolics | 420.1 | | 04/27/23 | 04/27/23 11:46 |
| | | | TDS | SM2540 C | | | 04/27/23 10:30 |

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## LAB CHRONICLE

| | | | |
|---|---|---|---|
| TKN | SM4500-N<br>Org C-11 plus<br>NH3 B plus<br>G-11 | 05/03/23 | 05/04/23<br>11:11 |
| TOC | 9060A | | 04/27/23<br>20:47 |

# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 08:49 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 363 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 13:22 | SM 2320 B-11 |
| Ammonia as N | 2.60 | OR | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 12:25 | SM 4500-NH3 B plus G-11 |
| Bromide | 2.00 | U | 1 | 0.27 | 2.00 | mg/L | | 04/26/23 15:20 | 300.0 |
| Chloride | 39.8 | OR | 1 | 0.11 | 0.60 | mg/L | | 04/26/23 15:20 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/26/23 15:20 | 300.0 |
| Nitrate | 0.20 | J | 1 | 0.084 | 0.50 | mg/L | | 04/26/23 15:20 | 300.0 |
| Sulfate | 34.9 | | 1 | 0.55 | 3.00 | mg/L | | 04/26/23 15:20 | 300.0 |
| Nitrate+Nitrite | 0.20 | J | 1 | 0.17 | 1.10 | mg/L | | 04/26/23 15:20 | 300.0 |
| BOD5 | 26.6 | | 1 | 0.17 | 2.00 | mg/L | | 04/26/23 13:50 | SM 5210 B-16 |
| COD | 140 | | 1 | 2.52 | 10.0 | mg/L | | 05/03/23 14:02 | SM 5220 D-11 |
| Cyanide | 0.027 | | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 13:53 | 9012B |
| pH | 6.66 | H | 1 | 0 | 0 | pH | | 04/26/23 11:15 | 9040C |
| Phenolics | 0.050 | U | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 11:46 | 420.1 |
| TDS | 508 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 5.30 | | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:11 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 9.90 | | 1 | 0.37 | 1.00 | mg/L | | 04/27/23 14:21 | 9060A |

Comments: pH result reported at temperature 20.3 °C

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 08:49 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-01DL | SDG No.: | O2495 |
| Lab Sample ID: | O2495-01DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | 2.60 | D | 2 | 0.090 | 0.20 | mg/L | 05/01/23 13:30 | 05/02/23 13:54 | SM 4500-NH3 B plus G-11 |
| Chloride | 33.0 | D | 10 | 1.10 | 6.00 | mg/L | | 04/27/23 11:48 | 300.0 |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 09:53 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 539 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 13:29 | SM 2320 B-11 |
| Ammonia as N | 24.8 | OR | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:04 | SM 4500-NH3 B plus G-11 |
| Bromide | 1.20 | J | 1 | 0.27 | 2.00 | mg/L | | 04/26/23 15:52 | 300.0 |
| Chloride | 207 | OR | 1 | 0.11 | 0.60 | mg/L | | 04/26/23 15:52 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/26/23 15:52 | 300.0 |
| Nitrate | 0.50 | U | 1 | 0.084 | 0.50 | mg/L | | 04/26/23 15:52 | 300.0 |
| Sulfate | 9.40 | | 1 | 0.55 | 3.00 | mg/L | | 04/26/23 15:52 | 300.0 |
| Nitrate+Nitrite | 1.10 | U | 1 | 0.17 | 1.10 | mg/L | | 04/26/23 15:52 | 300.0 |
| BOD5 | 14.3 | | 1 | 0.17 | 2.00 | mg/L | | 04/26/23 13:50 | SM 5210 B-16 |
| COD | 82.0 | | 1 | 2.52 | 10.0 | mg/L | | 05/03/23 14:02 | SM 5220 D-11 |
| Cyanide | 0.14 | | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 13:53 | 9012B |
| pH | 6.74 | H | 1 | 0 | 0 | pH | | 04/26/23 11:20 | 9040C |
| Phenolics | 0.050 | U | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 11:46 | 420.1 |
| TDS | 736 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 33.1 | OR | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:11 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 17.9 | | 1 | 0.37 | 1.00 | mg/L | | 04/27/23 19:20 | 9060A |

Comments: pH result reported at temperature 20.1 °C

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 09:53 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | PZ-02DL | SDG No.: | O2495 |
| Lab Sample ID: | O2495-03DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | 33.8 | D | 50 | 2.30 | 5.00 | mg/L | 05/01/23 13:30 | 05/02/23 14:02 | SM 4500-NH3 B plus G-11 |
| Chloride | 138 | D | 50 | 5.50 | 30.0 | mg/L | | 04/27/23 12:20 | 300.0 |
| TKN | 52.6 | D | 10 | 1.30 | 5.00 | mg/L | 05/03/23 10:30 | 05/04/23 12:20 | SM4500-N Org C-11 plus NH3 B plus G-11 |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 11:52 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 38.2 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 13:33 | SM 2320 B-11 |
| Ammonia as N | 0.088 | J | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:04 | SM 4500-NH3 B plus G-11 |
| Bromide | 2.00 | U | 1 | 0.27 | 2.00 | mg/L | | 04/26/23 16:25 | 300.0 |
| Chloride | 43.6 | OR | 1 | 0.11 | 0.60 | mg/L | | 04/26/23 16:25 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/26/23 16:25 | 300.0 |
| Nitrate | 0.25 | J | 1 | 0.084 | 0.50 | mg/L | | 04/26/23 16:25 | 300.0 |
| Sulfate | 435 | OR | 1 | 0.55 | 3.00 | mg/L | | 04/26/23 16:25 | 300.0 |
| Nitrate+Nitrite | 0.25 | J | 1 | 0.17 | 1.10 | mg/L | | 04/26/23 16:25 | 300.0 |
| BOD5 | 6.36 | | 1 | 0.17 | 2.00 | mg/L | | 04/26/23 13:50 | SM 5210 B-16 |
| COD | 55.0 | | 1 | 2.52 | 10.0 | mg/L | | 05/03/23 14:03 | SM 5220 D-11 |
| Cyanide | 0.042 | | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 13:53 | 9012B |
| pH | 9.43 | H | 1 | 0 | 0 | pH | | 04/26/23 11:25 | 9040C |
| Phenolics | 0.019 | J | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 11:46 | 420.1 |
| TDS | 528 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 3.50 | | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:11 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 11.0 | | 1 | 0.37 | 1.00 | mg/L | | 04/27/23 19:49 | 9060A |

Comments: pH result reported at temperature 20.4 °C

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 11:52 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-11DL | SDG No.: | O2495 |
| Lab Sample ID: | O2495-05DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 33.9 | D | 20 | 2.20 | 12.0 | mg/L | | 04/27/23 12:53 | 300.0 |
| Sulfate | 289 | D | 20 | 11.0 | 60.0 | mg/L | | 04/27/23 12:53 | 300.0 |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 11:52 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-X | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 36.2 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 13:36 | SM 2320 B-11 |
| Ammonia as N | 0.21 | | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:04 | SM 4500-NH3 B plus G-11 |
| Bromide | 0.75 | J | 1 | 0.27 | 2.00 | mg/L | | 04/26/23 16:57 | 300.0 |
| Chloride | 43.6 | OR | 1 | 0.11 | 0.60 | mg/L | | 04/26/23 16:57 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/26/23 16:57 | 300.0 |
| Nitrate | 0.20 | J | 1 | 0.084 | 0.50 | mg/L | | 04/26/23 16:57 | 300.0 |
| Sulfate | 437 | OR | 1 | 0.55 | 3.00 | mg/L | | 04/26/23 16:57 | 300.0 |
| Nitrate+Nitrite | 0.20 | J | 1 | 0.17 | 1.10 | mg/L | | 04/26/23 16:57 | 300.0 |
| BOD5 | 3.54 | | 1 | 0.17 | 2.00 | mg/L | | 04/26/23 13:50 | SM 5210 B-16 |
| COD | 64.0 | | 1 | 2.52 | 10.0 | mg/L | | 05/03/23 14:03 | SM 5220 D-11 |
| Cyanide | 0.0047 | J | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 13:53 | 9012B |
| pH | 9.49 | H | 1 | 0 | 0 | pH | | 04/26/23 11:30 | 9040C |
| Phenolics | 0.021 | J | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 11:46 | 420.1 |
| TDS | 538 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 4.10 | | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:11 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 11.4 | | 1 | 0.37 | 1.00 | mg/L | | 04/27/23 20:18 | 9060A |

Comments: pH result reported at temperature 20.6 °C

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 11:52 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-XDL | SDG No.: | O2495 |
| Lab Sample ID: | O2495-07DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 33.9 | D | 20 | 2.20 | 12.0 | mg/L | | 04/27/23 13:26 | 300.0 |
| Sulfate | 292 | D | 20 | 11.0 | 60.0 | mg/L | | 04/27/23 13:26 | 300.0 |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/25/23 13:47 |
| Project: | Ferry Point | Date Received: | 04/25/23 |
| Client Sample ID: | GMW-5 | SDG No.: | O2495 |
| Lab Sample ID: | O2495-09 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 193 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 13:40 | SM 2320 B-11 |
| Ammonia as N | 0.21 | | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:04 | SM 4500-NH3 B plus G-11 |
| Bromide | 2.00 | U | 1 | 0.27 | 2.00 | mg/L | | 04/26/23 17:30 | 300.0 |
| Chloride | 5.70 | | 1 | 0.11 | 0.60 | mg/L | | 04/26/23 17:30 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/26/23 17:30 | 300.0 |
| Nitrate | 0.50 | U | 1 | 0.084 | 0.50 | mg/L | | 04/26/23 17:30 | 300.0 |
| Sulfate | 2.90 | J | 1 | 0.55 | 3.00 | mg/L | | 04/26/23 17:30 | 300.0 |
| Nitrate+Nitrite | 1.10 | U | 1 | 0.17 | 1.10 | mg/L | | 04/26/23 17:30 | 300.0 |
| BOD5 | 6.46 | | 1 | 0.17 | 2.00 | mg/L | | 04/26/23 13:50 | SM 5210 B-16 |
| COD | 126 | | 1 | 2.52 | 10.0 | mg/L | | 05/03/23 14:04 | SM 5220 D-11 |
| Cyanide | 0.0027 | J | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 13:53 | 9012B |
| pH | 7.87 | H | 1 | 0 | 0 | pH | | 04/26/23 11:32 | 9040C |
| Phenolics | 0.050 | U | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 11:46 | 420.1 |
| TDS | 332 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 6.90 | | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:11 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 8.90 | | 1 | 0.37 | 1.00 | mg/L | | 04/27/23 20:47 | 9060A |

Comments: pH result reported at temperature 20.1 °C

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
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OR = Over Range
N =Spiked sample recovery not within control limits

# QC RESULT SUMMARY

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# Initial and Continuing Calibration Verification

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **RunNo.:** | LB125158 |

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID:** | **ICV** | | | | | | |
| pH | | pH | 6.99 | 7 | 100 | 90-110 | 04/26/2023 |
| **Sample ID:** | **CCV1** | | | | | | |
| pH | | pH | 2.01 | 2.00 | 101 | 90-110 | 04/26/2023 |
| **Sample ID:** | **CCV2** | | | | | | |
| pH | | pH | 12.03 | 12.00 | 100 | 90-110 | 04/26/2023 |

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# Initial and Continuing Calibration Verification

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **RunNo.:** | LB125176 |

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID:** | **ICV1** | | | | | | |
| TOC | | mg/L | 10.3 | 10 | 103 | 90-110 | 04/04/2023 |
| **Sample ID:** | **CCV1** | | | | | | |
| TOC | | mg/L | 10 | 10 | 100 | 90-110 | 04/27/2023 |
| **Sample ID:** | **CCV2** | | | | | | |
| TOC | | mg/L | 10.5 | 10 | 105 | 90-110 | 04/27/2023 |
| **Sample ID:** | **CCV3** | | | | | | |
| TOC | | mg/L | 10.6 | 10 | 106 | 90-110 | 04/27/2023 |

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# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125177

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|
| **Sample ID: ICV1** | | | | | | |
| Bromide | mg/L | 10.3 | 10 | 103 | 90-110 | 04/24/2023 |
| Chloride | mg/L | 3.1 | 3 | 103 | 90-110 | 04/24/2023 |
| Fluoride | mg/L | 1.9 | 2 | 95 | 90-110 | 04/24/2023 |
| Nitrite | mg/L | 3.1 | 3 | 103 | 90-110 | 04/24/2023 |
| Nitrate | mg/L | 2.6 | 2.5 | 104 | 90-110 | 04/24/2023 |
| Sulfate | mg/L | 15.4 | 15 | 103 | 90-110 | 04/24/2023 |
| Orthophosphate as P | mg/L | 4.7 | 5 | 94 | 90-110 | 04/24/2023 |
| **Sample ID: CCV1** | | | | | | |
| Bromide | mg/L | 9.7 | 10 | 97 | 90-110 | 04/26/2023 |
| Chloride | mg/L | 2.9 | 3 | 97 | 90-110 | 04/26/2023 |
| Fluoride | mg/L | 1.9 | 2 | 95 | 90-110 | 04/26/2023 |
| Nitrite | mg/L | 2.9 | 3 | 97 | 90-110 | 04/26/2023 |
| Nitrate | mg/L | 2.4 | 2.5 | 96 | 90-110 | 04/26/2023 |
| Sulfate | mg/L | 14.7 | 15 | 98 | 90-110 | 04/26/2023 |
| Orthophosphate as P | mg/L | 5.5 | 5 | 110 | 90-110 | 04/26/2023 |
| **Sample ID: CCV2** | | | | | | |
| Bromide | mg/L | 10.2 | 10 | 102 | 90-110 | 04/26/2023 |
| Chloride | mg/L | 3 | 3 | 100 | 90-110 | 04/26/2023 |
| Fluoride | mg/L | 2 | 2 | 100 | 90-110 | 04/26/2023 |
| Nitrite | mg/L | 3.1 | 3 | 103 | 90-110 | 04/26/2023 |
| Nitrate | mg/L | 2.5 | 2.5 | 100 | 90-110 | 04/26/2023 |
| Sulfate | mg/L | 15.3 | 15 | 102 | 90-110 | 04/26/2023 |
| Orthophosphate as P | mg/L | 6.1 | 5 | 122 | 90-110 | 04/26/2023 |
| **Sample ID: CCV3** | | | | | | |
| Bromide | mg/L | 10.2 | 10 | 102 | 90-110 | 04/27/2023 |
| Chloride | mg/L | 3.1 | 3 | 103 | 90-110 | 04/27/2023 |
| Fluoride | mg/L | 2.1 | 2 | 105 | 90-110 | 04/27/2023 |
| Nitrite | mg/L | 3.1 | 3 | 103 | 90-110 | 04/27/2023 |
| Nitrate | mg/L | 2.5 | 2.5 | 100 | 90-110 | 04/27/2023 |
| Sulfate | mg/L | 15.4 | 15 | 103 | 90-110 | 04/27/2023 |
| Orthophosphate as P | mg/L | 6.3 | 5 | 126 | 90-110 | 04/27/2023 |
| **Sample ID: CCV4** | | | | | | |
| Bromide | mg/L | 9.6 | 10 | 96 | 90-110 | 04/27/2023 |
| Chloride | mg/L | 2.9 | 3 | 97 | 90-110 | 04/27/2023 |
| Fluoride | mg/L | 2 | 2 | 100 | 90-110 | 04/27/2023 |
| Nitrite | mg/L | 2.9 | 3 | 97 | 90-110 | 04/27/2023 |
| Nitrate | mg/L | 2.4 | 2.5 | 96 | 90-110 | 04/27/2023 |
| Sulfate | mg/L | 14.4 | 15 | 96 | 90-110 | 04/27/2023 |
| Orthophosphate as P | mg/L | 5.7 | 5 | 114 | 90-110 | 04/27/2023 |
| **Sample ID: CCV5** | | | | | | |
| Bromide | mg/L | 9.8 | 10 | 98 | 90-110 | 04/27/2023 |
| Chloride | mg/L | 2.9 | 3 | 97 | 90-110 | 04/27/2023 |
| Fluoride | mg/L | 1.9 | 2 | 95 | 90-110 | 04/27/2023 |

# Initial and Continuing Calibration Verification



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125177

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|
| Nitrite | mg/L | 2.9 | 3 | 97 | 90-110 | 04/27/2023 |
| Nitrate | mg/L | 2.4 | 2.5 | 96 | 90-110 | 04/27/2023 |
| Sulfate | mg/L | 14.6 | 15 | 97 | 90-110 | 04/27/2023 |
| Orthophosphate as P | mg/L | 5.7 | 5 | 114 | 90-110 | 04/27/2023 |

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# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125184

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV1 | | | | | | |
| Phenolics | | mg/L | 0.98 | 1 | 98 | 90-110 | 04/27/2023 |
| Sample ID: | CCV1 | | | | | | |
| Phenolics | | mg/L | 0.94 | 1 | 94 | 90-110 | 04/27/2023 |
| Sample ID: | CCV2 | | | | | | |
| Phenolics | | mg/L | 0.93 | 1 | 93 | 90-110 | 04/27/2023 |
| Sample ID: | CCV3 | | | | | | |
| Phenolics | | mg/L | 0.94 | 1 | 94 | 90-110 | 04/27/2023 |

# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125211

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV1 | | | | | | |
| Cyanide | | mg/L | 0.096 | 0.099 | 97 | 90-110 | 04/28/2023 |
| Sample ID: | CCV1 | | | | | | |
| Cyanide | | mg/L | 0.25 | 0.25 | 100 | 90-110 | 04/28/2023 |
| Sample ID: | CCV2 | | | | | | |
| Cyanide | | mg/L | 0.24 | 0.25 | 96 | 90-110 | 04/28/2023 |
| Sample ID: | CCV3 | | | | | | |
| Cyanide | | mg/L | 0.25 | 0.25 | 100 | 90-110 | 04/28/2023 |
| Sample ID: | CCV4 | | | | | | |
| Cyanide | | mg/L | 0.24 | 0.25 | 96 | 90-110 | 04/28/2023 |
| Sample ID: | CCV5 | | | | | | |
| Cyanide | | mg/L | 0.26 | 0.25 | 104 | 90-110 | 04/28/2023 |

# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125248

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV1 | | | | | | |
| Ammonia as N | | mg/L | 0.91 | 1 | 91 | 90-110 | 05/02/2023 |
| Sample ID: | CCV1 | | | | | | |
| Ammonia as N | | mg/L | 0.95 | 1 | 95 | 90-110 | 05/02/2023 |
| Sample ID: | CCV2 | | | | | | |
| Ammonia as N | | mg/L | 0.94 | 1 | 94 | 90-110 | 05/02/2023 |
| Sample ID: | CCV3 | | | | | | |
| Ammonia as N | | mg/L | 0.93 | 1 | 93 | 90-110 | 05/02/2023 |
| Sample ID: | CCV4 | | | | | | |
| Ammonia as N | | mg/L | 0.97 | 1 | 97 | 90-110 | 05/02/2023 |
| Sample ID: | CCV5 | | | | | | |
| Ammonia as N | | mg/L | 1 | 1 | 100 | 90-110 | 05/02/2023 |

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# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125267

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | | | | | | |
| COD | | mg/L | 49.991 | 50 | 100 | 95-105 | 03/10/2023 |
| Sample ID: | CCV1 | | | | | | |
| COD | | mg/L | 48.990 | 50 | 98 | 95-105 | 05/03/2023 |
| Sample ID: | CCV2 | | | | | | |
| COD | | mg/L | 48.990 | 50 | 98 | 95-105 | 05/03/2023 |
| Sample ID: | CCV3 | | | | | | |
| COD | | mg/L | 50.992 | 50 | 102 | 95-105 | 05/03/2023 |

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# Initial and Continuing Calibration Verification

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **RunNo.:** | LB125282 |

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV1 | | | | | | |
| TKN | | mg/L | 4.9 | 5 | 98 | 90-110 | 05/04/2023 |
| Sample ID: | CCV1 | | | | | | |
| TKN | | mg/L | 4.9 | 5 | 98 | 90-110 | 05/04/2023 |
| Sample ID: | CCV2 | | | | | | |
| TKN | | mg/L | 4.8 | 5 | 96 | 90-110 | 05/04/2023 |
| Sample ID: | CCV3 | | | | | | |
| TKN | | mg/L | 5.1 | 5 | 102 | 90-110 | 05/04/2023 |
| Sample ID: | CCV4 | | | | | | |
| TKN | | mg/L | 5.1 | 5 | 102 | 90-110 | 05/04/2023 |

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# Initial and Continuing Calibration Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125176

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB1 | | | | | | | |
| TOC | | mg/L | 0.47 | 0.5000 | J | 0.37 | 1 | 04/04/2023 |
| Sample ID: | CCB1 | | | | | | | |
| TOC | | mg/L | 0.39 | 0.5000 | J | 0.37 | 1 | 04/27/2023 |
| Sample ID: | CCB2 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 04/27/2023 |
| Sample ID: | CCB3 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 04/27/2023 |

# Initial and Continuing Calibration Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125177

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID: ICB1** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/24/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/24/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/24/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/24/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/24/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/24/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/24/2023 |
| **Sample ID: CCB1** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/26/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/26/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/26/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/26/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/26/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/26/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/26/2023 |
| **Sample ID: CCB2** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/26/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/26/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/26/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/26/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/26/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/26/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/26/2023 |
| **Sample ID: CCB3** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/27/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/27/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/27/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/27/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/27/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/27/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/27/2023 |
| **Sample ID: CCB4** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/27/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/27/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/27/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/27/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/27/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/27/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/27/2023 |
| **Sample ID: CCB5** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/27/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/27/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/27/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/27/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/27/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/27/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/27/2023 |

# Initial and Continuing Calibration Blank Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125184

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB1 | | | | | | | |
| Phenolics | | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |
| Sample ID: | CCB1 | | | | | | | |
| Phenolics | | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |
| Sample ID: | CCB2 | | | | | | | |
| Phenolics | | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |
| Sample ID: | CCB3 | | | | | | | |
| Phenolics | | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |

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# Initial and Continuing Calibration Blank Summary

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **RunNo.:** | LB125211 |

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB1 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB1 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB2 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB3 | | | | | | | |
| Cyanide | | mg/L | 0.0011 | 0.0025 | J | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB4 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB5 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |

# Initial and Continuing Calibration Blank Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **RunNo.:** LB125248

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: ICB1 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB1 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB2 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB3 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB4 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB5 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |

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# Initial and Continuing Calibration Blank Summary

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **RunNo.:** | LB125267 |

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB | | | | | | | |
| COD | | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10 | 03/10/2023 |
| Sample ID: | CCB1 | | | | | | | |
| COD | | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10 | 05/03/2023 |
| Sample ID: | CCB2 | | | | | | | |
| COD | | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10 | 05/03/2023 |
| Sample ID: | CCB3 | | | | | | | |
| COD | | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10 | 05/03/2023 |

# Initial and Continuing Calibration Blank Summary

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **RunNo.:** | LB125282 |

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB1 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| Sample ID: | CCB1 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| Sample ID: | CCB2 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| Sample ID: | CCB3 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| Sample ID: | CCB4 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |

# Preparation Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID:** LB125161BL | | | | | | | |
| BOD5 | mg/L | < 0.2000 | 0.2000 | U | 0.17 | 2.0 | 04/26/2023 |
| **Sample ID:** LB125176BLW | | | | | | | |
| TOC | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 04/27/2023 |
| **Sample ID:** LB125177BLW | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/26/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/26/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/26/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/26/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/26/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/26/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.3 | 1 | 04/26/2023 |
| **Sample ID:** LB125177BLW2 | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/27/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/27/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/27/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/27/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/27/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/27/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.3 | 1 | 04/27/2023 |
| **Sample ID:** LB125179BL | | | | | | | |
| TDS | mg/L | < 5.0000 | 5.0000 | U | 1.0 | 10 | 04/27/2023 |
| **Sample ID:** LB125267BL | | | | | | | |
| COD | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10.0 | 05/03/2023 |
| **Sample ID:** LB125289BLW | | | | | | | |
| Alkalinity | mg/L | < 1.0000 | 1.0000 | U | 1 | 2 | 05/04/2023 |
| **Sample ID:** PB152437BL | | | | | | | |
| TKN | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| **Sample ID:** PB152445BL | | | | | | | |
| Phenolics | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |
| **Sample ID:** PB152488BL | | | | | | | |
| Cyanide | mg/L | < 0.0025 | 0.0025 | U | 0.001 | 0.005 | 04/28/2023 |
| **Sample ID:** PB152517BL | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |

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# Matrix Spike Summary



**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2495-01
**Client ID:** PZ-01MS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TOC | mg/L | 75-125 | 19.4 | | 9.90 | | 10 | 1 | 95 | | 04/27/2023 |

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# Matrix Spike Summary



**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2495-01
**Client ID:** PZ-01MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TOC | mg/L | 75-125 | 21.8 | OR | 9.90 | | 10 | 1 | 119 | | 04/27/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2495-09
**Client ID:** GMW-5MS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | mg/L | 80-120 | 10.8 | | 0.27 | U | 10 | 1 | 108 | | 04/26/2023 |
| Chloride | mg/L | 80-120 | 8.90 | OR | 5.70 | | 3 | 1 | 107 | | 04/26/2023 |
| Fluoride | mg/L | 80-120 | 3.50 | | 0.41 | | 2 | 1 | 155 | * | 04/26/2023 |
| Nitrite | mg/L | 80-120 | 3.10 | | 0.089 | U | 3 | 1 | 103 | | 04/26/2023 |
| Nitrate | mg/L | 80-120 | 2.70 | | 0.084 | U | 2.5 | 1 | 108 | | 04/26/2023 |
| Sulfate | mg/L | 80-120 | 19.3 | | 2.90 | J | 15 | 1 | 109 | | 04/26/2023 |
| Orthophosphate as P | mg/L | 80-120 | 8.40 | | 0.30 | U | 5 | 1 | 168 | * | 04/26/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2495-09
**Client ID:** GMW-5MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | mg/L | 80-120 | 10.4 | | 0.27 | U | 10 | 1 | 104 | | 04/26/2023 |
| Chloride | mg/L | 80-120 | 8.80 | OR | 5.70 | | 3 | 1 | 103 | | 04/26/2023 |
| Fluoride | mg/L | 80-120 | 3.50 | | 0.41 | | 2 | 1 | 155 | * | 04/26/2023 |
| Nitrite | mg/L | 80-120 | 3.00 | | 0.089 | U | 3 | 1 | 100 | | 04/26/2023 |
| Nitrate | mg/L | 80-120 | 2.60 | | 0.084 | U | 2.5 | 1 | 104 | | 04/26/2023 |
| Sulfate | mg/L | 80-120 | 18.5 | | 2.90 | J | 15 | 1 | 104 | | 04/26/2023 |
| Orthophosphate as P | mg/L | 80-120 | 8.70 | | 0.30 | U | 5 | 1 | 174 | * | 04/26/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | mg/L | 75-125 | 2.20 | OR | 1.50 | | 1 | 1 | 70 | * | 05/02/2023 |
| COD | mg/L | 75-125 | 61.0 | | 15.0 | | 50.0 | 1 | 92 | | 05/03/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide | mg/L | 75-125 | 0.057 | | 0.010 | | 0.04 | 1 | 117 | | 04/28/2023 |
| TKN | mg/L | 75-125 | 9.50 | | 4.70 | | 5 | 1 | 96 | | 05/04/2023 |
| Phenolics | mg/L | 75-125 | 0.44 | | 0.012 | U | 1 | 1 | 44 | * | 04/27/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | mg/L | 75-125 | 2.20 | OR | 1.50 | | 1 | 1 | 70 | * | 05/02/2023 |
| COD | mg/L | 75-125 | 62.0 | | 15.0 | | 50.0 | 1 | 94 | | 05/03/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide | mg/L | 75-125 | 0.057 | | 0.010 | | 0.04 | 1 | 117 | | 04/28/2023 |
| TKN | mg/L | 75-125 | 9.00 | | 4.70 | | 5 | 1 | 86 | | 05/04/2023 |
| Phenolics | mg/L | 75-125 | 0.41 | | 0.012 | U | 1 | 1 | 41 | * | 04/27/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2495-01
**Client ID:** PZ-01DUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| BOD5 | mg/L | +/-20 | 26.6 | | 26.6 | | 1 | 0 | | 04/26/2023 |
| Alkalinity | mg/L | +/-20 | 363 | | 359 | | 1 | 1 | | 05/04/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2495-01
**Client ID:** PZ-01MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | mg/L | +/-20 | 19.4 | | 21.8 | OR | 1 | 12 | | 04/27/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2495-09
**Client ID:** GMW-5DUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| TDS | mg/L | +/-5 | 332 | | 333 | | 1 | 0.3 | | 04/27/2023 |

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# Duplicate Sample Summary



**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2495-09
**Client ID:** GMW-5MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | mg/L | +/-20 | 3.50 | | 3.50 | | 1 | 0 | | 04/26/2023 |
| Chloride | mg/L | +/-20 | 8.90 | OR | 8.80 | OR | 1 | 1 | | 04/26/2023 |
| Nitrite | mg/L | +/-20 | 3.10 | | 3.00 | | 1 | 3 | | 04/26/2023 |
| Bromide | mg/L | +/-20 | 10.8 | | 10.4 | | 1 | 4 | | 04/26/2023 |
| Nitrate | mg/L | +/-20 | 2.70 | | 2.60 | | 1 | 4 | | 04/26/2023 |
| Orthophosphate as P | mg/L | +/-20 | 8.40 | | 8.70 | | 1 | 4 | | 04/26/2023 |
| Sulfate | mg/L | +/-20 | 19.3 | | 18.5 | | 1 | 4 | | 04/26/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2496-01
**Client ID:** TOTE-4-25-2023DUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| pH | pH | +/-20 | 7.37 | | 7.38 | | 1 | 0.14 | | 04/26/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7DUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Phenolics | mg/L | +/-20 | 0.012 | U | 0.012 | U | 1 | 0 | | 04/27/2023 |
| Cyanide | mg/L | +/-20 | 0.010 | | 0.0097 | | 1 | 3 | | 04/28/2023 |
| Ammonia as N | mg/L | +/-20 | 1.50 | | 1.50 | | 1 | 0 | | 05/02/2023 |
| COD | mg/L | +/-20 | 15.0 | | 14.0 | | 1 | 6.9 | | 05/03/2023 |
| TKN | mg/L | +/-20 | 4.70 | | 4.90 | | 1 | 4 | | 05/04/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | mg/L | +/-20 | 2.20 | OR | 2.20 | OR | 1 | 0 | | 05/02/2023 |
| COD | mg/L | +/-20 | 61.0 | | 62.0 | | 1 | 1.63 | | 05/03/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2495
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Phenolics | mg/L | +/-20 | 0.44 | | 0.41 | | 1 | 7 | | 04/27/2023 |
| Cyanide | mg/L | +/-20 | 0.057 | | 0.057 | | 1 | 0 | | 04/28/2023 |
| TKN | mg/L | +/-20 | 9.50 | | 9.00 | | 1 | 5 | | 05/04/2023 |

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# Laboratory Control Sample Summary



| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **Run No.:** | LB125161 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125161BS | | | | | | | | |
| BOD5 | mg/L | 198 | 196 | | 99 | 1 | 84.6-115.4 | 04/26/2023 |

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# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **Run No.:** LB125176

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125176BSW | | | | | | | | |
| TOC | mg/L | 10 | 10.3 | | 103 | 1 | 90-110 | 04/27/2023 |

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# Laboratory Control Sample Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **Run No.:** LB125177

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125177BSW | | | | | | | | |
| Bromide | mg/L | 10 | 9.80 | | 98 | 1 | 90-110 | 04/26/2023 |
| Chloride | mg/L | 3 | 2.90 | | 97 | 1 | 90-110 | 04/26/2023 |
| Fluoride | mg/L | 2 | 1.90 | | 95 | 1 | 90-110 | 04/26/2023 |
| Nitrite | mg/L | 3 | 2.90 | | 97 | 1 | 90-110 | 04/26/2023 |
| Nitrate | mg/L | 2.5 | 2.40 | | 96 | 1 | 90-110 | 04/26/2023 |
| Sulfate | mg/L | 15 | 14.7 | | 98 | 1 | 90-110 | 04/26/2023 |
| Orthophosphate as P | mg/L | 5 | 5.10 | | 102 | 1 | 90-110 | 04/26/2023 |

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# Laboratory Control Sample Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **Run No.:** LB125177

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125177BSW2 | | | | | | | | |
| Bromide | mg/L | 10 | 9.70 | | 97 | 1 | 90-110 | 04/27/2023 |
| Chloride | mg/L | 3 | 2.90 | | 97 | 1 | 90-110 | 04/27/2023 |
| Fluoride | mg/L | 2 | 1.90 | | 95 | 1 | 90-110 | 04/27/2023 |
| Nitrite | mg/L | 3 | 2.90 | | 97 | 1 | 90-110 | 04/27/2023 |
| Nitrate | mg/L | 2.5 | 2.40 | | 96 | 1 | 90-110 | 04/27/2023 |
| Sulfate | mg/L | 15 | 14.5 | | 97 | 1 | 90-110 | 04/27/2023 |
| Orthophosphate as P | mg/L | 5 | 5.10 | | 102 | 1 | 90-110 | 04/27/2023 |

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# Laboratory Control Sample Summary



| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **Run No.:** | LB125179 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125179BS | | | | | | | | |
| TDS | mg/L | 100 | 94.0 | | 94 | 1 | 90-110 | 04/27/2023 |

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# Laboratory Control Sample Summary



| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **Run No.:** | LB125267 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125267BS | | | | | | | | |
| COD | mg/L | 50 | 50.0 | | 100 | 1 | 90-110 | 05/03/2023 |

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# Laboratory Control Sample Summary

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **Run No.:** | LB125289 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125289BSW | | | | | | | | |
| Alkalinity | mg/L | 50 | 56.0 | | 112 | 1 | 80-120 | 05/04/2032 |

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# Laboratory Control Sample Summary

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **Run No.:** | LB125282 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **PB152437BS** | | | | | | | |
| TKN | mg/L | 5 | 5.10 | | 102 | 1 | 90-110 | 05/04/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **Run No.:** LB125184

| Analyte | | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **PB152445BS** | | | | | | | | |
| **Phenolics** | | **mg/L** | **1** | **0.97** | | **97** | **1** | **80-120** | **04/27/2023** |

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# Laboratory Control Sample Summary

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2495 |
| **Project:** | Ferry Point | **Run No.:** | LB125211 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** **PB152488BS** | | | | | | | | |
| Cyanide | mg/L | 0.1 | 0.097 | | 97 | 1 | 85-115 | 04/28/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2495

**Project:** Ferry Point **Run No.:** LB125248

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** PB152517BS | | | | | | | | |
| Ammonia as N | mg/L | 1 | 0.93 | | 93 | 1 | 90-110 | 05/02/2023 |

# SHIPPING DOCUMENTS

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. 02495
COC Number 2038360

9
9.1

### CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: GEI Consultants
ADDRESS: 530 7th Ave. Suite 2007
CITY NY STATE: NY ZIP: 10018
ATTENTION: Stacey Ng
PHONE: (347) 514-3861 FAX:

### CLIENT PROJECT INFORMATION

PROJECT NAME: Ferry Point
PROJECT NO.: 2204594 LOCATION: Bronx, NY
PROJECT MANAGER: Stacey Ng
e-mail: sng@geiconsultants.com
Same
PHONE: FAX:

### CLIENT BILLING INFORMATION

BILL TO: SAME AS PO#:
ADDRESS: CLIENT
CITY STATE: ZIP:
ATTENTION: PHONE:

### DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

### DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ EDD FORMAT _____
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☒ NYS ASP A ☐ NYS ASP B
- ☐ Other _____

### ANALYSIS

1 Phenolics, 2 TCL VOC, 3 Color, 4 BOD5, 5 Alkalinity, 6 TDS, 7 TCL SVOC, 8 Mercury, 9 TAL Metals Hardness

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | PZ-01 | W | | | 4/25/23 | 8:49 | 19 | X | X | X | X | X | X | X | X | X | |
| 2. | PZ-02 | | | | | 9:53 | | | | | | | | | | | |
| 3. | GMW-11 | | | | | 11:52 | | | | | | | | | | | |
| 4. | GMW-X | | | | | 11:52 | | | | | | | | | | | |
| 5. | GMW-5 | | | | | 13:47 | | | | | | | | | | | |
| 6. | Trip Blank | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

### SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

| | RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|---|
| 1. | [signature] | 4/25/23 14:55 | [signature] 1455 4-25-23 |
| 2. | | | |
| 3. | [signature] | 4-25-23 1720 | |

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.0 °C
Comments:

Page ____ of ____
CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling
Shipment Complete ☐ YES ☐ NO

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. 02495
COC Number 2038361

9
9.1

### CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: GEI Consultants
ADDRESS: 530 7th Ave, Suite 2007
CITY NY STATE: NY ZIP: 10018
ATTENTION: Stacey Ng
PHONE: (347) 514-3861 FAX:

### CLIENT PROJECT INFORMATION

PROJECT NAME: Ferry Point
PROJECT NO.: 2204594 LOCATION: Bronx, NY
PROJECT MANAGER: Stacey Ng
e-mail: sng@geiconsultants.com
PHONE: SAME FAX:

### CLIENT BILLING INFORMATION

BILL TO: SAME AS PO#:
ADDRESS: CLIENT
CITY STATE: ZIP:
ATTENTION: PHONE:

### DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

### DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced
- ☐ US EPA CLP
- ☒ NYS ASP A
- ☐ NYS ASP B
- ☐ Other _____
- ☐ EDD FORMAT _____

### ANALYSIS

1 Cyanide, 2 COD, 3 Ammonia, 4 TKN, 5 Dissolved TAL Metals, 6 Chloride, Bromide, Nitrate+Nitrite, 7 pH, 8 TOC, 9

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | PZ-01 | W | | | 4/25/23 | 8:49 | 19 | X | X | X | X | X | X | X | X | | |
| 2. | PZ-02 | ↓ | | | ↓ | 9:53 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | |
| 3. | GMW-11 | | | | | 11:52 | | | | | | | | | | | |
| 4. | GMW-X | | | | | 11:52 | | | | | | | | | | | |
| 5. | GMW-5 | | | | | 13:47 | | | | | | | | | | | |
| 6. | Trip Blank | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

### SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. Marina | 4/25/23 14:55 | 1455 4-25-23 |
| 2. | | |
| 3. | 4/25.23 1720 | 3. |

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.0 °C
Comments:

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

2/0[illegible]

# Laboratory Certification

| Certified By | License No. |
|---|---|
| | |
| CAS EPA CLP Contract | 68HERH20D0011 |
| | |
| Connecticut | PH-0649 |
| | |
| DOD ELAP (L-A-B) | L2219 |
| | |
| Maine | 2022022 |
| | |
| Maryland | 296 |
| | |
| New Hampshire | 255422 |
| | |
| New Jersey | 20012 |
| | |
| New York | 11376 |
| | |
| Pennsylvania | 68-00548 |
| | |
| Soil Permit | P330-21-00137 |
| | |
| Texas | T104704488-22-15 |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** O2495 GEIC06
**Client Name :** GEI Consultants, Inc., P.C.
**Client Contact :** Stacey Ng
**Invoice Name :** GEI Consultants, Inc., P.C.
**Invoice Contact :** Stacey Ng

**Order Date :** 4/25/2023 3:22:44 PM
**Project Name :** Ferry Point
**Receive DateTime :** 4/25/2023 ~~12:00:00 AM~~ 5:40pm SB 4-26
**Purchase Order :**

**Project Mgr :**
**Report Type :** ~~Level 2~~ NYS ASP A SB 5/1/23
**EDD Type :** EXCEL NOCLEANUP
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| O2495-01 | PZ-01 | Water | 04/25/2023 | 08:49 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| O2495-03 | PZ-02 | Water | 04/25/2023 | 09:53 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| O2495-05 | GMW-11 | Water | 04/25/2023 | 11:52 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| O2495-07 | GMW-X | Water | 04/25/2023 | 11:52 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| O2495-09 | GMW-5 | Water | 04/25/2023 | 13:47 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| O2495-11 | TRIP-BLANK | Water | 04/25/2023 | 00:00 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |

**Relinguished By :**
**Date / Time :** 4/26/23 0900

**Received By :**
**Date / Time :** 4/26/23 09:10
Rep #24

**Storage Area :** VOA Refridgerator Room

CHEMTECH
284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2495**
**Test Name: VOC-TCLVOA-10**

**A. Number of Samples and Date of Receipt:**
11 Water samples were received on 04/25/2023.

**B. Parameters**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

**C. Analytical Techniques:**
The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UIThe analysis of VOC-TCLVOA-10 was based on method 8260D.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank Spike Duplicate met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .

The Continuous Calibration File ID VX035415.D met the requirements except for 2-Butanone is failing marginally Low therefore no corrective action taken.

The Tuning criteria met requirements.

**E. Additional Comments:**
Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

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Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <20% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 20% for the Initial Calibration curve for SW-846 analysis.

**F. Manual Integration Comments:**
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

**APPROVED**
*By Sohil Jodhani, QA/QC Director at 9:05 am, Jul 12, 2023*

CHEMTECH

# DATA PACKAGE

VOLATILE ORGANICS
GENERAL CHEMISTRY
METALS
SEMI-VOLATILE ORGANICS

**PROJECT NAME : FERRY POINT**

**GEI CONSULTANTS, INC., P.C.**

**530 7th Ave, Suite 2007**

**New York, NY - 10018**

**Phone No: 212-845-9965**

**ORDER ID : O2521**

**ATTENTION : Stacey Ng**

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

**Laboratory Certification ID # 20012**

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# Cover Page

**Order ID :** O2521

**Project ID :** Ferry Point

**Client :** GEI Consultants, Inc., P.C.

| Lab Sample Number | Client Sample Number |
|---|---|
| O2521-01 | GMW-1 |
| O2521-02 | GMW-1 |
| O2521-03 | PZ-15 |
| O2521-04 | PZ-15 |
| O2521-05 | GMW-10 |
| O2521-06 | GMW-10 |
| O2521-07 | GMW-7 |
| O2521-08 | GMW-7 |
| O2521-09 | GMW-7MS |
| O2521-10 | GMW-7MSD |
| O2521-11 | GMW-7MS |
| O2521-12 | GMW-7MSD |
| O2521-13 | TB-2 |
| O2521-14 | FB |
| O2521-15 | FB |

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : N. N. Pandya

APPROVED

*By Nimisha Pandya QA/QC Supervisor at 10:23 am, May 12, 2023*

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2521**
**Test Name: VOC-TCLVOA-10**

**A. Number of Samples and Date of Receipt:**
15 Water samples were received on 04/26/2023.

**B. Parameters**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

**C. Analytical Techniques:**
The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UIThe analysis of VOC-TCLVOA-10 was based on method 8260D.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.

The MS {O2521-09MS} with File ID: VX035489.D recoveries met the requirements for all compounds except for 1,2,3-Trichlorobenzene[73%] due to matrix interference.
The MSD {O2521-10MSD} with File ID: VX035490.D recoveries met the acceptable requirements except for 1,1,2-Trichlorotrifluoroethane[69%], Carbon Tetrachloride[83%], Cyclohexane[70%] and Methylcyclohexane[56%] due to matrix interference.
The RPD met criteria .

The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .

The Continuous Calibration File ID VX035466.D met the requirements except for Bromomethane is failing marginally Low therefore no corrective action taken.
The Tuning criteria met requirements.

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**E. Additional Comments:**

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <20% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 20% for the Initial Calibration curve for SW-846 analysis.

**F. Manual Integration Comments:**

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

**APPROVED**
*By Nimisha Pandya QA/QC Supervisor at 10:23 am, May 12, 2023*

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# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2521**
**Test Name: SVOC-TCL BNA -20**

**A. Number of Samples and Date of Receipt:**
15 Water samples were received on 04/26/2023.

**B. Parameters**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for SVOC-TCL BNA -20.

**C. Analytical Techniques:**
The samples were analyzed on instrument BNA_F using GC Column DB-UI 8270D which is 20 meters, 0.18 mm ID, 0.36 um dfThe analysis of SVOC-TCL BNA -20 was based on method 8270E and extraction was done based on method 3510.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.

The MS {O2521-09MS} with File ID: BF133152.D recoveries met the requirements for all compounds except for 1,2,4,5-Tetrachlorobenzene[73%], 1,4-Dioxane[32%] and 2,3,4,6-Tetrachlorophenol[79%] due to matrix interference.
The MSD {O2521-10MSD} with File ID: BF133153.D recoveries met the acceptable requirements except for 1,2,4,5-Tetrachlorobenzene[72%], 1,4-Dioxane[31%] and 2,3,4,6-Tetrachlorophenol[79%] due to matrix interference.
The RPD met criteria .

The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.

The % RSD is greater than 20% in the Initial Calibration method (Method 8270-BF042123.M) for Benzaldehyde,this compound is passing on Quadratic regression.

The Continuous Calibration met the requirements .

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The Tuning criteria met requirements.

**E. Additional Comments:**
The Form 6 is not included in the data package because the Initial Calibration was performed using 7 points.
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <20% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 20% for the Initial Calibration curve for SW-846 analysis.

**F. Manual Integration Comments:**
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

**APPROVED**
*By Nimisha Pandya QA/QC Supervisor at 10:24 am, May 12, 2023*

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# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2521**
**Test Name: Dissolved ICP-TAL Metals,Metals ICP-TAL,Dissolved Mercury,Mercury**

**A. Number of Samples and Date of Receipt:**
15 Water samples were received on 04/26/2023.

**B. Parameters:**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for Dissolved ICP-TAL Metals,Metals ICP-TAL,Dissolved Mercury,Mercury.

**C. Analytical Techniques:**
The analysis of Dissolved ICP-TAL Metals,Metals ICP-TAL was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of Dissolved Mercury,Mercury was based on method 7470A.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.

The Matrix Spike (GMW-7MS-for Total sample) analysis met criteria for all samples except for Aluminum, Barium, Iron, Manganese, Zinc due to chemical interference during digestion process.

The Matrix Spike (GMW-7MS-for Dissolved sample) analysis met criteria for all samples except for Barium, Manganese, Zinc due to chemical interference during digestion process.

The Matrix Spike Duplicate(GMW-7MSD-for Total sample) analysis met criteria for all samples except for Aluminum, Barium, Iron, Manganese, Zinc due to chemical interference during digestion process.

The Matrix Spike Duplicate(GMW-7MSD-for Dissolved sample) analysis met criteria for all samples except for Barium, Manganese, Zinc due to chemical interference during digestion process.

The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

**E. Additional Comments:**
Samples O2521-01, O2521-03, O2521-05, O2521-07 and O2521-14 were analyzed as Total Metals while Samples O2521-02, O2521-04, O2521-06, O2521-08 and O2521-15 were analyzed as Dissolved Metals.

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Signature N. N. Pandya

**APPROVED**
*By Nimisha Pandya QA/QC Supervisor at 10:24 am, May 12, 2023*

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# CASE NARRATIVE

**GEI Consultants, Inc., P.C.**
**Project Name: Ferry Point**
**Project # N/A**
**Chemtech Project # O2521**
**Test Name:**
**pH,Alkalinity,Cyanide,TOC,Phenolics,TKN,Ammonia,TDS,COD,BOD5,Anions Group1**

**A. Number of Samples and Date of Receipt:**
15 Water samples were received on 04/26/2023.

**B. Parameters:**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Dissolved ICP-TAL Metals, Dissolved Mercury, DISSOLVED METALS-TAL, Hardness, Total, Mercury, Metals ICP-TAL, METALS-TAL, pH, Phenolics, SVOC-TCL BNA -20, TDS, TKN, TOC and VOC-TCLVOA-10. This data package contains results for pH, Alkalinity, Cyanide, TOC, Phenolics, TKN, Ammonia, TDS, COD, BOD5, Anions Group1.

**C. Analytical Techniques:**
The analysis of Anions Group1 was based on method 300.0, The analysis of Phenolics was based on method 420.1, The analysis of Cyanide was based on method 9012B, The analysis of pH was based on method 9040C, The analysis of TOC was based on method 9060A, The analysis of Alkalinity was based on method SM2320 B, The analysis of TDS was based on method SM2540 C, The analysis of TKN was based on method SM4500 N Org B or C, The analysis of Ammonia was based on method SM4500-NH3, The analysis of BOD5 was based on method SM5210 B and The analysis of COD was based on method SM5220 D.

**D. QA/ QC Samples:**
The Holding Times were met for all samples except for FB of pH, for GMW-1 of pH.for GMW-10 of pH.for GMW-7 of pH.for PZ-15 of pH as samples were receive out of hold.
Sample GMW-1 was diluted due to high concentrations for Ammonia as N, TKN, TOC, Chloride & Sample PZ-15 was diluted due to high concentrations for Ammonia as N, TKN, TOC, Chloride & Sample GMW-10 was diluted due to high concentrations for TOC, Chloride, Sulfate & Sample GMW-7 was diluted due to high concentrations for Chloride, Sulfate.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (MW-4MS) analysis met criteria for all samples except for Chloride due to matrix interferences. The Matrix Spike (GMW-7MS) analysis met criteria for all samples except for Nitrite, Ammonia as N and Phenolics due to matrix interferences.
The Matrix Spike Duplicate (MW-4MSD) analysis met criteria for all samples except for Chloride due to matrix interferences. The Matrix Spike Duplicate (GMW-7MSD)

analysis met criteria for all samples except for Nitrite, Ammonia as N and Phenolics due to matrix interferences.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

**E. Additional Comments:**
Sample O2521-01 and O2521-01 were analyzed Straight 10X Dilution for COD because the original samples were reading over range, only 10X has been reported.

---

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Signature N. N. Pandya

**APPROVED**
*By Nimisha Pandya QA/QC Supervisor at 10:25 am, May 12, 2023*

# DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| **J** | Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL). |
| **U** | Indicates the analyte was analyzed for, but not detected. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **E** | Indicates the reported value is estimated because of the presence of interference |
| **M** | Indicates Duplicate injection precision not met. |
| **N** | Indicates the spiked sample recovery is not within control limits. |
| **S** | Indicates the reported value was determined by the Method of Standard Addition (MSA). |
| * | Indicates that the duplicate analysis is not within control limits. |
| + | Indicates the correlation coefficient for the MSA is less than 0.995. |
| **D** | Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range. |
| **M** | Method qualifiers<br>**"P"** for ICP instrument<br>**"PM"** for ICP when Microwave Digestion is used<br>**"CV"** for Manual Cold Vapor AA<br>**"AV"** for automated Cold Vapor AA<br>**"CA"** for MIDI-Distillation Spectrophotometric<br>**"AS"** for Semi –Automated Spectrophotometric<br>**"C"** for Manual Spectrophotometric<br>**"T"** for Titrimetric<br>**"NR"** for analyte not required to be analyzed |
| **OR** | Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **Q** | Indicates the LCS did not meet the control limits requirements |
| H | Sample Analysis Out Of Hold Time |

## DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| Value | If the result is a value greater than or equal to the detection limit, report the value |
| **U** | Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **J** | Indicates an estimated value**.** This flag is used:<br>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)<br>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others. |
| **B** | Indicates the analyte was found in the blank as well as the sample report as "12 B". |
| **E** | Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **D** | This flag identifies all compounds identified in an analysis at a secondary dilution factor. |
| **P** | This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P". |
| **N** | This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used. |
| **A** | This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product. |
| **Q** | Indicates the LCS did not meet the control limits requirements |

## APPENDIX A

## QA REVIEW GENERAL DOCUMENTATION

**Project #:** O2521

| | Completed |
|---|---|
| **For thorough review, the report must have the following:** | |
| **GENERAL:** | |
| **Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)** | ✓ |
| **Check chain-of-custody for proper relinquish/return of samples** | ✓ |
| **Is the chain of custody signed and complete** | ✓ |
| **Check internal chain-of-custody for proper relinquish/return of samples /sample extracts** | ✓ |
| **Collect information for each project id from server. Were all requirements followed** | ✓ |
| **COVER PAGE:** | |
| **Do numbers of samples correspond to the number of samples in the Chain of Custody on login page** | ✓ |
| **Do lab numbers and client Ids on cover page agree with the Chain of Custody** | ✓ |
| **CHAIN OF CUSTODY:** | |
| **Do requested analyses on Chain of Custody agree with form I results** | ✓ |
| **Do requested analyses on Chain of Custody agree with the log-in page** | ✓ |
| **Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody** | ✓ |
| **Were the samples received within hold time** | ✓ |
| **Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle** | ✓ |
| **ANALYTICAL:** | |
| **Was method requirement followed?** | ✓ |
| **Was client requirement followed?** | ✓ |
| **Does the case narrative summarize all QC failure?** | ✓ |
| **All runlogs and manual integration are reviewed for requirements** | ✓ |
| **All manual calculations and /or hand notations verified** | ✓ |

**1st Level QA Review Signature:** SOHIL JODHANI **Date:** 05/12/2023

**2nd Level QA Review Signature:** N. N. Pandya

APPROVED
By Nimisha Pandya QA/QC Supervisor at 10:25 am, May 12, 2023

**Date:**

CHEMTECH
284 Sheffield Street, Mountainside, New Jersey - 07092
Phone: (908) 789 8900 Fax: (908) 789 8922



# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O2521 | **OrderDate:** | 4/27/2023 8:52:00 AM |
| **Client:** | GEI Consultants, Inc., P.C. | **Project:** | Ferry Point |
| **Contact:** | Stacey Ng | **Location:** | M11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O2521-01** | **GMW-1** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 05/02/23 | |
| **O2521-03** | **PZ-15** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 05/02/23 | |
| **O2521-05** | **GMW-10** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 05/02/23 | |
| **O2521-07** | **GMW-7** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 05/02/23 | |
| **O2521-13** | **TB-2** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 05/02/23 | |
| **O2521-14** | **FB** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 05/02/23 | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

| Sample ID | Client ID | Matrix | Parameter | | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Client ID:** | **GMW-1** | | | | | | | | |
| O2521-01 | GMW-1 | Water | Acetone | | 280 | | 1.20 | 5.00 | ug/L |
| O2521-01 | GMW-1 | Water | 2-Butanone | | 1.90 | J | 1.20 | 5.00 | ug/L |
| O2521-01 | GMW-1 | Water | Chlorobenzene | | 3.30 | | 0.12 | 1.00 | ug/L |
| O2521-01 | GMW-1 | Water | 1,4-Dichlorobenzene | | 0.88 | J | 0.24 | 1.00 | ug/L |
| | | | **Total Voc :** | | 286 | | | | |
| O2521-01 | GMW-1 | Water | Sulfur dioxide | * | 6.90 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 6.90 | | | | |
| | | | **Total Concentration:** | | 293 | | | | |
| **Client ID:** | **PZ-15** | | | | | | | | |
| O2521-03 | PZ-15 | Water | Acetone | | 10.9 | | 1.20 | 5.00 | ug/L |
| O2521-03 | PZ-15 | Water | Carbon Disulfide | | 0.35 | J | 0.27 | 1.00 | ug/L |
| O2521-03 | PZ-15 | Water | Chlorobenzene | | 12.5 | | 0.12 | 1.00 | ug/L |
| O2521-03 | PZ-15 | Water | Isopropylbenzene | | 0.44 | J | 0.13 | 1.00 | ug/L |
| O2521-03 | PZ-15 | Water | 1,4-Dichlorobenzene | | 1.10 | | 0.24 | 1.00 | ug/L |
| | | | **Total Voc :** | | 25.3 | | | | |
| O2521-03 | PZ-15 | Water | unknown13.122 | * | 6.30 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | Water | Benzene, 1-ethenyl-2-methyl- | * | 5.30 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | Water | Sulfur dioxide | * | 5.80 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | Water | Tetrahydrofuran | * | 1.00 | J | 0.85 | 5.00 | ug/L |
| O2521-03 | PZ-15 | Water | tert-Butylbenzene | * | 0.32 | J | 0.16 | 1.00 | ug/L |
| O2521-03 | PZ-15 | Water | sec-Butylbenzene | * | 0.47 | J | 0.16 | 1.00 | ug/L |
| | | | **Total Tics :** | | 19.2 | | | | |
| | | | **Total Concentration:** | | 44.5 | | | | |
| **Client ID:** | **GMW-10** | | | | | | | | |
| O2521-05 | GMW-10 | Water | Acetone | | 6.40 | | 1.20 | 5.00 | ug/L |
| O2521-05 | GMW-10 | Water | Chlorobenzene | | 0.37 | J | 0.12 | 1.00 | ug/L |
| | | | **Total Voc :** | | 6.77 | | | | |
| O2521-05 | GMW-10 | Water | Sulfur dioxide | * | 5.90 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 5.90 | | | | |
| | | | **Total Concentration:** | | 12.7 | | | | |
| **Client ID:** | **GMW-7** | | | | | | | | |
| O2521-07 | GMW-7 | Water | Acetone | | 2.80 | J | 1.20 | 5.00 | ug/L |
| | | | **Total Voc :** | | 2.80 | | | | |
| O2521-07 | GMW-7 | Water | Aminomethanesulfonic acid | * | 5.30 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 5.30 | | | | |
| | | | **Total Concentration:** | | 8.10 | | | | |
| **Client ID:** | **TB-2** | | | | | | | | |
| O2521-13 | TB-2 | Water | Sulfur dioxide | * | 14.2 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 14.2 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Hit Summary Sheet
**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

| Sample ID | Client ID | Matrix | Parameter | | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Total Concentration:** | | 14.2 | | | | |
| **Client ID:** | **FB** | | | | | | | | |
| O2521-14 | FB | Water | Acetone | | 2.40 | J | 1.20 | 5.00 | ug/L |
| O2521-14 | FB | Water | Methylene Chloride | | 0.68 | J | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 3.08 | | | | |
| O2521-14 | FB | Water | Sulfur dioxide | * | 16.6 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | 16.6 | | | | |
| | | | **Total Concentration:** | | 19.7 | | | | |

# SAMPLE DATA

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035479.D | 1 | | 05/02/23 15:12 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 280 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 1.90 | J | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035479.D | 1 | | 05/02/23 15:12 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 3.30 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.88 | J | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.6 | | 74 - 125 | 99% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.3 | | 75 - 124 | 101% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.4 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 49.9 | | 64 - 133 | 100% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 220000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 353000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 316000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 144000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 6.90 | J | | 1.26 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035479.D | 1 | | 05/02/23 15:12 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035480.D | 1 | | 05/02/23 15:35 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 10.9 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.35 | J | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035480.D | 1 | | 05/02/23 15:35 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 12.5 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.44 | J | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.10 | | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.7 | | 74 - 125 | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.5 | | 75 - 124 | 101% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.6 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 54.3 | | 64 - 133 | 109% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 234000 | 5.556 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 376000 | 6.757 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 348000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 172000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 5.80 | J | | 1.26 | ug/L |
| 109-99-9 | Tetrahydrofuran | 1.00 | J | | 5.04 | ug/L |
| 98-06-6 | tert-Butylbenzene | 0.32 | J | | 11.7 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035480.D | 1 | | 05/02/23 15:35 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 135-98-8 | sec-Butylbenzene | 0.47 | J | | 11.9 | ug/L |
| 000611-15-4 | Benzene, 1-ethenyl-2-methyl- | 5.30 | J | | 12.2 | ug/L |
| | unknown13.122 | 6.30 | J | | 13.1 | ug/L |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035481.D | 1 | | 05/02/23 15:58 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 6.40 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035481.D | 1 | | 05/02/23 15:58 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.37 | J | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.0 | | 74 - 125 | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 48.7 | | 75 - 124 | 97% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 51.5 | | 86 - 113 | 103% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 51.7 | | 64 - 133 | 103% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 240000 | 5.556 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 398000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 366000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 172000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 5.90 | J | | 1.26 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035481.D | 1 | | 05/02/23 15:58 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035482.D | 1 | | 05/02/23 16:22 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.80 | J | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035482.D | 1 | | 05/02/23 16:22 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.4 | | 74 - 125 | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.2 | | 75 - 124 | 100% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.9 | | 86 - 113 | 102% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 51.4 | | 64 - 133 | 103% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 226000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 370000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 337000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 158000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 013881-91-9 | Aminomethanesulfonic acid | 5.30 | J | | 1.26 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035482.D | 1 | | 05/02/23 16:22 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | TB-2 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035476.D | 1 | | 05/02/23 14:02 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | TB-2 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035476.D | 1 | | 05/02/23 14:02 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.9 | | 74 - 125 | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.2 | | 75 - 124 | 100% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.1 | | 86 - 113 | 100% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 48.9 | | 64 - 133 | 98% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 245000 | 5.556 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 398000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 350000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 160000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 14.2 | J | | 1.25 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | TB-2 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035476.D | 1 | | 05/02/23 14:02 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035475.D | 1 | | 05/02/23 13:39 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.40 | J | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.68 | J | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035475.D | 1 | | 05/02/23 13:39 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.1 | | 74 - 125 | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 50.6 | | 75 - 124 | 101% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.4 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 53.0 | | 64 - 133 | 106% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 230000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 377000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 348000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 168000 | 12.024 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 007446-09-5 | Sulfur dioxide | 16.6 | J | | 1.25 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035475.D | 1 | | 05/02/23 13:39 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# QC SUMMARY

## Surrogate Summary

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low

| Lab Sample ID | Client ID | Parameter | Spike | Result | RecoveryQual | Limits Low | Limits High |
|---|---|---|---|---|---|---|---|
| O2521-01 | GMW-1 | 1,2-Dichloroethane-d4 | 50 | 49.6 | 99 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.3 | 101 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.4 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.9 | 100 | 64 | 133 |
| O2521-03 | PZ-15 | 1,2-Dichloroethane-d4 | 50 | 48.7 | 97 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.5 | 101 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.6 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 54.3 | 109 | 64 | 133 |
| O2521-05 | GMW-10 | 1,2-Dichloroethane-d4 | 50 | 49.0 | 98 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 48.7 | 97 | 75 | 124 |
| | | Toluene-d8 | 50 | 51.5 | 103 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 51.7 | 103 | 64 | 133 |
| O2521-07 | GMW-7 | 1,2-Dichloroethane-d4 | 50 | 48.4 | 97 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.3 | 100 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.9 | 102 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 51.4 | 103 | 64 | 133 |
| O2521-09MS | GMW-7MS | 1,2-Dichloroethane-d4 | 50 | 51.6 | 103 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 46.0 | 92 | 75 | 124 |
| | | Toluene-d8 | 50 | 43.6 | 87 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 43.0 | 86 | 64 | 133 |
| O2521-10MSD | GMW-7MSD | 1,2-Dichloroethane-d4 | 50 | 62.4 | 125 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 56.0 | 112 | 75 | 124 |
| | | Toluene-d8 | 50 | 53.0 | 106 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 55.0 | 110 | 64 | 133 |
| O2521-13 | TB-2 | 1,2-Dichloroethane-d4 | 50 | 47.9 | 96 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.2 | 100 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.1 | 100 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.0 | 98 | 64 | 133 |
| O2521-14 | FB | 1,2-Dichloroethane-d4 | 50 | 49.1 | 98 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 50.6 | 101 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.4 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 53.0 | 106 | 64 | 133 |
| VX0502WBL01 | VX0502WBL01 | 1,2-Dichloroethane-d4 | 50 | 47.1 | 94 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 49.6 | 99 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.6 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 51.5 | 103 | 64 | 133 |
| VX0502WBS01 | VX0502WBS01 | 1,2-Dichloroethane-d4 | 50 | 49.6 | 99 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.9 | 104 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.6 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 51.4 | 103 | 64 | 133 |

CHEMTECH

## Matrix Spike/Matrix Spike Duplicate Summary
## SW-846

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lab Sample ID :** O2521-09MS | **Client Sample ID :** GMW-7MS | | | | | | | **Datafile :** VX035489.D | | | |
| Dichlorodifluoromethane | 50 | 0 | 41.4 | ug/L | 83 | | | | 73 | 120 | |
| Chloromethane | 50 | 0 | 40.3 | ug/L | 81 | | | | 58 | 133 | |
| Vinyl chloride | 50 | 0 | 41.7 | ug/L | 83 | | | | 69 | 125 | |
| Bromomethane | 50 | 0 | 34.2 | ug/L | 68 | | | | 61 | 120 | |
| Chloroethane | 50 | 0 | 44.0 | ug/L | 88 | | | | 58 | 134 | |
| Trichlorofluoromethane | 50 | 0 | 42.9 | ug/L | 86 | | | | 72 | 124 | |
| 1,1,2-Trichlorotrifluoroethane | 50 | 0 | 38.7 | ug/L | 77 | | | | 75 | 117 | |
| 1,1-Dichloroethene | 50 | 0 | 41.9 | ug/L | 84 | | | | 77 | 118 | |
| Acetone | 250 | 2.80 | 270 | ug/L | 107 | | | | 57 | 139 | |
| Carbon disulfide | 50 | 0 | 38.1 | ug/L | 76 | | | | 67 | 118 | |
| Methyl tert-butyl Ether | 50 | 0 | 53.6 | ug/L | 107 | | | | 60 | 148 | |
| Methyl Acetate | 50 | 0 | 54.0 | ug/L | 108 | | | | 60 | 133 | |
| Methylene Chloride | 50 | 0 | 44.4 | ug/L | 89 | | | | 79 | 115 | |
| trans-1,2-Dichloroethene | 50 | 0 | 44.4 | ug/L | 89 | | | | 76 | 118 | |
| 1,1-Dichloroethane | 50 | 0 | 48.3 | ug/L | 97 | | | | 78 | 122 | |
| Cyclohexane | 50 | 0 | 40.3 | ug/L | 81 | | | | 71 | 119 | |
| 2-Butanone | 250 | 0 | 310 | ug/L | 124 | | | | 67 | 137 | |
| Carbon Tetrachloride | 50 | 0 | 42.2 | ug/L | 84 | | | | 84 | 115 | |
| cis-1,2-Dichloroethene | 50 | 0 | 50.2 | ug/L | 100 | | | | 82 | 124 | |
| Bromochloromethane | 50 | 0 | 50.6 | ug/L | 101 | | | | 72 | 130 | |
| Chloroform | 50 | 0 | 52.4 | ug/L | 105 | | | | 83 | 119 | |
| 1,1,1-Trichloroethane | 50 | 0 | 48.1 | ug/L | 96 | | | | 83 | 117 | |
| Methylcyclohexane | 50 | 0 | 33.0 | ug/L | 66 | | | | 64 | 120 | |
| Benzene | 50 | 0 | 44.6 | ug/L | 89 | | | | 63 | 133 | |
| 1,2-Dichloroethane | 50 | 0 | 48.3 | ug/L | 97 | | | | 76 | 120 | |
| Trichloroethene | 50 | 0 | 41.7 | ug/L | 83 | | | | 33 | 175 | |
| 1,2-Dichloropropane | 50 | 0 | 47.0 | ug/L | 94 | | | | 85 | 116 | |
| Bromodichloromethane | 50 | 0 | 48.8 | ug/L | 98 | | | | 86 | 117 | |
| 4-Methyl-2-Pentanone | 250 | 0 | 280 | ug/L | 112 | | | | 72 | 137 | |
| Toluene | 50 | 0 | 44.2 | ug/L | 88 | | | | 85 | 115 | |
| t-1,3-Dichloropropene | 50 | 0 | 46.2 | ug/L | 92 | | | | 78 | 117 | |
| cis-1,3-Dichloropropene | 50 | 0 | 45.4 | ug/L | 91 | | | | 77 | 115 | |
| 1,1,2-Trichloroethane | 50 | 0 | 49.3 | ug/L | 99 | | | | 87 | 119 | |
| 2-Hexanone | 250 | 0 | 290 | ug/L | 116 | | | | 75 | 131 | |
| Dibromochloromethane | 50 | 0 | 52.0 | ug/L | 104 | | | | 88 | 118 | |
| 1,2-Dibromoethane | 50 | 0 | 50.6 | ug/L | 101 | | | | 85 | 119 | |
| Tetrachloroethene | 50 | 0 | 37.8 | ug/L | 76 | | | | 65 | 114 | |
| Chlorobenzene | 50 | 0 | 43.8 | ug/L | 88 | | | | 85 | 114 | |
| Ethyl Benzene | 50 | 0 | 42.0 | ug/L | 84 | | | | 62 | 134 | |
| m/p-Xylenes | 100 | 0 | 82.9 | ug/L | 83 | | | | 47 | 145 | |
| o-Xylene | 50 | 0 | 43.6 | ug/L | 87 | | | | 56 | 140 | |
| Styrene | 50 | 0 | 43.8 | ug/L | 88 | | | | 84 | 128 | |
| Bromoform | 50 | 0 | 53.6 | ug/L | 107 | | | | 83 | 121 | |
| Isopropylbenzene | 50 | 0 | 44.3 | ug/L | 89 | | | | 76 | 121 | |
| 1,1,2,2-Tetrachloroethane | 50 | 0 | 56.7 | ug/L | 113 | | | | 66 | 145 | |
| 1,3-Dichlorobenzene | 50 | 0 | 44.0 | ug/L | 88 | | | | 84 | 110 | |
| 1,4-Dichlorobenzene | 50 | 0 | 42.0 | ug/L | 84 | | | | 81 | 111 | |

CHEMTECH

## Matrix Spike/Matrix Spike Duplicate Summary
## SW-846

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 50 | 0 | 45.0 | ug/L | 90 | | | | 82 | 113 | |
| 1,2-Dibromo-3-Chloropropane | 50 | 0 | 61.8 | ug/L | 124 | | | | 79 | 137 | |
| 1,2,4-Trichlorobenzene | 50 | 0 | 36.5 | ug/L | 73 | | | | 73 | 120 | |
| 1,2,3-Trichlorobenzene | 50 | 0 | 36.7 | ug/L | 73 | * | | | 75 | 119 | |

CHEMTECH

## Matrix Spike/Matrix Spike Duplicate Summary
## SW-846

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lab Sample ID :** O2521-10MSD | **Client Sample ID :** GMW-7MSD | | | | | | | **Datafile :** VX035490.D | | | |
| Dichlorodifluoromethane | 50 | 0 | 36.3 | ug/L | 73 | | 13 | | 73 | 120 | 20 |
| Chloromethane | 50 | 0 | 43.4 | ug/L | 87 | | 7 | | 58 | 133 | 20 |
| Vinyl chloride | 50 | 0 | 42.1 | ug/L | 84 | | 1 | | 69 | 125 | 20 |
| Bromomethane | 50 | 0 | 39.1 | ug/L | 78 | | 13 | | 61 | 120 | 20 |
| Chloroethane | 50 | 0 | 42.3 | ug/L | 85 | | 4 | | 58 | 134 | 20 |
| Trichlorofluoromethane | 50 | 0 | 41.1 | ug/L | 82 | | 4 | | 72 | 124 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 50 | 0 | 34.6 | ug/L | 69 | * | 11 | | 75 | 117 | 20 |
| 1,1-Dichloroethene | 50 | 0 | 42.4 | ug/L | 85 | | 1 | | 77 | 118 | 20 |
| Acetone | 250 | 2.80 | 260 | ug/L | 103 | | 4 | | 57 | 139 | 20 |
| Carbon disulfide | 50 | 0 | 41.3 | ug/L | 83 | | 8 | | 67 | 118 | 20 |
| Methyl tert-butyl Ether | 50 | 0 | 57.3 | ug/L | 115 | | 7 | | 60 | 148 | 20 |
| Methyl Acetate | 50 | 0 | 51.3 | ug/L | 103 | | 5 | | 60 | 133 | 20 |
| Methylene Chloride | 50 | 0 | 48.1 | ug/L | 96 | | 8 | | 79 | 115 | 20 |
| trans-1,2-Dichloroethene | 50 | 0 | 46.3 | ug/L | 93 | | 4 | | 76 | 118 | 20 |
| 1,1-Dichloroethane | 50 | 0 | 50.5 | ug/L | 101 | | 4 | | 78 | 122 | 20 |
| Cyclohexane | 50 | 0 | 35.1 | ug/L | 70 | * | 14 | | 71 | 119 | 20 |
| 2-Butanone | 250 | 0 | 270 | ug/L | 108 | | 14 | | 67 | 137 | 20 |
| Carbon Tetrachloride | 50 | 0 | 41.7 | ug/L | 83 | * | 1 | | 84 | 115 | 20 |
| cis-1,2-Dichloroethene | 50 | 0 | 51.0 | ug/L | 102 | | 2 | | 82 | 124 | 20 |
| Bromochloromethane | 50 | 0 | 51.9 | ug/L | 104 | | 3 | | 72 | 130 | 20 |
| Chloroform | 50 | 0 | 53.3 | ug/L | 107 | | 2 | | 83 | 119 | 20 |
| 1,1,1-Trichloroethane | 50 | 0 | 48.8 | ug/L | 98 | | 1 | | 83 | 117 | 20 |
| Methylcyclohexane | 50 | 0 | 27.9 | ug/L | 56 | * | 17 | | 64 | 120 | 20 |
| Benzene | 50 | 0 | 43.8 | ug/L | 88 | | 2 | | 63 | 133 | 20 |
| 1,2-Dichloroethane | 50 | 0 | 48.8 | ug/L | 98 | | 1 | | 76 | 120 | 20 |
| Trichloroethene | 50 | 0 | 43.2 | ug/L | 86 | | 4 | | 33 | 175 | 20 |
| 1,2-Dichloropropane | 50 | 0 | 48.5 | ug/L | 97 | | 3 | | 85 | 116 | 20 |
| Bromodichloromethane | 50 | 0 | 52.6 | ug/L | 105 | | 7 | | 86 | 117 | 20 |
| 4-Methyl-2-Pentanone | 250 | 0 | 270 | ug/L | 108 | | 4 | | 72 | 137 | 20 |
| Toluene | 50 | 0 | 46.3 | ug/L | 93 | | 5 | | 85 | 115 | 20 |
| t-1,3-Dichloropropene | 50 | 0 | 51.4 | ug/L | 103 | | 11 | | 78 | 117 | 20 |
| cis-1,3-Dichloropropene | 50 | 0 | 49.3 | ug/L | 99 | | 8 | | 77 | 115 | 20 |
| 1,1,2-Trichloroethane | 50 | 0 | 52.0 | ug/L | 104 | | 5 | | 87 | 119 | 20 |
| 2-Hexanone | 250 | 0 | 270 | ug/L | 108 | | 7 | | 75 | 131 | 20 |
| Dibromochloromethane | 50 | 0 | 56.3 | ug/L | 113 | | 8 | | 88 | 118 | 20 |
| 1,2-Dibromoethane | 50 | 0 | 53.1 | ug/L | 106 | | 5 | | 85 | 119 | 20 |
| Tetrachloroethene | 50 | 0 | 35.9 | ug/L | 72 | | 5 | | 65 | 114 | 20 |
| Chlorobenzene | 50 | 0 | 43.9 | ug/L | 88 | | 0 | | 85 | 114 | 20 |
| Ethyl Benzene | 50 | 0 | 42.3 | ug/L | 85 | | 1 | | 62 | 134 | 20 |
| m/p-Xylenes | 100 | 0 | 84.2 | ug/L | 84 | | 2 | | 47 | 145 | 20 |
| o-Xylene | 50 | 0 | 44.1 | ug/L | 88 | | 1 | | 56 | 140 | 20 |
| Styrene | 50 | 0 | 45.3 | ug/L | 91 | | 3 | | 84 | 128 | 20 |
| Bromoform | 50 | 0 | 53.8 | ug/L | 108 | | 0 | | 83 | 121 | 20 |
| Isopropylbenzene | 50 | 0 | 43.1 | ug/L | 86 | | 3 | | 76 | 121 | 20 |
| 1,1,2,2-Tetrachloroethane | 50 | 0 | 51.6 | ug/L | 103 | | 9 | | 66 | 145 | 20 |
| 1,3-Dichlorobenzene | 50 | 0 | 44.9 | ug/L | 90 | | 2 | | 84 | 110 | 20 |
| 1,4-Dichlorobenzene | 50 | 0 | 43.4 | ug/L | 87 | | 3 | | 81 | 111 | 20 |

CHEMTECH

## Matrix Spike/Matrix Spike Duplicate Summary
## SW-846

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 50 | 0 | 45.1 | ug/L | 90 | | 0 | | 82 | 113 | 20 |
| 1,2-Dibromo-3-Chloropropane | 50 | 0 | 56.1 | ug/L | 112 | | 10 | | 79 | 137 | 20 |
| 1,2,4-Trichlorobenzene | 50 | 0 | 41.4 | ug/L | 83 | | 13 | | 73 | 120 | 20 |
| 1,2,3-Trichlorobenzene | 50 | 0 | 41.2 | ug/L | 82 | | 12 | | 75 | 119 | 20 |

CHEMTECH

**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2521
**Client:** GEI Consultants, Inc., P.C.
**Analytical Method:** SW8260-Low **Datafile :** VX035471.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0502WBS01 | Dichlorodifluoromethane | 20 | 18.3 | ug/L | 92 | | | 69 | 116 | |
| | Chloromethane | 20 | 16.2 | ug/L | 81 | | | 65 | 116 | |
| | Vinyl chloride | 20 | 16.8 | ug/L | 84 | | | 65 | 117 | |
| | Bromomethane | 20 | 15.9 | ug/L | 79 | | | 42 | 173 | |
| | Chloroethane | 20 | 16.5 | ug/L | 83 | | | 44 | 165 | |
| | Trichlorofluoromethane | 20 | 17.8 | ug/L | 89 | | | 73 | 115 | |
| | 1,1,2-Trichlorotrifluoroethane | 20 | 18.4 | ug/L | 92 | | | 80 | 112 | |
| | 1,1-Dichloroethene | 20 | 17.3 | ug/L | 86 | | | 74 | 110 | |
| | Acetone | 100 | 91.7 | ug/L | 92 | | | 60 | 125 | |
| | Carbon disulfide | 20 | 16.2 | ug/L | 81 | | | 64 | 112 | |
| | Methyl tert-butyl Ether | 20 | 19.2 | ug/L | 96 | | | 78 | 114 | |
| | Methyl Acetate | 20 | 18.4 | ug/L | 92 | | | 67 | 125 | |
| | Methylene Chloride | 20 | 17.0 | ug/L | 85 | | | 72 | 114 | |
| | trans-1,2-Dichloroethene | 20 | 17.5 | ug/L | 88 | | | 75 | 108 | |
| | 1,1-Dichloroethane | 20 | 18.2 | ug/L | 91 | | | 78 | 112 | |
| | Cyclohexane | 20 | 17.0 | ug/L | 85 | | | 75 | 110 | |
| | 2-Butanone | 100 | 88.2 | ug/L | 88 | | | 65 | 122 | |
| | Carbon Tetrachloride | 20 | 19.3 | ug/L | 97 | | | 77 | 113 | |
| | cis-1,2-Dichloroethene | 20 | 17.7 | ug/L | 89 | | | 77 | 110 | |
| | Bromochloromethane | 20 | 20.5 | ug/L | 103 | | | 70 | 124 | |
| | Chloroform | 20 | 18.9 | ug/L | 95 | | | 79 | 113 | |
| | 1,1,1-Trichloroethane | 20 | 18.6 | ug/L | 93 | | | 80 | 108 | |
| | Methylcyclohexane | 20 | 18.2 | ug/L | 91 | | | 72 | 115 | |
| | Benzene | 20 | 18.3 | ug/L | 92 | | | 82 | 109 | |
| | 1,2-Dichloroethane | 20 | 19.2 | ug/L | 96 | | | 80 | 115 | |
| | Trichloroethene | 20 | 18.7 | ug/L | 94 | | | 77 | 113 | |
| | 1,2-Dichloropropane | 20 | 19.0 | ug/L | 95 | | | 83 | 111 | |
| | Bromodichloromethane | 20 | 19.9 | ug/L | 100 | | | 83 | 110 | |
| | 4-Methyl-2-Pentanone | 100 | 94.9 | ug/L | 95 | | | 74 | 118 | |
| | Toluene | 20 | 18.6 | ug/L | 93 | | | 82 | 110 | |
| | t-1,3-Dichloropropene | 20 | 20.5 | ug/L | 103 | | | 79 | 110 | |
| | cis-1,3-Dichloropropene | 20 | 20.0 | ug/L | 100 | | | 82 | 110 | |
| | 1,1,2-Trichloroethane | 20 | 19.4 | ug/L | 97 | | | 83 | 112 | |
| | 2-Hexanone | 100 | 93.9 | ug/L | 94 | | | 73 | 117 | |
| | Dibromochloromethane | 20 | 20.8 | ug/L | 104 | | | 82 | 110 | |
| | 1,2-Dibromoethane | 20 | 19.8 | ug/L | 99 | | | 81 | 110 | |
| | Tetrachloroethene | 20 | 19.1 | ug/L | 96 | | | 67 | 123 | |
| | Chlorobenzene | 20 | 18.8 | ug/L | 94 | | | 82 | 109 | |
| | Ethyl Benzene | 20 | 19.2 | ug/L | 96 | | | 83 | 109 | |
| | m/p-Xylenes | 40 | 38.9 | ug/L | 97 | | | 82 | 110 | |
| | o-Xylene | 20 | 19.4 | ug/L | 97 | | | 83 | 109 | |
| | Styrene | 20 | 19.7 | ug/L | 99 | | | 80 | 111 | |
| | Bromoform | 20 | 20.4 | ug/L | 102 | | | 79 | 109 | |
| | Isopropylbenzene | 20 | 20.0 | ug/L | 100 | | | 83 | 112 | |
| | 1,1,2,2-Tetrachloroethane | 20 | 19.7 | ug/L | 99 | | | 76 | 118 | |
| | 1,3-Dichlorobenzene | 20 | 19.6 | ug/L | 98 | | | 82 | 108 | |
| | 1,4-Dichlorobenzene | 20 | 18.5 | ug/L | 93 | | | 82 | 107 | |
| | 1,2-Dichlorobenzene | 20 | 19.1 | ug/L | 96 | | | 82 | 109 | |
| | 1,2-Dibromo-3-Chloropropane | 20 | 19.7 | ug/L | 99 | | | 68 | 112 | |

CHEMTECH

**Laboratory Control Sample/Laboratory Control Sample Duplicate Summary**
**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8260-Low **Datafile :** VX035471.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VX0502WBS01 | 1,2,4-Trichlorobenzene | 20 | 19.7 | ug/L | 99 | | | 74 | 114 | |
| | 1,2,3-Trichlorobenzene | 20 | 19.7 | ug/L | 99 | | | 77 | 113 | |

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# VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX0502WBL01

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

Lab File ID: VX035468.D Lab Sample ID: VX0502WBL01

Date Analyzed: 05/02/2023 Time Analyzed: 10:42

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| VX0502WBS01 | VX0502WBS01 | VX035471.D | 05/02/2023 |
| FB | O2521-14 | VX035475.D | 05/02/2023 |
| TB-2 | O2521-13 | VX035476.D | 05/02/2023 |
| GMW-1 | O2521-01 | VX035479.D | 05/02/2023 |
| PZ-15 | O2521-03 | VX035480.D | 05/02/2023 |
| GMW-10 | O2521-05 | VX035481.D | 05/02/2023 |
| GMW-7 | O2521-07 | VX035482.D | 05/02/2023 |
| GMW-7MS | O2521-09MS | VX035489.D | 05/02/2023 |
| GMW-7MSD | O2521-10MSD | VX035490.D | 05/02/2023 |

COMMENTS:

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# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

Lab File ID: VX035269.D BFB Injection Date: 04/25/2023

Instrument ID: MSVOA_X BFB Injection Time: 08:57

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.5 |
| 75 | 30.0 - 60.0% of mass 95 | 49.1 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 7 |
| 173 | Less than 2.0% of mass 174 | 0.5 ( 0.6 ) 1 |
| 174 | 50.0 - 100.0% of mass 95 | 75.5 |
| 175 | 5.0 - 9.0% of mass 174 | 5.9 ( 7.8 ) 1 |
| 176 | 95.0 - 101.0% of mass 174 | 75.2 ( 99.5 ) 1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.1 ( 6.7 ) 2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| VSTDICC001 | VSTDICC001 | VX035272.D | 04/25/2023 | 10:37 |
| VSTDICC005 | VSTDICC005 | VX035273.D | 04/25/2023 | 11:00 |
| VSTDICC020 | VSTDICC020 | VX035274.D | 04/25/2023 | 11:23 |
| VSTDICCC050 | VSTDICCC050 | VX035275.D | 04/25/2023 | 11:46 |
| VSTDICC150 | VSTDICC150 | VX035277.D | 04/25/2023 | 12:32 |
| VSTDICC100 | VSTDICC100 | VX035279.D | 04/25/2023 | 13:21 |

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

Lab File ID: VX035465.D BFB Injection Date: 05/02/2023

Instrument ID: MSVOA_X BFB Injection Time: 09:18

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 16.6 |
| 75 | 30.0 - 60.0% of mass 95 | 48.2 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 7.1 |
| 173 | Less than 2.0% of mass 174 | 0.3 ( 0.4 ) 1 |
| 174 | 50.0 - 100.0% of mass 95 | 78.1 |
| 175 | 5.0 - 9.0% of mass 174 | 5.8 ( 7.4 ) 1 |
| 176 | 95.0 - 101.0% of mass 174 | 75.8 ( 97.1 ) 1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.2 ( 6.9 ) 2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| VSTDCCC050 | VSTDCCC050 | VX035466.D | 05/02/2023 | 09:51 |
| VX0502WBL01 | VX0502WBL01 | VX035468.D | 05/02/2023 | 10:42 |
| VX0502WBS01 | VX0502WBS01 | VX035471.D | 05/02/2023 | 12:06 |
| FB | O2521-14 | VX035475.D | 05/02/2023 | 13:39 |
| TB-2 | O2521-13 | VX035476.D | 05/02/2023 | 14:02 |
| GMW-1 | O2521-01 | VX035479.D | 05/02/2023 | 15:12 |
| PZ-15 | O2521-03 | VX035480.D | 05/02/2023 | 15:35 |
| GMW-10 | O2521-05 | VX035481.D | 05/02/2023 | 15:58 |
| GMW-7 | O2521-07 | VX035482.D | 05/02/2023 | 16:22 |
| GMW-7MS | O2521-09MS | VX035489.D | 05/02/2023 | 19:05 |
| GMW-7MSD | O2521-10MSD | VX035490.D | 05/02/2023 | 19:28 |

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## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

Lab File ID: VX035466.D Date Analyzed: 05/02/2023

Instrument ID: MSVOA_X Time Analyzed: 09:51

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 266388 | 5.55 | 413827 | 6.76 | 352802 | 10.06 |
| UPPER LIMIT | 532776 | 6.05 | 827654 | 7.257 | 705604 | 10.555 |
| LOWER LIMIT | 133194 | 5.05 | 206914 | 6.257 | 176401 | 9.555 |
| EPA SAMPLE NO. | | | | | | |
| GMW-1 | 219899 | 5.55 | 353240 | 6.76 | 315578 | 10.06 |
| PZ-15 | 234153 | 5.56 | 376409 | 6.76 | 347920 | 10.06 |
| GMW-10 | 239956 | 5.56 | 398040 | 6.76 | 365850 | 10.06 |
| GMW-7 | 226018 | 5.55 | 369917 | 6.76 | 336556 | 10.06 |
| GMW-7MS | 158417 | 5.55 | 275723 | 6.76 | 245530 | 10.06 |
| GMW-7MSD | 183547 | 5.56 | 326028 | 6.76 | 309770 | 10.06 |
| TB-2 | 244671 | 5.56 | 397795 | 6.76 | 349827 | 10.06 |
| FB | 229556 | 5.55 | 377193 | 6.76 | 347606 | 10.06 |
| VX0502WBL01 | 262892 | 5.55 | 425885 | 6.76 | 388967 | 10.06 |
| VX0502WBS01 | 252421 | 5.56 | 389892 | 6.76 | 341434 | 10.06 |

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

Lab File ID: VX035466.D Date Analyzed: 05/02/2023

Instrument ID: MSVOA_X Time Analyzed: 09:51

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS4 AREA # | RT # | | | | |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 175791 | 12.018 | | | | |
| UPPER LIMIT | 351582 | 12.518 | | | | |
| LOWER LIMIT | 87895.5 | 11.518 | | | | |
| EPA SAMPLE NO. | | | | | | |
| GMW-1 | 144473 | 12.02 | | | | |
| PZ-15 | 171803 | 12.02 | | | | |
| GMW-10 | 172382 | 12.02 | | | | |
| GMW-7 | 158095 | 12.02 | | | | |
| GMW-7MS | 112617 | 12.02 | | | | |
| GMW-7MSD | 147703 | 12.02 | | | | |
| TB-2 | 159751 | 12.02 | | | | |
| FB | 167849 | 12.02 | | | | |
| VX0502WBL01 | 180000 | 12.02 | | | | |
| VX0502WBS01 | 169110 | 12.02 | | | | |

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

# QC SAMPLE DATA

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0502WBL01 | SDG No.: | O2521 |
| Lab Sample ID: | VX0502WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035468.D | 1 | | 05/02/23 10:42 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 1.00 | U | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | U | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 1.00 | U | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | U | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.00 | U | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.00 | U | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | U | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | U | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.00 | U | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 1.00 | U | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 1.00 | U | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | U | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0502WBL01 | SDG No.: | O2521 |
| Lab Sample ID: | VX0502WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035468.D | 1 | | 05/02/23 10:42 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | U | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.00 | U | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.1 | | 74 - 125 | 94% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 49.6 | | 75 - 124 | 99% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.6 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 51.5 | | 64 - 133 | 103% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 263000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 426000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 389000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 180000 | 12.024 | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0502WBL01 | SDG No.: | O2521 |
| Lab Sample ID: | VX0502WBL01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035468.D | 1 | | 05/02/23 10:42 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0502WBS01 | SDG No.: | O2521 |
| Lab Sample ID: | VX0502WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035471.D | 1 | | 05/02/23 12:06 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 18.3 | | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 16.2 | | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 16.8 | | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 15.9 | | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 16.5 | | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 17.8 | | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 18.4 | | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 17.3 | | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 91.7 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 16.2 | | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 19.2 | | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 18.4 | | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 17.0 | | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 17.5 | | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 18.2 | | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 17.0 | | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 88.2 | | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 19.3 | | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 17.7 | | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 20.5 | | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 18.9 | | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 18.6 | | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 18.2 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 18.3 | | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 19.2 | | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 18.7 | | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 19.0 | | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 19.9 | | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 94.9 | | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 18.6 | | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 20.5 | | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 20.0 | | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0502WBS01 | SDG No.: | O2521 |
| Lab Sample ID: | VX0502WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035471.D | 1 | | 05/02/23 12:06 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 19.4 | | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 93.9 | | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 20.8 | | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 19.8 | | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 19.1 | | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 18.8 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 19.2 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 38.9 | | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 19.4 | | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 19.7 | | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 20.4 | | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 20.0 | | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 19.7 | | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 19.6 | | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 18.5 | | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 19.1 | | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 19.7 | | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 19.7 | | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 19.7 | | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.7 | | 74 - 125 | 99% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.9 | | 75 - 124 | 104% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.6 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 51.4 | | 64 - 133 | 103% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 252000 | 5.556 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 390000 | 6.757 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 341000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 169000 | 12.024 | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | VX0502WBS01 | SDG No.: | O2521 |
| Lab Sample ID: | VX0502WBS01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035471.D | 1 | | 05/02/23 12:06 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MS | SDG No.: | O2521 |
| Lab Sample ID: | O2521-09MS | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035489.D | 1 | | 05/02/23 19:05 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 41.4 | | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 40.3 | | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 41.7 | | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 34.2 | | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 44.0 | | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 42.9 | | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 38.7 | | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 41.9 | | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 270 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 38.1 | | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 53.6 | | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 54.0 | | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 44.4 | | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 44.4 | | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 48.3 | | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 40.3 | | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 310 | | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 42.2 | | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 50.2 | | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 50.6 | | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 52.4 | | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 48.1 | | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 33.0 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 44.6 | | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 48.3 | | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 41.7 | | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 47.0 | | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 48.8 | | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 280 | | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 44.2 | | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 46.2 | | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 45.4 | | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MS | SDG No.: | O2521 |
| Lab Sample ID: | O2521-09MS | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035489.D | 1 | | 05/02/23 19:05 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 49.3 | | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 290 | | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 52.0 | | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 50.6 | | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 37.8 | | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 43.8 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 42.0 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 82.9 | | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 43.6 | | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 43.8 | | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 53.6 | | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 44.3 | | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 56.7 | | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 44.0 | | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 42.0 | | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 45.0 | | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 61.8 | | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 36.5 | | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 36.7 | | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 51.6 | | 74 - 125 | 103% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.0 | | 75 - 124 | 92% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 43.6 | | 86 - 113 | 87% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.0 | | 64 - 133 | 86% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 158000 | 5.55 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 276000 | 6.763 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 246000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 113000 | 12.024 | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MS | SDG No.: | O2521 |
| Lab Sample ID: | O2521-09MS | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035489.D | 1 | | 05/02/23 19:05 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MSD | SDG No.: | O2521 |
| Lab Sample ID: | O2521-10MSD | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035490.D | 1 | | 05/02/23 19:28 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 36.3 | | 0.14 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 43.4 | | 0.25 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 42.1 | | 0.25 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 39.1 | | 1.60 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 42.3 | | 0.28 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 41.1 | | 0.13 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 34.6 | | 0.21 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 42.4 | | 0.21 | 1.00 | ug/L |
| 67-64-1 | Acetone | 260 | | 1.20 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 41.3 | | 0.27 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 57.3 | | 0.14 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 51.3 | | 0.36 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 48.1 | | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 46.3 | | 0.17 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 50.5 | | 0.16 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 35.1 | | 1.60 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 270 | | 1.20 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 41.7 | | 0.13 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 51.0 | | 0.20 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 51.9 | | 0.14 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 53.3 | | 0.14 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 48.8 | | 0.14 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 27.9 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 43.8 | | 0.12 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 48.8 | | 0.16 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 43.2 | | 0.26 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 48.5 | | 0.15 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 52.6 | | 0.15 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 270 | | 0.74 | 5.00 | ug/L |
| 108-88-3 | Toluene | 46.3 | | 0.14 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 51.4 | | 0.17 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 49.3 | | 0.15 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MSD | SDG No.: | O2521 |
| Lab Sample ID: | O2521-10MSD | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035490.D | 1 | | 05/02/23 19:28 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 52.0 | | 0.13 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 270 | | 0.98 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 56.3 | | 0.15 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 53.1 | | 0.13 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 35.9 | | 0.17 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 43.9 | | 0.12 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 42.3 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 84.2 | | 0.31 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 44.1 | | 0.15 | 1.00 | ug/L |
| 100-42-5 | Styrene | 45.3 | | 0.13 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 53.8 | | 0.15 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 43.1 | | 0.13 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 51.6 | | 0.15 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 44.9 | | 0.23 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 43.4 | | 0.24 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 45.1 | | 0.17 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 56.1 | | 0.43 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 41.4 | | 0.43 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 41.2 | | 0.55 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 62.4 | | 74 - 125 | 125% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 56.0 | | 75 - 124 | 112% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 53.0 | | 86 - 113 | 106% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 55.0 | | 64 - 133 | 110% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 184000 | 5.556 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 326000 | 6.757 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 310000 | 10.055 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 148000 | 12.024 | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MSD | SDG No.: | O2521 |
| Lab Sample ID: | O2521-10MSD | Matrix: | Water |
| Analytical Method: | SW8260 | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX035490.D | 1 | | 05/02/23 19:28 | VX050223 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# CALIBRATION SUMMARY

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: MSVOA_X Calibration Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Calibration Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID: RRF001 = VX035272.D RRF005 = VX035273.D RRF020 = VX035274.D
RRF050 = VX035275.D RRF150 = VX035277.D RRF100 = VX035279.D

| COMPOUND | RRF001 | RRF005 | RRF020 | RRF050 | RRF150 | RRF100 | $\overline{RRF}$ | % RSD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.488 | 0.488 | 0.515 | 0.550 | 0.543 | 0.589 | 0.529 | 7.5 |
| Chloromethane | 0.521 | 0.467 | 0.445 | 0.473 | 0.484 | 0.498 | 0.481 | 5.4 |
| Vinyl Chloride | 0.485 | 0.479 | 0.449 | 0.478 | 0.488 | 0.518 | 0.483 | 4.6 |
| Bromomethane | | 0.316 | 0.307 | 0.317 | 0.328 | 0.336 | 0.321 | 3.5 |
| Chloroethane | 0.332 | 0.268 | 0.264 | 0.277 | 0.268 | 0.285 | 0.282 | 9 |
| Trichlorofluoromethane | 0.848 | 0.740 | 0.719 | 0.732 | 0.713 | 0.778 | 0.755 | 6.8 |
| 1,1,2-Trichlorotrifluoroethane | 0.562 | 0.496 | 0.459 | 0.493 | 0.483 | 0.532 | 0.504 | 7.3 |
| 1,1-Dichloroethene | 0.545 | 0.475 | 0.444 | 0.471 | 0.475 | 0.504 | 0.486 | 7.2 |
| Acetone | 0.310 | 0.255 | 0.247 | 0.253 | 0.237 | 0.270 | 0.262 | 9.9 |
| Carbon Disulfide | 1.168 | 1.018 | 1.053 | 1.182 | 1.259 | 1.304 | 1.164 | 9.6 |
| Methyl tert-butyl Ether | 1.731 | 1.674 | 1.558 | 1.657 | 1.649 | 1.727 | 1.666 | 3.8 |
| Methyl Acetate | 1.071 | 0.953 | 0.968 | 1.022 | 1.018 | 1.048 | 1.013 | 4.5 |
| Methylene Chloride | 0.840 | 0.588 | 0.536 | 0.539 | 0.536 | 0.565 | 0.601 | 19.8 |
| trans-1,2-Dichloroethene | 0.567 | 0.535 | 0.488 | 0.514 | 0.515 | 0.546 | 0.527 | 5.2 |
| 1,1-Dichloroethane | 0.982 | 0.949 | 0.895 | 0.949 | 0.944 | 0.997 | 0.953 | 3.7 |
| Cyclohexane | | 0.842 | 0.832 | 0.855 | 0.841 | 0.909 | 0.856 | 3.6 |
| 2-Butanone | 0.395 | 0.386 | 0.365 | 0.382 | 0.373 | 0.394 | 0.382 | 3.1 |
| Carbon Tetrachloride | 0.427 | 0.412 | 0.429 | 0.466 | 0.485 | 0.511 | 0.455 | 8.5 |
| cis-1,2-Dichloroethene | 0.713 | 0.600 | 0.569 | 0.598 | 0.606 | 0.634 | 0.620 | 8.1 |
| Bromochloromethane | 0.364 | 0.421 | 0.404 | 0.415 | 0.417 | 0.414 | 0.406 | 5.2 |
| Chloroform | 0.969 | 0.967 | 0.924 | 0.960 | 0.950 | 0.999 | 0.962 | 2.6 |
| 1,1,1-Trichloroethane | 0.848 | 0.797 | 0.778 | 0.851 | 0.874 | 0.908 | 0.843 | 5.7 |
| Methylcyclohexane | 0.593 | 0.561 | 0.550 | 0.580 | 0.579 | 0.637 | 0.583 | 5.2 |
| Benzene | 1.473 | 1.386 | 1.313 | 1.345 | 1.325 | 1.406 | 1.375 | 4.3 |
| 1,2-Dichloroethane | 0.514 | 0.498 | 0.464 | 0.482 | 0.479 | 0.504 | 0.490 | 3.8 |
| Trichloroethene | 0.391 | 0.383 | 0.358 | 0.372 | 0.372 | 0.395 | 0.379 | 3.6 |
| 1,2-Dichloropropane | 0.366 | 0.335 | 0.325 | 0.344 | 0.344 | 0.364 | 0.347 | 4.7 |
| Bromodichloromethane | 0.404 | 0.406 | 0.406 | 0.455 | 0.470 | 0.490 | 0.438 | 8.7 |
| 4-Methyl-2-Pentanone | 0.465 | 0.459 | 0.439 | 0.454 | 0.434 | 0.461 | 0.452 | 2.8 |
| Toluene | 0.911 | 0.880 | 0.829 | 0.864 | 0.845 | 0.899 | 0.871 | 3.6 |
| t-1,3-Dichloropropene | 0.351 | 0.368 | 0.434 | 0.496 | 0.539 | 0.559 | 0.458 | 19.1 |
| cis-1,3-Dichloropropene | 0.419 | 0.459 | 0.496 | 0.553 | 0.577 | 0.603 | 0.518 | 13.8 |
| 1,1,2-Trichloroethane | 0.382 | 0.344 | 0.326 | 0.343 | 0.336 | 0.352 | 0.347 | 5.6 |

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: MSVOA_X Calibration Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Calibration Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID: RRF001 = VX035272.D RRF005 = VX035273.D RRF020 = VX035274.D
RRF050 = VX035275.D RRF150 = VX035277.D RRF100 = VX035279.D

| COMPOUND | RRF001 | RRF005 | RRF020 | RRF050 | RRF150 | RRF100 | $\overline{RRF}$ | % RSD |
|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | 0.339 | 0.342 | 0.332 | 0.347 | 0.322 | 0.354 | 0.339 | 3.3 |
| Dibromochloromethane | 0.271 | 0.290 | 0.315 | 0.355 | 0.375 | 0.390 | 0.333 | 14.4 |
| 1,2-Dibromoethane | 0.355 | 0.347 | 0.345 | 0.362 | 0.361 | 0.379 | 0.358 | 3.4 |
| Tetrachloroethene | 0.447 | 0.394 | 0.356 | 0.363 | 0.351 | 0.386 | 0.383 | 9.4 |
| Chlorobenzene | 1.214 | 1.127 | 0.997 | 1.030 | 1.022 | 1.101 | 1.082 | 7.6 |
| Ethyl Benzene | 1.993 | 1.874 | 1.739 | 1.854 | 1.811 | 1.969 | 1.873 | 5.1 |
| m/p-Xylenes | 0.731 | 0.731 | 0.679 | 0.710 | 0.697 | 0.760 | 0.718 | 4 |
| o-Xylene | 0.705 | 0.717 | 0.669 | 0.697 | 0.690 | 0.745 | 0.704 | 3.7 |
| Styrene | 1.078 | 1.132 | 1.088 | 1.154 | 1.147 | 1.248 | 1.141 | 5.3 |
| Bromoform | 0.213 | 0.219 | 0.234 | 0.279 | 0.306 | 0.321 | 0.262 | 17.7 |
| Isopropylbenzene | 3.616 | 3.740 | 3.546 | 3.603 | 3.607 | 3.818 | 3.655 | 2.8 |
| 1,1,2,2-Tetrachloroethane | 1.225 | 1.172 | 1.082 | 1.102 | 1.085 | 1.142 | 1.134 | 5 |
| 1,3-Dichlorobenzene | 1.794 | 1.735 | 1.619 | 1.675 | 1.721 | 1.816 | 1.727 | 4.3 |
| 1,4-Dichlorobenzene | 2.166 | 1.837 | 1.637 | 1.681 | 1.706 | 1.834 | 1.810 | 10.6 |
| 1,2-Dichlorobenzene | 2.007 | 1.786 | 1.599 | 1.632 | 1.600 | 1.738 | 1.727 | 9.1 |
| 1,2-Dibromo-3-Chloropropane | 0.202 | 0.192 | 0.214 | 0.238 | 0.261 | 0.258 | 0.227 | 12.8 |
| 1,2,4-Trichlorobenzene | 1.123 | 0.998 | 1.002 | 1.058 | 1.132 | 1.201 | 1.085 | 7.4 |
| 1,2,3-Trichlorobenzene | 1.181 | 1.071 | 1.004 | 1.046 | 1.098 | 1.156 | 1.093 | 6.1 |
| 1,2-Dichloroethane-d4 | | 0.633 | 0.613 | 0.597 | 0.573 | 0.600 | 0.603 | 3.7 |
| Dibromofluoromethane | | 0.302 | 0.309 | 0.308 | 0.297 | 0.318 | 0.307 | 2.6 |
| Toluene-d8 | | 1.179 | 1.191 | 1.167 | 1.087 | 1.165 | 1.158 | 3.5 |
| 4-Bromofluorobenzene | | 0.428 | 0.442 | 0.436 | 0.421 | 0.450 | 0.435 | 2.6 |

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



## VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: MSVOA_X Calibration Date/Time: 05/02/2023 09:51

Lab File ID: VX035466.D Init. Calib. Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.529 | 0.525 | | -0.76 | 20 |
| Chloromethane | 0.481 | 0.419 | 0.1 | -12.89 | 20 |
| Vinyl Chloride | 0.483 | 0.445 | | -7.87 | 20 |
| Bromomethane | 0.321 | 0.256 | | -20.25 | 20 |
| Chloroethane | 0.282 | 0.240 | | -14.89 | 20 |
| Trichlorofluoromethane | 0.755 | 0.726 | | -3.84 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 0.504 | 0.492 | | -2.38 | 20 |
| 1,1-Dichloroethene | 0.486 | 0.454 | | -6.58 | 20 |
| Acetone | 0.262 | 0.253 | | -3.43 | 20 |
| Carbon Disulfide | 1.164 | 1.049 | | -9.88 | 20 |
| Methyl tert-butyl Ether | 1.666 | 1.634 | | -1.92 | 20 |
| Methyl Acetate | 1.013 | 0.936 | | -7.6 | 20 |
| Methylene Chloride | 0.601 | 0.517 | | -13.98 | 20 |
| trans-1,2-Dichloroethene | 0.527 | 0.493 | | -6.45 | 20 |
| 1,1-Dichloroethane | 0.953 | 0.912 | 0.1 | -4.3 | 20 |
| Cyclohexane | 0.856 | 0.812 | | -5.14 | 20 |
| 2-Butanone | 0.382 | 0.354 | | -7.33 | 20 |
| Carbon Tetrachloride | 0.455 | 0.488 | | 7.25 | 20 |
| cis-1,2-Dichloroethene | 0.620 | 0.602 | | -2.9 | 20 |
| Bromochloromethane | 0.406 | 0.375 | | -7.64 | 20 |
| Chloroform | 0.962 | 0.978 | | 1.66 | 20 |
| 1,1,1-Trichloroethane | 0.843 | 0.865 | | 2.61 | 20 |
| Methylcyclohexane | 0.583 | 0.568 | | -2.57 | 20 |
| Benzene | 1.375 | 1.351 | | -1.75 | 20 |
| 1,2-Dichloroethane | 0.490 | 0.487 | | -0.61 | 20 |
| Trichloroethene | 0.379 | 0.387 | | 2.11 | 20 |
| 1,2-Dichloropropane | 0.347 | 0.352 | | 1.44 | 20 |
| Bromodichloromethane | 0.438 | 0.471 | | 7.53 | 20 |
| 4-Methyl-2-Pentanone | 0.452 | 0.435 | | -3.76 | 20 |
| Toluene | 0.871 | 0.852 | | -2.18 | 20 |
| t-1,3-Dichloropropene | 0.458 | 0.507 | | 10.7 | 20 |
| cis-1,3-Dichloropropene | 0.518 | 0.580 | | 11.97 | 20 |
| 1,1,2-Trichloroethane | 0.347 | 0.342 | | -1.44 | 20 |
| 2-Hexanone | 0.339 | 0.318 | | -6.2 | 20 |
| Dibromochloromethane | 0.333 | 0.369 | | 10.81 | 20 |
| 1,2-Dibromoethane | 0.358 | 0.359 | | 0.28 | 20 |
| Tetrachloroethene | 0.383 | 0.375 | | -2.09 | 20 |
| Chlorobenzene | 1.082 | 1.079 | 0.3 | -0.28 | 20 |
| Ethyl Benzene | 1.873 | 1.907 | | 1.82 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



## VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: MSVOA_X Calibration Date/Time: 05/02/2023 09:51

Lab File ID: VX035466.D Init. Calib. Date(s): 04/25/2023 04/25/2023

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:37 13:21

GC Column: DB-624UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| m/p-Xylenes | 0.718 | 0.728 | | 1.39 | 20 |
| o-Xylene | 0.704 | 0.723 | | 2.7 | 20 |
| Styrene | 1.141 | 1.203 | | 5.43 | 20 |
| Bromoform | 0.262 | 0.304 | 0.1 | 16.03 | 20 |
| Isopropylbenzene | 3.655 | 3.799 | | 3.94 | 20 |
| 1,1,2,2-Tetrachloroethane | 1.134 | 1.130 | 0.3 | -0.35 | 20 |
| 1,3-Dichlorobenzene | 1.727 | 1.785 | | 3.36 | 20 |
| 1,4-Dichlorobenzene | 1.810 | 1.786 | | -1.33 | 20 |
| 1,2-Dichlorobenzene | 1.727 | 1.741 | | 0.81 | 20 |
| 1,2-Dibromo-3-Chloropropane | 0.227 | 0.250 | | 10.13 | 20 |
| 1,2,4-Trichlorobenzene | 1.085 | 1.170 | | 7.83 | 20 |
| 1,2,3-Trichlorobenzene | 1.093 | 1.127 | | 3.11 | 20 |
| 1,2-Dichloroethane-d4 | 0.603 | 0.559 | | -7.3 | 20 |
| Dibromofluoromethane | 0.307 | 0.303 | | -1.3 | 20 |
| Toluene-d8 | 1.158 | 1.114 | | -3.8 | 20 |
| 4-Bromofluorobenzene | 0.435 | 0.415 | | -4.6 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

CHEMTECH

284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922



# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O2521 | **OrderDate:** | 4/27/2023 8:52:00 AM |
| **Client:** | GEI Consultants, Inc., P.C. | **Project:** | Ferry Point |
| **Contact:** | Stacey Ng | **Location:** | M11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O2521-01** | **GMW-1** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/27/23 | 05/02/23 | |
| **O2521-03** | **PZ-15** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/27/23 | 05/02/23 | |
| **O2521-05** | **GMW-10** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/27/23 | 05/02/23 | |
| **O2521-07** | **GMW-7** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/27/23 | 05/01/23 | |
| **O2521-14** | **FB** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | SVOC-TCL BNA -20 | 8270E | | 04/27/23 | 05/01/23 | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Hit Summary Sheet
## SW-846

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

| Sample ID | Client ID | | Parameter | | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Client ID : GMW-1** | | | | | | | | | |
| O2521-01 | GMW-1 | WATER | 1-Hexadecanol | * | 8.000 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | Benzophenone | * | 3.100 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | Heneicosane | * | 7.100 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | Heptadecane | * | 3.700 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | n-Hexadecanoic acid | * | 18.600 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | Octadecanoic acid | * | 18.600 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | Pentacosane | * | 4.800 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | Supraene | * | 3.900 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | Tetracosane | * | 6.700 | J | 0 | 0 | ug/L |
| O2521-01 | GMW-1 | WATER | unknown13.168 | * | 7.800 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | **82.30** | | | | |
| | | | **Total Concentration:** | | **82.30** | | | | |
| **Client ID : PZ-15** | | | | | | | | | |
| O2521-03 | PZ-15 | WATER | 1-Nonadecene | * | 7.200 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | 2(3H)-Benzothiazolone | * | 2.700 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | Benzene, 1,1-(1,5-hexadiene-1,6-c | * | 2.700 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | Benzene, 1,2,3,4-tetramethyl- | * | 2.300 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | Benzenesulfonamide, N-ethyl-4-m | * | 3.000 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | Benzophenone | * | 3.900 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | Ethanone, 1-(1,4-dimethyl-3-cycl | * | 7.000 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | n-Hexadecanoic acid | * | 9.900 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | Octadecanoic acid | * | 3.800 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | Phenol, p-tert-butyl- | * | 2.700 | J | 0 | 0 | ug/L |
| O2521-03 | PZ-15 | WATER | Supraene | * | 5.000 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | **50.20** | | | | |
| | | | **Total Concentration:** | | **50.20** | | | | |
| **Client ID : GMW-10** | | | | | | | | | |
| O2521-05 | GMW-10 | WATER | Benzophenone | * | 10.000 | J | 0 | 0 | ug/L |
| O2521-05 | GMW-10 | WATER | Cyclopentadecane | * | 10.700 | J | 0 | 0 | ug/L |
| O2521-05 | GMW-10 | WATER | Heneicosane | * | 2.100 | J | 0 | 0 | ug/L |
| O2521-05 | GMW-10 | WATER | n-Hexadecanoic acid | * | 21.300 | J | 0 | 0 | ug/L |
| O2521-05 | GMW-10 | WATER | Octadecanoic acid | * | 17.000 | J | 0 | 0 | ug/L |
| O2521-05 | GMW-10 | WATER | Supraene | * | 2.400 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | | **63.50** | | | | |
| | | | **Total Concentration:** | | **63.50** | | | | |
| **Client ID : GMW-7** | | | | | | | | | |
| O2521-07 | GMW-7 | WATER | Benzophenone | * | 3.100 | J | 0 | 0 | ug/L |
| O2521-07 | GMW-7 | WATER | n-Hexadecanoic acid | * | 7.900 | J | 0 | 0 | ug/L |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

| Sample ID | Client ID | | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| O2521-07 | GMW-7 | WATER | Octadecanoic acid | * 12.200 | J | 0 | 0 | ug/L |
| | | | **Total Tics :** | **23.20** | | | | |
| | | | **Total Concentration:** | **23.20** | | | | |

# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133182.D | 1 | 04/27/23 10:50 | 05/02/23 11:39 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.0 | U | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.00 | U | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.00 | U | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.00 | U | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.00 | U | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 5.00 | U | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.0 | U | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 5.00 | U | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.00 | U | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.00 | U | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.00 | U | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.00 | U | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | U | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.00 | U | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.0 | U | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.00 | U | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.00 | U | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.00 | U | 2.10 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133182.D | 1 | 04/27/23 10:50 | 05/02/23 11:39 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.0 | U | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.0 | U | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 5.00 | U | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.00 | U | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 5.00 | U | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.00 | U | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.00 | U | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.0 | U | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.00 | U | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.00 | U | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 5.00 | U | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.0 | U | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 5.00 | U | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 5.00 | U | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.00 | U | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.00 | U | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.0 | U | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.00 | U | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.0 | U | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.00 | U | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.00 | U | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133182.D | 1 | 04/27/23 10:50 | 05/02/23 11:39 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.00 | U | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.00 | U | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 67.0 | | 10 - 139 | 45% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 40.9 | | 10 - 134 | 27% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 86.9 | | 49 - 133 | 87% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 85.4 | | 52 - 132 | 85% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 129 | | 45 - 141 | 86% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 90.3 | | 45 - 142 | 90% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 218000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 868000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 448000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 782000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 465000 | 13.886 | | | |
| 1520-96-3 | Perylene-d12 | 390000 | 15.304 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 000119-61-9 | Benzophenone | 3.10 | J | | 10.5 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 18.6 | J | | 11.8 | ug/L |
| 000057-11-4 | Octadecanoic acid | 18.6 | J | | 12.6 | ug/L |
| | unknown13.168 | 7.80 | J | | 13.2 | ug/L |
| 036653-82-4 | 1-Hexadecanol | 8.00 | J | | 13.8 | ug/L |
| 000629-99-2 | Pentacosane | 4.80 | J | | 14.7 | ug/L |
| 007683-64-9 | Supraene | 3.90 | J | | 14.7 | ug/L |
| 000629-94-7 | Heneicosane | 7.10 | J | | 15.0 | ug/L |
| 000646-31-1 | Tetracosane | 6.70 | J | | 15.8 | ug/L |
| 000629-78-7 | Heptadecane | 3.70 | J | | 16.2 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133182.D | 1 | 04/27/23 10:50 | 05/02/23 11:39 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133184.D | 1 | 04/27/23 10:50 | 05/02/23 12:42 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.0 | U | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.00 | U | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.00 | U | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.00 | U | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.00 | U | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 5.00 | U | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.0 | U | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 5.00 | U | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.00 | U | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.00 | U | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.00 | U | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.00 | U | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | U | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.00 | U | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.0 | U | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.00 | U | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.00 | U | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.00 | U | 2.10 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133184.D | 1 | 04/27/23 10:50 | 05/02/23 12:42 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.0 | U | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.0 | U | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 5.00 | U | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.00 | U | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 5.00 | U | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.00 | U | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.00 | U | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.0 | U | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.00 | U | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.00 | U | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 5.00 | U | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.0 | U | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 5.00 | U | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 5.00 | U | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.00 | U | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.00 | U | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.0 | U | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.00 | U | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.0 | U | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.00 | U | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.00 | U | 2.00 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133184.D | 1 | 04/27/23 10:50 | 05/02/23 12:42 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.00 | U | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.00 | U | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 57.6 | | 10 - 139 | 38% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 36.2 | | 10 - 134 | 24% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 76.0 | | 49 - 133 | 76% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 77.6 | | 52 - 132 | 78% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 124 | | 45 - 141 | 83% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 77.1 | | 45 - 142 | 77% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 203000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 828000 | 8.01 | | | |
| 15067-26-2 | Acenaphthene-d10 | 431000 | 9.763 | | | |
| 1517-22-2 | Phenanthrene-d10 | 776000 | 11.245 | | | |
| 1719-03-5 | Chrysene-d12 | 487000 | 13.88 | | | |
| 1520-96-3 | Perylene-d12 | 372000 | 15.304 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 004439-45-6 | Benzene, 1,1-(1,5-hexadiene-1,6-d | 2.70 | J | | 6.91 | ug/L |
| 043219-68-7 | Ethanone, 1-(1,4-dimethyl-3-cycloh | 7.00 | J | | 7.45 | ug/L |
| 000488-23-3 | Benzene, 1,2,3,4-tetramethyl- | 2.30 | J | | 7.76 | ug/L |
| 000098-54-4 | Phenol, p-tert-butyl- | 2.70 | J | | 8.59 | ug/L |
| 000119-61-9 | Benzophenone | 3.90 | J | | 10.5 | ug/L |
| 000934-34-9 | 2(3H)-Benzothiazolone | 2.70 | J | | 10.7 | ug/L |
| 000080-39-7 | Benzenesulfonamide, N-ethyl-4-meth | 3.00 | J | | 10.8 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 9.90 | J | | 11.8 | ug/L |
| 000057-11-4 | Octadecanoic acid | 3.80 | J | | 12.6 | ug/L |
| 018435-45-5 | 1-Nonadecene | 7.20 | J | | 13.8 | ug/L |
| 007683-64-9 | Supraene | 5.00 | J | | 14.7 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133184.D | 1 | 04/27/23 10:50 | 05/02/23 12:42 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133183.D | 1 | 04/27/23 10:50 | 05/02/23 12:11 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.0 | U | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.00 | U | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.00 | U | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.00 | U | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.00 | U | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 5.00 | U | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.0 | U | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 5.00 | U | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.00 | U | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.00 | U | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.00 | U | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.00 | U | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | U | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.00 | U | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.0 | U | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.00 | U | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.00 | U | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.00 | U | 2.10 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133183.D | 1 | 04/27/23 10:50 | 05/02/23 12:11 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.0 | U | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.0 | U | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 5.00 | U | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.00 | U | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 5.00 | U | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.00 | U | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.00 | U | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.0 | U | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.00 | U | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.00 | U | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 5.00 | U | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.0 | U | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 5.00 | U | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 5.00 | U | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.00 | U | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.00 | U | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.0 | U | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.00 | U | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.0 | U | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.00 | U | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.00 | U | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133183.D | 1 | 04/27/23 10:50 | 05/02/23 12:11 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.00 | U | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.00 | U | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 54.4 | | 10 - 139 | 36% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 33.7 | | 10 - 134 | 22% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 74.9 | | 49 - 133 | 75% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 75.2 | | 52 - 132 | 75% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 113 | | 45 - 141 | 75% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 76.0 | | 45 - 142 | 76% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 222000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 884000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 465000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 807000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 532000 | 13.88 | | | |
| 1520-96-3 | Perylene-d12 | 408000 | 15.304 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 000119-61-9 | Benzophenone | 10.0 | J | | 10.5 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 21.3 | J | | 11.8 | ug/L |
| 000057-11-4 | Octadecanoic acid | 17.0 | J | | 12.6 | ug/L |
| 000295-48-7 | Cyclopentadecane | 10.7 | J | | 13.8 | ug/L |
| 007683-64-9 | Supraene | 2.40 | J | | 14.7 | ug/L |
| 000629-94-7 | Heneicosane | 2.10 | J | | 15.8 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133183.D | 1 | 04/27/23 10:50 | 05/02/23 12:11 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133151.D | 1 | 04/27/23 10:50 | 05/01/23 12:47 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.0 | U | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.00 | U | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.00 | U | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.00 | U | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.00 | U | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 5.00 | U | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.0 | U | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 5.00 | U | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.00 | U | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.00 | U | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.00 | U | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.00 | U | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | U | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.00 | U | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.0 | U | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.00 | U | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.00 | U | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.00 | U | 2.10 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133151.D | 1 | 04/27/23 10:50 | 05/01/23 12:47 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.0 | U | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.0 | U | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 5.00 | U | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.00 | U | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 5.00 | U | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.00 | U | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.00 | U | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.0 | U | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.00 | U | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.00 | U | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 5.00 | U | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.0 | U | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 5.00 | U | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 5.00 | U | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.00 | U | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.00 | U | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.0 | U | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.00 | U | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.0 | U | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.00 | U | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.00 | U | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133151.D | 1 | 04/27/23 10:50 | 05/01/23 12:47 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.00 | U | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.00 | U | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 68.0 | | 10 - 139 | 45% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 41.6 | | 10 - 134 | 28% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 89.3 | | 49 - 133 | 89% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 87.8 | | 52 - 132 | 88% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 129 | | 45 - 141 | 86% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 101 | | 45 - 142 | 101% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 187000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 760000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 403000 | 9.763 | | | |
| 1517-22-2 | Phenanthrene-d10 | 716000 | 11.245 | | | |
| 1719-03-5 | Chrysene-d12 | 392000 | 13.88 | | | |
| 1520-96-3 | Perylene-d12 | 352000 | 15.304 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 000119-61-9 | Benzophenone | 3.10 | J | | 10.5 | ug/L |
| 000057-10-3 | n-Hexadecanoic acid | 7.90 | J | | 11.8 | ug/L |
| 000057-11-4 | Octadecanoic acid | 12.2 | J | | 12.6 | ug/L |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-14 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133161.D | 1 | 04/27/23 10:50 | 05/01/23 18:06 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.0 | U | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.00 | U | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.00 | U | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.00 | U | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.00 | U | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 5.00 | U | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.0 | U | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 5.00 | U | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.00 | U | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.00 | U | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.00 | U | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.00 | U | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | U | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.00 | U | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.0 | U | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.00 | U | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.00 | U | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.00 | U | 2.10 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-14 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133161.D | 1 | 04/27/23 10:50 | 05/01/23 18:06 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.0 | U | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.0 | U | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 5.00 | U | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.00 | U | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 5.00 | U | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.00 | U | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.00 | U | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.0 | U | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.00 | U | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.00 | U | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 5.00 | U | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.0 | U | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 5.00 | U | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 5.00 | U | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.00 | U | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.00 | U | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.0 | U | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.00 | U | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.0 | U | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.00 | U | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.00 | U | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-14 | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133161.D | 1 | 04/27/23 10:50 | 05/01/23 18:06 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.00 | U | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.00 | U | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 64.3 | | 10 - 139 | 43% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 39.2 | | 10 - 134 | 26% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 92.2 | | 49 - 133 | 92% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 90.0 | | 52 - 132 | 90% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 132 | | 45 - 141 | 88% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 113 | | 45 - 142 | 113% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 182000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 745000 | 8.01 | | | |
| 15067-26-2 | Acenaphthene-d10 | 394000 | 9.763 | | | |
| 1517-22-2 | Phenanthrene-d10 | 715000 | 11.245 | | | |
| 1719-03-5 | Chrysene-d12 | 387000 | 13.88 | | | |
| 1520-96-3 | Perylene-d12 | 370000 | 15.298 | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# QC SUMMARY

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Surrogate Summary

**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E

| Lab Sample ID | Client ID | Parameter | Spike (PPM) | Result (PPM) | Recovery (%) | Qual | Limits (%) Low | High |
|---|---|---|---|---|---|---|---|---|
| O2521-01 | GMW-1 | 2-Fluorophenol | 150 | 67.0 | 45 | | 10 | 139 |
| | | Phenol-d6 | 150 | 40.9 | 27 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 86.9 | 87 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 85.4 | 85 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 129 | 86 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 90.3 | 90 | | 45 | 142 |
| O2521-03 | PZ-15 | 2-Fluorophenol | 150 | 57.6 | 38 | | 10 | 139 |
| | | Phenol-d6 | 150 | 36.2 | 24 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 76.0 | 76 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 77.6 | 78 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 124 | 83 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 77.1 | 77 | | 45 | 142 |
| O2521-05 | GMW-10 | 2-Fluorophenol | 150 | 54.4 | 36 | | 10 | 139 |
| | | Phenol-d6 | 150 | 33.7 | 22 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 74.9 | 75 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 75.2 | 75 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 113 | 75 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 76.0 | 76 | | 45 | 142 |
| O2521-07 | GMW-7 | 2-Fluorophenol | 150 | 68.0 | 45 | | 10 | 139 |
| | | Phenol-d6 | 150 | 41.6 | 28 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 89.3 | 89 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 87.8 | 88 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 129 | 86 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 101 | 101 | | 45 | 142 |
| O2521-09MS | GMW-7MS | 2-Fluorophenol | 150 | 51.8 | 35 | | 10 | 139 |
| | | Phenol-d6 | 150 | 33.1 | 22 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 70.2 | 70 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 74.1 | 74 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 108 | 72 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 93.7 | 94 | | 45 | 142 |
| O2521-10MSD | GMW-7MSD | 2-Fluorophenol | 150 | 49.7 | 33 | | 10 | 139 |
| | | Phenol-d6 | 150 | 31.9 | 21 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 70.1 | 70 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 74.2 | 74 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 110 | 74 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 92.5 | 92 | | 45 | 142 |
| O2521-14 | FB | 2-Fluorophenol | 150 | 64.3 | 43 | | 10 | 139 |
| | | Phenol-d6 | 150 | 39.2 | 26 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 92.2 | 92 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 90.0 | 90 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 132 | 88 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 113 | 113 | | 45 | 142 |
| PB152460BL | PB152460BL | 2-Fluorophenol | 150 | 116 | 77 | | 10 | 139 |
| | | Phenol-d6 | 150 | 117 | 78 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 73.6 | 74 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 74.7 | 75 | | 52 | 132 |
| | | 2,4,6-Tribromophenol | 150 | 114 | 76 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 69.5 | 70 | | 45 | 142 |
| PB152460BS | PB152460BS | 2-Fluorophenol | 150 | 125 | 83 | | 10 | 139 |
| | | Phenol-d6 | 150 | 121 | 81 | | 10 | 134 |
| | | Nitrobenzene-d5 | 100 | 79.6 | 80 | | 49 | 133 |
| | | 2-Fluorobiphenyl | 100 | 81.6 | 82 | | 52 | 132 |

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## Surrogate Summary

**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E

| Lab Sample ID | Client ID | Parameter | Spike (PPM) | Result (PPM) | Recovery (%) | Qual | Limits (%) Low | Limits (%) High |
|---|---|---|---|---|---|---|---|---|
| PB152460BS | PB152460BS | 2,4,6-Tribromophenol | 150 | 123 | 82 | | 45 | 141 |
| | | Terphenyl-d14 | 100 | 82.2 | 82 | | 45 | 142 |

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**Matrix Spike/Matrix Spike Duplicate Summary**
**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8270E

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lab Sample ID: O2521-09MS** | | **Client Sample ID: GMW-7MS** | | | | | | **DataFile: BF133152.D** | | | |
| Benzaldehyde | 50 | 0 | 40.7 | ug/L | 81 | | | | 10 | 137 | |
| Phenol | 50 | 0 | 13.2 | ug/L | 26 | | | | 10 | 130 | |
| bis(2-Chloroethyl)ether | 50 | 0 | 36.7 | ug/L | 73 | | | | 29 | 141 | |
| 2-Chlorophenol | 50 | 0 | 32.6 | ug/L | 65 | | | | 23 | 127 | |
| 2-Methylphenol | 50 | 0 | 25.7 | ug/L | 51 | | | | 43 | 134 | |
| 2,2-oxybis(1-Chloropropane) | 50 | 0 | 34.5 | ug/L | 69 | | | | 36 | 141 | |
| Acetophenone | 50 | 0 | 38.5 | ug/L | 77 | | | | 31 | 164 | |
| 3+4-Methylphenols | 50 | 0 | 23.3 | ug/L | 47 | | | | 37 | 137 | |
| N-Nitroso-di-n-propylamine | 50 | 0 | 36.9 | ug/L | 74 | | | | 36 | 147 | |
| Hexachloroethane | 50 | 0 | 32.0 | ug/L | 64 | | | | 50 | 127 | |
| Nitrobenzene | 50 | 0 | 35.3 | ug/L | 71 | | | | 59 | 129 | |
| Isophorone | 50 | 0 | 36.4 | ug/L | 73 | | | | 39 | 146 | |
| 2-Nitrophenol | 50 | 0 | 38.6 | ug/L | 77 | | | | 30 | 148 | |
| 2,4-Dimethylphenol | 50 | 0 | 34.7 | ug/L | 69 | | | | 17 | 143 | |
| bis(2-Chloroethoxy)methane | 50 | 0 | 37.2 | ug/L | 74 | | | | 39 | 143 | |
| 2,4-Dichlorophenol | 50 | 0 | 36.2 | ug/L | 72 | | | | 22 | 146 | |
| Naphthalene | 50 | 0 | 35.0 | ug/L | 70 | | | | 17 | 157 | |
| 4-Chloroaniline | 50 | 0 | 20.3 | ug/L | 41 | | | | 10 | 95 | |
| Hexachlorobutadiene | 50 | 0 | 32.8 | ug/L | 66 | | | | 52 | 125 | |
| Caprolactam | 50 | 0 | 9.70 | ug/L | 19 | | | | 10 | 130 | |
| 4-Chloro-3-methylphenol | 50 | 0 | 35.2 | ug/L | 70 | | | | 17 | 148 | |
| 2-Methylnaphthalene | 50 | 0 | 35.3 | ug/L | 71 | | | | 38 | 146 | |
| Hexachlorocyclopentadiene | 100 | 0 | 69.2 | ug/L | 69 | | | | 20 | 153 | |
| 2,4,6-Trichlorophenol | 50 | 0 | 39.2 | ug/L | 78 | | | | 64 | 129 | |
| 2,4,5-Trichlorophenol | 50 | 0 | 36.4 | ug/L | 73 | | | | 64 | 131 | |
| 1,1-Biphenyl | 50 | 0 | 38.1 | ug/L | 76 | | | | 38 | 154 | |
| 2-Chloronaphthalene | 50 | 0 | 39.3 | ug/L | 79 | | | | 41 | 145 | |
| 2-Nitroaniline | 50 | 0 | 40.1 | ug/L | 80 | | | | 39 | 151 | |
| Dimethylphthalate | 50 | 0 | 39.6 | ug/L | 79 | | | | 42 | 147 | |
| Acenaphthylene | 50 | 0 | 38.1 | ug/L | 76 | | | | 40 | 141 | |
| 2,6-Dinitrotoluene | 50 | 0 | 40.9 | ug/L | 82 | | | | 43 | 148 | |
| 3-Nitroaniline | 50 | 0 | 23.4 | ug/L | 47 | | | | 10 | 111 | |
| Acenaphthene | 50 | 0 | 42.2 | ug/L | 84 | | | | 37 | 146 | |
| 2,4-Dinitrophenol | 100 | 0 | 77.6 | ug/L | 78 | | | | 14 | 167 | |
| 4-Nitrophenol | 100 | 0 | 27.2 | ug/L | 27 | | | | 10 | 130 | |
| Dibenzofuran | 50 | 0 | 38.5 | ug/L | 77 | | | | 41 | 145 | |
| 2,4-Dinitrotoluene | 50 | 0 | 42.1 | ug/L | 84 | | | | 56 | 142 | |
| Diethylphthalate | 50 | 0 | 40.2 | ug/L | 80 | | | | 41 | 148 | |
| 4-Chlorophenyl-phenylether | 50 | 0 | 38.1 | ug/L | 76 | | | | 38 | 149 | |
| Fluorene | 50 | 0 | 38.6 | ug/L | 77 | | | | 39 | 144 | |
| 4-Nitroaniline | 50 | 0 | 39.1 | ug/L | 78 | | | | 27 | 138 | |
| 4,6-Dinitro-2-methylphenol | 50 | 0 | 42.6 | ug/L | 85 | | | | 32 | 175 | |
| N-Nitrosodiphenylamine | 50 | 0 | 39.3 | ug/L | 79 | | | | 40 | 150 | |
| 4-Bromophenyl-phenylether | 50 | 0 | 39.4 | ug/L | 79 | | | | 42 | 151 | |
| Hexachlorobenzene | 50 | 0 | 41.0 | ug/L | 82 | | | | 60 | 129 | |
| Atrazine | 50 | 0 | 43.6 | ug/L | 87 | | | | 20 | 162 | |
| Pentachlorophenol | 100 | 0 | 63.2 | ug/L | 63 | | | | 35 | 147 | |

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**Matrix Spike/Matrix Spike Duplicate Summary**
**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8270E

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenanthrene | 50 | 0 | 39.4 | ug/L | 79 | | | | 40 | 147 | |
| Anthracene | 50 | 0 | 39.5 | ug/L | 79 | | | | 41 | 146 | |
| Carbazole | 50 | 0 | 39.4 | ug/L | 79 | | | | 37 | 154 | |
| Di-n-butylphthalate | 50 | 0 | 42.2 | ug/L | 84 | | | | 40 | 151 | |
| Fluoranthene | 50 | 0 | 37.9 | ug/L | 76 | | | | 42 | 146 | |
| Pyrene | 50 | 0 | 47.8 | ug/L | 96 | | | | 41 | 149 | |
| Butylbenzylphthalate | 50 | 0 | 54.0 | ug/L | 108 | | | | 39 | 155 | |
| 3,3-Dichlorobenzidine | 50 | 0 | 27.9 | ug/L | 56 | | | | 10 | 114 | |
| Benzo(a)anthracene | 50 | 0 | 40.1 | ug/L | 80 | | | | 41 | 147 | |
| Chrysene | 50 | 0 | 39.4 | ug/L | 79 | | | | 44 | 144 | |
| bis(2-Ethylhexyl)phthalate | 50 | 0 | 50.4 | ug/L | 101 | | | | 33 | 160 | |
| Di-n-octyl phthalate | 50 | 0 | 50.1 | ug/L | 100 | | | | 36 | 158 | |
| Benzo(b)fluoranthene | 50 | 0 | 38.7 | ug/L | 77 | | | | 40 | 150 | |
| Benzo(k)fluoranthene | 50 | 0 | 38.6 | ug/L | 77 | | | | 40 | 147 | |
| Benzo(a)pyrene | 50 | 0 | 38.3 | ug/L | 77 | | | | 42 | 147 | |
| Indeno(1,2,3-cd)pyrene | 50 | 0 | 51.4 | ug/L | 103 | | | | 30 | 166 | |
| Dibenz(a,h)anthracene | 50 | 0 | 52.0 | ug/L | 104 | | | | 23 | 172 | |
| Benzo(g,h,i)perylene | 50 | 0 | 51.4 | ug/L | 103 | | | | 27 | 167 | |
| 1,2,4,5-Tetrachlorobenzene | 50 | 0 | 36.5 | ug/L | 73 | * | | | 89 | 102 | |
| 1,4-Dioxane | 50 | 0 | 16.2 | ug/L | 32 | * | | | 38 | 130 | |
| 2,3,4,6-Tetrachlorophenol | 50 | 0 | 39.3 | ug/L | 79 | * | | | 91 | 111 | |

**Matrix Spike/Matrix Spike Duplicate Summary**
**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8270E

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lab Sample ID: O2521-10MSD** | | **Client Sample ID: GMW-7MSD** | | | | | | **DataFile: BF133153.D** | | | |
| Benzaldehyde | 50 | 0 | 38.8 | ug/L | 78 | | 4 | | 10 | 137 | 20 |
| Phenol | 50 | 0 | 12.9 | ug/L | 26 | | 0 | | 10 | 130 | 20 |
| bis(2-Chloroethyl)ether | 50 | 0 | 35.8 | ug/L | 72 | | 1 | | 29 | 141 | 20 |
| 2-Chlorophenol | 50 | 0 | 31.8 | ug/L | 64 | | 2 | | 23 | 127 | 20 |
| 2-Methylphenol | 50 | 0 | 24.3 | ug/L | 49 | | 4 | | 43 | 134 | 20 |
| 2,2-oxybis(1-Chloropropane) | 50 | 0 | 33.4 | ug/L | 67 | | 3 | | 36 | 141 | 20 |
| Acetophenone | 50 | 0 | 38.5 | ug/L | 77 | | 0 | | 31 | 164 | 20 |
| 3+4-Methylphenols | 50 | 0 | 22.7 | ug/L | 45 | | 4 | | 37 | 137 | 20 |
| N-Nitroso-di-n-propylamine | 50 | 0 | 35.4 | ug/L | 71 | | 4 | | 36 | 147 | 20 |
| Hexachloroethane | 50 | 0 | 30.5 | ug/L | 61 | | 5 | | 50 | 127 | 20 |
| Nitrobenzene | 50 | 0 | 35.3 | ug/L | 71 | | 0 | | 59 | 129 | 20 |
| Isophorone | 50 | 0 | 36.5 | ug/L | 73 | | 0 | | 39 | 146 | 20 |
| 2-Nitrophenol | 50 | 0 | 38.7 | ug/L | 77 | | 0 | | 30 | 148 | 20 |
| 2,4-Dimethylphenol | 50 | 0 | 34.9 | ug/L | 70 | | 1 | | 17 | 143 | 20 |
| bis(2-Chloroethoxy)methane | 50 | 0 | 36.7 | ug/L | 73 | | 1 | | 39 | 143 | 20 |
| 2,4-Dichlorophenol | 50 | 0 | 36.7 | ug/L | 73 | | 1 | | 22 | 146 | 20 |
| Naphthalene | 50 | 0 | 35.3 | ug/L | 71 | | 1 | | 17 | 157 | 20 |
| 4-Chloroaniline | 50 | 0 | 24.7 | ug/L | 49 | | 18 | | 10 | 95 | 20 |
| Hexachlorobutadiene | 50 | 0 | 33.2 | ug/L | 66 | | 0 | | 52 | 125 | 20 |
| Caprolactam | 50 | 0 | 10.0 | ug/L | 20 | | 5 | | 10 | 130 | 20 |
| 4-Chloro-3-methylphenol | 50 | 0 | 35.0 | ug/L | 70 | | 0 | | 17 | 148 | 20 |
| 2-Methylnaphthalene | 50 | 0 | 36.1 | ug/L | 72 | | 1 | | 38 | 146 | 20 |
| Hexachlorocyclopentadiene | 100 | 0 | 69.6 | ug/L | 70 | | 1 | | 20 | 153 | 20 |
| 2,4,6-Trichlorophenol | 50 | 0 | 38.5 | ug/L | 77 | | 1 | | 64 | 129 | 20 |
| 2,4,5-Trichlorophenol | 50 | 0 | 35.6 | ug/L | 71 | | 3 | | 64 | 131 | 20 |
| 1,1-Biphenyl | 50 | 0 | 38.1 | ug/L | 76 | | 0 | | 38 | 154 | 20 |
| 2-Chloronaphthalene | 50 | 0 | 38.6 | ug/L | 77 | | 3 | | 41 | 145 | 20 |
| 2-Nitroaniline | 50 | 0 | 38.1 | ug/L | 76 | | 5 | | 39 | 151 | 20 |
| Dimethylphthalate | 50 | 0 | 39.1 | ug/L | 78 | | 1 | | 42 | 147 | 20 |
| Acenaphthylene | 50 | 0 | 38.4 | ug/L | 77 | | 1 | | 40 | 141 | 20 |
| 2,6-Dinitrotoluene | 50 | 0 | 40.7 | ug/L | 81 | | 1 | | 43 | 148 | 20 |
| 3-Nitroaniline | 50 | 0 | 25.7 | ug/L | 51 | | 8 | | 10 | 111 | 20 |
| Acenaphthene | 50 | 0 | 41.3 | ug/L | 83 | | 1 | | 37 | 146 | 20 |
| 2,4-Dinitrophenol | 100 | 0 | 80.5 | ug/L | 81 | | 4 | | 14 | 167 | 20 |
| 4-Nitrophenol | 100 | 0 | 27.4 | ug/L | 27 | | 0 | | 10 | 130 | 20 |
| Dibenzofuran | 50 | 0 | 37.8 | ug/L | 76 | | 1 | | 41 | 145 | 20 |
| 2,4-Dinitrotoluene | 50 | 0 | 42.2 | ug/L | 84 | | 0 | | 56 | 142 | 20 |
| Diethylphthalate | 50 | 0 | 40.1 | ug/L | 80 | | 0 | | 41 | 148 | 20 |
| 4-Chlorophenyl-phenylether | 50 | 0 | 38.1 | ug/L | 76 | | 0 | | 38 | 149 | 20 |
| Fluorene | 50 | 0 | 38.8 | ug/L | 78 | | 1 | | 39 | 144 | 20 |
| 4-Nitroaniline | 50 | 0 | 38.9 | ug/L | 78 | | 0 | | 27 | 138 | 20 |
| 4,6-Dinitro-2-methylphenol | 50 | 0 | 43.7 | ug/L | 87 | | 2 | | 32 | 175 | 20 |
| N-Nitrosodiphenylamine | 50 | 0 | 39.4 | ug/L | 79 | | 0 | | 40 | 150 | 20 |
| 4-Bromophenyl-phenylether | 50 | 0 | 39.0 | ug/L | 78 | | 1 | | 42 | 151 | 20 |
| Hexachlorobenzene | 50 | 0 | 41.5 | ug/L | 83 | | 1 | | 60 | 129 | 20 |
| Atrazine | 50 | 0 | 45.4 | ug/L | 91 | | 4 | | 20 | 162 | 20 |
| Pentachlorophenol | 100 | 0 | 66.0 | ug/L | 66 | | 5 | | 35 | 147 | 20 |

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**Matrix Spike/Matrix Spike Duplicate Summary**
**SW-846**

**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** SW8270E

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenanthrene | 50 | 0 | 39.5 | ug/L | 79 | | 0 | | 40 | 147 | 20 |
| Anthracene | 50 | 0 | 39.8 | ug/L | 80 | | 1 | | 41 | 146 | 20 |
| Carbazole | 50 | 0 | 40.0 | ug/L | 80 | | 1 | | 37 | 154 | 20 |
| Di-n-butylphthalate | 50 | 0 | 43.0 | ug/L | 86 | | 2 | | 40 | 151 | 20 |
| Fluoranthene | 50 | 0 | 38.8 | ug/L | 78 | | 3 | | 42 | 146 | 20 |
| Pyrene | 50 | 0 | 46.7 | ug/L | 93 | | 3 | | 41 | 149 | 20 |
| Butylbenzylphthalate | 50 | 0 | 54.4 | ug/L | 109 | | 1 | | 39 | 155 | 20 |
| 3,3-Dichlorobenzidine | 50 | 0 | 31.8 | ug/L | 64 | | 13 | | 10 | 114 | 20 |
| Benzo(a)anthracene | 50 | 0 | 39.9 | ug/L | 80 | | 0 | | 41 | 147 | 20 |
| Chrysene | 50 | 0 | 38.7 | ug/L | 77 | | 3 | | 44 | 144 | 20 |
| bis(2-Ethylhexyl)phthalate | 50 | 0 | 49.8 | ug/L | 100 | | 1 | | 33 | 160 | 20 |
| Di-n-octyl phthalate | 50 | 0 | 49.8 | ug/L | 100 | | 0 | | 36 | 158 | 20 |
| Benzo(b)fluoranthene | 50 | 0 | 39.1 | ug/L | 78 | | 1 | | 40 | 150 | 20 |
| Benzo(k)fluoranthene | 50 | 0 | 38.2 | ug/L | 76 | | 1 | | 40 | 147 | 20 |
| Benzo(a)pyrene | 50 | 0 | 38.5 | ug/L | 77 | | 0 | | 42 | 147 | 20 |
| Indeno(1,2,3-cd)pyrene | 50 | 0 | 52.0 | ug/L | 104 | | 1 | | 30 | 166 | 20 |
| Dibenz(a,h)anthracene | 50 | 0 | 52.2 | ug/L | 104 | | 0 | | 23 | 172 | 20 |
| Benzo(g,h,i)perylene | 50 | 0 | 51.9 | ug/L | 104 | | 1 | | 27 | 167 | 20 |
| 1,2,4,5-Tetrachlorobenzene | 50 | 0 | 36.0 | ug/L | 72 | * | 1 | | 89 | 102 | 20 |
| 1,4-Dioxane | 50 | 0 | 15.7 | ug/L | 31 | * | 3 | | 38 | 130 | 20 |
| 2,3,4,6-Tetrachlorophenol | 50 | 0 | 39.6 | ug/L | 79 | * | 0 | | 91 | 111 | 20 |

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# Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846



**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E **DataFile:** BF133115.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | RPD Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PB152460BS | Benzaldehyde | 50 | 45.1 | ug/L | 90 | | | | 21 | 131 | |
| | Phenol | 50 | 39.3 | ug/L | 79 | | | | 66 | 118 | |
| | bis(2-Chloroethyl)ether | 50 | 41.9 | ug/L | 84 | | | | 62 | 103 | |
| | 2-Chlorophenol | 50 | 45.5 | ug/L | 91 | | | | 70 | 117 | |
| | 2-Methylphenol | 50 | 43.0 | ug/L | 86 | | | | 69 | 109 | |
| | 2,2-oxybis(1-Chloropropane) | 50 | 38.6 | ug/L | 77 | | | | 52 | 103 | |
| | Acetophenone | 50 | 42.4 | ug/L | 85 | | | | 60 | 104 | |
| | 3+4-Methylphenols | 50 | 41.4 | ug/L | 83 | | | | 67 | 106 | |
| | N-Nitroso-di-n-propylamine | 50 | 39.0 | ug/L | 78 | | | | 57 | 107 | |
| | Hexachloroethane | 50 | 43.9 | ug/L | 88 | | | | 60 | 105 | |
| | Nitrobenzene | 50 | 39.2 | ug/L | 78 | | | | 58 | 106 | |
| | Isophorone | 50 | 39.1 | ug/L | 78 | | | | 61 | 102 | |
| | 2-Nitrophenol | 50 | 45.8 | ug/L | 92 | | | | 70 | 115 | |
| | 2,4-Dimethylphenol | 50 | 43.4 | ug/L | 87 | | | | 67 | 130 | |
| | bis(2-Chloroethoxy)methane | 50 | 39.9 | ug/L | 80 | | | | 58 | 109 | |
| | 2,4-Dichlorophenol | 50 | 43.6 | ug/L | 87 | | | | 66 | 115 | |
| | Naphthalene | 50 | 40.5 | ug/L | 81 | | | | 64 | 107 | |
| | 4-Chloroaniline | 50 | 27.9 | ug/L | 56 | | | | 10 | 85 | |
| | Hexachlorobutadiene | 50 | 42.0 | ug/L | 84 | | | | 56 | 102 | |
| | Caprolactam | 50 | 46.3 | ug/L | 93 | | | | 47 | 129 | |
| | 4-Chloro-3-methylphenol | 50 | 43.7 | ug/L | 87 | | | | 65 | 114 | |
| | 2-Methylnaphthalene | 50 | 39.9 | ug/L | 80 | | | | 64 | 107 | |
| | Hexachlorocyclopentadiene | 100 | 90.3 | ug/L | 90 | | | | 49 | 132 | |
| | 2,4,6-Trichlorophenol | 50 | 41.5 | ug/L | 83 | | | | 61 | 110 | |
| | 2,4,5-Trichlorophenol | 50 | 39.1 | ug/L | 78 | | | | 70 | 106 | |
| | 1,1-Biphenyl | 50 | 40.1 | ug/L | 80 | | | | 72 | 98 | |
| | 2-Chloronaphthalene | 50 | 41.1 | ug/L | 82 | | | | 59 | 106 | |
| | 2-Nitroaniline | 50 | 39.2 | ug/L | 78 | | | | 58 | 107 | |
| | Dimethylphthalate | 50 | 40.2 | ug/L | 80 | | | | 64 | 103 | |
| | Acenaphthylene | 50 | 39.3 | ug/L | 79 | | | | 65 | 108 | |
| | 2,6-Dinitrotoluene | 50 | 41.2 | ug/L | 82 | | | | 64 | 110 | |
| | 3-Nitroaniline | 50 | 32.7 | ug/L | 65 | | | | 28 | 100 | |
| | Acenaphthene | 50 | 43.7 | ug/L | 87 | | | | 59 | 113 | |
| | 2,4-Dinitrophenol | 100 | 100 | ug/L | 100 | | | | 48 | 129 | |
| | 4-Nitrophenol | 100 | 85.2 | ug/L | 85 | | | | 54 | 119 | |
| | Dibenzofuran | 50 | 39.6 | ug/L | 79 | | | | 65 | 106 | |
| | 2,4-Dinitrotoluene | 50 | 43.8 | ug/L | 88 | | | | 60 | 115 | |
| | Diethylphthalate | 50 | 39.7 | ug/L | 79 | | | | 63 | 105 | |
| | 4-Chlorophenyl-phenylether | 50 | 39.4 | ug/L | 79 | | | | 61 | 104 | |
| | Fluorene | 50 | 40.2 | ug/L | 80 | | | | 64 | 107 | |
| | 4-Nitroaniline | 50 | 45.5 | ug/L | 91 | | | | 57 | 103 | |
| | 4,6-Dinitro-2-methylphenol | 50 | 48.1 | ug/L | 96 | | | | 62 | 132 | |
| | N-Nitrosodiphenylamine | 50 | 40.0 | ug/L | 80 | | | | 61 | 109 | |
| | 4-Bromophenyl-phenylether | 50 | 40.6 | ug/L | 81 | | | | 73 | 103 | |
| | Hexachlorobenzene | 50 | 43.9 | ug/L | 88 | | | | 73 | 106 | |
| | Atrazine | 50 | 45.9 | ug/L | 92 | | | | 52 | 134 | |

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# Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846



**SDG No.:** O2521

**Client:** GEI Consultants, Inc., P.C.

**Analytical Method:** 8270E **DataFile:** BF133115.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | RPD Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PB152460BS | Pentachlorophenol | 100 | 75.1 | ug/L | 75 | | | | 65 | 112 | |
| | Phenanthrene | 50 | 40.0 | ug/L | 80 | | | | 62 | 109 | |
| | Anthracene | 50 | 39.9 | ug/L | 80 | | | | 65 | 110 | |
| | Carbazole | 50 | 41.5 | ug/L | 83 | | | | 62 | 106 | |
| | Di-n-butylphthalate | 50 | 41.6 | ug/L | 83 | | | | 64 | 106 | |
| | Fluoranthene | 50 | 41.0 | ug/L | 82 | | | | 64 | 110 | |
| | Pyrene | 50 | 40.3 | ug/L | 81 | | | | 71 | 103 | |
| | Butylbenzylphthalate | 50 | 47.8 | ug/L | 96 | | | | 61 | 105 | |
| | 3,3-Dichlorobenzidine | 50 | 42.7 | ug/L | 85 | | | | 30 | 96 | |
| | Benzo(a)anthracene | 50 | 40.1 | ug/L | 80 | | | | 62 | 107 | |
| | Chrysene | 50 | 39.6 | ug/L | 79 | | | | 61 | 108 | |
| | bis(2-Ethylhexyl)phthalate | 50 | 43.1 | ug/L | 86 | | | | 59 | 110 | |
| | Di-n-octyl phthalate | 50 | 46.9 | ug/L | 94 | | | | 55 | 116 | |
| | Benzo(b)fluoranthene | 50 | 46.5 | ug/L | 93 | | | | 64 | 111 | |
| | Benzo(k)fluoranthene | 50 | 41.8 | ug/L | 84 | | | | 64 | 113 | |
| | Benzo(a)pyrene | 50 | 41.4 | ug/L | 83 | | | | 72 | 131 | |
| | Indeno(1,2,3-cd)pyrene | 50 | 48.1 | ug/L | 96 | | | | 72 | 105 | |
| | Dibenz(a,h)anthracene | 50 | 48.5 | ug/L | 97 | | | | 63 | 117 | |
| | Benzo(g,h,i)perylene | 50 | 48.8 | ug/L | 98 | | | | 61 | 120 | |
| | 1,2,4,5-Tetrachlorobenzene | 50 | 40.2 | ug/L | 80 | | | | 72 | 101 | |
| | 1,4-Dioxane | 50 | 35.5 | ug/L | 71 | | | | 38 | 125 | |
| | 2,3,4,6-Tetrachlorophenol | 50 | 42.3 | ug/L | 85 | | | | 63 | 116 | |

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4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB152460BL

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

Lab File ID: BF133114.D Lab Sample ID: PB152460BL

Instrument ID: BNA_F Date Extracted: 04/27/2023

Matrix: (soil/water) Water Date Analyzed: 04/28/2023

Level: (low/med) LOW Time Analyzed: 10:16

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| PB152460BS | PB152460BS | BF133115.D | 04/28/2023 |
| GMW-7 | O2521-07 | BF133151.D | 05/01/2023 |
| GMW-7MS | O2521-09MS | BF133152.D | 05/01/2023 |
| GMW-7MSD | O2521-10MSD | BF133153.D | 05/01/2023 |
| FB | O2521-14 | BF133161.D | 05/01/2023 |
| GMW-1 | O2521-01 | BF133182.D | 05/02/2023 |
| GMW-10 | O2521-05 | BF133183.D | 05/02/2023 |
| PZ-15 | O2521-03 | BF133184.D | 05/02/2023 |

COMMENTS:

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2521 SDG NO.: O2521

Lab File ID: BF132964.D DFTPP Injection Date: 04/21/2023

Instrument ID: BNA_F DFTPP Injection Time: 12:40

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 41.3 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 1.7 ) 1 |
| 69 | Mass 69 relative abundance | 36.7 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.5 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 45.8 |
| 197 | Less than 2.0% of mass 198 | 0.1 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.8 |
| 275 | 10.0 - 60.0% of mass 198 | 26.3 |
| 365 | Greater than 1% of mass 198 | 3.2 |
| 441 | Present, but less than mass 443 | 13.8 |
| 442 | Greater than 50% of mass 198 | 89.4 |
| 443 | 15.0 - 24.0% of mass 442 | 16.9 (18.9) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDICC2.5 | SSTDICC2.5 | BF132965.D | 04/21/2023 | 13:11 |
| SSTDICC005 | SSTDICC005 | BF132966.D | 04/21/2023 | 13:42 |
| SSTDICC010 | SSTDICC010 | BF132967.D | 04/21/2023 | 14:12 |
| SSTDICC020 | SSTDICC020 | BF132968.D | 04/21/2023 | 14:43 |
| SSTDICCC040 | SSTDICCC040 | BF132969.D | 04/21/2023 | 15:15 |
| SSTDICC050 | SSTDICC050 | BF132970.D | 04/21/2023 | 15:47 |
| SSTDICC060 | SSTDICC060 | BF132971.D | 04/21/2023 | 16:19 |
| SSTDICC080 | SSTDICC080 | BF132972.D | 04/21/2023 | 16:50 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2521 SDG NO.: O2521

Lab File ID: BF133112.D DFTPP Injection Date: 04/28/2023

Instrument ID: BNA_F DFTPP Injection Time: 09:14

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 33.3 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 1.9 ) 1 |
| 69 | Mass 69 relative abundance | 30.8 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.5 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 40.5 |
| 197 | Less than 2.0% of mass 198 | 0.0 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.2 |
| 275 | 10.0 - 60.0% of mass 198 | 25.9 |
| 365 | Greater than 1% of mass 198 | 3.1 |
| 441 | Present, but less than mass 443 | 15.4 |
| 442 | Greater than 50% of mass 198 | 100 |
| 443 | 15.0 - 24.0% of mass 442 | 18.4 (18.4) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133113.D | 04/28/2023 | 09:45 |
| PB152460BL | PB152460BL | BF133114.D | 04/28/2023 | 10:16 |
| PB152460BS | PB152460BS | BF133115.D | 04/28/2023 | 10:47 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2521 SDG NO.: O2521

Lab File ID: BF133146.D DFTPP Injection Date: 05/01/2023

Instrument ID: BNA_F DFTPP Injection Time: 10:10

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 38.9 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 1.8 ) 1 |
| 69 | Mass 69 relative abundance | 34.4 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.7 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 45.9 |
| 197 | Less than 2.0% of mass 198 | 0.2 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.9 |
| 275 | 10.0 - 60.0% of mass 198 | 26 |
| 365 | Greater than 1% of mass 198 | 3.1 |
| 441 | Present, but less than mass 443 | 14.3 |
| 442 | Greater than 50% of mass 198 | 91.1 |
| 443 | 15.0 - 24.0% of mass 442 | 17 (18.7) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133147.D | 05/01/2023 | 10:41 |
| GMW-7 | O2521-07 | BF133151.D | 05/01/2023 | 12:47 |
| GMW-7MS | O2521-09MS | BF133152.D | 05/01/2023 | 13:18 |
| GMW-7MSD | O2521-10MSD | BF133153.D | 05/01/2023 | 13:49 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2521 SDG NO.: O2521

Lab File ID: BF133155.D DFTPP Injection Date: 05/01/2023

Instrument ID: BNA_F DFTPP Injection Time: 14:54

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 39.2 |
| 68 | Less than 2.0% of mass 69 | 0.6 ( 1.8 ) 1 |
| 69 | Mass 69 relative abundance | 34.1 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.6 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 45.8 |
| 197 | Less than 2.0% of mass 198 | 1 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.4 |
| 275 | 10.0 - 60.0% of mass 198 | 25.4 |
| 365 | Greater than 1% of mass 198 | 3.1 |
| 441 | Present, but less than mass 443 | 13.2 |
| 442 | Greater than 50% of mass 198 | 86 |
| 443 | 15.0 - 24.0% of mass 442 | 15.8 (18.4) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133156.D | 05/01/2023 | 15:25 |
| FB | O2521-14 | BF133161.D | 05/01/2023 | 18:06 |

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM SAS No.: O2521 SDG NO.: O2521

Lab File ID: BF133178.D DFTPP Injection Date: 05/02/2023

Instrument ID: BNA_F DFTPP Injection Time: 09:23

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 40.8 |
| 68 | Less than 2.0% of mass 69 | 0.7 ( 1.9 ) 1 |
| 69 | Mass 69 relative abundance | 35.9 |
| 70 | Less than 2.0% of mass 69 | 0.3 ( 0.7 ) 1 |
| 127 | 10.0 - 80.0% of mass 198 | 46.9 |
| 197 | Less than 2.0% of mass 198 | 0.1 |
| 198 | Base Peak, 100% relative abundance | 100 |
| 199 | 5.0 to 9.0% of mass 198 | 6.9 |
| 275 | 10.0 - 60.0% of mass 198 | 25.6 |
| 365 | Greater than 1% of mass 198 | 2.9 |
| 441 | Present, but less than mass 443 | 13 |
| 442 | Greater than 50% of mass 198 | 83.8 |
| 443 | 15.0 - 24.0% of mass 442 | 16.1 (19.2) 2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| SSTDCCC040 | SSTDCCC040 | BF133179.D | 05/02/2023 | 09:54 |
| GMW-1 | O2521-01 | BF133182.D | 05/02/2023 | 11:39 |
| GMW-10 | O2521-05 | BF133183.D | 05/02/2023 | 12:11 |
| PZ-15 | O2521-03 | BF133184.D | 05/02/2023 | 12:42 |

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/28/2023

Lab File ID: BF133113.D Time Analyzed: 09:45

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 198535 | 6.739 | 770653 | 8.02 | 402568 | 9.77 |
| | UPPER LIMIT | 397070 | 7.239 | 1541310 | 8.522 | 805136 | 10.274 |
| | LOWER LIMIT | 99267.5 | 6.239 | 385327 | 7.522 | 201284 | 9.274 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | PB152460BL | 222354 | 6.73 | 909738 | 8.02 | 497178 | 9.77 |
| 02 | PB152460BS | 195818 | 6.74 | 817481 | 8.02 | 432093 | 9.78 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/28/2023

Lab File ID: BF133113.D Time Analyzed: 09:45

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 728942 | 11.257 | 481262 | 13.892 | 419069 | 15.309 |
| | UPPER LIMIT | 1457880 | 11.757 | 962524 | 14.392 | 838138 | 15.809 |
| | LOWER LIMIT | 364471 | 10.757 | 240631 | 13.392 | 209535 | 14.809 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | PB152460BL | 894791 | 11.25 | 645193 | 13.89 | 589322 | 15.31 |
| 02 | PB152460BS | 762637 | 11.26 | 503022 | 13.89 | 426531 | 15.31 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/28/2023

Lab File ID: BF133124.D Time Analyzed: 16:17

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 169530 | 6.739 | 651406 | 8.02 | 331291 | 9.78 |
| | UPPER LIMIT | 339060 | 7.239 | 1302810 | 8.522 | 662582 | 10.275 |
| | LOWER LIMIT | 84765 | 6.239 | 325703 | 7.522 | 165646 | 9.275 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | MW-4MSD | 183608 | 6.73 | 751779 | 8.02 | 381525 | 9.78 |
| 02 | MW-4MS | 190366 | 6.73 | 772909 | 8.02 | 393106 | 9.78 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 04/28/2023

Lab File ID: BF133124.D Time Analyzed: 16:17

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 609324 | 11.251 | 433500 | 13.892 | 385479 | 15.309 |
| | UPPER LIMIT | 1218650 | 11.751 | 867000 | 14.392 | 770958 | 15.809 |
| | LOWER LIMIT | 304662 | 10.751 | 216750 | 13.392 | 192740 | 14.809 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | MW-4MSD | 684496 | 11.25 | 425360 | 13.89 | 366457 | 15.30 |
| 02 | MW-4MS | 700777 | 11.25 | 454277 | 13.89 | 386766 | 15.30 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/01/2023

Lab File ID: BF133147.D Time Analyzed: 10:41

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 217083 | 6.733 | 848696 | 8.02 | 437359 | 9.77 |
| | UPPER LIMIT | 434166 | 7.233 | 1697390 | 8.516 | 874718 | 10.269 |
| | LOWER LIMIT | 108542 | 6.233 | 424348 | 7.516 | 218680 | 9.269 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-7MS | 203700 | 6.73 | 837623 | 8.02 | 424855 | 9.77 |
| 02 | GMW-7MSD | 195768 | 6.73 | 779426 | 8.02 | 408781 | 9.77 |
| 03 | GMW-7 | 186758 | 6.73 | 760166 | 8.02 | 403432 | 9.76 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/01/2023

Lab File ID: BF133147.D Time Analyzed: 10:41

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 726398 | 11.251 | 488634 | 13.892 | 431751 | 15.304 |
| | UPPER LIMIT | 1452800 | 11.751 | 977268 | 14.392 | 863502 | 15.804 |
| | LOWER LIMIT | 363199 | 10.751 | 244317 | 13.392 | 215876 | 14.804 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-7MS | 739323 | 11.25 | 372991 | 13.89 | 387375 | 15.30 |
| 02 | GMW-7MSD | 712325 | 11.25 | 379662 | 13.89 | 380330 | 15.30 |
| 03 | GMW-7 | 715597 | 11.25 | 392041 | 13.88 | 351902 | 15.30 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/01/2023

Lab File ID: BF133156.D Time Analyzed: 15:25

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 201641 | 6.734 | 797320 | 8.02 | 409305 | 9.77 |
| | UPPER LIMIT | 403282 | 7.234 | 1594640 | 8.516 | 818610 | 10.269 |
| | LOWER LIMIT | 100821 | 6.234 | 398660 | 7.516 | 204653 | 9.269 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | FB | 181752 | 6.73 | 744647 | 8.01 | 393741 | 9.76 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/01/2023

Lab File ID: BF133156.D Time Analyzed: 15:25

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 709193 | 11.251 | 470586 | 13.886 | 409938 | 15.304 |
| | UPPER LIMIT | 1418390 | 11.751 | 941172 | 14.386 | 819876 | 15.804 |
| | LOWER LIMIT | 354597 | 10.751 | 235293 | 13.386 | 204969 | 14.804 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | FB | 715460 | 11.25 | 386608 | 13.88 | 370078 | 15.30 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/02/2023

Lab File ID: BF133179.D Time Analyzed: 09:54

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS1 (DCB) AREA # | RT # | IS2 (NPT) AREA # | RT # | IS3 (ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 210801 | 6.734 | 810149 | 8.02 | 408451 | 9.77 |
| | UPPER LIMIT | 421602 | 7.234 | 1620300 | 8.516 | 816902 | 10.269 |
| | LOWER LIMIT | 105401 | 6.234 | 405075 | 7.516 | 204226 | 9.269 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-1 | 217825 | 6.73 | 867706 | 8.02 | 448217 | 9.77 |
| 02 | PZ-15 | 202539 | 6.73 | 828276 | 8.01 | 431004 | 9.76 |
| 03 | GMW-10 | 222157 | 6.73 | 884085 | 8.02 | 465386 | 9.77 |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG NO.: O2521

EPA Sample No.: SSTDCCC040 Date Analyzed: 05/02/2023

Lab File ID: BF133179.D Time Analyzed: 09:54

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 739807 | 11.251 | 524855 | 13.892 | 463126 | 15.309 |
| | UPPER LIMIT | 1479610 | 11.751 | 1049710 | 14.392 | 926252 | 15.809 |
| | LOWER LIMIT | 369904 | 10.751 | 262428 | 13.392 | 231563 | 14.809 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | GMW-1 | 782429 | 11.25 | 465239 | 13.89 | 390223 | 15.30 |
| 02 | PZ-15 | 775776 | 11.25 | 487304 | 13.88 | 371572 | 15.30 |
| 03 | GMW-10 | 807304 | 11.25 | 532323 | 13.88 | 408265 | 15.30 |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

# QC SAMPLE DATA

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152460BL | SDG No.: | O2521 |
| Lab Sample ID: | PB152460BL | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133114.D | 1 | 04/27/23 10:50 | 04/28/23 10:16 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 10.0 | U | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 5.00 | U | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 5.00 | U | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 5.00 | U | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 5.00 | U | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 5.00 | U | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 10.0 | U | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 2.50 | U | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 5.00 | U | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 5.00 | U | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 5.00 | U | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 5.00 | U | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 5.00 | U | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 5.00 | U | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | U | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 5.00 | U | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 10.0 | U | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.00 | U | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.00 | U | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 5.00 | U | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 5.00 | U | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 5.00 | U | 2.10 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152460BL | SDG No.: | O2521 |
| Lab Sample ID: | PB152460BL | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133114.D | 1 | 04/27/23 10:50 | 04/28/23 10:16 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5.00 | U | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 5.00 | U | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 10.0 | U | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 10.0 | U | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 5.00 | U | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 5.00 | U | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 5.00 | U | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.00 | U | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 5.00 | U | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10.0 | U | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 5.00 | U | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 5.00 | U | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 5.00 | U | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 10.0 | U | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 5.00 | U | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 5.00 | U | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 5.00 | U | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 5.00 | U | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 5.00 | U | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 10.0 | U | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 5.00 | U | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.00 | U | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 10.0 | U | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 5.00 | U | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 5.00 | U | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.00 | U | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152460BL | SDG No.: | O2521 |
| Lab Sample ID: | PB152460BL | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133114.D | 1 | 04/27/23 10:50 | 04/28/23 10:16 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 5.00 | U | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 5.00 | U | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 5.00 | U | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 5.00 | U | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 116 | | 10 - 139 | 77% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 117 | | 10 - 134 | 78% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 73.6 | | 49 - 133 | 74% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 74.7 | | 52 - 132 | 75% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 114 | | 45 - 141 | 76% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 69.5 | | 45 - 142 | 70% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 222000 | 6.734 | | | |
| 1146-65-2 | Naphthalene-d8 | 910000 | 8.022 | | | |
| 15067-26-2 | Acenaphthene-d10 | 497000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 895000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 645000 | 13.886 | | | |
| 1520-96-3 | Perylene-d12 | 589000 | 15.31 | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | |
| 001825-64-5 | Isopropyl alcohol, TMS derivative | 2.50 | J | | 2.12 | ug/L |
| 000123-42-2 | 2-Pentanone, 4-hydroxy-4-methyl- | 44.2 | A | | 4.95 | ug/L |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152460BS | SDG No.: | O2521 |
| Lab Sample ID: | PB152460BS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133115.D | 1 | 04/27/23 10:50 | 04/28/23 10:47 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 45.1 | | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 39.3 | | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 41.9 | | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 45.5 | | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 43.0 | | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 38.6 | | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 42.4 | | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 41.4 | | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 39.0 | | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 43.9 | | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 39.2 | | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 39.1 | | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 45.8 | | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 43.4 | | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 39.9 | | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 43.6 | | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 40.5 | | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 27.9 | | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 42.0 | | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 46.3 | | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 43.7 | | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 39.9 | | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 90.3 | E | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 41.5 | | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 39.1 | | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 40.1 | | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 41.1 | | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 39.2 | | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 40.2 | | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 39.3 | | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 41.2 | | 2.10 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152460BS | SDG No.: | O2521 |
| Lab Sample ID: | PB152460BS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133115.D | 1 | 04/27/23 10:50 | 04/28/23 10:47 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 32.7 | | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 43.7 | | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 100 | E | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 85.2 | E | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 39.6 | | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 43.8 | | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 39.7 | | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 39.4 | | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 40.2 | | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 45.5 | | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 48.1 | | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 40.0 | | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 40.6 | | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 43.9 | | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 45.9 | | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 75.1 | | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 40.0 | | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 39.9 | | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 41.5 | | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 41.6 | | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 41.0 | | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 40.3 | | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 47.8 | | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 42.7 | | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 40.1 | | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 39.6 | | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 43.1 | | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 46.9 | | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 46.5 | | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 41.8 | | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 41.4 | | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 48.1 | | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 48.5 | | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | |
| Project: | Ferry Point | Date Received: | |
| Client Sample ID: | PB152460BS | SDG No.: | O2521 |
| Lab Sample ID: | PB152460BS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133115.D | 1 | 04/27/23 10:50 | 04/28/23 10:47 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 48.8 | | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 40.2 | | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 35.5 | | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 42.3 | | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 125 | | 10 - 139 | 83% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 121 | | 10 - 134 | 81% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 79.6 | | 49 - 133 | 80% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 81.6 | | 52 - 132 | 82% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 123 | | 45 - 141 | 82% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 82.2 | | 45 - 142 | 82% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 196000 | 6.74 | | | |
| 1146-65-2 | Naphthalene-d8 | 817000 | 8.022 | | | |
| 15067-26-2 | Acenaphthene-d10 | 432000 | 9.775 | | | |
| 1517-22-2 | Phenanthrene-d10 | 763000 | 11.257 | | | |
| 1719-03-5 | Chrysene-d12 | 503000 | 13.892 | | | |
| 1520-96-3 | Perylene-d12 | 427000 | 15.31 | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MS | SDG No.: | O2521 |
| Lab Sample ID: | O2521-09MS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133152.D | 1 | 04/27/23 10:50 | 05/01/23 13:18 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 40.7 | | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 13.2 | | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 36.7 | | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 32.6 | | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 25.7 | | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 34.5 | | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 38.5 | | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 23.3 | | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 36.9 | | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 32.0 | | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 35.3 | | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 36.4 | | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 38.6 | | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 34.7 | | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 37.2 | | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 36.2 | | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 35.0 | | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 20.3 | | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 32.8 | | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 9.70 | J | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 35.2 | | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 35.3 | | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 69.2 | | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 39.2 | | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 36.4 | | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 38.1 | | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 39.3 | | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 40.1 | | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 39.6 | | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 38.1 | | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 40.9 | | 2.10 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MS | SDG No.: | O2521 |
| Lab Sample ID: | O2521-09MS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133152.D | 1 | 04/27/23 10:50 | 05/01/23 13:18 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 23.4 | | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 42.2 | | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 77.6 | | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 27.2 | | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 38.5 | | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 42.1 | | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 40.2 | | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 38.1 | | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 38.6 | | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 39.1 | | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 42.6 | | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 39.3 | | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 39.4 | | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 41.0 | | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 43.6 | | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 63.2 | | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 39.4 | | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 39.5 | | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 39.4 | | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 42.2 | | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 37.9 | | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 47.8 | | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 54.0 | | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 27.9 | | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 40.1 | | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 39.4 | | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 50.4 | | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 50.1 | | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 38.7 | | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 38.6 | | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 38.3 | | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 51.4 | | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 52.0 | | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MS | SDG No.: | O2521 |
| Lab Sample ID: | O2521-09MS | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133152.D | 1 | 04/27/23 10:50 | 05/01/23 13:18 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 51.4 | | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 36.5 | | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 16.2 | | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 39.3 | | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 51.8 | | 10 - 139 | 35% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 33.1 | | 10 - 134 | 22% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 70.2 | | 49 - 133 | 70% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 74.1 | | 52 - 132 | 74% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 108 | | 45 - 141 | 72% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 93.7 | | 45 - 142 | 94% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 204000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 838000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 425000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 739000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 373000 | 13.886 | | | |
| 1520-96-3 | Perylene-d12 | 387000 | 15.304 | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MSD | SDG No.: | O2521 |
| Lab Sample ID: | O2521-10MSD | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133153.D | 1 | 04/27/23 10:50 | 05/01/23 13:49 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 100-52-7 | Benzaldehyde | 38.8 | | 3.30 | 10.0 | ug/L |
| 108-95-2 | Phenol | 12.9 | | 1.50 | 5.00 | ug/L |
| 111-44-4 | bis(2-Chloroethyl)ether | 35.8 | | 1.70 | 5.00 | ug/L |
| 95-57-8 | 2-Chlorophenol | 31.8 | | 1.40 | 5.00 | ug/L |
| 95-48-7 | 2-Methylphenol | 24.3 | | 2.10 | 5.00 | ug/L |
| 108-60-1 | 2,2-oxybis(1-Chloropropane) | 33.4 | | 2.30 | 5.00 | ug/L |
| 98-86-2 | Acetophenone | 38.5 | | 1.80 | 5.00 | ug/L |
| 65794-96-9 | 3+4-Methylphenols | 22.7 | | 2.20 | 10.0 | ug/L |
| 621-64-7 | n-Nitroso-di-n-propylamine | 35.4 | | 2.00 | 2.50 | ug/L |
| 67-72-1 | Hexachloroethane | 30.5 | | 1.60 | 5.00 | ug/L |
| 98-95-3 | Nitrobenzene | 35.3 | | 1.70 | 5.00 | ug/L |
| 78-59-1 | Isophorone | 36.5 | | 1.70 | 5.00 | ug/L |
| 88-75-5 | 2-Nitrophenol | 38.7 | | 2.40 | 5.00 | ug/L |
| 105-67-9 | 2,4-Dimethylphenol | 34.9 | | 3.00 | 5.00 | ug/L |
| 111-91-1 | bis(2-Chloroethoxy)methane | 36.7 | | 2.00 | 5.00 | ug/L |
| 120-83-2 | 2,4-Dichlorophenol | 36.7 | | 1.70 | 5.00 | ug/L |
| 91-20-3 | Naphthalene | 35.3 | | 1.70 | 5.00 | ug/L |
| 106-47-8 | 4-Chloroaniline | 24.7 | | 2.50 | 5.00 | ug/L |
| 87-68-3 | Hexachlorobutadiene | 33.2 | | 1.90 | 5.00 | ug/L |
| 105-60-2 | Caprolactam | 10.0 | | 3.40 | 10.0 | ug/L |
| 59-50-7 | 4-Chloro-3-methylphenol | 35.0 | | 1.80 | 5.00 | ug/L |
| 91-57-6 | 2-Methylnaphthalene | 36.1 | | 2.20 | 5.00 | ug/L |
| 77-47-4 | Hexachlorocyclopentadiene | 69.6 | | 5.70 | 10.0 | ug/L |
| 88-06-2 | 2,4,6-Trichlorophenol | 38.5 | | 1.50 | 5.00 | ug/L |
| 95-95-4 | 2,4,5-Trichlorophenol | 35.6 | | 1.60 | 5.00 | ug/L |
| 92-52-4 | 1,1-Biphenyl | 38.1 | | 1.80 | 5.00 | ug/L |
| 91-58-7 | 2-Chloronaphthalene | 38.6 | | 1.60 | 5.00 | ug/L |
| 88-74-4 | 2-Nitroaniline | 38.1 | | 2.40 | 5.00 | ug/L |
| 131-11-3 | Dimethylphthalate | 39.1 | | 1.90 | 5.00 | ug/L |
| 208-96-8 | Acenaphthylene | 38.4 | | 2.10 | 5.00 | ug/L |
| 606-20-2 | 2,6-Dinitrotoluene | 40.7 | | 2.10 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MSD | SDG No.: | O2521 |
| Lab Sample ID: | O2521-10MSD | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133153.D | 1 | 04/27/23 10:50 | 05/01/23 13:49 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 25.7 | | 2.40 | 5.00 | ug/L |
| 83-32-9 | Acenaphthene | 41.3 | | 1.70 | 5.00 | ug/L |
| 51-28-5 | 2,4-Dinitrophenol | 80.5 | E | 5.50 | 10.0 | ug/L |
| 100-02-7 | 4-Nitrophenol | 27.4 | | 2.80 | 10.0 | ug/L |
| 132-64-9 | Dibenzofuran | 37.8 | | 1.60 | 5.00 | ug/L |
| 121-14-2 | 2,4-Dinitrotoluene | 42.2 | | 2.50 | 5.00 | ug/L |
| 84-66-2 | Diethylphthalate | 40.1 | | 2.10 | 5.00 | ug/L |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 38.1 | | 2.20 | 5.00 | ug/L |
| 86-73-7 | Fluorene | 38.8 | | 2.00 | 5.00 | ug/L |
| 100-01-6 | 4-Nitroaniline | 38.9 | | 2.30 | 5.00 | ug/L |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 43.7 | | 1.80 | 10.0 | ug/L |
| 86-30-6 | n-Nitrosodiphenylamine | 39.4 | | 2.00 | 5.00 | ug/L |
| 101-55-3 | 4-Bromophenyl-phenylether | 39.0 | | 2.00 | 5.00 | ug/L |
| 118-74-1 | Hexachlorobenzene | 41.5 | | 1.90 | 5.00 | ug/L |
| 1912-24-9 | Atrazine | 45.4 | | 3.50 | 5.00 | ug/L |
| 87-86-5 | Pentachlorophenol | 66.0 | | 2.60 | 10.0 | ug/L |
| 85-01-8 | Phenanthrene | 39.5 | | 2.00 | 5.00 | ug/L |
| 120-12-7 | Anthracene | 39.8 | | 2.30 | 5.00 | ug/L |
| 86-74-8 | Carbazole | 40.0 | | 1.70 | 5.00 | ug/L |
| 84-74-2 | Di-n-butylphthalate | 43.0 | | 2.40 | 5.00 | ug/L |
| 206-44-0 | Fluoranthene | 38.8 | | 2.10 | 5.00 | ug/L |
| 129-00-0 | Pyrene | 46.7 | | 1.90 | 5.00 | ug/L |
| 85-68-7 | Butylbenzylphthalate | 54.4 | | 2.80 | 5.00 | ug/L |
| 91-94-1 | 3,3-Dichlorobenzidine | 31.8 | | 5.40 | 10.0 | ug/L |
| 56-55-3 | Benzo(a)anthracene | 39.9 | | 1.50 | 5.00 | ug/L |
| 218-01-9 | Chrysene | 38.7 | | 1.60 | 5.00 | ug/L |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 49.8 | | 2.90 | 5.00 | ug/L |
| 117-84-0 | Di-n-octyl phthalate | 49.8 | | 3.10 | 10.0 | ug/L |
| 205-99-2 | Benzo(b)fluoranthene | 39.1 | | 1.50 | 5.00 | ug/L |
| 207-08-9 | Benzo(k)fluoranthene | 38.2 | | 1.90 | 5.00 | ug/L |
| 50-32-8 | Benzo(a)pyrene | 38.5 | | 2.70 | 5.00 | ug/L |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 52.0 | | 2.10 | 5.00 | ug/L |
| 53-70-3 | Dibenzo(a,h)anthracene | 52.2 | | 2.00 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7MSD | SDG No.: | O2521 |
| Lab Sample ID: | O2521-10MSD | Matrix: | Water |
| Analytical Method: | SW8270 | % Solid: | 0 |
| Sample Wt/Vol: | 1000 Units: mL | Final Vol: | 1000 uL |
| Soil Aliquot Vol: | uL | Test: | SVOC-TCL BNA -20 |
| Extraction Type : | Decanted : N | Level : | LOW |
| Injection Volume : | GPC Factor : 1.0 | GPC Cleanup : | N PH : |
| Prep Method : | SW3510C | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| BF133153.D | 1 | 04/27/23 10:50 | 05/01/23 13:49 | PB152460 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| 191-24-2 | Benzo(g,h,i)perylene | 51.9 | | 1.90 | 5.00 | ug/L |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 36.0 | | 2.10 | 5.00 | ug/L |
| 123-91-1 | 1,4-Dioxane | 15.7 | | 2.40 | 5.00 | ug/L |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 39.6 | | 1.30 | 5.00 | ug/L |
| **SURROGATES** | | | | | | |
| 367-12-4 | 2-Fluorophenol | 49.7 | | 10 - 139 | 33% | SPK: 150 |
| 13127-88-3 | Phenol-d6 | 31.9 | | 10 - 134 | 21% | SPK: 150 |
| 4165-60-0 | Nitrobenzene-d5 | 70.1 | | 49 - 133 | 70% | SPK: 100 |
| 321-60-8 | 2-Fluorobiphenyl | 74.2 | | 52 - 132 | 74% | SPK: 100 |
| 118-79-6 | 2,4,6-Tribromophenol | 110 | | 45 - 141 | 74% | SPK: 150 |
| 1718-51-0 | Terphenyl-d14 | 92.5 | | 45 - 142 | 92% | SPK: 100 |
| **INTERNAL STANDARDS** | | | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 196000 | 6.728 | | | |
| 1146-65-2 | Naphthalene-d8 | 779000 | 8.016 | | | |
| 15067-26-2 | Acenaphthene-d10 | 409000 | 9.769 | | | |
| 1517-22-2 | Phenanthrene-d10 | 712000 | 11.251 | | | |
| 1719-03-5 | Chrysene-d12 | 380000 | 13.886 | | | |
| 1520-96-3 | Perylene-d12 | 380000 | 15.304 | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# CALIBRATION SUMMARY

Response Factor Report BNA_F

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF042123.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
Last Update : Sat Apr 22 03:30:56 2023
Response Via : Initial Calibration

Calibration Files
2.5 =BF132965.D 5 =BF132966.D 10 =BF132967.D 20 =BF132968.D 40 =BF132969.D 50 =BF132970.D 60 =BF132971.D 80 =BF1329
72.D

| | | Compound | 2.5 | 5 | 10 | 20 | 40 | 50 | 60 | 80 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | 1,4-Dichlorobenzen... | ---------- | ISTD | ---------- | | | | | | | |
| 2) | | 1,4-Dioxane | | 0.714 | 0.644 | 0.646 | 0.612 | 0.569 | 0.575 | 0.539 | 0.614 | 9.67 |
| 3) | | Pyridine | | 1.675 | 1.643 | 1.752 | 1.673 | 1.573 | 1.614 | 1.488 | 1.631 | 5.17 |
| 4) | | n-Nitrosodimet... | | 0.933 | 0.888 | 0.890 | 0.847 | 0.789 | 0.804 | 0.765 | 0.845 | 7.30 |
| 5) | S | 2-Fluorophenol | | 1.587 | 1.456 | 1.437 | 1.322 | 1.200 | 1.180 | 1.085 | 1.324 | 13.53 |
| 6) | | Aniline | | 2.341 | 2.241 | 2.314 | 2.197 | 2.008 | 2.006 | 1.709 | 2.117 | 10.60 |
| 7) | S | Phenol-d6 | | 1.918 | 1.800 | 1.795 | 1.629 | 1.504 | 1.492 | 1.366 | 1.643 | 12.25 |
| 8) | | 2-Chlorophenol | | 1.575 | 1.485 | 1.479 | 1.354 | 1.225 | 1.208 | 1.084 | 1.344 | 13.31 |
| 9) | | Benzaldehyde | | | 1.115 | 1.002 | 0.762 | 0.683 | 0.640 | 0.545 | 0.791 | 28.00 |
| 10) | C | Phenol | | 2.117 | 1.981 | 1.990 | 1.822 | 1.664 | 1.643 | 1.474 | 1.813 | 12.70 |
| 11) | | bis(2-Chloroet... | | 1.563 | 1.433 | 1.459 | 1.366 | 1.265 | 1.252 | 1.185 | 1.360 | 9.85 |
| 12) | | 1,3-Dichlorobe... | | 1.682 | 1.566 | 1.562 | 1.426 | 1.310 | 1.287 | 1.171 | 1.429 | 12.82 |
| 13) | C | 1,4-Dichlorobe... | | 1.706 | 1.570 | 1.567 | 1.453 | 1.297 | 1.279 | 1.154 | 1.432 | 13.71 |
| 14) | | 1,2-Dichlorobe... | | 1.599 | 1.477 | 1.491 | 1.324 | 1.187 | 1.160 | 1.007 | 1.321 | 16.16 |
| 15) | | Benzyl Alcohol | | 1.293 | 1.244 | 1.263 | 1.180 | 1.060 | 1.020 | 0.886 | 1.135 | 13.27 |
| 16) | | 2,2'-oxybis(1-... | | 2.695 | 2.537 | 2.568 | 2.379 | 2.181 | 2.176 | 2.004 | 2.363 | 10.63 |
| 17) | | 2-Methylphenol | | 1.399 | 1.313 | 1.314 | 1.238 | 1.135 | 1.140 | 1.078 | 1.231 | 9.56 |
| 18) | | Hexachloroethane | | 0.562 | 0.541 | 0.544 | 0.500 | 0.465 | 0.454 | 0.419 | 0.498 | 10.80 |
| 19) | P | n-Nitroso-di-n... | 1.129 | 1.150 | 1.087 | 1.086 | 1.001 | 0.913 | 0.933 | 0.885 | 1.023 | 10.15 |
| 20) | | 3+4-Methylphenols | | 1.803 | 1.697 | 1.649 | 1.438 | 1.266 | 1.209 | 1.085 | 1.450 | 18.90 |
| 21) | I | Naphthalene-d8 | ---------- | ISTD | ---------- | | | | | | | |
| 22) | | Acetophenone | | 0.563 | 0.525 | 0.502 | 0.454 | 0.411 | 0.407 | 0.381 | 0.463 | 14.72 |
| 23) | S | Nitrobenzene-d5 | | 0.407 | 0.381 | 0.389 | 0.379 | 0.350 | 0.356 | 0.332 | 0.371 | 6.88 |
| 24) | | Nitrobenzene | | 0.411 | 0.391 | 0.396 | 0.382 | 0.359 | 0.357 | 0.331 | 0.375 | 7.29 |
| 25) | | Isophorone | | 0.754 | 0.706 | 0.717 | 0.710 | 0.665 | 0.696 | 0.677 | 0.704 | 4.09 |
| 26) | C | 2-Nitrophenol | | 0.172 | 0.172 | 0.187 | 0.192 | 0.181 | 0.186 | 0.179 | 0.181 | 4.15 |
| 27) | | 2,4-Dimethylph... | | 0.344 | 0.320 | 0.323 | 0.319 | 0.289 | 0.296 | 0.284 | 0.311 | 6.98 |
| 28) | | bis(2-Chloroet... | | 0.470 | 0.437 | 0.434 | 0.420 | 0.391 | 0.391 | 0.370 | 0.416 | 8.26 |
| 29) | C | 2,4-Dichloroph... | | 0.306 | 0.291 | 0.299 | 0.292 | 0.268 | 0.271 | 0.252 | 0.283 | 6.83 |
| 30) | | 1,2,4-Trichlor... | | 0.335 | 0.305 | 0.313 | 0.295 | 0.273 | 0.276 | 0.253 | 0.293 | 9.43 |
| 31) | | Naphthalene | | 1.196 | 1.094 | 1.079 | 1.011 | 0.898 | 0.910 | 0.811 | 1.000 | 13.40 |
| 32) | | Benzoic acid | | 0.144 | 0.152 | 0.181 | 0.211 | 0.214 | 0.224 | 0.217 | 0.192 | 17.13 |
| 33) | | 4-Chloroaniline | | 0.456 | 0.442 | 0.444 | 0.402 | 0.367 | 0.374 | 0.341 | 0.404 | 11.08 |
| 34) | C | Hexachlorobuta... | | 0.182 | 0.174 | 0.172 | 0.164 | 0.150 | 0.153 | 0.142 | 0.162 | 9.08 |
| 35) | | Caprolactam | | 0.096 | 0.093 | 0.097 | 0.100 | 0.092 | 0.097 | 0.092 | 0.095 | 3.23 |
| 36) | C | 4-Chloro-3-met... | | 0.330 | 0.317 | 0.316 | 0.312 | 0.284 | 0.298 | 0.278 | 0.305 | 6.30 |
| 37) | | 2-Methylnaphth... | | 0.823 | 0.760 | 0.739 | 0.689 | 0.614 | 0.616 | 0.545 | 0.684 | 14.25 |
| 38) | | 1-Methylnaphth... | | 0.776 | 0.702 | 0.692 | 0.641 | 0.578 | 0.575 | 0.513 | 0.640 | 14.21 |

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF042123.M

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 39) | I | Acenaphthene-d10 | ----------ISTD---------- | | | | | | | | |
| 40) | | 1,2,4,5-Tetrac... | 0.611 | 0.578 | 0.583 | 0.541 | 0.495 | 0.495 | 0.460 | 0.538 | 10.41 |
| 41) | P | Hexachlorocycl... | 0.286 | 0.296 | 0.334 | 0.334 | 0.313 | 0.324 | 0.307 | 0.314 | 5.86 |
| 42) | S | 2,4,6-Tribromo... | 0.211 | 0.203 | 0.214 | 0.208 | 0.191 | 0.197 | 0.184 | 0.201 | 5.42 |
| 43) | C | 2,4,6-Trichlor... | 0.396 | 0.372 | 0.396 | 0.381 | 0.353 | 0.363 | 0.343 | 0.372 | 5.54 |
| 44) | | 2,4,5-Trichlor... | 0.464 | 0.437 | 0.452 | 0.444 | 0.411 | 0.418 | 0.384 | 0.430 | 6.33 |
| 45) | S | 2-Fluorobiphenyl | 1.476 | 1.430 | 1.210 | 1.081 | 1.054 | 0.922 | 1.195 | | 18.41 |
| 46) | | 1,1'-Biphenyl | 1.887 | 1.771 | 1.752 | 1.598 | 1.440 | 1.390 | 1.263 | 1.586 | 14.48 |
| 47) | | 2-Chloronaphth... | 1.344 | 1.228 | 1.260 | 1.168 | 1.074 | 1.073 | 0.979 | 1.161 | 10.91 |
| 48) | | 2-Nitroaniline | 0.373 | 0.379 | 0.407 | 0.402 | 0.372 | 0.386 | 0.366 | 0.384 | 4.04 |
| 49) | | Acenaphthylene | 2.146 | 2.002 | 2.049 | 1.893 | 1.709 | 1.681 | 1.504 | 1.855 | 12.45 |
| 50) | | Dimethylphthalate | 1.577 | 1.470 | 1.496 | 1.409 | 1.289 | 1.296 | 1.226 | 1.395 | 9.19 |
| 51) | | 2,6-Dinitrotol... | 0.320 | 0.312 | 0.332 | 0.321 | 0.304 | 0.312 | 0.295 | 0.314 | 3.89 |
| 52) | C | Acenaphthene | 1.448 | 1.334 | 1.352 | 1.258 | 1.138 | 1.139 | 1.026 | 1.242 | 11.90 |
| 53) | | 3-Nitroaniline | 0.372 | 0.372 | 0.394 | 0.391 | 0.365 | 0.371 | 0.348 | 0.373 | 4.23 |
| 54) | P | 2,4-Dinitrophenol | 0.116 | 0.125 | 0.157 | 0.175 | 0.172 | 0.180 | 0.179 | 0.158 | 16.93 |
| 55) | | Dibenzofuran | 2.046 | 1.864 | 1.856 | 1.699 | 1.535 | 1.516 | 1.346 | 1.695 | 14.39 |
| 56) | P | 4-Nitrophenol | 0.282 | 0.281 | 0.303 | 0.309 | 0.286 | 0.285 | 0.278 | 0.289 | 4.10 |
| 57) | | 2,4-Dinitrotol... | 0.408 | 0.398 | 0.428 | 0.424 | 0.389 | 0.397 | 0.358 | 0.400 | 5.84 |
| 58) | | Fluorene | 1.579 | 1.434 | 1.383 | 1.209 | 1.094 | 1.055 | 0.937 | 1.241 | 18.65 |
| 59) | | 2,3,4,6-Tetrac... | 0.369 | 0.342 | 0.356 | 0.338 | 0.316 | 0.320 | 0.293 | 0.333 | 7.75 |
| 60) | | Diethylphthalate | 1.503 | 1.395 | 1.422 | 1.334 | 1.224 | 1.221 | 1.121 | 1.317 | 10.20 |
| 61) | | 4-Chlorophenyl... | 0.744 | 0.689 | 0.688 | 0.596 | 0.535 | 0.523 | 0.459 | 0.605 | 17.34 |
| 62) | | 4-Nitroaniline | 0.351 | 0.350 | 0.377 | 0.347 | 0.322 | 0.338 | 0.316 | 0.343 | 5.93 |
| 63) | | Azobenzene | 1.605 | 1.502 | 1.513 | 1.404 | 1.294 | 1.284 | 1.165 | 1.395 | 11.15 |
| 64) | I | Phenanthrene-d10 | ----------ISTD---------- | | | | | | | | |
| 65) | | 4,6-Dinitro-2-... | 0.094 | 0.105 | 0.125 | 0.134 | 0.128 | 0.131 | 0.131 | 0.121 | 12.81 |
| 66) | c | n-Nitrosodiphe... | 0.746 | 0.703 | 0.704 | 0.645 | 0.598 | 0.597 | 0.548 | 0.649 | 11.04 |
| 67) | | 4-Bromophenyl-... | 0.237 | 0.226 | 0.229 | 0.219 | 0.205 | 0.209 | 0.193 | 0.217 | 6.98 |
| 68) | | Hexachlorobenzene | 0.236 | 0.231 | 0.236 | 0.225 | 0.210 | 0.215 | 0.203 | 0.222 | 5.95 |
| 69) | | Atrazine | 0.203 | 0.199 | 0.197 | 0.194 | 0.174 | 0.177 | 0.164 | 0.187 | 8.05 |
| 70) | C | Pentachlorophenol | 0.150 | 0.154 | 0.164 | 0.170 | 0.156 | 0.161 | 0.153 | 0.158 | 4.43 |
| 71) | | Phenanthrene | 1.314 | 1.187 | 1.153 | 1.062 | 0.972 | 0.972 | 0.865 | 1.075 | 14.28 |
| 72) | | Anthracene | 1.314 | 1.214 | 1.194 | 1.099 | 0.992 | 0.999 | 0.888 | 1.100 | 13.59 |
| 73) | | Carbazole | 1.120 | 1.068 | 1.044 | 0.991 | 0.896 | 0.919 | 0.819 | 0.980 | 10.90 |
| 74) | | Di-n-butylphth... | 1.186 | 1.160 | 1.191 | 1.152 | 1.057 | 1.046 | 0.968 | 1.109 | 7.68 |
| 75) | C | Fluoranthene | 1.251 | 1.164 | 1.164 | 1.094 | 0.992 | 0.982 | 0.904 | 1.079 | 11.46 |
| 76) | I | Chrysene-d12 | ----------ISTD---------- | | | | | | | | |
| 77) | | Benzidine | 0.313 | 0.374 | 0.425 | 0.340 | 0.288 | 0.289 | | 0.338 | 15.86 |
| 78) | | Pyrene | 1.801 | 1.685 | 1.720 | 1.762 | 1.659 | 1.722 | 1.651 | 1.714 | 3.18 |
| 79) | S | Terphenyl-d14 | 1.290 | 1.208 | 1.208 | 1.173 | 1.078 | 1.119 | 1.041 | 1.160 | 7.41 |
| 80) | | Butylbenzylpht... | 0.487 | 0.516 | 0.592 | 0.665 | 0.639 | 0.679 | 0.671 | 0.607 | 12.86 |
| 81) | | Benzo(a)anthra... | 1.506 | 1.401 | 1.466 | 1.417 | 1.298 | 1.305 | 1.234 | 1.375 | 7.18 |
| 82) | | 3,3'-Dichlorob... | 0.375 | 0.382 | 0.423 | 0.411 | 0.374 | 0.382 | 0.312 | 0.380 | 9.23 |
| 83) | | Chrysene | 1.501 | 1.402 | 1.426 | 1.413 | 1.302 | 1.322 | 1.259 | 1.375 | 6.10 |
| 84) | | Bis(2-ethylhex... | 0.727 | 0.743 | 0.806 | 0.817 | 0.759 | 0.768 | 0.714 | 0.762 | 5.05 |
| 85) | c | Di-n-octyl pht... | 1.065 | 1.096 | 1.296 | 1.351 | 1.273 | 1.319 | 1.298 | 1.242 | 9.14 |

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF042123.M

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | I | Perylene-d12 | ----------ISTD---------- | | | | | | | |
| 87) | | Indeno(1,2,3-c... | 1.036 | 0.939 | 1.052 | 1.207 | 1.180 | 1.278 | 1.271 | 1.138 | 11.41 |
| 88) | | Benzo(b)fluora... | 1.321 | 1.257 | 1.295 | 1.334 | 1.247 | 1.223 | 1.230 | 1.272 | 3.48 |
| 89) | | Benzo(k)fluora... | 1.317 | 1.332 | 1.424 | 1.289 | 1.177 | 1.219 | 1.071 | 1.261 | 9.17 |
| 90) | C | Benzo(a)pyrene | 1.181 | 1.145 | 1.203 | 1.202 | 1.127 | 1.150 | 1.099 | 1.158 | 3.37 |
| 91) | | Dibenzo(a,h)an... | 0.856 | 0.786 | 0.885 | 1.022 | 0.980 | 1.065 | 1.047 | 0.949 | 11.27 |
| 92) | | Benzo(g,h,i)pe... | 0.827 | 0.732 | 0.853 | 1.005 | 0.989 | 1.077 | 1.075 | 0.937 | 14.29 |

(#) = Out of Range

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: BNA_F Calibration Date/Time: 04/28/2023 09:45

Lab File ID: BF133113.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.213 | | -8.4 | |
| Benzaldehyde | 0.791 | 0.737 | | -6.8 | |
| Phenol-d6 | 1.643 | 1.516 | | -7.7 | |
| Phenol | 1.813 | 1.635 | | -9.8 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.219 | | -10.4 | |
| 2-Chlorophenol | 1.344 | 1.249 | | -7.1 | |
| 2-Methylphenol | 1.231 | 1.193 | | -3.1 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 1.957 | | -17.2 | |
| Acetophenone | 0.463 | 0.435 | | -6.0 | |
| 3+4-Methylphenols | 1.450 | 1.373 | | -5.3 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.877 | 0.050 | -14.3 | |
| Nitrobenzene-d5 | 0.371 | 0.349 | | -5.9 | |
| Hexachloroethane | 0.498 | 0.459 | | -7.8 | |
| Nitrobenzene | 0.375 | 0.352 | | -6.1 | |
| Isophorone | 0.704 | 0.647 | | -8.1 | |
| 2-Nitrophenol | 0.181 | 0.188 | | 3.9 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.299 | | -3.9 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.373 | | -10.3 | |
| 2,4-Dichlorophenol | 0.283 | 0.276 | | -2.5 | 20.0 |
| Naphthalene | 1.000 | 0.944 | | -5.6 | |
| 4-Chloroaniline | 0.404 | 0.411 | | 1.7 | |
| Hexachlorobutadiene | 0.162 | 0.153 | | -5.6 | 20.0 |
| Caprolactam | 0.095 | 0.096 | | 1.1 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.300 | | -1.6 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.643 | | -6.0 | |
| Hexachlorocyclopentadiene | 0.314 | 0.293 | 0.050 | -6.7 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.357 | | -4.0 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.143 | | -4.4 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.417 | | -3.0 | |
| 1,1-Biphenyl | 1.586 | 1.462 | | -7.8 | |
| 2-Chloronaphthalene | 1.161 | 1.082 | | -6.8 | |
| 2-Nitroaniline | 0.384 | 0.363 | | -5.5 | |
| Dimethylphthalate | 1.395 | 1.316 | | -5.7 | |
| Acenaphthylene | 1.855 | 1.739 | | -6.3 | |
| 2,6-Dinitrotoluene | 0.314 | 0.309 | | -1.6 | |
| 3-Nitroaniline | 0.373 | 0.366 | | -1.9 | |
| Acenaphthene | 1.242 | 1.177 | | -5.2 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.170 | 0.050 | 7.6 | |
| 4-Nitrophenol | 0.289 | 0.275 | 0.050 | -4.8 | |
| Dibenzofuran | 1.695 | 1.575 | | -7.1 | |
| 2,4-Dinitrotoluene | 0.400 | 0.408 | | 2.0 | |

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: BNA_F Calibration Date/Time: 04/28/2023 09:45

Lab File ID: BF133113.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.232 | | -6.5 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.570 | | -5.8 | |
| Fluorene | 1.241 | 1.176 | | -5.2 | |
| 4-Nitroaniline | 0.343 | 0.363 | | 5.8 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.133 | | 9.9 | |
| n-Nitrosodiphenylamine | 0.649 | 0.598 | | -7.9 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.201 | | 0.0 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.197 | | -9.2 | |
| Hexachlorobenzene | 0.222 | 0.210 | | -5.4 | |
| Atrazine | 0.187 | 0.182 | | -2.7 | |
| Pentachlorophenol | 0.158 | 0.150 | | -5.1 | 20.0 |
| Phenanthrene | 1.075 | 0.979 | | -8.9 | |
| Anthracene | 1.100 | 1.001 | | -9.0 | |
| Carbazole | 0.980 | 0.916 | | -6.5 | |
| Di-n-butylphthalate | 1.109 | 1.047 | | -5.6 | |
| Fluoranthene | 1.079 | 1.007 | | -6.7 | 20.0 |
| Pyrene | 1.714 | 1.572 | | -8.3 | |
| Terphenyl-d14 | 1.160 | 1.041 | | -10.3 | |
| Butylbenzylphthalate | 0.607 | 0.658 | | 8.4 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.409 | | 7.6 | |
| Benzo(a)anthracene | 1.375 | 1.249 | | -9.2 | |
| Chrysene | 1.375 | 1.254 | | -8.8 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.755 | | -0.9 | |
| Di-n-octyl phthalate | 1.242 | 1.288 | | 3.7 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.240 | | -2.5 | |
| Benzo(k)fluoranthene | 1.261 | 1.126 | | -10.7 | |
| Benzo(a)pyrene | 1.158 | 1.084 | | -6.4 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.146 | | 0.7 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.947 | | -0.2 | |
| Benzo(g,h,i)perylene | 0.937 | 0.954 | | 1.8 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.499 | | -7.2 | |
| 1,4-Dioxane | 0.614 | 0.550 | | -10.4 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.310 | | -6.9 | |

All other compounds must meet a minimum RRF of 0.010.

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: BNA_F Calibration Date/Time: 05/01/2023 10:41

Lab File ID: BF133147.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.247 | | -5.8 | |
| Benzaldehyde | 0.791 | 0.752 | | -4.9 | |
| Phenol-d6 | 1.643 | 1.550 | | -5.7 | |
| Phenol | 1.813 | 1.675 | | -7.6 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.268 | | -6.8 | |
| 2-Chlorophenol | 1.344 | 1.290 | | -4.0 | |
| 2-Methylphenol | 1.231 | 1.195 | | -2.9 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 2.033 | | -14.0 | |
| Acetophenone | 0.463 | 0.431 | | -6.9 | |
| 3+4-Methylphenols | 1.450 | 1.342 | | -7.4 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.874 | 0.050 | -14.6 | |
| Nitrobenzene-d5 | 0.371 | 0.348 | | -6.2 | |
| Hexachloroethane | 0.498 | 0.469 | | -5.8 | |
| Nitrobenzene | 0.375 | 0.354 | | -5.6 | |
| Isophorone | 0.704 | 0.652 | | -7.4 | |
| 2-Nitrophenol | 0.181 | 0.188 | | 3.9 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.301 | | -3.2 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.383 | | -7.9 | |
| 2,4-Dichlorophenol | 0.283 | 0.275 | | -2.8 | 20.0 |
| Naphthalene | 1.000 | 0.943 | | -5.7 | |
| 4-Chloroaniline | 0.404 | 0.412 | | 2.0 | |
| Hexachlorobutadiene | 0.162 | 0.152 | | -6.2 | 20.0 |
| Caprolactam | 0.095 | 0.096 | | 1.1 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.300 | | -1.6 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.638 | | -6.7 | |
| Hexachlorocyclopentadiene | 0.314 | 0.290 | 0.050 | -7.6 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.353 | | -5.1 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.110 | | -7.1 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.413 | | -4.0 | |
| 1,1-Biphenyl | 1.586 | 1.458 | | -8.1 | |
| 2-Chloronaphthalene | 1.161 | 1.089 | | -6.2 | |
| 2-Nitroaniline | 0.384 | 0.364 | | -5.2 | |
| Dimethylphthalate | 1.395 | 1.310 | | -6.1 | |
| Acenaphthylene | 1.855 | 1.719 | | -7.3 | |
| 2,6-Dinitrotoluene | 0.314 | 0.304 | | -3.2 | |
| 3-Nitroaniline | 0.373 | 0.366 | | -1.9 | |
| Acenaphthene | 1.242 | 1.165 | | -6.2 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.167 | 0.050 | 5.7 | |
| 4-Nitrophenol | 0.289 | 0.277 | 0.050 | -4.2 | |
| Dibenzofuran | 1.695 | 1.563 | | -7.8 | |
| 2,4-Dinitrotoluene | 0.400 | 0.394 | | -1.5 | |

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: BNA_F Calibration Date/Time: 05/01/2023 10:41

Lab File ID: BF133147.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.153 | | -12.5 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.537 | | -11.2 | |
| Fluorene | 1.241 | 1.098 | | -11.5 | |
| 4-Nitroaniline | 0.343 | 0.348 | | 1.5 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.130 | | 7.4 | |
| n-Nitrosodiphenylamine | 0.649 | 0.608 | | -6.3 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.186 | | -7.5 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.203 | | -6.5 | |
| Hexachlorobenzene | 0.222 | 0.214 | | -3.6 | |
| Atrazine | 0.187 | 0.181 | | -3.2 | |
| Pentachlorophenol | 0.158 | 0.156 | | -1.3 | 20.0 |
| Phenanthrene | 1.075 | 1.000 | | -7.0 | |
| Anthracene | 1.100 | 1.030 | | -6.4 | |
| Carbazole | 0.980 | 0.925 | | -5.6 | |
| Di-n-butylphthalate | 1.109 | 1.065 | | -4.0 | |
| Fluoranthene | 1.079 | 1.037 | | -3.9 | 20.0 |
| Pyrene | 1.714 | 1.573 | | -8.2 | |
| Terphenyl-d14 | 1.160 | 1.029 | | -11.3 | |
| Butylbenzylphthalate | 0.607 | 0.643 | | 5.9 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.394 | | 3.7 | |
| Benzo(a)anthracene | 1.375 | 1.271 | | -7.6 | |
| Chrysene | 1.375 | 1.286 | | -6.5 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.778 | | 2.1 | |
| Di-n-octyl phthalate | 1.242 | 1.340 | | 7.9 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.182 | | -7.1 | |
| Benzo(k)fluoranthene | 1.261 | 1.204 | | -4.5 | |
| Benzo(a)pyrene | 1.158 | 1.096 | | -5.4 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.118 | | -1.8 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.933 | | -1.7 | |
| Benzo(g,h,i)perylene | 0.937 | 0.949 | | 1.3 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.491 | | -8.7 | |
| 1,4-Dioxane | 0.614 | 0.578 | | -5.9 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.301 | | -9.6 | |

All other compounds must meet a minimum RRF of 0.010.

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: BNA_F Calibration Date/Time: 05/01/2023 15:25

Lab File ID: BF133156.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.266 | | -4.4 | |
| Benzaldehyde | 0.791 | 0.766 | | -3.2 | |
| Phenol-d6 | 1.643 | 1.586 | | -3.5 | |
| Phenol | 1.813 | 1.695 | | -6.5 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.281 | | -5.8 | |
| 2-Chlorophenol | 1.344 | 1.302 | | -3.1 | |
| 2-Methylphenol | 1.231 | 1.183 | | -3.9 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 2.102 | | -11.0 | |
| Acetophenone | 0.463 | 0.440 | | -5.0 | |
| 3+4-Methylphenols | 1.450 | 1.379 | | -4.9 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.897 | 0.050 | -12.3 | |
| Nitrobenzene-d5 | 0.371 | 0.357 | | -3.8 | |
| Hexachloroethane | 0.498 | 0.480 | | -3.6 | |
| Nitrobenzene | 0.375 | 0.363 | | -3.2 | |
| Isophorone | 0.704 | 0.663 | | -5.8 | |
| 2-Nitrophenol | 0.181 | 0.188 | | 3.9 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.301 | | -3.2 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.393 | | -5.5 | |
| 2,4-Dichlorophenol | 0.283 | 0.281 | | -0.7 | 20.0 |
| Naphthalene | 1.000 | 0.961 | | -3.9 | |
| 4-Chloroaniline | 0.404 | 0.422 | | 4.5 | |
| Hexachlorobutadiene | 0.162 | 0.158 | | -2.5 | 20.0 |
| Caprolactam | 0.095 | 0.100 | | 5.3 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.304 | | -0.3 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.664 | | -2.9 | |
| Hexachlorocyclopentadiene | 0.314 | 0.297 | 0.050 | -5.4 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.364 | | -2.2 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.159 | | -3.0 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.426 | | -0.9 | |
| 1,1-Biphenyl | 1.586 | 1.520 | | -4.2 | |
| 2-Chloronaphthalene | 1.161 | 1.121 | | -3.4 | |
| 2-Nitroaniline | 0.384 | 0.387 | | 0.8 | |
| Dimethylphthalate | 1.395 | 1.346 | | -3.5 | |
| Acenaphthylene | 1.855 | 1.818 | | -2.0 | |
| 2,6-Dinitrotoluene | 0.314 | 0.315 | | 0.3 | |
| 3-Nitroaniline | 0.373 | 0.382 | | 2.4 | |
| Acenaphthene | 1.242 | 1.096 | | -11.8 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.171 | 0.050 | 8.2 | |
| 4-Nitrophenol | 0.289 | 0.274 | 0.050 | -5.2 | |
| Dibenzofuran | 1.695 | 1.599 | | -5.7 | |
| 2,4-Dinitrotoluene | 0.400 | 0.409 | | 2.3 | |

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: BNA_F Calibration Date/Time: 05/01/2023 15:25

Lab File ID: BF133156.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.220 | | -7.4 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.565 | | -6.6 | |
| Fluorene | 1.241 | 1.157 | | -6.8 | |
| 4-Nitroaniline | 0.343 | 0.357 | | 4.1 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.134 | | 10.7 | |
| n-Nitrosodiphenylamine | 0.649 | 0.617 | | -4.9 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.201 | | 0.0 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.210 | | -3.2 | |
| Hexachlorobenzene | 0.222 | 0.220 | | -0.9 | |
| Atrazine | 0.187 | 0.187 | | 0.0 | |
| Pentachlorophenol | 0.158 | 0.157 | | -0.6 | 20.0 |
| Phenanthrene | 1.075 | 1.017 | | -5.4 | |
| Anthracene | 1.100 | 1.053 | | -4.3 | |
| Carbazole | 0.980 | 0.945 | | -3.6 | |
| Di-n-butylphthalate | 1.109 | 1.096 | | -1.2 | |
| Fluoranthene | 1.079 | 1.048 | | -2.9 | 20.0 |
| Pyrene | 1.714 | 1.636 | | -4.6 | |
| Terphenyl-d14 | 1.160 | 1.108 | | -4.5 | |
| Butylbenzylphthalate | 0.607 | 0.715 | | 17.8 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.414 | | 8.9 | |
| Benzo(a)anthracene | 1.375 | 1.286 | | -6.5 | |
| Chrysene | 1.375 | 1.317 | | -4.2 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.811 | | 6.4 | |
| Di-n-octyl phthalate | 1.242 | 1.301 | | 4.8 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.253 | | -1.5 | |
| Benzo(k)fluoranthene | 1.261 | 1.182 | | -6.3 | |
| Benzo(a)pyrene | 1.158 | 1.123 | | -3.0 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.198 | | 5.3 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.998 | | 5.2 | |
| Benzo(g,h,i)perylene | 0.937 | 1.018 | | 8.6 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.504 | | -6.3 | |
| 1,4-Dioxane | 0.614 | 0.601 | | -2.1 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.321 | | -3.6 | |

All other compounds must meet a minimum RRF of 0.010.

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: BNA_F Calibration Date/Time: 05/02/2023 09:54

Lab File ID: BF133179.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| 2-Fluorophenol | 1.324 | 1.272 | | -3.9 | |
| Benzaldehyde | 0.791 | 0.765 | | -3.3 | |
| Phenol-d6 | 1.643 | 1.555 | | -5.4 | |
| Phenol | 1.813 | 1.666 | | -8.1 | 20.0 |
| bis(2-Chloroethyl)ether | 1.360 | 1.266 | | -6.9 | |
| 2-Chlorophenol | 1.344 | 1.295 | | -3.6 | |
| 2-Methylphenol | 1.231 | 1.158 | | -5.9 | |
| 2,2-oxybis(1-Chloropropane) | 2.363 | 2.046 | | -13.4 | |
| Acetophenone | 0.463 | 0.435 | | -6.0 | |
| 3+4-Methylphenols | 1.450 | 1.351 | | -6.8 | |
| n-Nitroso-di-n-propylamine | 1.023 | 0.856 | 0.050 | -16.3 | |
| Nitrobenzene-d5 | 0.371 | 0.350 | | -5.7 | |
| Hexachloroethane | 0.498 | 0.468 | | -6.0 | |
| Nitrobenzene | 0.375 | 0.361 | | -3.7 | |
| Isophorone | 0.704 | 0.645 | | -8.4 | |
| 2-Nitrophenol | 0.181 | 0.187 | | 3.3 | 20.0 |
| 2,4-Dimethylphenol | 0.311 | 0.300 | | -3.5 | |
| bis(2-Chloroethoxy)methane | 0.416 | 0.382 | | -8.2 | |
| 2,4-Dichlorophenol | 0.283 | 0.278 | | -1.8 | 20.0 |
| Naphthalene | 1.000 | 0.957 | | -4.3 | |
| 4-Chloroaniline | 0.404 | 0.419 | | 3.7 | |
| Hexachlorobutadiene | 0.162 | 0.155 | | -4.3 | 20.0 |
| Caprolactam | 0.095 | 0.100 | | 5.3 | |
| 4-Chloro-3-methylphenol | 0.305 | 0.299 | | -2.0 | 20.0 |
| 2-Methylnaphthalene | 0.684 | 0.645 | | -5.7 | |
| Hexachlorocyclopentadiene | 0.314 | 0.286 | 0.050 | -8.9 | |
| 2,4,6-Trichlorophenol | 0.372 | 0.364 | | -2.2 | 20.0 |
| 2-Fluorobiphenyl | 1.195 | 1.150 | | -3.8 | |
| 2,4,5-Trichlorophenol | 0.430 | 0.419 | | -2.6 | |
| 1,1-Biphenyl | 1.586 | 1.516 | | -4.4 | |
| 2-Chloronaphthalene | 1.161 | 1.119 | | -3.6 | |
| 2-Nitroaniline | 0.384 | 0.385 | | 0.3 | |
| Dimethylphthalate | 1.395 | 1.356 | | -2.8 | |
| Acenaphthylene | 1.855 | 1.819 | | -1.9 | |
| 2,6-Dinitrotoluene | 0.314 | 0.311 | | -1.0 | |
| 3-Nitroaniline | 0.373 | 0.393 | | 5.4 | |
| Acenaphthene | 1.242 | 1.207 | | -2.8 | 20.0 |
| 2,4-Dinitrophenol | 0.158 | 0.168 | 0.050 | 6.3 | |
| 4-Nitrophenol | 0.289 | 0.292 | 0.050 | 1.0 | |
| Dibenzofuran | 1.695 | 1.646 | | -2.9 | |
| 2,4-Dinitrotoluene | 0.400 | 0.424 | | 6.0 | |

Form VII SV-1

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: GEIC06

Lab Code: CHEM Case No.: O2521 SAS No.: O2521 SDG No.: O2521

Instrument ID: BNA_F Calibration Date/Time: 05/02/2023 09:54

Lab File ID: BF133179.D Init. Calib. Date(s): 04/21/2023 04/21/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:11 16:50

GC Column: DB-UI ID: 0.18 (mm)

| COMPOUND | RRF | RRF040 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Diethylphthalate | 1.317 | 1.299 | | -1.4 | |
| 4-Chlorophenyl-phenylether | 0.605 | 0.577 | | -4.6 | |
| Fluorene | 1.241 | 1.213 | | -2.3 | |
| 4-Nitroaniline | 0.343 | 0.395 | | 15.2 | |
| 4,6-Dinitro-2-methylphenol | 0.121 | 0.133 | | 9.9 | |
| n-Nitrosodiphenylamine | 0.649 | 0.611 | | -5.9 | 20.0 |
| 2,4,6-Tribromophenol | 0.201 | 0.198 | | -1.5 | |
| 4-Bromophenyl-phenylether | 0.217 | 0.203 | | -6.5 | |
| Hexachlorobenzene | 0.222 | 0.212 | | -4.5 | |
| Atrazine | 0.187 | 0.190 | | 1.6 | |
| Pentachlorophenol | 0.158 | 0.150 | | -5.1 | 20.0 |
| Phenanthrene | 1.075 | 1.010 | | -6.0 | |
| Anthracene | 1.100 | 1.055 | | -4.1 | |
| Carbazole | 0.980 | 0.971 | | -0.9 | |
| Di-n-butylphthalate | 1.109 | 1.131 | | 2.0 | |
| Fluoranthene | 1.079 | 1.081 | | 0.2 | 20.0 |
| Pyrene | 1.714 | 1.554 | | -9.3 | |
| Terphenyl-d14 | 1.160 | 1.016 | | -12.4 | |
| Butylbenzylphthalate | 0.607 | 0.682 | | 12.4 | |
| 3,3-Dichlorobenzidine | 0.380 | 0.421 | | 10.8 | |
| Benzo(a)anthracene | 1.375 | 1.256 | | -8.7 | |
| Chrysene | 1.375 | 1.273 | | -7.4 | |
| Bis(2-ethylhexyl)phthalate | 0.762 | 0.769 | | 0.9 | |
| Di-n-octyl phthalate | 1.242 | 1.349 | | 8.6 | 20.0 |
| Benzo(b)fluoranthene | 1.272 | 1.291 | | 1.5 | |
| Benzo(k)fluoranthene | 1.261 | 1.137 | | -9.8 | |
| Benzo(a)pyrene | 1.158 | 1.110 | | -4.1 | 20.0 |
| Indeno(1,2,3-cd)pyrene | 1.138 | 1.138 | | 0.0 | |
| Dibenzo(a,h)anthracene | 0.949 | 0.939 | | -1.1 | |
| Benzo(g,h,i)perylene | 0.937 | 0.948 | | 1.2 | |
| 1,2,4,5-Tetrachlorobenzene | 0.538 | 0.512 | | -4.8 | |
| 1,4-Dioxane | 0.614 | 0.587 | | -4.4 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | 0.333 | 0.332 | | -0.3 | |

All other compounds must meet a minimum RRF of 0.010.

Form VII SV-1

CHEMTECH

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O2521 | **OrderDate:** | 4/27/2023 8:52:00 AM |
| **Client:** | GEI Consultants, Inc., P.C. | **Project:** | Ferry Point |
| **Contact:** | Stacey Ng | **Location:** | M11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O2521-01** | **GMW-1** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |
| | | | Metals ICP-TAL | 6010D | | 05/03/23 | 05/03/23 | |
| **O2521-02** | **GMW-1** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/03/23 | 05/03/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |
| **O2521-03** | **PZ-15** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |
| | | | Metals ICP-TAL | 6010D | | 05/03/23 | 05/03/23 | |
| **O2521-04** | **PZ-15** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/03/23 | 05/03/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |
| **O2521-05** | **GMW-10** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |
| | | | Metals ICP-TAL | 6010D | | 05/03/23 | 05/04/23 | |
| **O2521-06** | **GMW-10** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/03/23 | 05/04/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |
| **O2521-07** | **GMW-7** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |
| | | | Metals ICP-TAL | 6010D | | 05/03/23 | 05/04/23 | |
| **O2521-08** | **GMW-7** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/03/23 | 05/04/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |
| **O2521-14** | **FB** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Mercury | 7470A | | 04/28/23 | 04/28/23 | |

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# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Metals ICP-TAL | 6010D | | 05/03/23 | 05/04/23 | |
| **O2521-15** | **FB** | **Water** | | | **04/26/23** | | | **04/26/23** |
| | | | Dissolved ICP-TAL Metals | 6010D | | 05/03/23 | 05/11/23 | |
| | | | Dissolved Mercury | 7470A | | 05/02/23 | 05/02/23 | |

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# Hit Summary Sheet
## SW-846

**SDG No.:** O2521 **Order ID:** O2521

**Client:** GEI Consultants, Inc., P.C. **Project ID:** Ferry Point

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| **Client ID : GMW-1** | | | | | | | | |
| O2521-01 | GMW-1 | Water | Aluminum | 693 | | 28.3 | 50.0 | ug/L |
| O2521-01 | GMW-1 | Water | Antimony | 2.29 | J | 2.06 | 25.0 | ug/L |
| O2521-01 | GMW-1 | Water | Barium | 2370 | | 3.92 | 50.0 | ug/L |
| O2521-01 | GMW-1 | Water | Beryllium | 0.29 | J | 0.13 | 3.00 | ug/L |
| O2521-01 | GMW-1 | Water | Cadmium | 1.11 | J | 0.10 | 3.00 | ug/L |
| O2521-01 | GMW-1 | Water | Calcium | 123000 | | 47.7 | 1000 | ug/L |
| O2521-01 | GMW-1 | Water | Chromium | 6.13 | | 0.80 | 5.00 | ug/L |
| O2521-01 | GMW-1 | Water | Cobalt | 1.49 | J | 0.40 | 15.0 | ug/L |
| O2521-01 | GMW-1 | Water | Copper | 34.4 | | 7.07 | 10.0 | ug/L |
| O2521-01 | GMW-1 | Water | Iron | 26700 | | 18.5 | 50.0 | ug/L |
| O2521-01 | GMW-1 | Water | Lead | 45.7 | | 3.51 | 6.00 | ug/L |
| O2521-01 | GMW-1 | Water | Magnesium | 27400 | | 36.0 | 1000 | ug/L |
| O2521-01 | GMW-1 | Water | Manganese | 174 | | 0.68 | 10.0 | ug/L |
| O2521-01 | GMW-1 | Water | Mercury | 0.21 | | 0.078 | 0.20 | ug/L |
| O2521-01 | GMW-1 | Water | Nickel | 4.98 | J | 0.85 | 20.0 | ug/L |
| O2521-01 | GMW-1 | Water | Potassium | 23900 | | 685 | 1000 | ug/L |
| O2521-01 | GMW-1 | Water | Silver | 4.96 | J | 0.66 | 5.00 | ug/L |
| O2521-01 | GMW-1 | Water | Sodium | 60900 | | 237 | 1000 | ug/L |
| O2521-01 | GMW-1 | Water | Vanadium | 24.0 | | 3.01 | 20.0 | ug/L |
| O2521-01 | GMW-1 | Water | Zinc | 98.8 | | 1.75 | 20.0 | ug/L |
| O2521-01 | GMW-1 | Water | Hardness, Total | 420000 | | 267 | 6620 | ug/L |
| **Client ID : GMW-1** | | | | | | | | |
| O2521-02 | GMW-1 | Water | Aluminum | 141 | | 28.3 | 50.0 | ug/L |
| O2521-02 | GMW-1 | Water | Barium | 1630 | | 3.92 | 50.0 | ug/L |
| O2521-02 | GMW-1 | Water | Cadmium | 0.11 | J | 0.10 | 3.00 | ug/L |
| O2521-02 | GMW-1 | Water | Calcium | 104000 | | 47.7 | 1000 | ug/L |
| O2521-02 | GMW-1 | Water | Chromium | 1.11 | J | 0.80 | 5.00 | ug/L |
| O2521-02 | GMW-1 | Water | Cobalt | 0.47 | J | 0.40 | 15.0 | ug/L |
| O2521-02 | GMW-1 | Water | Copper | 35.7 | | 7.07 | 10.0 | ug/L |
| O2521-02 | GMW-1 | Water | Iron | 361 | | 18.5 | 50.0 | ug/L |
| O2521-02 | GMW-1 | Water | Magnesium | 30100 | | 36.0 | 1000 | ug/L |
| O2521-02 | GMW-1 | Water | Manganese | 76.3 | | 0.68 | 10.0 | ug/L |
| O2521-02 | GMW-1 | Water | Nickel | 2.49 | J | 0.85 | 20.0 | ug/L |
| O2521-02 | GMW-1 | Water | Potassium | 27200 | | 685 | 1000 | ug/L |
| O2521-02 | GMW-1 | Water | Silver | 0.70 | J | 0.66 | 5.00 | ug/L |
| O2521-02 | GMW-1 | Water | Sodium | 69800 | | 237 | 1000 | ug/L |
| O2521-02 | GMW-1 | Water | Zinc | 10.9 | J | 1.75 | 20.0 | ug/L |
| **Client ID : PZ-15** | | | | | | | | |

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# Hit Summary Sheet
**SW-846**



**SDG No.:** O2521 **Order ID:** O2521

**Client:** GEI Consultants, Inc., P.C. **Project ID:** Ferry Point

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| O2521-03 | PZ-15 | Water | Aluminum | 140000 | | 28.3 | 50.0 | ug/L |
| O2521-03 | PZ-15 | Water | Arsenic | 15.2 | | 3.48 | 10.0 | ug/L |
| O2521-03 | PZ-15 | Water | Barium | 2260 | | 3.92 | 50.0 | ug/L |
| O2521-03 | PZ-15 | Water | Beryllium | 6.60 | | 0.13 | 3.00 | ug/L |
| O2521-03 | PZ-15 | Water | Cadmium | 11.9 | | 0.10 | 3.00 | ug/L |
| O2521-03 | PZ-15 | Water | Calcium | 137000 | | 47.7 | 1000 | ug/L |
| O2521-03 | PZ-15 | Water | Chromium | 369 | | 0.80 | 5.00 | ug/L |
| O2521-03 | PZ-15 | Water | Cobalt | 170 | | 0.40 | 15.0 | ug/L |
| O2521-03 | PZ-15 | Water | Copper | 293 | | 7.07 | 10.0 | ug/L |
| O2521-03 | PZ-15 | Water | Iron | 239000 | | 18.5 | 50.0 | ug/L |
| O2521-03 | PZ-15 | Water | Lead | 170 | | 3.51 | 6.00 | ug/L |
| O2521-03 | PZ-15 | Water | Magnesium | 69900 | | 36.0 | 1000 | ug/L |
| O2521-03 | PZ-15 | Water | Manganese | 8080 | | 0.68 | 10.0 | ug/L |
| O2521-03 | PZ-15 | Water | Mercury | 0.87 | | 0.078 | 0.20 | ug/L |
| O2521-03 | PZ-15 | Water | Nickel | 564 | | 0.85 | 20.0 | ug/L |
| O2521-03 | PZ-15 | Water | Potassium | 47000 | | 685 | 1000 | ug/L |
| O2521-03 | PZ-15 | Water | Selenium | 5.90 | J | 5.88 | 10.0 | ug/L |
| O2521-03 | PZ-15 | Water | Silver | 37.9 | | 0.66 | 5.00 | ug/L |
| O2521-03 | PZ-15 | Water | Sodium | 29800 | | 237 | 1000 | ug/L |
| O2521-03 | PZ-15 | Water | Vanadium | 313 | | 3.01 | 20.0 | ug/L |
| O2521-03 | PZ-15 | Water | Zinc | 519 | | 1.75 | 20.0 | ug/L |
| O2521-03 | PZ-15 | Water | Hardness, Total | 630000 | | 267 | 6620 | ug/L |
| **Client ID :** | **PZ-15** | | | | | | | |
| O2521-04 | PZ-15 | Water | Aluminum | 80.5 | | 28.3 | 50.0 | ug/L |
| O2521-04 | PZ-15 | Water | Barium | 291 | | 3.92 | 50.0 | ug/L |
| O2521-04 | PZ-15 | Water | Calcium | 61300 | | 47.7 | 1000 | ug/L |
| O2521-04 | PZ-15 | Water | Cobalt | 2.49 | J | 0.40 | 15.0 | ug/L |
| O2521-04 | PZ-15 | Water | Copper | 10.4 | | 7.07 | 10.0 | ug/L |
| O2521-04 | PZ-15 | Water | Iron | 62.4 | | 18.5 | 50.0 | ug/L |
| O2521-04 | PZ-15 | Water | Magnesium | 43700 | | 36.0 | 1000 | ug/L |
| O2521-04 | PZ-15 | Water | Manganese | 41.7 | | 0.68 | 10.0 | ug/L |
| O2521-04 | PZ-15 | Water | Nickel | 14.0 | J | 0.85 | 20.0 | ug/L |
| O2521-04 | PZ-15 | Water | Potassium | 30900 | | 685 | 1000 | ug/L |
| O2521-04 | PZ-15 | Water | Silver | 0.81 | J | 0.66 | 5.00 | ug/L |
| O2521-04 | PZ-15 | Water | Sodium | 36400 | | 237 | 1000 | ug/L |
| O2521-04 | PZ-15 | Water | Zinc | 4.22 | J | 1.75 | 20.0 | ug/L |
| **Client ID :** | **GMW-10** | | | | | | | |
| O2521-05 | GMW-10 | Water | Aluminum | 561 | | 28.3 | 50.0 | ug/L |
| O2521-05 | GMW-10 | Water | Antimony | 2.86 | J | 2.06 | 25.0 | ug/L |
| O2521-05 | GMW-10 | Water | Arsenic | 6.65 | J | 3.48 | 10.0 | ug/L |
| O2521-05 | GMW-10 | Water | Barium | 392 | | 3.92 | 50.0 | ug/L |

# Hit Summary Sheet
**SW-846**



**SDG No.:** O2521 **Order ID:** O2521

**Client:** GEI Consultants, Inc., P.C. **Project ID:** Ferry Point

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| O2521-05 | GMW-10 | Water | Beryllium | 0.20 | J | 0.13 | 3.00 | ug/L |
| O2521-05 | GMW-10 | Water | Cadmium | 0.70 | J | 0.10 | 3.00 | ug/L |
| O2521-05 | GMW-10 | Water | Calcium | 153000 | | 47.7 | 1000 | ug/L |
| O2521-05 | GMW-10 | Water | Chromium | 3.09 | J | 0.80 | 5.00 | ug/L |
| O2521-05 | GMW-10 | Water | Cobalt | 1.45 | J | 0.40 | 15.0 | ug/L |
| O2521-05 | GMW-10 | Water | Copper | 58.8 | | 7.07 | 10.0 | ug/L |
| O2521-05 | GMW-10 | Water | Iron | 16500 | | 18.5 | 50.0 | ug/L |
| O2521-05 | GMW-10 | Water | Lead | 66.0 | | 3.51 | 6.00 | ug/L |
| O2521-05 | GMW-10 | Water | Magnesium | 23700 | | 36.0 | 1000 | ug/L |
| O2521-05 | GMW-10 | Water | Manganese | 894 | | 0.68 | 10.0 | ug/L |
| O2521-05 | GMW-10 | Water | Nickel | 12.2 | J | 0.85 | 20.0 | ug/L |
| O2521-05 | GMW-10 | Water | Potassium | 35300 | | 685 | 1000 | ug/L |
| O2521-05 | GMW-10 | Water | Sodium | 14400 | | 237 | 1000 | ug/L |
| O2521-05 | GMW-10 | Water | Vanadium | 22.1 | | 3.01 | 20.0 | ug/L |
| O2521-05 | GMW-10 | Water | Zinc | 86.0 | | 1.75 | 20.0 | ug/L |
| O2521-05 | GMW-10 | Water | Hardness, Total | 480000 | | 267 | 6620 | ug/L |
| **Client ID :** | **GMW-10** | | | | | | | |
| O2521-06 | GMW-10 | Water | Aluminum | 147 | | 28.3 | 50.0 | ug/L |
| O2521-06 | GMW-10 | Water | Barium | 320 | | 3.92 | 50.0 | ug/L |
| O2521-06 | GMW-10 | Water | Cadmium | 0.11 | J | 0.10 | 3.00 | ug/L |
| O2521-06 | GMW-10 | Water | Calcium | 146000 | | 47.7 | 1000 | ug/L |
| O2521-06 | GMW-10 | Water | Copper | 23.9 | | 7.07 | 10.0 | ug/L |
| O2521-06 | GMW-10 | Water | Iron | 27.0 | J | 18.5 | 50.0 | ug/L |
| O2521-06 | GMW-10 | Water | Magnesium | 23900 | | 36.0 | 1000 | ug/L |
| O2521-06 | GMW-10 | Water | Manganese | 702 | | 0.68 | 10.0 | ug/L |
| O2521-06 | GMW-10 | Water | Nickel | 8.11 | J | 0.85 | 20.0 | ug/L |
| O2521-06 | GMW-10 | Water | Potassium | 35200 | | 685 | 1000 | ug/L |
| O2521-06 | GMW-10 | Water | Sodium | 15500 | | 237 | 1000 | ug/L |
| O2521-06 | GMW-10 | Water | Zinc | 17.0 | J | 1.75 | 20.0 | ug/L |
| **Client ID :** | **GMW-7** | | | | | | | |
| O2521-07 | GMW-7 | Water | Aluminum | 2230 | | 28.3 | 50.0 | ug/L |
| O2521-07 | GMW-7 | Water | Antimony | 2.16 | J | 2.06 | 25.0 | ug/L |
| O2521-07 | GMW-7 | Water | Barium | 290 | | 3.92 | 50.0 | ug/L |
| O2521-07 | GMW-7 | Water | Cadmium | 1.47 | J | 0.10 | 3.00 | ug/L |
| O2521-07 | GMW-7 | Water | Calcium | 145000 | | 47.7 | 1000 | ug/L |
| O2521-07 | GMW-7 | Water | Chromium | 9.98 | | 0.80 | 5.00 | ug/L |
| O2521-07 | GMW-7 | Water | Cobalt | 2.59 | J | 0.40 | 15.0 | ug/L |
| O2521-07 | GMW-7 | Water | Copper | 61.7 | | 7.07 | 10.0 | ug/L |
| O2521-07 | GMW-7 | Water | Iron | 4730 | | 18.5 | 50.0 | ug/L |
| O2521-07 | GMW-7 | Water | Lead | 49.5 | | 3.51 | 6.00 | ug/L |
| O2521-07 | GMW-7 | Water | Magnesium | 26900 | | 36.0 | 1000 | ug/L |

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# Hit Summary Sheet
**SW-846**



**SDG No.:** O2521 **Order ID:** O2521

**Client:** GEI Consultants, Inc., P.C. **Project ID:** Ferry Point

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| O2521-07 | GMW-7 | Water | Manganese | 249 | | 0.68 | 10.0 | ug/L |
| O2521-07 | GMW-7 | Water | Mercury | 0.083 | J | 0.078 | 0.20 | ug/L |
| O2521-07 | GMW-7 | Water | Nickel | 20.0 | | 0.85 | 20.0 | ug/L |
| O2521-07 | GMW-7 | Water | Potassium | 20900 | | 685 | 1000 | ug/L |
| O2521-07 | GMW-7 | Water | Sodium | 32800 | | 237 | 1000 | ug/L |
| O2521-07 | GMW-7 | Water | Vanadium | 4.55 | J | 3.01 | 20.0 | ug/L |
| O2521-07 | GMW-7 | Water | Zinc | 185 | | 1.75 | 20.0 | ug/L |
| O2521-07 | GMW-7 | Water | Hardness, Total | 473000 | | 267 | 6620 | ug/L |
| **Client ID :** | **GMW-7** | | | | | | | |
| O2521-08 | GMW-7 | Water | Aluminum | 145 | | 28.3 | 50.0 | ug/L |
| O2521-08 | GMW-7 | Water | Barium | 233 | | 3.92 | 50.0 | ug/L |
| O2521-08 | GMW-7 | Water | Cadmium | 0.23 | J | 0.10 | 3.00 | ug/L |
| O2521-08 | GMW-7 | Water | Calcium | 137000 | | 47.7 | 1000 | ug/L |
| O2521-08 | GMW-7 | Water | Cobalt | 0.84 | J | 0.40 | 15.0 | ug/L |
| O2521-08 | GMW-7 | Water | Copper | 22.3 | | 7.07 | 10.0 | ug/L |
| O2521-08 | GMW-7 | Water | Iron | 24.9 | J | 18.5 | 50.0 | ug/L |
| O2521-08 | GMW-7 | Water | Magnesium | 25800 | | 36.0 | 1000 | ug/L |
| O2521-08 | GMW-7 | Water | Manganese | 207 | | 0.68 | 10.0 | ug/L |
| O2521-08 | GMW-7 | Water | Nickel | 8.17 | J | 0.85 | 20.0 | ug/L |
| O2521-08 | GMW-7 | Water | Potassium | 20500 | | 685 | 1000 | ug/L |
| O2521-08 | GMW-7 | Water | Sodium | 32800 | | 237 | 1000 | ug/L |
| O2521-08 | GMW-7 | Water | Zinc | 70.2 | | 1.75 | 20.0 | ug/L |
| **Client ID :** | **FB** | | | | | | | |
| O2521-14 | FB | Water | Calcium | 50.4 | J | 47.7 | 1000 | ug/L |
| O2521-14 | FB | Water | Chromium | 0.85 | J | 0.80 | 5.00 | ug/L |
| O2521-14 | FB | Water | Manganese | 0.88 | J | 0.68 | 10.0 | ug/L |
| O2521-14 | FB | Water | Sodium | 240 | J | 237 | 1000 | ug/L |
| O2521-14 | FB | Water | Zinc | 2.17 | J | 1.75 | 20.0 | ug/L |
| **Client ID :** | **FB** | | | | | | | |
| O2521-15 | FB | Water | Barium | 9.56 | J | 3.92 | 50.0 | ug/L |
| O2521-15 | FB | Water | Cadmium | 0.28 | J | 0.10 | 3.00 | ug/L |
| O2521-15 | FB | Water | Calcium | 1900 | | 47.7 | 1000 | ug/L |
| O2521-15 | FB | Water | Iron | 32.2 | J | 18.5 | 50.0 | ug/L |
| O2521-15 | FB | Water | Magnesium | 41.9 | J | 36.0 | 1000 | ug/L |
| O2521-15 | FB | Water | Manganese | 31.6 | | 0.68 | 10.0 | ug/L |
| O2521-15 | FB | Water | Sodium | 763 | J | 237 | 1000 | ug/L |
| O2521-15 | FB | Water | Zinc | 21.4 | | 1.75 | 20.0 | ug/L |

# SAMPLE DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 693 | N | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 2.29 | J | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 2370 | N | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 0.29 | J | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 1.11 | J | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 123000 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 6.13 | | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 1.49 | J | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 34.4 | | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 420000 | | 1 | 267 | 6620 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 26700 | N | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 45.7 | | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 27400 | | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 174 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.21 | | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:52 | SW7470A | |
| 7440-02-0 | Nickel | 4.98 | J | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 23900 | | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 4.96 | J | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 60900 | | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 24.0 | | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 98.8 | N | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:47 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-02 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 141 | N | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 1630 | N | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 0.11 | J | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 104000 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 1.11 | J | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 0.47 | J | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 35.7 | | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 361 | N | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 30100 | | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 76.3 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:42 | SW7470A | |
| 7440-02-0 | Nickel | 2.49 | J | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 27200 | | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 0.70 | J | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 69800 | | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 10.9 | JN | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:51 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |

Comments: DISSOLVED METALS-TAL

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 140000 | N | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 15.2 | | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 2260 | N | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 6.60 | | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 11.9 | | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 137000 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 369 | | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 170 | | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 293 | | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 630000 | | 1 | 267 | 6620 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 239000 | N | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 170 | | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 69900 | | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 8080 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.87 | | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:54 | SW7470A | |
| 7440-02-0 | Nickel | 564 | | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 47000 | | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 5.90 | J | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 37.9 | | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 29800 | | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 313 | | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 519 | N | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:55 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Brown | Clarity Before: | Cloudy | Texture: | |
| Color After: | Brown | Clarity After: | Cloudy | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-04 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 80.5 | N | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 291 | N | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 3.00 | U | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 61300 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 5.00 | U | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 2.49 | J | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 10.4 | | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 62.4 | N | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 43700 | | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 41.7 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:44 | SW7470A | |
| 7440-02-0 | Nickel | 14.0 | J | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 30900 | | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 0.81 | J | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 36400 | | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 4.22 | JN | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/03/23 18:59 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | DISSOLVED METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 561 | N | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 2.86 | J | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 6.65 | J | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 392 | N | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 0.20 | J | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 0.70 | J | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 153000 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 3.09 | J | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 1.45 | J | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 58.8 | | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 480000 | | 1 | 267 | 6620 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 16500 | N | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 66.0 | | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 23700 | | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 894 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:57 | SW7470A | |
| 7440-02-0 | Nickel | 12.2 | J | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 35300 | | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 14400 | | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 22.1 | | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 86.0 | N | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:01 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-06 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 147 | N | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 320 | N | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 0.11 | J | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 146000 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 5.00 | U | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 15.0 | U | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 23.9 | | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 27.0 | JN | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 23900 | | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 702 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:47 | SW7470A | |
| 7440-02-0 | Nickel | 8.11 | J | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 35200 | | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 15500 | | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 17.0 | JN | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:05 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | DISSOLVED METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2230 | N | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 2.16 | J | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 290 | N | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 1.47 | J | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 145000 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 9.98 | | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 2.59 | J | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 61.7 | | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 473000 | | 1 | 267 | 6620 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 4730 | N | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 49.5 | | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 26900 | | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 249 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.083 | J | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 13:59 | SW7470A | |
| 7440-02-0 | Nickel | 20.0 | | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 20900 | | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 32800 | | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 4.55 | J | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 185 | N | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:09 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
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OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-08 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 145 | N | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 233 | N | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 0.23 | J | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 137000 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 5.00 | U | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 0.84 | J | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 22.3 | | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 24.9 | JN | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 25800 | | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 207 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:49 | SW7470A | |
| 7440-02-0 | Nickel | 8.17 | J | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 20500 | | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 32800 | | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 70.2 | N | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 17:51 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |

Comments: DISSOLVED METALS-TAL

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-14 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 50.0 | UN | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 50.0 | UN | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 3.00 | U | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 50.4 | J | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 0.85 | J | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 15.0 | U | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 10.0 | U | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| Hardness | Hardness, Total | 126 | U | 1 | 267 | 6620 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 50.0 | UN | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 1000 | U | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 0.88 | JN | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 04/28/23 10:35 | 04/28/23 14:11 | SW7470A | |
| 7440-02-0 | Nickel | 20.0 | U | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 1000 | U | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 240 | J | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 2.17 | JN | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/04/23 16:32 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | METALS-TAL | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-15 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. | Prep Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 50.0 | UN | 1 | 28.3 | 50.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-36-0 | Antimony | 25.0 | U | 1 | 2.06 | 25.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-38-2 | Arsenic | 10.0 | U | 1 | 3.48 | 10.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-39-3 | Barium | 9.56 | JN | 1 | 3.92 | 50.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-41-7 | Beryllium | 3.00 | U | 1 | 0.13 | 3.00 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-43-9 | Cadmium | 0.28 | J | 1 | 0.10 | 3.00 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-70-2 | Calcium | 1900 | | 1 | 47.7 | 1000 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-47-3 | Chromium | 5.00 | U | 1 | 0.80 | 5.00 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-48-4 | Cobalt | 15.0 | U | 1 | 0.40 | 15.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-50-8 | Copper | 10.0 | U | 1 | 7.07 | 10.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7439-89-6 | Iron | 32.2 | JN | 1 | 18.5 | 50.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7439-92-1 | Lead | 6.00 | U | 1 | 3.51 | 6.00 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7439-95-4 | Magnesium | 41.9 | J | 1 | 36.0 | 1000 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7439-96-5 | Manganese | 31.6 | N | 1 | 0.68 | 10.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7439-97-6 | Mercury | 0.20 | U | 1 | 0.078 | 0.20 | ug/L | 05/02/23 13:30 | 05/02/23 16:58 | SW7470A | |
| 7440-02-0 | Nickel | 20.0 | U | 1 | 0.85 | 20.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-09-7 | Potassium | 1000 | U | 1 | 685 | 1000 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7782-49-2 | Selenium | 10.0 | U | 1 | 5.88 | 10.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-22-4 | Silver | 5.00 | U | 1 | 0.66 | 5.00 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-23-5 | Sodium | 763 | J | 1 | 237 | 1000 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-28-0 | Thallium | 20.0 | U | 1 | 3.00 | 20.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-62-2 | Vanadium | 20.0 | U | 1 | 3.01 | 20.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |
| 7440-66-6 | Zinc | 21.4 | N | 1 | 1.75 | 20.0 | ug/L | 05/03/23 12:30 | 05/11/23 18:43 | SW6010 | SW3010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |

Comments: DISSOLVED METALS-TAL

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

# METAL CALIBRATION DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV53 | Mercury | 4.39 | 4.0 | 110 | 90 - 110 | CV | 04/28/2023 | 13:11 | LB125204 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV79 | Mercury | 5.13 | 5.0 | 102 | 90 - 110 | CV | 04/28/2023 | 13:16 | LB125204 |
| CCV80 | Mercury | 4.98 | 5.0 | 100 | 90 - 110 | CV | 04/28/2023 | 13:43 | LB125204 |
| CCV81 | Mercury | 4.94 | 5.0 | 99 | 90 - 110 | CV | 04/28/2023 | 14:14 | LB125204 |
| CCV82 | Mercury | 5.03 | 5.0 | 101 | 90 - 110 | CV | 04/28/2023 | 14:30 | LB125204 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV58 | Mercury | 3.76 | 4.0 | 94 | 90 - 110 | CV | 05/02/2023 | 16:06 | LB125251 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV98 | Mercury | 4.81 | 5.0 | 96 | 90 - 110 | CV | 05/02/2023 | 16:10 | LB125251 |
| CCV99 | Mercury | 4.78 | 5.0 | 96 | 90 - 110 | CV | 05/02/2023 | 16:38 | LB125251 |
| CCV01 | Mercury | 4.71 | 5.0 | 94 | 90 - 110 | CV | 05/02/2023 | 17:05 | LB125251 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Aluminum | 2610 | 2500 | 104 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Antimony | 1040 | 1000 | 104 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Arsenic | 1080 | 1000 | 108 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Barium | 555 | 520 | 107 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Beryllium | 515 | 510 | 101 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Cadmium | 521 | 510 | 102 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Calcium | 10100 | 10000 | 100 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Chromium | 492 | 520 | 95 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Cobalt | 524 | 520 | 101 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Copper | 548 | 510 | 108 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Iron | 9830 | 10000 | 98 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Lead | 1060 | 1000 | 106 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Magnesium | 6080 | 6000 | 101 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Manganese | 551 | 520 | 106 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Nickel | 530 | 530 | 100 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Potassium | 9740 | 9900 | 98 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Selenium | 1090 | 1000 | 109 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Silver | 239 | 250 | 96 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Sodium | 9080 | 10000 | 91 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Thallium | 1080 | 1000 | 108 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Vanadium | 509 | 500 | 102 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |
| | Zinc | 1050 | 1000 | 105 | 90 - 110 | P | 05/03/2023 | 14:04 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV01 | Aluminum | 9750 | 10000 | 98 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Antimony | 5000 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Arsenic | 4870 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Barium | 10100 | 10000 | 101 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Beryllium | 238 | 250 | 95 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Cadmium | 2390 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Calcium | 23600 | 25000 | 95 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Chromium | 953 | 1000 | 95 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Cobalt | 2450 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Copper | 1230 | 1250 | 98 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Iron | 4840 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Lead | 4880 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Magnesium | 26300 | 25000 | 105 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Manganese | 2520 | 2500 | 101 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Nickel | 2470 | 2500 | 99 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Potassium | 24200 | 25000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Selenium | 4860 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Silver | 1130 | 1250 | 90 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Sodium | 25500 | 25000 | 102 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Thallium | 4870 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Vanadium | 2410 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |
| | Zinc | 2490 | 2500 | 99 | 90 - 110 | P | 05/03/2023 | 14:31 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| LLCCV01 | Aluminum | 99.2 | 100 | 99 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Antimony | 53.9 | 50.0 | 108 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Arsenic | 23.0 | 20.0 | 115 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Barium | 112 | 100 | 112 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Beryllium | 6.29 | 6.0 | 105 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Cadmium | 6.52 | 6.0 | 109 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Calcium | 1950 | 2000 | 98 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Chromium | 9.71 | 10.0 | 97 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Cobalt | 30.8 | 30.0 | 103 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Copper | 23.6 | 20.0 | 118 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Iron | 104 | 100 | 104 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Lead | 12.7 | 12.0 | 106 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Magnesium | 2190 | 2000 | 109 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Manganese | 22.8 | 20.0 | 114 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Nickel | 40.9 | 40.0 | 102 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Potassium | 1940 | 2000 | 97 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Selenium | 22.2 | 20.0 | 111 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Silver | 10.9 | 10.0 | 109 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Sodium | 1720 | 2000 | 86 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Thallium | 43.2 | 40.0 | 108 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Vanadium | 40.7 | 40.0 | 102 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |
| | Zinc | 46.9 | 40.0 | 117 | 80 - 120 | P | 05/03/2023 | 14:35 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV02 | Aluminum | 9680 | 10000 | 97 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Antimony | 5010 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Arsenic | 4820 | 5000 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Barium | 10100 | 10000 | 101 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Beryllium | 237 | 250 | 95 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Cadmium | 2330 | 2500 | 93 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Calcium | 23500 | 25000 | 94 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Chromium | 941 | 1000 | 94 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Cobalt | 2410 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Copper | 1210 | 1250 | 97 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Iron | 4750 | 5000 | 95 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Lead | 4810 | 5000 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Magnesium | 26400 | 25000 | 106 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Manganese | 2530 | 2500 | 101 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Nickel | 2450 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Potassium | 23900 | 25000 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Selenium | 4760 | 5000 | 95 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Silver | 1130 | 1250 | 90 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Sodium | 24700 | 25000 | 99 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Thallium | 4780 | 5000 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Vanadium | 2400 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| | Zinc | 2460 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 15:21 | LB125269 |
| CCV03 | Aluminum | 9780 | 10000 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Antimony | 5290 | 5000 | 106 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Arsenic | 5000 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Barium | 10500 | 10000 | 105 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Beryllium | 237 | 250 | 95 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Cadmium | 2390 | 2500 | 96 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Calcium | 23800 | 25000 | 95 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Chromium | 947 | 1000 | 95 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Cobalt | 2500 | 2500 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Copper | 1250 | 1250 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Iron | 5000 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Lead | 5000 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV03 | Magnesium | 27300 | 25000 | 109 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Manganese | 2610 | 2500 | 104 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Nickel | 2560 | 2500 | 103 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Potassium | 24600 | 25000 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Selenium | 4910 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Silver | 1150 | 1250 | 92 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Sodium | 25500 | 25000 | 102 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Thallium | 4930 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Vanadium | 2460 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| | Zinc | 2500 | 2500 | 100 | 90 - 110 | P | 05/03/2023 | 16:39 | LB125269 |
| CCV04 | Aluminum | 9900 | 10000 | 99 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Antimony | 5200 | 5000 | 104 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Arsenic | 4910 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Barium | 10500 | 10000 | 105 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Beryllium | 238 | 250 | 95 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Cadmium | 2340 | 2500 | 94 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Calcium | 23900 | 25000 | 96 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Chromium | 950 | 1000 | 95 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Cobalt | 2460 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Copper | 1230 | 1250 | 98 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Iron | 5020 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Lead | 4910 | 5000 | 98 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Magnesium | 27400 | 25000 | 110 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Manganese | 2620 | 2500 | 105 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Nickel | 2510 | 2500 | 100 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Potassium | 24800 | 25000 | 99 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Selenium | 4830 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Silver | 1140 | 1250 | 92 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Sodium | 25500 | 25000 | 102 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Thallium | 4840 | 5000 | 97 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Vanadium | 2460 | 2500 | 99 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| | Zinc | 2520 | 2500 | 101 | 90 - 110 | P | 05/03/2023 | 17:30 | LB125269 |
| CCV05 | Aluminum | 10100 | 10000 | 101 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Antimony | 5360 | 5000 | 107 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV05 | Arsenic | 5070 | 5000 | 101 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Barium | 10800 | 10000 | 108 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Beryllium | 244 | 250 | 98 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Cadmium | 2430 | 2500 | 97 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Calcium | 24400 | 25000 | 98 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Chromium | 911 | 1000 | 91 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Cobalt | 2550 | 2500 | 102 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Copper | 1270 | 1250 | 102 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Iron | 4940 | 5000 | 99 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Lead | 5090 | 5000 | 102 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Magnesium | 26000 | 25000 | 104 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Manganese | 2710 | 2500 | 108 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Nickel | 2610 | 2500 | 104 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Potassium | 24800 | 25000 | 99 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Selenium | 4980 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Silver | 1140 | 1250 | 91 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Sodium | 23300 | 25000 | 93 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Thallium | 5020 | 5000 | 100 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Vanadium | 2530 | 2500 | 101 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| | Zinc | 2550 | 2500 | 102 | 90 - 110 | P | 05/03/2023 | 18:16 | LB125269 |
| CCV06 | Aluminum | 9940 | 10000 | 99 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Antimony | 5320 | 5000 | 106 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Arsenic | 5060 | 5000 | 101 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Barium | 10600 | 10000 | 106 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Beryllium | 243 | 250 | 97 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Cadmium | 2460 | 2500 | 98 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Calcium | 24000 | 25000 | 96 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Chromium | 904 | 1000 | 90 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Cobalt | 2570 | 2500 | 103 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Copper | 1280 | 1250 | 102 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Iron | 4810 | 5000 | 96 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Lead | 5120 | 5000 | 102 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Magnesium | 25500 | 25000 | 102 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Manganese | 2670 | 2500 | 107 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV06 | Nickel | 2620 | 2500 | 105 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Potassium | 24200 | 25000 | 97 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Selenium | 4960 | 5000 | 99 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Silver | 1250 | 1250 | 100 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Sodium | 22500 | 25000 | 90 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Thallium | 5040 | 5000 | 101 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Vanadium | 2470 | 2500 | 99 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |
| | Zinc | 2560 | 2500 | 102 | 90 - 110 | P | 05/03/2023 | 19:03 | LB125269 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Aluminum | 2590 | 2500 | 104 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Antimony | 1000 | 1000 | 100 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Arsenic | 1050 | 1000 | 105 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Barium | 525 | 520 | 101 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Beryllium | 524 | 510 | 103 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Cadmium | 518 | 510 | 102 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Calcium | 10200 | 10000 | 102 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Chromium | 521 | 520 | 100 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Cobalt | 509 | 520 | 98 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Copper | 535 | 510 | 105 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Iron | 9840 | 10000 | 98 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Lead | 1040 | 1000 | 104 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Magnesium | 6060 | 6000 | 101 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Manganese | 528 | 520 | 102 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Nickel | 511 | 530 | 96 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Potassium | 9650 | 9900 | 98 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Selenium | 1070 | 1000 | 107 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Silver | 253 | 250 | 101 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Sodium | 9520 | 10000 | 95 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Thallium | 1070 | 1000 | 107 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Vanadium | 508 | 500 | 102 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |
| | Zinc | 1030 | 1000 | 103 | 90 - 110 | P | 05/04/2023 | 13:41 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV01 | Aluminum | 9590 | 10000 | 96 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Antimony | 5000 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Arsenic | 5100 | 5000 | 102 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Barium | 9860 | 10000 | 99 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Beryllium | 242 | 250 | 97 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Cadmium | 2390 | 2500 | 96 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Calcium | 23700 | 25000 | 95 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Chromium | 956 | 1000 | 96 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Cobalt | 2440 | 2500 | 98 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Copper | 1250 | 1250 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Iron | 4870 | 5000 | 97 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Lead | 4880 | 5000 | 98 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Magnesium | 24400 | 25000 | 98 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Manganese | 2500 | 2500 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Nickel | 2460 | 2500 | 99 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Potassium | 24200 | 25000 | 97 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Selenium | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Silver | 1250 | 1250 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Sodium | 23800 | 25000 | 95 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Thallium | 4870 | 5000 | 98 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Vanadium | 2410 | 2500 | 96 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |
| | Zinc | 2490 | 2500 | 100 | 90 - 110 | P | 05/04/2023 | 14:10 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| LLCCV01 | Aluminum | 117 | 100 | 117 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Antimony | 51.3 | 50.0 | 103 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Arsenic | 20.4 | 20.0 | 102 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Barium | 104 | 100 | 104 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Beryllium | 6.34 | 6.0 | 106 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Cadmium | 6.31 | 6.0 | 105 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Calcium | 1920 | 2000 | 96 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Chromium | 9.72 | 10.0 | 97 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Cobalt | 29.1 | 30.0 | 97 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Copper | 23.5 | 20.0 | 117 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Iron | 100 | 100 | 100 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Lead | 13.7 | 12.0 | 114 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Magnesium | 2130 | 2000 | 106 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Manganese | 22.1 | 20.0 | 110 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Nickel | 38.9 | 40.0 | 97 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Potassium | 1910 | 2000 | 95 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Selenium | 18.9 | 20.0 | 95 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Silver | 10.5 | 10.0 | 105 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Sodium | 1810 | 2000 | 90 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Thallium | 40.9 | 40.0 | 102 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Vanadium | 39.2 | 40.0 | 98 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |
| | Zinc | 47.9 | 40.0 | 120 | 80 - 120 | P | 05/04/2023 | 14:14 | LB125287 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV02 | Aluminum | 9700 | 10000 | 97 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Antimony | 5120 | 5000 | 102 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Arsenic | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Barium | 10100 | 10000 | 101 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Beryllium | 242 | 250 | 97 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Cadmium | 2420 | 2500 | 97 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Calcium | 23900 | 25000 | 96 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Chromium | 963 | 1000 | 96 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Cobalt | 2480 | 2500 | 99 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Copper | 1270 | 1250 | 102 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Iron | 4990 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Lead | 4970 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Magnesium | 25000 | 25000 | 100 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Manganese | 2570 | 2500 | 103 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Nickel | 2520 | 2500 | 101 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Potassium | 24900 | 25000 | 99 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Selenium | 5070 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Silver | 1350 | 1250 | 108 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Sodium | 24600 | 25000 | 98 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Thallium | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Vanadium | 2430 | 2500 | 97 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| | Zinc | 2540 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 15:05 | LB125287 |
| CCV03 | Aluminum | 9720 | 10000 | 97 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Antimony | 5280 | 5000 | 106 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Arsenic | 5060 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Barium | 10200 | 10000 | 102 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Beryllium | 238 | 250 | 95 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Cadmium | 2440 | 2500 | 98 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Calcium | 23900 | 25000 | 95 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Chromium | 968 | 1000 | 97 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Cobalt | 2520 | 2500 | 101 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Copper | 1300 | 1250 | 104 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Iron | 5040 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Lead | 5030 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV03 | Magnesium | 24900 | 25000 | 100 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Manganese | 2570 | 2500 | 103 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Nickel | 2560 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Potassium | 25700 | 25000 | 103 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Selenium | 5220 | 5000 | 104 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Silver | 1370 | 1250 | 109 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Sodium | 23700 | 25000 | 95 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Thallium | 5010 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Vanadium | 2450 | 2500 | 98 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| | Zinc | 2580 | 2500 | 103 | 90 - 110 | P | 05/04/2023 | 15:53 | LB125287 |
| CCV04 | Aluminum | 9490 | 10000 | 95 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Antimony | 5230 | 5000 | 104 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Arsenic | 4980 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Barium | 9960 | 10000 | 100 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Beryllium | 239 | 250 | 96 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Cadmium | 2390 | 2500 | 96 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Calcium | 23300 | 25000 | 93 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Chromium | 967 | 1000 | 97 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Cobalt | 2480 | 2500 | 99 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Copper | 1290 | 1250 | 103 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Iron | 5010 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Lead | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Magnesium | 24400 | 25000 | 98 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Manganese | 2540 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Nickel | 2520 | 2500 | 101 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Potassium | 25100 | 25000 | 101 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Selenium | 5170 | 5000 | 103 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Silver | 1340 | 1250 | 107 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Sodium | 24700 | 25000 | 99 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Thallium | 4910 | 5000 | 98 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Vanadium | 2390 | 2500 | 95 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| | Zinc | 2580 | 2500 | 103 | 90 - 110 | P | 05/04/2023 | 16:52 | LB125287 |
| CCV05 | Aluminum | 9300 | 10000 | 93 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Antimony | 5360 | 5000 | 107 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV05 | Arsenic | 5030 | 5000 | 101 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Barium | 10000 | 10000 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Beryllium | 230 | 250 | 92 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Cadmium | 2370 | 2500 | 95 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Calcium | 22800 | 25000 | 91 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Chromium | 927 | 1000 | 93 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Cobalt | 2490 | 2500 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Copper | 1310 | 1250 | 104 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Iron | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Lead | 4990 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Magnesium | 24100 | 25000 | 96 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Manganese | 2560 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Nickel | 2550 | 2500 | 102 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Potassium | 25000 | 25000 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Selenium | 5300 | 5000 | 106 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Silver | 1330 | 1250 | 106 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Sodium | 23600 | 25000 | 94 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Thallium | 4930 | 5000 | 98 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Vanadium | 2360 | 2500 | 94 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| | Zinc | 2500 | 2500 | 100 | 90 - 110 | P | 05/04/2023 | 17:43 | LB125287 |
| CCV06 | Aluminum | 9500 | 10000 | 95 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Antimony | 5250 | 5000 | 105 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Arsenic | 4960 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Barium | 10100 | 10000 | 101 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Beryllium | 240 | 250 | 96 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Cadmium | 2370 | 2500 | 95 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Calcium | 23300 | 25000 | 93 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Chromium | 939 | 1000 | 94 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Cobalt | 2480 | 2500 | 99 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Copper | 1290 | 1250 | 103 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Iron | 5010 | 5000 | 100 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Lead | 4950 | 5000 | 99 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Magnesium | 24600 | 25000 | 98 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Manganese | 2620 | 2500 | 105 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV06 | Nickel | 2520 | 2500 | 101 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Potassium | 25200 | 25000 | 101 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Selenium | 5170 | 5000 | 103 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Silver | 1360 | 1250 | 108 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Sodium | 24100 | 25000 | 96 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Thallium | 4870 | 5000 | 97 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Vanadium | 2400 | 2500 | 96 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |
| | Zinc | 2600 | 2500 | 104 | 90 - 110 | P | 05/04/2023 | 18:13 | LB125287 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Aluminum | 2410 | 2500 | 96 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Antimony | 985 | 1000 | 98 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Arsenic | 1040 | 1000 | 104 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Barium | 526 | 520 | 101 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Beryllium | 551 | 510 | 108 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Cadmium | 511 | 510 | 100 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Calcium | 10200 | 10000 | 102 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Chromium | 525 | 520 | 101 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Cobalt | 503 | 520 | 97 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Copper | 526 | 510 | 103 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Iron | 9700 | 10000 | 97 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Lead | 1030 | 1000 | 102 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Magnesium | 6270 | 6000 | 104 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Manganese | 530 | 520 | 102 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Nickel | 506 | 530 | 95 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Potassium | 9510 | 9900 | 96 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Selenium | 1050 | 1000 | 105 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Silver | 253 | 250 | 101 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Sodium | 9530 | 10000 | 95 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Thallium | 1040 | 1000 | 104 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Vanadium | 515 | 500 | 103 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |
| | Zinc | 1030 | 1000 | 103 | 90 - 110 | P | 05/11/2023 | 15:47 | LB125428 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV01 | Aluminum | 9820 | 10000 | 98 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Antimony | 4850 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Arsenic | 4840 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Barium | 9660 | 10000 | 97 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Beryllium | 241 | 250 | 96 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Cadmium | 2470 | 2500 | 99 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Calcium | 24300 | 25000 | 97 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Chromium | 1010 | 1000 | 101 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Cobalt | 2400 | 2500 | 96 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Copper | 1220 | 1250 | 98 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Iron | 4950 | 5000 | 99 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Lead | 4850 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Magnesium | 24300 | 25000 | 97 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Manganese | 2400 | 2500 | 96 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Nickel | 2420 | 2500 | 97 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Potassium | 23800 | 25000 | 95 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Selenium | 4990 | 5000 | 100 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Silver | 1220 | 1250 | 98 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Sodium | 23500 | 25000 | 94 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Thallium | 4810 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Vanadium | 2460 | 2500 | 98 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |
| | Zinc | 2430 | 2500 | 97 | 90 - 110 | P | 05/11/2023 | 16:19 | LB125428 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| LLCCV01 | Aluminum | 88.2 | 100 | 88 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Antimony | 52.1 | 50.0 | 104 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Arsenic | 22.5 | 20.0 | 113 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Barium | 104 | 100 | 104 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Beryllium | 6.55 | 6.0 | 109 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Cadmium | 6.67 | 6.0 | 111 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Calcium | 2010 | 2000 | 100 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Chromium | 10.5 | 10.0 | 105 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Cobalt | 30.2 | 30.0 | 101 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Copper | 23.6 | 20.0 | 118 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Iron | 81.6 | 100 | 82 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Lead | 13.9 | 12.0 | 116 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Magnesium | 2220 | 2000 | 111 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Manganese | 21.9 | 20.0 | 110 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Nickel | 40.0 | 40.0 | 100 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Potassium | 1940 | 2000 | 97 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Selenium | 17.7 | 20.0 | 88 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Silver | 10.5 | 10.0 | 105 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Sodium | 1780 | 2000 | 89 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Thallium | 43.6 | 40.0 | 109 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Vanadium | 43.6 | 40.0 | 109 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |
| | Zinc | 42.6 | 40.0 | 106 | 80 - 120 | P | 05/11/2023 | 16:23 | LB125428 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV02 | Aluminum | 9890 | 10000 | 99 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Antimony | 4810 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Arsenic | 4790 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Barium | 9930 | 10000 | 99 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Beryllium | 268 | 250 | 107 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Cadmium | 2450 | 2500 | 98 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Calcium | 24700 | 25000 | 99 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Chromium | 1020 | 1000 | 102 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Cobalt | 2390 | 2500 | 95 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Copper | 1210 | 1250 | 97 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Iron | 4630 | 5000 | 92 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Lead | 4800 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Magnesium | 24500 | 25000 | 98 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Manganese | 2480 | 2500 | 99 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Nickel | 2400 | 2500 | 96 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Potassium | 23100 | 25000 | 92 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Selenium | 4890 | 5000 | 98 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Silver | 1250 | 1250 | 100 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Sodium | 23100 | 25000 | 92 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Thallium | 4790 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Vanadium | 2510 | 2500 | 100 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| | Zinc | 2490 | 2500 | 100 | 90 - 110 | P | 05/11/2023 | 17:16 | LB125428 |
| CCV03 | Aluminum | 9910 | 10000 | 99 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Antimony | 4920 | 5000 | 98 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Arsenic | 4860 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Barium | 9910 | 10000 | 99 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Beryllium | 264 | 250 | 106 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Cadmium | 2530 | 2500 | 101 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Calcium | 25200 | 25000 | 101 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Chromium | 1060 | 1000 | 106 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Cobalt | 2420 | 2500 | 97 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Copper | 1230 | 1250 | 98 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Iron | 4760 | 5000 | 95 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Lead | 4860 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV03 | Magnesium | 24400 | 25000 | 98 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Manganese | 2470 | 2500 | 99 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Nickel | 2430 | 2500 | 97 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Potassium | 23900 | 25000 | 95 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Selenium | 5000 | 5000 | 100 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Silver | 1270 | 1250 | 102 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Sodium | 23600 | 25000 | 94 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Thallium | 4840 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Vanadium | 2570 | 2500 | 103 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| | Zinc | 2520 | 2500 | 101 | 90 - 110 | P | 05/11/2023 | 18:18 | LB125428 |
| CCV04 | Aluminum | 9830 | 10000 | 98 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Antimony | 4860 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Arsenic | 4830 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Barium | 9600 | 10000 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Beryllium | 239 | 250 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Cadmium | 2500 | 2500 | 100 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Calcium | 24300 | 25000 | 97 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Chromium | 1050 | 1000 | 104 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Cobalt | 2400 | 2500 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Copper | 1220 | 1250 | 97 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Iron | 4770 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Lead | 4810 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Magnesium | 24200 | 25000 | 97 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Manganese | 2380 | 2500 | 95 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Nickel | 2410 | 2500 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Potassium | 24000 | 25000 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Selenium | 4920 | 5000 | 98 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Silver | 1220 | 1250 | 98 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Sodium | 25600 | 25000 | 102 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Thallium | 4790 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Vanadium | 2510 | 2500 | 100 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| | Zinc | 2410 | 2500 | 96 | 90 - 110 | P | 05/11/2023 | 19:01 | LB125428 |
| CCV05 | Aluminum | 9480 | 10000 | 95 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Antimony | 4800 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV05 | Arsenic | 4720 | 5000 | 94 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Barium | 9440 | 10000 | 94 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Beryllium | 236 | 250 | 95 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Cadmium | 2410 | 2500 | 96 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Calcium | 23500 | 25000 | 94 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Chromium | 998 | 1000 | 100 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Cobalt | 2310 | 2500 | 92 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Copper | 1190 | 1250 | 95 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Iron | 4550 | 5000 | 91 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Lead | 4630 | 5000 | 92 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Magnesium | 22800 | 25000 | 91 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Manganese | 2320 | 2500 | 93 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Nickel | 2320 | 2500 | 93 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Potassium | 23400 | 25000 | 94 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Selenium | 4890 | 5000 | 98 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Silver | 1190 | 1250 | 95 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Sodium | 23600 | 25000 | 94 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Thallium | 4610 | 5000 | 92 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Vanadium | 2460 | 2500 | 98 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| | Zinc | 2350 | 2500 | 94 | 90 - 110 | P | 05/11/2023 | 19:49 | LB125428 |
| CCV06 | Aluminum | 9640 | 10000 | 96 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Antimony | 4850 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Arsenic | 4770 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Barium | 9590 | 10000 | 96 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Beryllium | 240 | 250 | 96 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Cadmium | 2470 | 2500 | 99 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Calcium | 23800 | 25000 | 95 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Chromium | 1030 | 1000 | 103 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Cobalt | 2350 | 2500 | 94 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Copper | 1200 | 1250 | 96 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Iron | 4830 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Lead | 4740 | 5000 | 95 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Magnesium | 23300 | 25000 | 93 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Manganese | 2350 | 2500 | 94 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result ug/L | True Value | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCV06 | Nickel | 2370 | 2500 | 95 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Potassium | 23900 | 25000 | 96 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Selenium | 5000 | 5000 | 100 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Silver | 1230 | 1250 | 98 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Sodium | 24700 | 25000 | 99 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Thallium | 4650 | 5000 | 93 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Vanadium | 2490 | 2500 | 100 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| | Zinc | 2430 | 2500 | 97 | 90 - 110 | P | 05/11/2023 | 20:37 | LB125428 |
| CCV07 | Aluminum | 9600 | 10000 | 96 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Antimony | 4850 | 5000 | 97 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Arsenic | 4800 | 5000 | 96 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Barium | 9460 | 10000 | 95 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Beryllium | 233 | 250 | 93 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Cadmium | 2480 | 2500 | 99 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Calcium | 23600 | 25000 | 95 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Chromium | 1050 | 1000 | 104 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Cobalt | 2340 | 2500 | 94 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Copper | 1210 | 1250 | 97 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Iron | 5000 | 5000 | 100 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Lead | 4760 | 5000 | 95 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Magnesium | 23300 | 25000 | 93 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Manganese | 2290 | 2500 | 92 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Nickel | 2380 | 2500 | 95 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Potassium | 24000 | 25000 | 96 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Selenium | 5150 | 5000 | 103 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Silver | 1230 | 1250 | 98 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Sodium | 24800 | 25000 | 99 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Thallium | 4590 | 5000 | 92 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Vanadium | 2460 | 2500 | 98 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |
| | Zinc | 2430 | 2500 | 97 | 90 - 110 | P | 05/11/2023 | 21:04 | LB125428 |

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# Metals

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## CRDL STANDARD FOR AA & ICP

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:**

**Continuing Calibration Source:**

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CRA | Mercury | 0.21 | 0.2 | 105 | 40 - 160 | CV | 04/28/2023 | 13:20 | LB125204 |
| CRA | Mercury | 0.16 | 0.2 | 82 | 40 - 160 | CV | 05/02/2023 | 16:15 | LB125251 |
| CRI01 | Aluminum | 120 | 100 | 120 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Antimony | 52.5 | 50.0 | 105 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Arsenic | 22.2 | 20.0 | 111 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Barium | 113 | 100 | 114 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Beryllium | 6.52 | 6.0 | 109 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Cadmium | 6.52 | 6.0 | 109 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Calcium | 1980 | 2000 | 99 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Chromium | 10.0 | 10.0 | 100 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Cobalt | 30.7 | 30.0 | 102 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Copper | 23.4 | 20.0 | 117 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Iron | 103 | 100 | 103 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Lead | 12.8 | 12.0 | 107 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Magnesium | 2200 | 2000 | 110 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Manganese | 23.1 | 20.0 | 115 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Nickel | 40.7 | 40.0 | 102 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Potassium | 1950 | 2000 | 97 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Selenium | 23.3 | 20.0 | 117 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Silver | 11.5 | 10.0 | 116 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Sodium | 1750 | 2000 | 88 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Thallium | 42.6 | 40.0 | 106 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Vanadium | 43.5 | 40.0 | 109 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| | Zinc | 47.8 | 40.0 | 120 | 40 - 160 | P | 05/03/2023 | 14:15 | LB125269 |
| CRI01 | Aluminum | 98.1 | 100 | 98 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Antimony | 49.6 | 50.0 | 99 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Arsenic | 21.0 | 20.0 | 105 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Barium | 103 | 100 | 103 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Beryllium | 6.51 | 6.0 | 108 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Cadmium | 6.24 | 6.0 | 104 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Calcium | 1930 | 2000 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Chromium | 9.64 | 10.0 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Cobalt | 29.0 | 30.0 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Copper | 24.1 | 20.0 | 120 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Iron | 103 | 100 | 103 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |

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# Metals

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## CRDL STANDARD FOR AA & ICP

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Initial Calibration Source:**

**Continuing Calibration Source:**

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CRI01 | Lead | 14.0 | 12.0 | 116 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Magnesium | 2140 | 2000 | 107 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Manganese | 21.9 | 20.0 | 110 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Nickel | 38.6 | 40.0 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Potassium | 1910 | 2000 | 96 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Selenium | 21.3 | 20.0 | 106 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Silver | 10.4 | 10.0 | 104 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Sodium | 1830 | 2000 | 91 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Thallium | 39.9 | 40.0 | 100 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Vanadium | 41.0 | 40.0 | 103 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| | Zinc | 48.4 | 40.0 | 121 | 40 - 160 | P | 05/04/2023 | 13:51 | LB125287 |
| CRI01 | Aluminum | 91.1 | 100 | 91 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Antimony | 50.8 | 50.0 | 102 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Arsenic | 21.4 | 20.0 | 107 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Barium | 105 | 100 | 105 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Beryllium | 6.59 | 6.0 | 110 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Cadmium | 6.54 | 6.0 | 109 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Calcium | 2020 | 2000 | 101 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Chromium | 10.3 | 10.0 | 102 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Cobalt | 30.2 | 30.0 | 101 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Copper | 23.2 | 20.0 | 116 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Iron | 74.8 | 100 | 75 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Lead | 12.5 | 12.0 | 104 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Magnesium | 2220 | 2000 | 111 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Manganese | 21.9 | 20.0 | 110 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Nickel | 39.8 | 40.0 | 100 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Potassium | 1930 | 2000 | 96 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Selenium | 19.7 | 20.0 | 98 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Silver | 10.2 | 10.0 | 102 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Sodium | 1810 | 2000 | 90 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Thallium | 41.4 | 40.0 | 104 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Vanadium | 41.3 | 40.0 | 103 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |
| | Zinc | 42.5 | 40.0 | 106 | 40 - 160 | P | 05/11/2023 | 15:55 | LB125428 |

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## Metals

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### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICB53 | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 13:14 | LB125204 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CCB79** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 13:18 | LB125204 |
| **CCB80** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 13:45 | LB125204 |
| **CCB81** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 14:16 | LB125204 |
| **CCB82** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 04/28/2023 | 14:33 | LB125204 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICB58** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 05/02/2023 | 16:08 | LB125251 |

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# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CCB98** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 05/02/2023 | 16:13 | LB125251 |
| **CCB99** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 05/02/2023 | 16:40 | LB125251 |
| **CCB01** | Mercury | 0.20 | +/-0.20 | U | 0.20 | CV | 05/02/2023 | 17:07 | LB125251 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:11 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:11 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 14:11 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 14:11 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:11 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:11 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:11 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:11 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Silver | 1.54 | +/-10.0 | J | 10.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:11 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:11 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:11 | LB125269 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:39 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:39 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 14:39 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 14:39 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:39 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 14:39 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:39 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:39 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Silver | 1.35 | +/-10.0 | J | 10.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 14:39 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:39 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 14:39 | LB125269 |
| CCB02 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 15:30 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 15:30 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 15:30 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 15:30 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 15:30 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 15:30 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 15:30 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 15:30 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 15:30 | LB125269 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB02 | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 15:30 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 15:30 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 15:30 | LB125269 |
| CCB03 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 16:43 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 16:43 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 16:43 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 16:43 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 16:43 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 16:43 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 16:43 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 16:43 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 16:43 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 16:43 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 16:43 | LB125269 |
| CCB04 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 17:34 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 17:34 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 17:34 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 17:34 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 17:34 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 17:34 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 17:34 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 17:34 | LB125269 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB04 | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 17:34 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Silver | 1.69 | +/-10.0 | J | 10.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 17:34 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 17:34 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 17:34 | LB125269 |
| CCB05 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 18:20 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 18:20 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 18:20 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 18:20 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 18:20 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 18:20 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 18:20 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 18:20 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 18:20 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 18:20 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 18:20 | LB125269 |
| CCB06 | Aluminum | 100 | +/-100 | U | 100 | P | 05/03/2023 | 19:07 | LB125269 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/03/2023 | 19:07 | LB125269 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 19:07 | LB125269 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/03/2023 | 19:07 | LB125269 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 19:07 | LB125269 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 19:07 | LB125269 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB06 | Iron | 100 | +/-100 | U | 100 | P | 05/03/2023 | 19:07 | LB125269 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 19:07 | LB125269 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 19:07 | LB125269 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Silver | 2.29 | +/-10.0 | J | 10.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/03/2023 | 19:07 | LB125269 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 19:07 | LB125269 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/03/2023 | 19:07 | LB125269 |

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# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 13:47 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 13:47 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 13:47 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 13:47 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 13:47 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 13:47 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 13:47 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 13:47 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 13:47 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 13:47 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 13:47 | LB125287 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 14:18 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 14:18 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 14:18 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 14:18 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 14:18 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 14:18 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 14:18 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 14:18 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 14:18 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 14:18 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 14:18 | LB125287 |
| CCB02 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:09 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:09 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 15:09 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 15:09 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:09 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:09 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:09 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:09 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 15:09 | LB125287 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB02 | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:09 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:09 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:09 | LB125287 |
| CCB03 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:57 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:57 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 15:57 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 15:57 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:57 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 15:57 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:57 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 15:57 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Sodium | 1020 | +/-2000 | J | 2000 | P | 05/04/2023 | 15:57 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:57 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 15:57 | LB125287 |
| CCB04 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 16:55 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 16:55 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 16:55 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 16:55 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 16:55 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 16:55 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 16:55 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 16:55 | LB125287 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB04 | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 16:55 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 16:55 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 16:55 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 16:55 | LB125287 |
| CCB05 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 17:47 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 17:47 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 17:47 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 17:47 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 17:47 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 17:47 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 17:47 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 17:47 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 17:47 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 17:47 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 17:47 | LB125287 |
| CCB06 | Aluminum | 100 | +/-100 | U | 100 | P | 05/04/2023 | 18:17 | LB125287 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/04/2023 | 18:17 | LB125287 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 18:17 | LB125287 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/04/2023 | 18:17 | LB125287 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 18:17 | LB125287 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 18:17 | LB125287 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB06 | Iron | 100 | +/-100 | U | 100 | P | 05/04/2023 | 18:17 | LB125287 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 18:17 | LB125287 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 18:17 | LB125287 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/04/2023 | 18:17 | LB125287 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 18:17 | LB125287 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/04/2023 | 18:17 | LB125287 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/11/2023 | 15:51 | LB125428 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/11/2023 | 15:51 | LB125428 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 15:51 | LB125428 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 15:51 | LB125428 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 15:51 | LB125428 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/11/2023 | 15:51 | LB125428 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 15:51 | LB125428 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 15:51 | LB125428 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 15:51 | LB125428 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 15:51 | LB125428 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 15:51 | LB125428 |

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# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB01 | Aluminum | 100 | +/-100 | U | 100 | P | 05/11/2023 | 16:27 | LB125428 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/11/2023 | 16:27 | LB125428 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 16:27 | LB125428 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 16:27 | LB125428 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 16:27 | LB125428 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/11/2023 | 16:27 | LB125428 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 16:27 | LB125428 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 16:27 | LB125428 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 16:27 | LB125428 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 16:27 | LB125428 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 16:27 | LB125428 |
| CCB02 | Aluminum | 100 | +/-100 | U | 100 | P | 05/11/2023 | 17:20 | LB125428 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/11/2023 | 17:20 | LB125428 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 17:20 | LB125428 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 17:20 | LB125428 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 17:20 | LB125428 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/11/2023 | 17:20 | LB125428 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 17:20 | LB125428 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 17:20 | LB125428 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 17:20 | LB125428 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CCB02** | Sodium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 17:20 | LB125428 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 17:20 | LB125428 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 17:20 | LB125428 |
| **CCB03** | Aluminum | 100 | +/-100 | U | 100 | P | 05/11/2023 | 18:21 | LB125428 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/11/2023 | 18:21 | LB125428 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 18:21 | LB125428 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 18:21 | LB125428 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 18:21 | LB125428 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/11/2023 | 18:21 | LB125428 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 18:21 | LB125428 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 18:21 | LB125428 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Sodium | 1440 | +/-2000 | J | 2000 | P | 05/11/2023 | 18:21 | LB125428 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 18:21 | LB125428 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 18:21 | LB125428 |
| **CCB04** | Aluminum | 100 | +/-100 | U | 100 | P | 05/11/2023 | 19:05 | LB125428 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/11/2023 | 19:05 | LB125428 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 19:05 | LB125428 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 19:05 | LB125428 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 19:05 | LB125428 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/11/2023 | 19:05 | LB125428 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 19:05 | LB125428 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 19:05 | LB125428 |

# Metals

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB04 | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 19:05 | LB125428 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Sodium | 929 | +/-2000 | J | 2000 | P | 05/11/2023 | 19:05 | LB125428 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 19:05 | LB125428 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 19:05 | LB125428 |
| CCB05 | Aluminum | 100 | +/-100 | U | 100 | P | 05/11/2023 | 19:53 | LB125428 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/11/2023 | 19:53 | LB125428 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 19:53 | LB125428 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 19:53 | LB125428 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 19:53 | LB125428 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/11/2023 | 19:53 | LB125428 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 19:53 | LB125428 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 19:53 | LB125428 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Sodium | 1800 | +/-2000 | J | 2000 | P | 05/11/2023 | 19:53 | LB125428 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 19:53 | LB125428 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 19:53 | LB125428 |
| CCB06 | Aluminum | 100 | +/-100 | U | 100 | P | 05/11/2023 | 20:41 | LB125428 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/11/2023 | 20:41 | LB125428 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 20:41 | LB125428 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 20:41 | LB125428 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 20:41 | LB125428 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 20:41 | LB125428 |

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## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | CRQL | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| CCB06 | Iron | 100 | +/-100 | U | 100 | P | 05/11/2023 | 20:41 | LB125428 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 20:41 | LB125428 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 20:41 | LB125428 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Sodium | 827 | +/-2000 | J | 2000 | P | 05/11/2023 | 20:41 | LB125428 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 20:41 | LB125428 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 20:41 | LB125428 |
| CCB07 | Aluminum | 100 | +/-100 | U | 100 | P | 05/11/2023 | 21:08 | LB125428 |
| | Antimony | 50.0 | +/-50.0 | U | 50.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Arsenic | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Barium | 100 | +/-100 | U | 100 | P | 05/11/2023 | 21:08 | LB125428 |
| | Beryllium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 21:08 | LB125428 |
| | Cadmium | 6.00 | +/-6.00 | U | 6.00 | P | 05/11/2023 | 21:08 | LB125428 |
| | Calcium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 21:08 | LB125428 |
| | Chromium | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Cobalt | 30.0 | +/-30.0 | U | 30.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Copper | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Iron | 100 | +/-100 | U | 100 | P | 05/11/2023 | 21:08 | LB125428 |
| | Lead | 12.0 | +/-12.0 | U | 12.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Magnesium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 21:08 | LB125428 |
| | Manganese | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Nickel | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Potassium | 2000 | +/-2000 | U | 2000 | P | 05/11/2023 | 21:08 | LB125428 |
| | Selenium | 20.0 | +/-20.0 | U | 20.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Silver | 10.0 | +/-10.0 | U | 10.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Sodium | 590 | +/-2000 | J | 2000 | P | 05/11/2023 | 21:08 | LB125428 |
| | Thallium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Vanadium | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 21:08 | LB125428 |
| | Zinc | 40.0 | +/-40.0 | U | 40.0 | P | 05/11/2023 | 21:08 | LB125428 |

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# Metals
## - 3b -
## PREPARATION BLANK SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Instrument:** CV1

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|
| **PB152487BL** | | **WATER** | | **Batch Number:** | **PB152487** | | **Prep Date:** | **04/28/2023** | |
| | Mercury | 0.20 | <0.20 | U | 0.20 | CV | 04/28/2023 | 13:27 | LB125204 |

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|
| **PB152538BL** | | **WATER** | | **Batch Number:** | **PB152538** | | **Prep Date:** | **05/02/2023** | |
| | Mercury | 0.20 | <0.20 | U | 0.20 | CV | 05/02/2023 | 16:22 | LB125251 |

**Metals**
**- 3b -**
**PREPARATION BLANK SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Instrument:** P4

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|
| **PB152450BL** | | **WATER** | | **Batch Number:** | **PB152450** | | **Prep Date:** | **05/03/2023** | |
| | Aluminum | 50.0 | <50.0 | U | 50.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Antimony | 25.0 | <25.0 | U | 25.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Arsenic | 10.0 | <10.0 | U | 10.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Barium | 50.0 | <50.0 | U | 50.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Beryllium | 3.00 | <3.00 | U | 3.00 | P | 05/03/2023 | 18:39 | LB125269 |
| | Cadmium | 3.00 | <3.00 | U | 3.00 | P | 05/03/2023 | 18:39 | LB125269 |
| | Calcium | 1000 | <1000 | U | 1000 | P | 05/03/2023 | 18:39 | LB125269 |
| | Chromium | 5.00 | <5.00 | U | 5.00 | P | 05/03/2023 | 18:39 | LB125269 |
| | Cobalt | 15.0 | <15.0 | U | 15.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Copper | 10.0 | <10.0 | U | 10.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Iron | 50.0 | <50.0 | U | 50.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Lead | 6.00 | <6.00 | U | 6.00 | P | 05/03/2023 | 18:39 | LB125269 |
| | Magnesium | 1000 | <1000 | U | 1000 | P | 05/03/2023 | 18:39 | LB125269 |
| | Manganese | 10.0 | <10.0 | U | 10.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Nickel | 20.0 | <20.0 | U | 20.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Potassium | 1000 | <1000 | U | 1000 | P | 05/03/2023 | 18:39 | LB125269 |
| | Selenium | 10.0 | <10.0 | U | 10.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Silver | 0.95 | <5.00 | J | 5.00 | P | 05/03/2023 | 18:39 | LB125269 |
| | Sodium | 1000 | <1000 | U | 1000 | P | 05/03/2023 | 18:39 | LB125269 |
| | Thallium | 20.0 | <20.0 | U | 20.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Vanadium | 20.0 | <20.0 | U | 20.0 | P | 05/03/2023 | 18:39 | LB125269 |
| | Zinc | 20.0 | <20.0 | U | 20.0 | P | 05/03/2023 | 18:39 | LB125269 |

# Metals
## - 4 -
## INTERFERENCE CHECK SAMPLE

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**ICS Source:** EPA **Instrument ID:** P4

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Low Limit (ug/L) | High Limit (ug/L) | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICSA01 | Aluminum | 260000 | 255000 | 102 | 216000 | 294000 | 05/03/2023 | 14:19 | LB125269 |
| | Antimony | 2.06 | | | -50 | 50 | 05/03/2023 | 14:19 | LB125269 |
| | Arsenic | -0.24 | | | -20 | 20 | 05/03/2023 | 14:19 | LB125269 |
| | Barium | 12.2 | 6.0 | 203 | -94 | 106 | 05/03/2023 | 14:19 | LB125269 |
| | Beryllium | 1.20 | | | -6 | 6 | 05/03/2023 | 14:19 | LB125269 |
| | Cadmium | 1.52 | 1.0 | 152 | -5 | 7 | 05/03/2023 | 14:19 | LB125269 |
| | Calcium | 245000 | 245000 | 100 | 208000 | 282000 | 05/03/2023 | 14:19 | LB125269 |
| | Chromium | 52.7 | 52.0 | 101 | 42 | 62 | 05/03/2023 | 14:19 | LB125269 |
| | Cobalt | 2.18 | | | -30 | 30 | 05/03/2023 | 14:19 | LB125269 |
| | Copper | 12.5 | 2.0 | 625 | -18 | 22 | 05/03/2023 | 14:19 | LB125269 |
| | Iron | 97400 | 101000 | 96 | 85600 | 116500 | 05/03/2023 | 14:19 | LB125269 |
| | Lead | -2.76 | | | -12 | 12 | 05/03/2023 | 14:19 | LB125269 |
| | Magnesium | 256000 | 255000 | 100 | 216000 | 294000 | 05/03/2023 | 14:19 | LB125269 |
| | Manganese | 12.3 | 7.0 | 176 | -13 | 27 | 05/03/2023 | 14:19 | LB125269 |
| | Nickel | 3.56 | 2.0 | 178 | -38 | 42 | 05/03/2023 | 14:19 | LB125269 |
| | Potassium | -84.5 | | | 0 | 0 | 05/03/2023 | 14:19 | LB125269 |
| | Selenium | 5.85 | | | -20 | 20 | 05/03/2023 | 14:19 | LB125269 |
| | Silver | 0.32 | | | -10 | 10 | 05/03/2023 | 14:19 | LB125269 |
| | Sodium | -96.6 | | | 0 | 0 | 05/03/2023 | 14:19 | LB125269 |
| | Thallium | -10.8 | | | -40 | 40 | 05/03/2023 | 14:19 | LB125269 |
| | Vanadium | 0.27 | | | -40 | 40 | 05/03/2023 | 14:19 | LB125269 |
| | Zinc | -3.16 | | | -40 | 40 | 05/03/2023 | 14:19 | LB125269 |
| ICSAB01 | Aluminum | 251000 | 247000 | 102 | 209000 | 285000 | 05/03/2023 | 14:23 | LB125269 |
| | Antimony | 610 | 618 | 99 | 525 | 711 | 05/03/2023 | 14:23 | LB125269 |
| | Arsenic | 105 | 104 | 101 | 88.4 | 120 | 05/03/2023 | 14:23 | LB125269 |
| | Barium | 535 | 537 | 100 | 437 | 637 | 05/03/2023 | 14:23 | LB125269 |
| | Beryllium | 493 | 495 | 100 | 420 | 570 | 05/03/2023 | 14:23 | LB125269 |
| | Cadmium | 999 | 972 | 103 | 826 | 1120 | 05/03/2023 | 14:23 | LB125269 |
| | Calcium | 237000 | 235000 | 101 | 199000 | 271000 | 05/03/2023 | 14:23 | LB125269 |
| | Chromium | 508 | 542 | 94 | 460 | 624 | 05/03/2023 | 14:23 | LB125269 |
| | Cobalt | 500 | 476 | 105 | 404 | 548 | 05/03/2023 | 14:23 | LB125269 |
| | Copper | 502 | 511 | 98 | 434 | 588 | 05/03/2023 | 14:23 | LB125269 |
| | Iron | 93500 | 99300 | 94 | 84400 | 114500 | 05/03/2023 | 14:23 | LB125269 |
| | Lead | 48.1 | 49.0 | 98 | 37 | 61 | 05/03/2023 | 14:23 | LB125269 |
| | Magnesium | 248000 | 248000 | 100 | 210000 | 286000 | 05/03/2023 | 14:23 | LB125269 |
| | Manganese | 519 | 507 | 102 | 430 | 584 | 05/03/2023 | 14:23 | LB125269 |
| | Nickel | 995 | 954 | 104 | 810 | 1100 | 05/03/2023 | 14:23 | LB125269 |
| | Potassium | -42.0 | | | 0 | 0 | 05/03/2023 | 14:23 | LB125269 |
| | Selenium | 51.6 | 46.0 | 112 | 26 | 66 | 05/03/2023 | 14:23 | LB125269 |
| | Silver | 193 | 201 | 96 | 170 | 232 | 05/03/2023 | 14:23 | LB125269 |
| | Sodium | -103 | | | 0 | 0 | 05/03/2023 | 14:23 | LB125269 |
| | Thallium | 95.8 | 108 | 89 | 68 | 148 | 05/03/2023 | 14:23 | LB125269 |
| | Vanadium | 482 | 491 | 98 | 417 | 565 | 05/03/2023 | 14:23 | LB125269 |
| | Zinc | 1020 | 952 | 107 | 809 | 1095 | 05/03/2023 | 14:23 | LB125269 |
| ICSA01 | Aluminum | 256000 | 255000 | 100 | 216000 | 294000 | 05/04/2023 | 13:55 | LB125287 |

# Metals
## - 4 -
## INTERFERENCE CHECK SAMPLE

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**ICS Source:** EPA **Instrument ID:** P4

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Low Limit (ug/L) | High Limit (ug/L) | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICSA01 | Antimony | -0.32 | | | -50 | 50 | 05/04/2023 | 13:55 | LB125287 |
| | Arsenic | -0.91 | | | -20 | 20 | 05/04/2023 | 13:55 | LB125287 |
| | Barium | 7.84 | 6.0 | 131 | -94 | 106 | 05/04/2023 | 13:55 | LB125287 |
| | Beryllium | 1.32 | | | -6 | 6 | 05/04/2023 | 13:55 | LB125287 |
| | Cadmium | 2.32 | 1.0 | 232 | -5 | 7 | 05/04/2023 | 13:55 | LB125287 |
| | Calcium | 245000 | 245000 | 100 | 208000 | 282000 | 05/04/2023 | 13:55 | LB125287 |
| | Chromium | 55.1 | 52.0 | 106 | 42 | 62 | 05/04/2023 | 13:55 | LB125287 |
| | Cobalt | 1.81 | | | -30 | 30 | 05/04/2023 | 13:55 | LB125287 |
| | Copper | 2.82 | 2.0 | 141 | -18 | 22 | 05/04/2023 | 13:55 | LB125287 |
| | Iron | 96700 | 101000 | 96 | 85600 | 116500 | 05/04/2023 | 13:55 | LB125287 |
| | Lead | -1.13 | | | -12 | 12 | 05/04/2023 | 13:55 | LB125287 |
| | Magnesium | 256000 | 255000 | 100 | 216000 | 294000 | 05/04/2023 | 13:55 | LB125287 |
| | Manganese | 13.4 | 7.0 | 191 | -13 | 27 | 05/04/2023 | 13:55 | LB125287 |
| | Nickel | 3.31 | 2.0 | 166 | -38 | 42 | 05/04/2023 | 13:55 | LB125287 |
| | Potassium | -57.3 | | | 0 | 0 | 05/04/2023 | 13:55 | LB125287 |
| | Selenium | 2.64 | | | -20 | 20 | 05/04/2023 | 13:55 | LB125287 |
| | Silver | -0.32 | | | -10 | 10 | 05/04/2023 | 13:55 | LB125287 |
| | Sodium | -50.2 | | | 0 | 0 | 05/04/2023 | 13:55 | LB125287 |
| | Thallium | -6.74 | | | -40 | 40 | 05/04/2023 | 13:55 | LB125287 |
| | Vanadium | 3.92 | | | -40 | 40 | 05/04/2023 | 13:55 | LB125287 |
| | Zinc | -3.08 | | | -40 | 40 | 05/04/2023 | 13:55 | LB125287 |
| ICSAB01 | Aluminum | 260000 | 247000 | 105 | 209000 | 285000 | 05/04/2023 | 13:58 | LB125287 |
| | Antimony | 621 | 618 | 100 | 525 | 711 | 05/04/2023 | 13:58 | LB125287 |
| | Arsenic | 103 | 104 | 99 | 88.4 | 120 | 05/04/2023 | 13:58 | LB125287 |
| | Barium | 532 | 537 | 99 | 437 | 637 | 05/04/2023 | 13:58 | LB125287 |
| | Beryllium | 520 | 495 | 105 | 420 | 570 | 05/04/2023 | 13:58 | LB125287 |
| | Cadmium | 1030 | 972 | 106 | 826 | 1120 | 05/04/2023 | 13:58 | LB125287 |
| | Calcium | 249000 | 235000 | 106 | 199000 | 271000 | 05/04/2023 | 13:58 | LB125287 |
| | Chromium | 554 | 542 | 102 | 460 | 624 | 05/04/2023 | 13:58 | LB125287 |
| | Cobalt | 506 | 476 | 106 | 404 | 548 | 05/04/2023 | 13:58 | LB125287 |
| | Copper | 498 | 511 | 98 | 434 | 588 | 05/04/2023 | 13:58 | LB125287 |
| | Iron | 99700 | 99300 | 100 | 84400 | 114500 | 05/04/2023 | 13:58 | LB125287 |
| | Lead | 49.9 | 49.0 | 102 | 37 | 61 | 05/04/2023 | 13:58 | LB125287 |
| | Magnesium | 261000 | 248000 | 105 | 210000 | 286000 | 05/04/2023 | 13:58 | LB125287 |
| | Manganese | 529 | 507 | 104 | 430 | 584 | 05/04/2023 | 13:58 | LB125287 |
| | Nickel | 1010 | 954 | 106 | 810 | 1100 | 05/04/2023 | 13:58 | LB125287 |
| | Potassium | -92.0 | | | 0 | 0 | 05/04/2023 | 13:58 | LB125287 |
| | Selenium | 53.1 | 46.0 | 115 | 26 | 66 | 05/04/2023 | 13:58 | LB125287 |
| | Silver | 221 | 201 | 110 | 170 | 232 | 05/04/2023 | 13:58 | LB125287 |
| | Sodium | -54.2 | | | 0 | 0 | 05/04/2023 | 13:58 | LB125287 |
| | Thallium | 96.5 | 108 | 89 | 68 | 148 | 05/04/2023 | 13:58 | LB125287 |
| | Vanadium | 501 | 491 | 102 | 417 | 565 | 05/04/2023 | 13:58 | LB125287 |
| | Zinc | 1070 | 952 | 112 | 809 | 1095 | 05/04/2023 | 13:58 | LB125287 |
| ICSA01 | Aluminum | 246000 | 255000 | 96 | 216000 | 294000 | 05/11/2023 | 15:59 | LB125428 |
| | Antimony | 1.23 | | | -50 | 50 | 05/11/2023 | 15:59 | LB125428 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Metals
## - 4 -
## INTERFERENCE CHECK SAMPLE

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**ICS Source:** EPA **Instrument ID:** P4

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Low Limit (ug/L) | High Limit (ug/L) | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| ICSA01 | Arsenic | -2.88 | | | -20 | 20 | 05/11/2023 | 15:59 | LB125428 |
| | Barium | 6.79 | 6.0 | 113 | -94 | 106 | 05/11/2023 | 15:59 | LB125428 |
| | Beryllium | 0.85 | | | -6 | 6 | 05/11/2023 | 15:59 | LB125428 |
| | Cadmium | 3.22 | 1.0 | 322 | -5 | 7 | 05/11/2023 | 15:59 | LB125428 |
| | Calcium | 244000 | 245000 | 100 | 208000 | 282000 | 05/11/2023 | 15:59 | LB125428 |
| | Chromium | 56.4 | 52.0 | 108 | 42 | 62 | 05/11/2023 | 15:59 | LB125428 |
| | Cobalt | 2.15 | | | -30 | 30 | 05/11/2023 | 15:59 | LB125428 |
| | Copper | -14.1 | 2.0 | 705 | -18 | 22 | 05/11/2023 | 15:59 | LB125428 |
| | Iron | 100000 | 101000 | 99 | 85600 | 116500 | 05/11/2023 | 15:59 | LB125428 |
| | Lead | -3.53 | | | -12 | 12 | 05/11/2023 | 15:59 | LB125428 |
| | Magnesium | 257000 | 255000 | 101 | 216000 | 294000 | 05/11/2023 | 15:59 | LB125428 |
| | Manganese | 13.5 | 7.0 | 193 | -13 | 27 | 05/11/2023 | 15:59 | LB125428 |
| | Nickel | 3.27 | 2.0 | 164 | -38 | 42 | 05/11/2023 | 15:59 | LB125428 |
| | Potassium | -35.6 | | | 0 | 0 | 05/11/2023 | 15:59 | LB125428 |
| | Selenium | -0.65 | | | -20 | 20 | 05/11/2023 | 15:59 | LB125428 |
| | Silver | 0.90 | | | -10 | 10 | 05/11/2023 | 15:59 | LB125428 |
| | Sodium | -22.9 | | | 0 | 0 | 05/11/2023 | 15:59 | LB125428 |
| | Thallium | -7.19 | | | -40 | 40 | 05/11/2023 | 15:59 | LB125428 |
| | Vanadium | 2.33 | | | -40 | 40 | 05/11/2023 | 15:59 | LB125428 |
| | Zinc | -3.28 | | | -40 | 40 | 05/11/2023 | 15:59 | LB125428 |
| ICSAB01 | Aluminum | 242000 | 247000 | 98 | 209000 | 285000 | 05/11/2023 | 16:03 | LB125428 |
| | Antimony | 600 | 618 | 97 | 525 | 711 | 05/11/2023 | 16:03 | LB125428 |
| | Arsenic | 102 | 104 | 98 | 88.4 | 120 | 05/11/2023 | 16:03 | LB125428 |
| | Barium | 526 | 537 | 98 | 437 | 637 | 05/11/2023 | 16:03 | LB125428 |
| | Beryllium | 539 | 495 | 109 | 420 | 570 | 05/11/2023 | 16:03 | LB125428 |
| | Cadmium | 1030 | 972 | 106 | 826 | 1120 | 05/11/2023 | 16:03 | LB125428 |
| | Calcium | 242000 | 235000 | 103 | 199000 | 271000 | 05/11/2023 | 16:03 | LB125428 |
| | Chromium | 555 | 542 | 102 | 460 | 624 | 05/11/2023 | 16:03 | LB125428 |
| | Cobalt | 499 | 476 | 105 | 404 | 548 | 05/11/2023 | 16:03 | LB125428 |
| | Copper | 475 | 511 | 93 | 434 | 588 | 05/11/2023 | 16:03 | LB125428 |
| | Iron | 93500 | 99300 | 94 | 84400 | 114500 | 05/11/2023 | 16:03 | LB125428 |
| | Lead | 47.5 | 49.0 | 97 | 37 | 61 | 05/11/2023 | 16:03 | LB125428 |
| | Magnesium | 254000 | 248000 | 102 | 210000 | 286000 | 05/11/2023 | 16:03 | LB125428 |
| | Manganese | 515 | 507 | 102 | 430 | 584 | 05/11/2023 | 16:03 | LB125428 |
| | Nickel | 988 | 954 | 104 | 810 | 1100 | 05/11/2023 | 16:03 | LB125428 |
| | Potassium | -24.2 | | | 0 | 0 | 05/11/2023 | 16:03 | LB125428 |
| | Selenium | 42.8 | 46.0 | 93 | 26 | 66 | 05/11/2023 | 16:03 | LB125428 |
| | Silver | 209 | 201 | 104 | 170 | 232 | 05/11/2023 | 16:03 | LB125428 |
| | Sodium | -14.5 | | | 0 | 0 | 05/11/2023 | 16:03 | LB125428 |
| | Thallium | 98.5 | 108 | 91 | 68 | 148 | 05/11/2023 | 16:03 | LB125428 |
| | Vanadium | 501 | 491 | 102 | 417 | 565 | 05/11/2023 | 16:03 | LB125428 |
| | Zinc | 1030 | 952 | 108 | 809 | 1095 | 05/11/2023 | 16:03 | LB125428 |

# METAL QC DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# metals
## - 5a -
## MATRIX SPIKE SUMMARY

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2521

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2521 **sas no.:** O2521

**matrix:** Water **sample id:** O2521-07 **client id:** GMW-7MS

**Percent Solids for Sample:** NA **Spiked ID:** O2521-09 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 75 - 125 | 1630 | | 2230 | | 1000 | -60 | N | P |
| Antimony | ug/L | 75 - 125 | 403 | | 2.16 | J | 400 | 100 | | P |
| Arsenic | ug/L | 75 - 125 | 405 | | 10.0 | U | 400 | 101 | | P |
| Barium | ug/L | 75 - 125 | 514 | | 290 | | 100 | 224 | N | P |
| Beryllium | ug/L | 75 - 125 | 87.8 | | 3.00 | U | 100 | 88 | | P |
| Cadmium | ug/L | 75 - 125 | 90.8 | | 1.47 | J | 100 | 89 | | P |
| Calcium | ug/L | 75 - 125 | 150000 | | 145000 | | 500 | 862 | | P |
| Chromium | ug/L | 75 - 125 | 180 | | 9.98 | | 200 | 85 | | P |
| Cobalt | ug/L | 75 - 125 | 94.9 | | 2.59 | J | 100 | 92 | | P |
| Copper | ug/L | 75 - 125 | 222 | | 61.7 | | 150 | 107 | | P |
| Iron | ug/L | 75 - 125 | 18800 | | 4730 | | 1500 | 939 | N | P |
| Lead | ug/L | 75 - 125 | 552 | | 49.5 | | 500 | 101 | | P |
| Magnesium | ug/L | 75 - 125 | 24900 | | 26900 | | 1000 | -206 | | P |
| Manganese | ug/L | 75 - 125 | 979 | | 249 | | 100 | 730 | N | P |
| Mercury | ug/L | 75 - 125 | 4.62 | | 0.083 | J | 4.0 | 113 | | CV |
| Nickel | ug/L | 75 - 125 | 247 | | 20.0 | | 250 | 91 | | P |
| Potassium | ug/L | 75 - 125 | 39700 | | 20900 | | 5000 | 377 | | P |
| Selenium | ug/L | 75 - 125 | 972 | | 10.0 | U | 1000 | 97 | | P |
| Silver | ug/L | 75 - 125 | 36.7 | | 5.00 | U | 37.5 | 98 | | P |
| Sodium | ug/L | 75 - 125 | 17700 | | 32800 | | 1500 | -1005 | | P |
| Thallium | ug/L | 75 - 125 | 897 | | 20.0 | U | 1000 | 90 | | P |
| Vanadium | ug/L | 75 - 125 | 159 | | 4.55 | J | 150 | 103 | | P |
| Zinc | ug/L | 75 - 125 | 212 | | 185 | | 100 | 27 | N | P |

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# metals
## - 5a -
## MATRIX SPIKE DUPLICATE SUMMARY

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2521

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2521 **sas no.:** O2521

**matrix:** Water **sample id:** O2521-07 **client id:** GMW-7MSD

**Percent Solids for Sample:** NA **Spiked ID:** O2521-10 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 75 - 125 | 1640 | | 2230 | | 1000 | -59 | N | P |
| Antimony | ug/L | 75 - 125 | 416 | | 2.16 | J | 400 | 103 | | P |
| Arsenic | ug/L | 75 - 125 | 418 | | 10.0 | U | 400 | 104 | | P |
| Barium | ug/L | 75 - 125 | 522 | | 290 | | 100 | 232 | N | P |
| Beryllium | ug/L | 75 - 125 | 89.2 | | 3.00 | U | 100 | 89 | | P |
| Cadmium | ug/L | 75 - 125 | 94.2 | | 1.47 | J | 100 | 93 | | P |
| Calcium | ug/L | 75 - 125 | 153000 | | 145000 | | 500 | 1561 | | P |
| Chromium | ug/L | 75 - 125 | 187 | | 9.98 | | 200 | 89 | | P |
| Cobalt | ug/L | 75 - 125 | 98.5 | | 2.59 | J | 100 | 96 | | P |
| Copper | ug/L | 75 - 125 | 227 | | 61.7 | | 150 | 111 | | P |
| Iron | ug/L | 75 - 125 | 19300 | | 4730 | | 1500 | 969 | N | P |
| Lead | ug/L | 75 - 125 | 571 | | 49.5 | | 500 | 104 | | P |
| Magnesium | ug/L | 75 - 125 | 25300 | | 26900 | | 1000 | -165 | | P |
| Manganese | ug/L | 75 - 125 | 990 | | 249 | | 100 | 741 | N | P |
| Mercury | ug/L | 75 - 125 | 4.36 | | 0.083 | J | 4.0 | 107 | | CV |
| Nickel | ug/L | 75 - 125 | 255 | | 20.0 | | 250 | 94 | | P |
| Potassium | ug/L | 75 - 125 | 40800 | | 20900 | | 5000 | 398 | | P |
| Selenium | ug/L | 75 - 125 | 1010 | | 10.0 | U | 1000 | 101 | | P |
| Silver | ug/L | 75 - 125 | 37.1 | | 5.00 | U | 37.5 | 99 | | P |
| Sodium | ug/L | 75 - 125 | 18200 | | 32800 | | 1500 | -972 | | P |
| Thallium | ug/L | 75 - 125 | 932 | | 20.0 | U | 1000 | 93 | | P |
| Vanadium | ug/L | 75 - 125 | 163 | | 4.55 | J | 150 | 105 | | P |
| Zinc | ug/L | 75 - 125 | 215 | | 185 | | 100 | 30 | N | P |

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# metals
## - 5a -
## MATRIX SPIKE SUMMARY

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2521

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2521 **sas no.:** O2521

**matrix:** Water **sample id:** O2521-08 **client id:** GMW-7MS

**Percent Solids for Sample:** NA **Spiked ID:** O2521-11 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 75 - 125 | 1050 | | 145 | | 1000 | 91 | | P |
| Antimony | ug/L | 75 - 125 | 396 | | 25.0 | U | 400 | 99 | | P |
| Arsenic | ug/L | 75 - 125 | 399 | | 10.0 | U | 400 | 100 | | P |
| Barium | ug/L | 75 - 125 | 389 | | 233 | | 100 | 155 | N | P |
| Beryllium | ug/L | 75 - 125 | 86.5 | | 3.00 | U | 100 | 86 | | P |
| Cadmium | ug/L | 75 - 125 | 87.9 | | 0.23 | J | 100 | 88 | | P |
| Calcium | ug/L | 75 - 125 | 134000 | | 137000 | | 500 | -690 | | P |
| Chromium | ug/L | 75 - 125 | 175 | | 5.00 | U | 200 | 88 | | P |
| Cobalt | ug/L | 75 - 125 | 92.6 | | 0.84 | J | 100 | 92 | | P |
| Copper | ug/L | 75 - 125 | 150 | | 22.3 | | 150 | 85 | | P |
| Iron | ug/L | 75 - 125 | 1450 | | 24.9 | J | 1500 | 95 | | P |
| Lead | ug/L | 75 - 125 | 462 | | 6.00 | U | 500 | 92 | | P |
| Magnesium | ug/L | 75 - 125 | 23800 | | 25800 | | 1000 | -198 | | P |
| Manganese | ug/L | 75 - 125 | 713 | | 207 | | 100 | 506 | N | P |
| Mercury | ug/L | 75 - 125 | 3.61 | | 0.20 | U | 4.0 | 90 | | CV |
| Nickel | ug/L | 75 - 125 | 238 | | 8.17 | J | 250 | 92 | | P |
| Potassium | ug/L | 75 - 125 | 39000 | | 20500 | | 5000 | 371 | | P |
| Selenium | ug/L | 75 - 125 | 977 | | 10.0 | U | 1000 | 98 | | P |
| Silver | ug/L | 75 - 125 | 36.8 | | 5.00 | U | 37.5 | 98 | | P |
| Sodium | ug/L | 75 - 125 | 18100 | | 32800 | | 1500 | -983 | | P |
| Thallium | ug/L | 75 - 125 | 889 | | 20.0 | U | 1000 | 89 | | P |
| Vanadium | ug/L | 75 - 125 | 137 | | 20.0 | U | 150 | 91 | | P |
| Zinc | ug/L | 75 - 125 | 117 | | 70.2 | | 100 | 47 | N | P |

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**metals**
**- 5a -**
**MATRIX SPIKE DUPLICATE SUMMARY**

**client:** GEI Consultants, Inc., P.C. **level:** low **sdg no.:** O2521

**contract:** GEIC06 **lab code:** CHEM **case no.:** O2521 **sas no.:** O2521

**matrix:** Water **sample id:** O2521-08 **client id:** GMW-7MSD

**Percent Solids for Sample:** NA **Spiked ID:** O2521-12 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 75 - 125 | 1040 | | 145 | | 1000 | 89 | | P |
| Antimony | ug/L | 75 - 125 | 395 | | 25.0 | U | 400 | 99 | | P |
| Arsenic | ug/L | 75 - 125 | 400 | | 10.0 | U | 400 | 100 | | P |
| Barium | ug/L | 75 - 125 | 383 | | 233 | | 100 | 149 | N | P |
| Beryllium | ug/L | 75 - 125 | 85.9 | | 3.00 | U | 100 | 86 | | P |
| Cadmium | ug/L | 75 - 125 | 88.5 | | 0.23 | J | 100 | 88 | | P |
| Calcium | ug/L | 75 - 125 | 131000 | | 137000 | | 500 | -1149 | | P |
| Chromium | ug/L | 75 - 125 | 173 | | 5.00 | U | 200 | 86 | | P |
| Cobalt | ug/L | 75 - 125 | 93.1 | | 0.84 | J | 100 | 92 | | P |
| Copper | ug/L | 75 - 125 | 151 | | 22.3 | | 150 | 85 | | P |
| Iron | ug/L | 75 - 125 | 1430 | | 24.9 | J | 1500 | 94 | | P |
| Lead | ug/L | 75 - 125 | 466 | | 6.00 | U | 500 | 93 | | P |
| Magnesium | ug/L | 75 - 125 | 23300 | | 25800 | | 1000 | -251 | | P |
| Manganese | ug/L | 75 - 125 | 706 | | 207 | | 100 | 499 | N | P |
| Mercury | ug/L | 75 - 125 | 3.50 | | 0.20 | U | 4.0 | 88 | | CV |
| Nickel | ug/L | 75 - 125 | 240 | | 8.17 | J | 250 | 93 | | P |
| Potassium | ug/L | 75 - 125 | 37800 | | 20500 | | 5000 | 346 | | P |
| Selenium | ug/L | 75 - 125 | 977 | | 10.0 | U | 1000 | 98 | | P |
| Silver | ug/L | 75 - 125 | 36.4 | | 5.00 | U | 37.5 | 97 | | P |
| Sodium | ug/L | 75 - 125 | 17500 | | 32800 | | 1500 | -1023 | | P |
| Thallium | ug/L | 75 - 125 | 890 | | 20.0 | U | 1000 | 89 | | P |
| Vanadium | ug/L | 75 - 125 | 136 | | 20.0 | U | 150 | 91 | | P |
| Zinc | ug/L | 75 - 125 | 114 | | 70.2 | | 100 | 44 | N | P |

CHEMTECH

# Metals
## - 5b -
## POST DIGEST SPIKE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Matrix:** Water **Level:** LOW **Client ID:** GMW-7A

**Sample ID:** O2521-07 **Spiked ID:** O2521-07A

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 75 - 125 | 3090 | | 2230 | | 1000 | 86 | | P |
| Barium | ug/L | 75 - 125 | 391 | | 290 | | 100 | 101 | | P |
| Iron | ug/L | 75 - 125 | 6080 | | 4730 | | 1500 | 90 | | P |
| Manganese | ug/L | 75 - 125 | 353 | | 249 | | 100 | 104 | | P |
| Zinc | ug/L | 75 - 125 | 284 | | 185 | | 100 | 99 | | P |

CHEMTECH

# Metals
## - 5b -
## POST DIGEST SPIKE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Matrix:** Water **Level:** LOW **Client ID:** GMW-7A

**Sample ID:** O2521-08 **Spiked ID:** O2521-08A

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | ug/L | 75 - 125 | 336 | | 233 | | 100 | 102 | | P |
| Manganese | ug/L | 75 - 125 | 309 | | 207 | | 100 | 102 | | P |
| Zinc | ug/L | 75 - 125 | 172 | | 70.2 | | 100 | 102 | | P |

## Metals

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### DUPLICATE SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Matrix:** Water **Sample ID:** O2521-07 **Client ID:** GMW-7DUP

**Percent Solids for Sample:** NA **Duplicate ID** O2521-07DUP **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 20 | 2230 | | 2140 | | 4 | | P |
| Antimony | ug/L | 20 | 2.16 | J | 2.11 | J | 2 | | P |
| Arsenic | ug/L | 20 | 10.0 | U | 10.0 | U | | | P |
| Barium | ug/L | 20 | 290 | | 288 | | 1 | | P |
| Beryllium | ug/L | 20 | 3.00 | U | 3.00 | U | | | P |
| Cadmium | ug/L | 20 | 1.47 | J | 1.47 | J | 0 | | P |
| Calcium | ug/L | 20 | 145000 | | 144000 | | 1 | | P |
| Chromium | ug/L | 20 | 9.98 | | 9.68 | | 3 | | P |
| Cobalt | ug/L | 20 | 2.59 | J | 2.61 | J | 1 | | P |
| Copper | ug/L | 20 | 61.7 | | 61.2 | | 1 | | P |
| Iron | ug/L | 20 | 4730 | | 4590 | | 3 | | P |
| Lead | ug/L | 20 | 49.5 | | 49.5 | | 0 | | P |
| Magnesium | ug/L | 20 | 26900 | | 26900 | | 0 | | P |
| Manganese | ug/L | 20 | 249 | | 249 | | 0 | | P |
| Mercury | ug/L | 20 | 0.083 | J | 0.090 | J | 8 | | CV |
| Nickel | ug/L | 20 | 20.0 | | 19.9 | J | 1 | | P |
| Potassium | ug/L | 20 | 20900 | | 20500 | | 2 | | P |
| Selenium | ug/L | 20 | 10.0 | U | 10.0 | U | | | P |
| Silver | ug/L | 20 | 5.00 | U | 5.00 | U | | | P |
| Sodium | ug/L | 20 | 32800 | | 32200 | | 2 | | P |
| Thallium | ug/L | 20 | 20.0 | U | 20.0 | U | | | P |
| Vanadium | ug/L | 20 | 4.55 | J | 4.32 | J | 5 | | P |
| Zinc | ug/L | 20 | 185 | | 182 | | 2 | | P |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

## Metals

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**DUPLICATE SAMPLE SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Matrix:** Water **Sample ID:** O2521-08 **Client ID:** GMW-7DUP

**Percent Solids for Sample:** NA **Duplicate ID** O2521-08DUP **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 20 | 0.20 | U | 0.20 | U | | | CV |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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## Metals

### - 6 -

### DUPLICATE SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Matrix:** Water **Sample ID:** O2521-09 **Client ID:** GMW-7MSD

**Percent Solids for Sample:** NA **Duplicate ID** O2521-10 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 20 | 1630 | | 1640 | | 1 | | P |
| Antimony | ug/L | 20 | 403 | | 416 | | 3 | | P |
| Arsenic | ug/L | 20 | 405 | | 418 | | 3 | | P |
| Barium | ug/L | 20 | 514 | | 522 | | 2 | | P |
| Beryllium | ug/L | 20 | 87.8 | | 89.2 | | 2 | | P |
| Cadmium | ug/L | 20 | 90.8 | | 94.2 | | 4 | | P |
| Calcium | ug/L | 20 | 150000 | | 153000 | | 2 | | P |
| Chromium | ug/L | 20 | 180 | | 187 | | 4 | | P |
| Cobalt | ug/L | 20 | 94.9 | | 98.5 | | 4 | | P |
| Copper | ug/L | 20 | 222 | | 227 | | 2 | | P |
| Iron | ug/L | 20 | 18800 | | 19300 | | 3 | | P |
| Lead | ug/L | 20 | 552 | | 571 | | 3 | | P |
| Magnesium | ug/L | 20 | 24900 | | 25300 | | 2 | | P |
| Manganese | ug/L | 20 | 979 | | 990 | | 1 | | P |
| Mercury | ug/L | 20 | 4.62 | | 4.36 | | 6 | | CV |
| Nickel | ug/L | 20 | 247 | | 255 | | 3 | | P |
| Potassium | ug/L | 20 | 39700 | | 40800 | | 3 | | P |
| Selenium | ug/L | 20 | 972 | | 1010 | | 4 | | P |
| Silver | ug/L | 20 | 36.7 | | 37.1 | | 1 | | P |
| Sodium | ug/L | 20 | 17700 | | 18200 | | 3 | | P |
| Thallium | ug/L | 20 | 897 | | 932 | | 4 | | P |
| Vanadium | ug/L | 20 | 159 | | 163 | | 2 | | P |
| Zinc | ug/L | 20 | 212 | | 215 | | 1 | | P |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

## Metals

**- 6 -**

**DUPLICATE SAMPLE SUMMARY**

**Client:** GEI Consultants, Inc., P.C. **Level:** LOW **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Matrix:** Water **Sample ID:** O2521-11 **Client ID:** GMW-7MSD

**Percent Solids for Sample:** NA **Duplicate ID** O2521-12 **Percent Solids for Spike Sample:** NA

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ug/L | 20 | 1050 | | 1040 | | 1 | | P |
| Antimony | ug/L | 20 | 396 | | 395 | | 0 | | P |
| Arsenic | ug/L | 20 | 399 | | 400 | | 0 | | P |
| Barium | ug/L | 20 | 389 | | 383 | | 2 | | P |
| Beryllium | ug/L | 20 | 86.5 | | 85.9 | | 1 | | P |
| Cadmium | ug/L | 20 | 87.9 | | 88.5 | | 1 | | P |
| Calcium | ug/L | 20 | 134000 | | 131000 | | 2 | | P |
| Chromium | ug/L | 20 | 175 | | 173 | | 1 | | P |
| Cobalt | ug/L | 20 | 92.6 | | 93.1 | | 1 | | P |
| Copper | ug/L | 20 | 150 | | 151 | | 1 | | P |
| Iron | ug/L | 20 | 1450 | | 1430 | | 1 | | P |
| Lead | ug/L | 20 | 462 | | 466 | | 1 | | P |
| Magnesium | ug/L | 20 | 23800 | | 23300 | | 2 | | P |
| Manganese | ug/L | 20 | 713 | | 706 | | 1 | | P |
| Mercury | ug/L | 20 | 3.61 | | 3.50 | | 3 | | CV |
| Nickel | ug/L | 20 | 238 | | 240 | | 1 | | P |
| Potassium | ug/L | 20 | 39000 | | 37800 | | 3 | | P |
| Selenium | ug/L | 20 | 977 | | 977 | | 0 | | P |
| Silver | ug/L | 20 | 36.8 | | 36.4 | | 1 | | P |
| Sodium | ug/L | 20 | 18100 | | 17500 | | 3 | | P |
| Thallium | ug/L | 20 | 889 | | 890 | | 0 | | P |
| Vanadium | ug/L | 20 | 137 | | 136 | | 1 | | P |
| Zinc | ug/L | 20 | 117 | | 114 | | 3 | | P |

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

## Metals



### LABORATORY CONTROL SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|
| PB152450BS | | | | | | | |
| Aluminum | ug/L | 1000 | 938 | | 94 | 80 - 120 | P |
| Antimony | ug/L | 400 | 388 | | 97 | 80 - 120 | P |
| Arsenic | ug/L | 400 | 390 | | 98 | 80 - 120 | P |
| Barium | ug/L | 100 | 105 | | 105 | 80 - 120 | P |
| Beryllium | ug/L | 100 | 93.5 | | 94 | 80 - 120 | P |
| Cadmium | ug/L | 100 | 91.1 | | 91 | 80 - 120 | P |
| Calcium | ug/L | 500 | 472 | J | 94 | 80 - 120 | P |
| Chromium | ug/L | 200 | 168 | | 84 | 80 - 120 | P |
| Cobalt | ug/L | 100 | 93.5 | | 94 | 80 - 120 | P |
| Copper | ug/L | 150 | 148 | | 99 | 80 - 120 | P |
| Iron | ug/L | 1500 | 1370 | | 91 | 80 - 120 | P |
| Lead | ug/L | 500 | 479 | | 96 | 80 - 120 | P |
| Magnesium | ug/L | 1000 | 956 | J | 96 | 80 - 120 | P |
| Manganese | ug/L | 100 | 103 | | 103 | 80 - 120 | P |
| Nickel | ug/L | 250 | 240 | | 96 | 80 - 120 | P |
| Potassium | ug/L | 5000 | 4520 | | 90 | 80 - 120 | P |
| Selenium | ug/L | 1000 | 944 | | 94 | 80 - 120 | P |
| Silver | ug/L | 37.5 | 32.9 | | 88 | 80 - 120 | P |
| Sodium | ug/L | 1500 | 1200 | | 80 | 80 - 120 | P |
| Thallium | ug/L | 1000 | 944 | | 94 | 80 - 120 | P |
| Vanadium | ug/L | 150 | 139 | | 93 | 80 - 120 | P |
| Zinc | ug/L | 100 | 98.0 | | 98 | 80 - 120 | P |

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## Metals



### LABORATORY CONTROL SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|
| PB152487BS | | | | | | | |
| Mercury | ug/L | 4.0 | 3.69 | | 92 | 80 - 120 | CV |

## Metals

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## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

| Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|
| PB152538BS | | | | | | | |
| Mercury | ug/L | 4.0 | 3.53 | | 88 | 80 - 120 | CV |

# Metals

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## ICP SERIAL DILUTIONS

SAMPLE NO.

GMW-7L

**Lab Name:** Chemtech Consulting Group **Contract:** GEIC06

**Lab Code:** CHEM **Lb No.:** lb125287 **Lab Sample ID :** O2521-07L **SDG No.:** O2521

**Matrix (soil/water):** Water **Level (low/med):** LOW

**Concentration Units:** ug/L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Aluminum | 2230 | | 2000 | | 10 | | P |
| Antimony | 2.16 | J | 125 | U | 100.0 | | P |
| Arsenic | 10.0 | U | 50.0 | U | | | P |
| Barium | 290 | | 279 | | 4 | | P |
| Beryllium | 3.00 | U | 15.0 | U | | | P |
| Cadmium | 1.47 | J | 1.31 | J | 11 | | P |
| Calcium | 145000 | | 138000 | | 5 | | P |
| Chromium | 9.98 | | 7.35 | J | 26 | | P |
| Cobalt | 2.59 | J | 2.44 | J | 6 | | P |
| Copper | 61.7 | | 62.6 | | 1 | | P |
| Iron | 4730 | | 4330 | | 8 | | P |
| Lead | 49.5 | | 47.4 | | 4 | | P |
| Magnesium | 26900 | | 26800 | | 0 | | P |
| Manganese | 249 | | 244 | | 2 | | P |
| Mercury | 0.083 | J | 1.00 | U | 100.0 | | CV |
| Nickel | 20.0 | | 19.7 | J | 1 | | P |
| Potassium | 20900 | | 18800 | | 10 | | P |
| Selenium | 10.0 | U | 50.0 | U | | | P |
| Silver | 5.00 | U | 25.0 | U | | | P |
| Sodium | 32800 | | 29100 | | 11 | | P |
| Thallium | 20.0 | U | 100 | U | | | P |
| Vanadium | 4.55 | J | 100 | U | 100.0 | | P |
| Zinc | 185 | | 170 | | 8 | | P |

# Metals

## -9 -

## ICP SERIAL DILUTIONS

SAMPLE NO.

GMW-7L

**Lab Name:** Chemtech Consulting Group **Contract:** GEIC06

**Lab Code:** CHEM **Lb No.:** lb125251 **Lab Sample ID :** O2521-08L **SDG No.:** O2521

**Matrix (soil/water):** Water **Level (low/med):** LOW

**Concentration Units:** ug/L

| Analyte | Initial Sample Result (I) | C | Serial Dilution Result (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Mercury | 0.20 | U | 1.00 | U | | | CV |

# METAL PREPARATION & INSTRUMENT DATA

# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: Al | Ca | Fe | Mg | Ag |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | -0.0002060 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 193.759 | 0.0000000 | 0.0000000 | -0.0000440 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000930 | 0.0000000 | 0.0000000 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | -0.0075970 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Copper | 224.700 | 0.0000000 | 0.0000000 | 0.0007850 | 0.0000000 | 0.0000000 |
| Iron | 240.488 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | -0.0000920 | 0.0000000 | 0.0000380 | 0.0000000 | 0.0000000 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | -0.0001440 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | -0.0001490 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.800 | 0.0000000 | 0.0000000 | 0.0001050 | 0.0000000 | 0.0000000 |

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# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: As | Ba | Be | Cd | Co |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 193.759 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0002870 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Copper | 224.700 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0009530 |
| Iron | 240.488 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0039600 |
| Lead | 220.353 | 0.0000000 | 0.0003170 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0003570 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0054900 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.800 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |

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# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: Cr | Cu | K | Mn | Mo |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | 0.0000000 | 0.0000590 | 0.0000000 | 0.0396900 |
| Antimony | 206.833 | 0.0122000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 193.759 | -0.0029000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0004900 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0000710 | -0.0003400 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000070 | 0.0002200 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0007860 |
| Copper | 224.700 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0006510 | 0.0020500 |
| Iron | 240.488 | 0.0000000 | 0.0000000 | 0.0000730 | 0.0000000 | -0.0015250 |
| Lead | 220.353 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0001400 | -0.0008600 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0007460 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0000120 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0017400 | -0.0100400 |
| Vanadium | 292.402 | -0.0025100 | 0.0000000 | 0.0000000 | 0.0000000 | -0.0072000 |
| Zinc | 213.800 | 0.0000000 | 0.0009010 | 0.0000000 | 0.0000000 | 0.0000000 |

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# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: Na | Ni | Pb | Sb | Se |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | 0.0000000 | 0.0012800 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Arsenic | 193.759 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Copper | 224.700 | 0.0000000 | -0.0047000 | 0.0036100 | 0.0000000 | 0.0000000 |
| Iron | 240.488 | 0.0000000 | -0.0017000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | 0.0000000 | 0.0006580 | 0.0000000 | 0.0000000 | 0.0001290 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | 0.0003330 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.800 | 0.0000000 | 0.0067600 | 0.0000000 | 0.0000000 | 0.0000000 |

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# Metals
## - 11 -
## ICP INTERELEMENT CORRECTION FACTORS

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Case No.:** O2521 **SAS No.:** O2521

**Instrument ID:** **Date:**

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-Length (nm) | ICP Interelement Correction Factors For: Sn | Ti | Tl | V | Zn |
|---|---|---|---|---|---|---|
| Aluminum | 396.100 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Antimony | 206.833 | -0.0035600 | -0.0007970 | 0.0000000 | -0.0018900 | 0.0000000 |
| Arsenic | 193.759 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Barium | 493.409 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Beryllium | 234.861 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Cadmium | 226.502 | 0.0000000 | 0.0000630 | 0.0001280 | 0.0000000 | 0.0000000 |
| Calcium | 373.690 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Chromium | 267.716 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0001110 | 0.0000000 |
| Cobalt | 228.616 | 0.0000000 | 0.0018800 | 0.0000000 | 0.0000000 | 0.0000000 |
| Copper | 224.700 | 0.0000000 | 0.0003840 | 0.0000000 | 0.0000000 | 0.0000000 |
| Iron | 240.488 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Lead | 220.353 | 0.0000000 | -0.0003610 | 0.0000000 | 0.0000000 | 0.0000000 |
| Magnesium | 279.079 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Manganese | 257.610 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Nickel | 231.604 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Potassium | 766.490 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Selenium | 196.090 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Silver | 328.068 | 0.0000000 | -0.0007420 | 0.0000000 | 0.0000000 | 0.0000000 |
| Sodium | 589.592 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |
| Thallium | 190.856 | 0.0000000 | -0.0039700 | 0.0000000 | -0.0115600 | 0.0000000 |
| Vanadium | 292.402 | 0.0000000 | 0.0005320 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc | 213.800 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |

# METAL PREPARATION & ANALYICAL SUMMARY

# Metals
## - 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Method:**

**Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | **PB152450** | | | | | | |
| O2521-01 | GMW-1 | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-02 | GMW-1 | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-03 | PZ-15 | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-04 | PZ-15 | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-05 | GMW-10 | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-06 | GMW-10 | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-07 | GMW-7 | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-07DUP | GMW-7DUP | DUP | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-08 | GMW-7 | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-09 | GMW-7MS | MS | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-10 | GMW-7MSD | MSD | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-11 | GMW-7MS | MS | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-12 | GMW-7MSD | MSD | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-14 | FB | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| O2521-15 | FB | SAM | WATER | 05/03/2023 | 50.0 | 25.0 | |
| PB152450BL | PB152450BL | MB | WATER | 05/03/2023 | 50.0 | 25.0 | |
| PB152450BS | PB152450BS | LCS | WATER | 05/03/2023 | 50.0 | 25.0 | |

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# Metals
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## SAMPLE PREPARATION SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Method:**

**Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | **PB152487** | | | | | | |
| O2521-01 | GMW-1 | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-03 | PZ-15 | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-05 | GMW-10 | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-07 | GMW-7 | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-07DUP | GMW-7DUP | DUP | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-09 | GMW-7MS | MS | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-10 | GMW-7MSD | MSD | WATER | 04/28/2023 | 30.0 | 30.0 | |
| O2521-14 | FB | SAM | WATER | 04/28/2023 | 30.0 | 30.0 | |
| PB152487BL | PB152487BL | MB | WATER | 04/28/2023 | 30.0 | 30.0 | |
| PB152487BS | PB152487BS | LCS | WATER | 04/28/2023 | 30.0 | 30.0 | |

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# Metals
## - 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Contract:** GEIC06 **Lab Code:** CHEM **Method:**

**Case No.:** O2521 **SAS No.:** O2521

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | **PB152538** | | | | | | |
| O2521-02 | GMW-1 | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-04 | PZ-15 | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-06 | GMW-10 | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-08 | GMW-7 | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-08DUP | GMW-7DUP | DUP | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-11 | GMW-7MS | MS | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-12 | GMW-7MSD | MSD | WATER | 05/02/2023 | 30.0 | 30.0 | |
| O2521-15 | FB | SAM | WATER | 05/02/2023 | 30.0 | 30.0 | |
| PB152538BL | PB152538BL | MB | WATER | 05/02/2023 | 30.0 | 30.0 | |
| PB152538BS | PB152538BS | LCS | WATER | 05/02/2023 | 30.0 | 30.0 | |

**metals**
**- 14 -**
**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2521 **Sas no.:** O2521 **Sdg no.:** O2521

**Instrument id number:** **Method:** **Run number:** LB125204

**Start date:** 04/28/2023 **End date:** 04/28/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1249 | HG |
| S0.2 | S0.2 | 1 | 1252 | HG |
| S2.5 | S2.5 | 1 | 1254 | HG |
| S5 | S5 | 1 | 1256 | HG |
| S7.5 | S7.5 | 1 | 1258 | HG |
| S10 | S10 | 1 | 1301 | HG |
| ICV53 | ICV53 | 1 | 1311 | HG |
| ICB53 | ICB53 | 1 | 1314 | HG |
| CCV79 | CCV79 | 1 | 1316 | HG |
| CCB79 | CCB79 | 1 | 1318 | HG |
| CRA | CRA | 1 | 1320 | HG |
| PB152487BL | PB152487BL | 1 | 1327 | HG |
| PB152487BS | PB152487BS | 1 | 1329 | HG |
| CCV80 | CCV80 | 1 | 1343 | HG |
| CCB80 | CCB80 | 1 | 1345 | HG |
| O2521-01 | GMW-1 | 1 | 1352 | HG |
| O2521-03 | PZ-15 | 1 | 1354 | HG |
| O2521-05 | GMW-10 | 1 | 1357 | HG |
| O2521-07 | GMW-7 | 1 | 1359 | HG |
| O2521-07DUP | GMW-7DUP | 1 | 1401 | HG |
| O2521-09 | GMW-7MS | 1 | 1407 | HG |
| O2521-10 | GMW-7MSD | 1 | 1409 | HG |
| O2521-14 | FB | 1 | 1411 | HG |
| CCV81 | CCV81 | 1 | 1414 | HG |
| CCB81 | CCB81 | 1 | 1416 | HG |
| O2521-07L | GMW-7L | 5 | 1420 | HG |
| CCV82 | CCV82 | 1 | 1430 | HG |
| CCB82 | CCB82 | 1 | 1433 | HG |

**metals**
**- 14 -**
**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2521 **Sas no.:** O2521 **Sdg no.:** O2521

**Instrument id number:** **Method:** **Run number:** LB125251

**Start date:** 05/02/2023 **End date:** 05/02/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1551 | HG |
| S0.2 | S0.2 | 1 | 1554 | HG |
| S2.5 | S2.5 | 1 | 1556 | HG |
| S5 | S5 | 1 | 1558 | HG |
| S7.5 | S7.5 | 1 | 1601 | HG |
| S10 | S10 | 1 | 1603 | HG |
| ICV58 | ICV58 | 1 | 1606 | HG |
| ICB58 | ICB58 | 1 | 1608 | HG |
| CCV98 | CCV98 | 1 | 1610 | HG |
| CCB98 | CCB98 | 1 | 1613 | HG |
| CRA | CRA | 1 | 1615 | HG |
| PB152538BL | PB152538BL | 1 | 1622 | HG |
| PB152538BS | PB152538BS | 1 | 1624 | HG |
| CCV99 | CCV99 | 1 | 1638 | HG |
| CCB99 | CCB99 | 1 | 1640 | HG |
| O2521-02 | GMW-1 | 1 | 1642 | HG |
| O2521-04 | PZ-15 | 1 | 1644 | HG |
| O2521-06 | GMW-10 | 1 | 1647 | HG |
| O2521-08 | GMW-7 | 1 | 1649 | HG |
| O2521-08DUP | GMW-7DUP | 1 | 1651 | HG |
| O2521-11 | GMW-7MS | 1 | 1653 | HG |
| O2521-12 | GMW-7MSD | 1 | 1656 | HG |
| O2521-15 | FB | 1 | 1658 | HG |
| O2521-08L | GMW-7L | 5 | 1700 | HG |
| CCV01 | CCV01 | 1 | 1705 | HG |
| CCB01 | CCB01 | 1 | 1707 | HG |

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**metals**
**- 14 -**
**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2521 **Sas no.:** O2521 **Sdg no.:** O2521

**Instrument id number:** **Method:** **Run number:** LB125269

**Start date:** 05/03/2023 **End date:** 05/03/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1240 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S1 | S1 | 1 | 1244 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S2 | S2 | 1 | 1248 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S3 | S3 | 1 | 1252 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S4 | S4 | 1 | 1255 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S5 | S5 | 1 | 1259 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICV01 | ICV01 | 1 | 1404 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICB01 | ICB01 | 1 | 1411 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CRI01 | CRI01 | 1 | 1415 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSA01 | ICSA01 | 1 | 1419 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSAB01 | ICSAB01 | 1 | 1423 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV01 | CCV01 | 1 | 1431 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| LLCCV01 | LLCCV01 | 1 | 1435 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB01 | CCB01 | 1 | 1439 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV02 | CCV02 | 1 | 1521 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB02 | CCB02 | 1 | 1530 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV03 | CCV03 | 1 | 1639 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB03 | CCB03 | 1 | 1643 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV04 | CCV04 | 1 | 1730 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB04 | CCB04 | 1 | 1734 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV05 | CCV05 | 1 | 1816 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB05 | CCB05 | 1 | 1820 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| PB152450BL | PB152450BL | 1 | 1839 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| PB152450BS | PB152450BS | 1 | 1843 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-01 | GMW-1 | 1 | 1847 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-02 | GMW-1 | 1 | 1851 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-03 | PZ-15 | 1 | 1855 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-04 | PZ-15 | 1 | 1859 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV06 | CCV06 | 1 | 1903 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB06 | CCB06 | 1 | 1907 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |

**metals**
**- 14 -**
**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2521 **Sas no.:** O2521 **Sdg no.:** O2521

**Instrument id number:** **Method:** **Run number:** LB125287

**Start date:** 05/04/2023 **End date:** 05/04/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1318 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S1 | S1 | 1 | 1322 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S2 | S2 | 1 | 1326 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S3 | S3 | 1 | 1330 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S4 | S4 | 1 | 1333 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S5 | S5 | 1 | 1337 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICV01 | ICV01 | 1 | 1341 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICB01 | ICB01 | 1 | 1347 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CRI01 | CRI01 | 1 | 1351 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSA01 | ICSA01 | 1 | 1355 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSAB01 | ICSAB01 | 1 | 1358 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV01 | CCV01 | 1 | 1410 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| LLCCV01 | LLCCV01 | 1 | 1414 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB01 | CCB01 | 1 | 1418 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV02 | CCV02 | 1 | 1505 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB02 | CCB02 | 1 | 1509 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV03 | CCV03 | 1 | 1553 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB03 | CCB03 | 1 | 1557 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-05 | GMW-10 | 1 | 1601 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-06 | GMW-10 | 1 | 1605 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-07 | GMW-7 | 1 | 1609 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-07DUP | GMW-7DUP | 1 | 1613 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-07L | GMW-7L | 5 | 1617 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-09 | GMW-7MS | 1 | 1621 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-10 | GMW-7MSD | 1 | 1625 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-07A | GMW-7A | 1 | 1628 | Al,Ba,Fe,Mn,Zn |
| O2521-14 | FB | 1 | 1632 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV04 | CCV04 | 1 | 1652 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB04 | CCB04 | 1 | 1655 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV05 | CCV05 | 1 | 1743 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB05 | CCB05 | 1 | 1747 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-08 | GMW-7 | 1 | 1751 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-11 | GMW-7MS | 1 | 1802 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-12 | GMW-7MSD | 1 | 1806 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-08A | GMW-7A | 1 | 1809 | Ba,Mn,Zn |
| CCV06 | CCV06 | 1 | 1813 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB06 | CCB06 | 1 | 1817 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |

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**metals**
**- 14 -**
**ANALYSIS RUN LOG**

**Client:** GEI Consultants, Inc., P.C. **Contract:** GEIC06

**Lab code:** CHEM **Case no.:** O2521 **Sas no.:** O2521 **Sdg no.:** O2521

**Instrument id number:** **Method:** **Run number:** LB125428

**Start date:** 05/11/2023 **End date:** 05/11/2023

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|---|---|---|---|---|
| S0 | S0 | 1 | 1524 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S1 | S1 | 1 | 1528 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S2 | S2 | 1 | 1532 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S3 | S3 | 1 | 1535 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S4 | S4 | 1 | 1539 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S5 | S5 | 1 | 1543 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICV01 | ICV01 | 1 | 1547 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICB01 | ICB01 | 1 | 1551 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CRI01 | CRI01 | 1 | 1555 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSA01 | ICSA01 | 1 | 1559 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSAB01 | ICSAB01 | 1 | 1603 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV01 | CCV01 | 1 | 1619 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| LLCCV01 | LLCCV01 | 1 | 1623 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB01 | CCB01 | 1 | 1627 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV02 | CCV02 | 1 | 1716 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB02 | CCB02 | 1 | 1720 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV03 | CCV03 | 1 | 1818 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB03 | CCB03 | 1 | 1821 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| O2521-15 | FB | 1 | 1843 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV04 | CCV04 | 1 | 1901 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB04 | CCB04 | 1 | 1905 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV05 | CCV05 | 1 | 1949 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB05 | CCB05 | 1 | 1953 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV06 | CCV06 | 1 | 2037 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB06 | CCB06 | 1 | 2041 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV07 | CCV07 | 1 | 2104 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB07 | CCB07 | 1 | 2108 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O2521 | **OrderDate:** | 4/27/2023 8:52:00 AM |
| **Client:** | GEI Consultants, Inc., P.C. | **Project:** | Ferry Point |
| **Contact:** | Stacey Ng | **Location:** | M11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O2521-01** | **GMW-1** | **WATER** | | | **04/26/23 08:36** | | | **04/26/23** |
| | | | Alkalinity | SM2320 B | | | 05/04/23 14:59 | |
| | | | Ammonia | SM4500-NH3 | | 05/01/23 | 05/02/23 13:04 | |
| | | | Anions Group1 | 300.0 | | | 04/27/23 16:09 | |
| | | | BOD5 | SM5210 B | | | 04/27/23 15:00 | |
| | | | COD | SM5220 D | | | 05/03/23 14:05 | |
| | | | Cyanide | 9012B | | 04/28/23 | 04/28/23 14:00 | |
| | | | pH | 9040C | | | 04/27/23 14:45 | |
| | | | Phenolics | 420.1 | | 04/27/23 | 04/27/23 11:46 | |
| | | | TDS | SM2540 C | | | 04/27/23 10:30 | |
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | | 05/03/23 | 05/04/23 11:21 | |
| | | | TOC | 9060A | | | 05/01/23 13:13 | |
| **O2521-01DL** | **GMW-1DL** | **WATER** | | | **04/26/23 08:36** | | | **04/26/23** |
| | | | Ammonia | SM4500-NH3 | | 05/01/23 | 05/02/23 14:36 | |
| | | | Anions Group1 | 300.0 | | | 04/28/23 09:04 | |

# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | | 05/03/23 | 05/04/23 12:20 |
| | | | TOC | 9060A | | | 05/01/23 19:06 |
| **O2521-03** | **PZ-15** | **WATER** | | | **04/26/23 09:54** | | **04/26/23** |
| | | | Alkalinity | SM2320 B | | | 05/04/23 15:07 |
| | | | Ammonia | SM4500-NH3 | | 05/01/23 | 05/02/23 13:04 |
| | | | Anions Group1 | 300.0 | | | 04/27/23 16:42 |
| | | | BOD5 | SM5210 B | | | 04/27/23 15:00 |
| | | | COD | SM5220 D | | | 05/03/23 14:07 |
| | | | Cyanide | 9012B | | 04/28/23 | 04/28/23 14:00 |
| | | | pH | 9040C | | | 04/27/23 14:49 |
| | | | Phenolics | 420.1 | | 04/27/23 | 04/27/23 11:46 |
| | | | TDS | SM2540 C | | | 04/27/23 10:30 |
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | | 05/03/23 | 05/04/23 11:21 |
| | | | TOC | 9060A | | | 05/01/23 13:44 |
| **O2521-03DL** | **PZ-15DL** | **WATER** | | | **04/26/23 09:54** | | **04/26/23** |
| | | | Ammonia | SM4500-NH3 | | 05/01/23 | 05/02/23 14:02 |
| | | | Anions Group1 | 300.0 | | | 04/28/23 09:36 |

# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | TKN | SM4500-N<br>Org C-11 plus<br>NH3 B plus<br>G-11 | | 05/03/23 | 05/04/23<br>12:20 |
| | | | TOC | 9060A | | | 05/01/23<br>19:35 |
| **O2521-05** | **GMW-10** | **WATER** | | | **04/26/23<br>11:16** | | **04/26/23** |
| | | | Alkalinity | SM2320 B | | | 05/04/23<br>15:12 |
| | | | Ammonia | SM4500-NH3 | | 05/01/23 | 05/02/23<br>13:04 |
| | | | Anions Group1 | 300.0 | | | 04/27/23<br>17:15 |
| | | | BOD5 | SM5210 B | | | 04/27/23<br>15:00 |
| | | | COD | SM5220 D | | | 05/03/23<br>14:07 |
| | | | Cyanide | 9012B | | 04/28/23 | 04/28/23<br>14:00 |
| | | | pH | 9040C | | | 04/27/23<br>15:00 |
| | | | Phenolics | 420.1 | | 04/27/23 | 04/27/23<br>11:46 |
| | | | TDS | SM2540 C | | | 04/27/23<br>10:30 |
| | | | TKN | SM4500-N<br>Org C-11 plus<br>NH3 B plus<br>G-11 | | 05/03/23 | 05/04/23<br>11:21 |
| | | | TOC | 9060A | | | 05/01/23<br>14:17 |
| **O2521-05DL** | **GMW-10DL** | **WATER** | | | **04/26/23<br>11:16** | | **04/26/23** |
| | | | Anions Group1 | 300.0 | | | 04/28/23<br>10:09 |
| | | | TOC | 9060A | | | 05/02/23<br>12:34 |

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# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **O2521-07** | **GMW-7** | **WATER** | | | **04/26/23 13:21** | | **04/26/23** |
| | | | Alkalinity | SM2320 B | | 05/04/23 15:18 | |
| | | | Ammonia | SM4500-NH3 | 05/01/23 | 05/02/23 13:04 | |
| | | | Anions Group1 | 300.0 | | 04/27/23 17:47 | |
| | | | BOD5 | SM5210 B | | 04/27/23 15:00 | |
| | | | COD | SM5220 D | | 05/03/23 14:08 | |
| | | | Cyanide | 9012B | 04/28/23 | 04/28/23 14:00 | |
| | | | pH | 9040C | | 04/27/23 15:05 | |
| | | | Phenolics | 420.1 | 04/27/23 | 04/27/23 12:24 | |
| | | | TDS | SM2540 C | | 04/27/23 10:30 | |
| | | | TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | 05/03/23 | 05/04/23 11:21 | |
| | | | TOC | 9060A | | 05/01/23 14:45 | |
| **O2521-07DL** | **GMW-7DL** | **WATER** | | | **04/26/23 13:21** | | **04/26/23** |
| | | | Anions Group1 | 300.0 | | 04/28/23 10:42 | |
| **O2521-14** | **FB** | **Water** | | | **04/26/23 12:00** | | **04/26/23** |
| | | | Alkalinity | SM2320 B | | 05/05/23 10:48 | |
| | | | BOD5 | SM5210 B | | 04/27/23 15:00 | |
| | | | COD | SM5220 D | | 05/03/23 14:10 | |
| | | | pH | 9040C | | 04/27/23 15:10 | |

CHEMTECH

284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922



## LAB CHRONICLE

| | | | |
|---|---|---|---|
| TDS | SM2540 C | | 04/27/23 10:30 |
| Ammonia | SM4500-NH3 | 05/01/23 | 05/02/23 13:54 |
| Anions Group1 | 300.0 | | 04/27/23 19:25 |
| Cyanide | 9012B | 04/28/23 | 04/28/23 14:04 |
| Phenolics | 420.1 | 04/27/23 | 04/27/23 12:24 |
| TKN | SM4500-N Org C-11 plus NH3 B plus G-11 | 05/03/23 | 05/04/23 11:22 |
| TOC | 9060A | | 05/01/23 18:13 |

# SAMPLE DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 08:36 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 614 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 14:59 | SM 2320 B-11 |
| Ammonia as N | 11.9 | OR | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:04 | SM 4500-NH3 B plus G-11 |
| Bromide | 0.90 | J | 1 | 0.27 | 2.00 | mg/L | | 04/27/23 16:09 | 300.0 |
| Chloride | 53.0 | OR | 1 | 0.11 | 0.60 | mg/L | | 04/27/23 16:09 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/27/23 16:09 | 300.0 |
| Nitrate | 0.50 | U | 1 | 0.084 | 0.50 | mg/L | | 04/27/23 16:09 | 300.0 |
| Sulfate | 1.50 | J | 1 | 0.55 | 3.00 | mg/L | | 04/27/23 16:09 | 300.0 |
| Nitrate+Nitrite | 1.10 | U | 1 | 0.17 | 1.10 | mg/L | | 04/27/23 16:09 | 300.0 |
| BOD5 | 95.4 | | 1 | 0.17 | 2.00 | mg/L | | 04/27/23 15:00 | SM 5210 B-16 |
| COD | 160 | D | 10 | 25.2 | 100 | mg/L | | 05/03/23 14:05 | SM 5220 D-11 |
| Cyanide | 0.035 | | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 14:00 | 9012B |
| pH | 6.85 | H | 1 | 0 | 0 | pH | | 04/27/23 14:45 | 9040C |
| Phenolics | 0.050 | U | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 11:46 | 420.1 |
| TDS | 666 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 12.4 | OR | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:21 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 28.2 | OR | 1 | 0.37 | 1.00 | mg/L | | 05/01/23 13:13 | 9060A |

Comments: pH result reported at temperature 20.8 °C

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 08:36 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-1DL | SDG No.: | O2521 |
| Lab Sample ID: | O2521-01DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | 13.3 | D | 10 | 0.45 | 1.00 | mg/L | 05/01/23 13:30 | 05/02/23 14:36 | SM 4500-NH3 B plus G-11 |
| Chloride | 44.4 | D | 10 | 1.10 | 6.00 | mg/L | | 04/28/23 09:04 | 300.0 |
| TKN | 13.0 | D | 2 | 0.26 | 1.00 | mg/L | 05/03/23 10:30 | 05/04/23 12:20 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 28.1 | D | 4 | 1.50 | 4.00 | mg/L | | 05/01/23 19:06 | 9060A |

Comments:

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N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 09:54 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 812 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 15:07 | SM 2320 B-11 |
| Ammonia as N | 32.6 | OR | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:04 | SM 4500-NH3 B plus G-11 |
| Bromide | 0.97 | J | 1 | 0.27 | 2.00 | mg/L | | 04/27/23 16:42 | 300.0 |
| Chloride | 44.7 | OR | 1 | 0.11 | 0.60 | mg/L | | 04/27/23 16:42 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/27/23 16:42 | 300.0 |
| Nitrate | 0.19 | J | 1 | 0.084 | 0.50 | mg/L | | 04/27/23 16:42 | 300.0 |
| Sulfate | 3.00 | | 1 | 0.55 | 3.00 | mg/L | | 04/27/23 16:42 | 300.0 |
| Nitrate+Nitrite | 0.19 | J | 1 | 0.17 | 1.10 | mg/L | | 04/27/23 16:42 | 300.0 |
| BOD5 | 39.2 | | 1 | 0.17 | 2.00 | mg/L | | 04/27/23 15:00 | SM 5210 B-16 |
| COD | 190 | D | 10 | 25.2 | 100 | mg/L | | 05/03/23 14:07 | SM 5220 D-11 |
| Cyanide | 0.34 | | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 14:00 | 9012B |
| pH | 6.71 | H | 1 | 0 | 0 | pH | | 04/27/23 14:49 | 9040C |
| Phenolics | 0.050 | U | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 11:46 | 420.1 |
| TDS | 773 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 31.0 | OR | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:21 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 29.0 | OR | 1 | 0.37 | 1.00 | mg/L | | 05/01/23 13:44 | 9060A |

Comments: pH result reported at temperature 20.1 °C

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J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 09:54 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | PZ-15DL | SDG No.: | O2521 |
| Lab Sample ID: | O2521-03DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | 56.8 | D | 50 | 2.30 | 5.00 | mg/L | 05/01/23 13:30 | 05/02/23 14:02 | SM 4500-NH3 B plus G-11 |
| Chloride | 38.2 | D | 10 | 1.10 | 6.00 | mg/L | | 04/28/23 09:36 | 300.0 |
| TKN | 49.6 | D | 10 | 1.30 | 5.00 | mg/L | 05/03/23 10:30 | 05/04/23 12:20 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 30.4 | D | 4 | 1.50 | 4.00 | mg/L | | 05/01/23 19:35 | 9060A |

Comments:

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 11:16 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 494 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 15:12 | SM 2320 B-11 |
| Ammonia as N | 1.60 | | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:04 | SM 4500-NH3 B plus G-11 |
| Bromide | 2.00 | U | 1 | 0.27 | 2.00 | mg/L | | 04/27/23 17:15 | 300.0 |
| Chloride | 21.8 | OR | 1 | 0.11 | 0.60 | mg/L | | 04/27/23 17:15 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/27/23 17:15 | 300.0 |
| Nitrate | 0.50 | U | 1 | 0.084 | 0.50 | mg/L | | 04/27/23 17:15 | 300.0 |
| Sulfate | 58.4 | OR | 1 | 0.55 | 3.00 | mg/L | | 04/27/23 17:15 | 300.0 |
| Nitrate+Nitrite | 1.10 | U | 1 | 0.17 | 1.10 | mg/L | | 04/27/23 17:15 | 300.0 |
| BOD5 | 8.50 | | 1 | 0.17 | 2.00 | mg/L | | 04/27/23 15:00 | SM 5210 B-16 |
| COD | 114 | | 1 | 2.52 | 10.0 | mg/L | | 05/03/23 14:07 | SM 5220 D-11 |
| Cyanide | 0.22 | | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 14:00 | 9012B |
| pH | 6.72 | H | 1 | 0 | 0 | pH | | 04/27/23 15:00 | 9040C |
| Phenolics | 0.050 | U | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 11:46 | 420.1 |
| TDS | 729 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 0.52 | | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:21 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 28.7 | OR | 1 | 0.37 | 1.00 | mg/L | | 05/01/23 14:17 | 9060A |

Comments: pH result reported at temperature 20.9 °C

U = Not Detected
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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 11:16 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-10DL | SDG No.: | O2521 |
| Lab Sample ID: | O2521-05DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 19.4 | D | 5 | 0.55 | 3.00 | mg/L | | 04/28/23 10:09 | 300.0 |
| Sulfate | 53.0 | D | 5 | 2.80 | 15.0 | mg/L | | 04/28/23 10:09 | 300.0 |
| TOC | 26.4 | D | 4 | 1.50 | 4.00 | mg/L | | 05/02/23 12:34 | 9060A |

Comments:

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 13:21 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7 | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 404 | | 1 | 1.00 | 2.00 | mg/L | | 05/04/23 15:18 | SM 2320 B-11 |
| Ammonia as N | 1.50 | | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:04 | SM 4500-NH3 B plus G-11 |
| Bromide | 2.00 | U | 1 | 0.27 | 2.00 | mg/L | | 04/27/23 17:47 | 300.0 |
| Chloride | 24.1 | OR | 1 | 0.11 | 0.60 | mg/L | | 04/27/23 17:47 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/27/23 17:47 | 300.0 |
| Nitrate | 1.70 | | 1 | 0.084 | 0.50 | mg/L | | 04/27/23 17:47 | 300.0 |
| Sulfate | 75.7 | OR | 1 | 0.55 | 3.00 | mg/L | | 04/27/23 17:47 | 300.0 |
| Nitrate+Nitrite | 1.70 | | 1 | 0.17 | 1.10 | mg/L | | 04/27/23 17:47 | 300.0 |
| BOD5 | 10.2 | | 1 | 0.17 | 2.00 | mg/L | | 04/27/23 15:00 | SM 5210 B-16 |
| COD | 15.0 | | 1 | 2.52 | 10.0 | mg/L | | 05/03/23 14:08 | SM 5220 D-11 |
| Cyanide | 0.010 | | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 14:00 | 9012B |
| pH | 7.02 | H | 1 | 0 | 0 | pH | | 04/27/23 15:05 | 9040C |
| Phenolics | 0.050 | U | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 12:24 | 420.1 |
| TDS | 658 | | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 4.70 | | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:21 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 7.90 | | 1 | 0.37 | 1.00 | mg/L | | 05/01/23 14:45 | 9060A |

Comments: pH result reported at temperature 20.9 °C

U = Not Detected
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B = Analyte Found in Associated Method Blank
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E = Indicates the reported value is estimated because of the presence of interference.
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N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 13:21 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | GMW-7DL | SDG No.: | O2521 |
| Lab Sample ID: | O2521-07DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 21.7 | D | 5 | 0.55 | 3.00 | mg/L | | 04/28/23 10:42 | 300.0 |
| Sulfate | 68.0 | D | 5 | 2.80 | 15.0 | mg/L | | 04/28/23 10:42 | 300.0 |

Comments:

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | GEI Consultants, Inc., P.C. | Date Collected: | 04/26/23 12:00 |
| Project: | Ferry Point | Date Received: | 04/26/23 |
| Client Sample ID: | FB | SDG No.: | O2521 |
| Lab Sample ID: | O2521-14 | Matrix: | Water |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 1.20 | J | 1 | 1.00 | 2.00 | mg/L | | 05/05/23 10:48 | SM 2320 B-11 |
| Ammonia as N | 0.10 | U | 1 | 0.045 | 0.10 | mg/L | 05/01/23 13:30 | 05/02/23 13:54 | SM 4500-NH3 B plus G-11 |
| Bromide | 2.00 | U | 1 | 0.27 | 2.00 | mg/L | | 04/27/23 19:25 | 300.0 |
| Chloride | 0.60 | U | 1 | 0.11 | 0.60 | mg/L | | 04/27/23 19:25 | 300.0 |
| Nitrite | 0.60 | U | 1 | 0.089 | 0.60 | mg/L | | 04/27/23 19:25 | 300.0 |
| Nitrate | 0.50 | U | 1 | 0.084 | 0.50 | mg/L | | 04/27/23 19:25 | 300.0 |
| Sulfate | 3.00 | U | 1 | 0.55 | 3.00 | mg/L | | 04/27/23 19:25 | 300.0 |
| Nitrate+Nitrite | 1.10 | U | 1 | 0.17 | 1.10 | mg/L | | 04/27/23 19:25 | 300.0 |
| BOD5 | 2.00 | U | 1 | 0.17 | 2.00 | mg/L | | 04/27/23 15:00 | SM 5210 B-16 |
| COD | 10.0 | U | 1 | 2.52 | 10.0 | mg/L | | 05/03/23 14:10 | SM 5220 D-11 |
| Cyanide | 0.0014 | J | 1 | 0.0010 | 0.0050 | mg/L | 04/28/23 10:45 | 04/28/23 14:04 | 9012B |
| pH | 5.48 | H | 1 | 0 | 0 | pH | | 04/27/23 15:10 | 9040C |
| Phenolics | 0.050 | U | 1 | 0.012 | 0.050 | mg/L | 04/27/23 09:45 | 04/27/23 12:24 | 420.1 |
| TDS | 10.0 | U | 1 | 1.00 | 10.0 | mg/L | | 04/27/23 10:30 | SM 2540 C-15 |
| TKN | 0.50 | U | 1 | 0.13 | 0.50 | mg/L | 05/03/23 10:30 | 05/04/23 11:22 | SM4500-N Org C-11 plus NH3 B plus G-11 |
| TOC | 0.76 | J | 1 | 0.37 | 1.00 | mg/L | | 05/01/23 18:13 | 9060A |

Comments: pH result reported at temperature 20.6 °C

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# QC RESULT SUMMARY

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125184

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV1 | | | | | | |
| Phenolics | | mg/L | 0.98 | 1 | 98 | 90-110 | 04/27/2023 |
| Sample ID: | CCV1 | | | | | | |
| Phenolics | | mg/L | 0.94 | 1 | 94 | 90-110 | 04/27/2023 |
| Sample ID: | CCV2 | | | | | | |
| Phenolics | | mg/L | 0.93 | 1 | 93 | 90-110 | 04/27/2023 |
| Sample ID: | CCV3 | | | | | | |
| Phenolics | | mg/L | 0.94 | 1 | 94 | 90-110 | 04/27/2023 |

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# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125187

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|
| **Sample ID: ICV1** | | | | | | |
| Bromide | mg/L | 10.3 | 10 | 103 | 90-110 | 04/24/2023 |
| Chloride | mg/L | 3.1 | 3 | 103 | 90-110 | 04/24/2023 |
| Fluoride | mg/L | 1.9 | 2 | 95 | 90-110 | 04/24/2023 |
| Nitrite | mg/L | 3.1 | 3 | 103 | 90-110 | 04/24/2023 |
| Nitrate | mg/L | 2.6 | 2.5 | 104 | 90-110 | 04/24/2023 |
| Sulfate | mg/L | 15.4 | 15 | 103 | 90-110 | 04/24/2023 |
| Orthophosphate as P | mg/L | 4.7 | 5 | 94 | 90-110 | 04/24/2023 |
| **Sample ID: CCV1** | | | | | | |
| Bromide | mg/L | 9.8 | 10 | 98 | 90-110 | 04/27/2023 |
| Chloride | mg/L | 2.9 | 3 | 97 | 90-110 | 04/27/2023 |
| Fluoride | mg/L | 1.9 | 2 | 95 | 90-110 | 04/27/2023 |
| Nitrite | mg/L | 2.9 | 3 | 97 | 90-110 | 04/27/2023 |
| Nitrate | mg/L | 2.4 | 2.5 | 96 | 90-110 | 04/27/2023 |
| Sulfate | mg/L | 14.6 | 15 | 97 | 90-110 | 04/27/2023 |
| Orthophosphate as P | mg/L | 5.7 | 5 | 114 | 90-110 | 04/27/2023 |
| **Sample ID: CCV2** | | | | | | |
| Bromide | mg/L | 9.9 | 10 | 99 | 90-110 | 04/27/2023 |
| Chloride | mg/L | 3 | 3 | 100 | 90-110 | 04/27/2023 |
| Fluoride | mg/L | 2 | 2 | 100 | 90-110 | 04/27/2023 |
| Nitrite | mg/L | 3.1 | 3 | 103 | 90-110 | 04/27/2023 |
| Nitrate | mg/L | 2.5 | 2.5 | 100 | 90-110 | 04/27/2023 |
| Sulfate | mg/L | 14.9 | 15 | 99 | 90-110 | 04/27/2023 |
| Orthophosphate as P | mg/L | 6.8 | 5 | 136 | 90-110 | 04/27/2023 |
| **Sample ID: CCV3** | | | | | | |
| Bromide | mg/L | 9.9 | 10 | 99 | 90-110 | 04/28/2023 |
| Chloride | mg/L | 3 | 3 | 100 | 90-110 | 04/28/2023 |
| Fluoride | mg/L | 2 | 2 | 100 | 90-110 | 04/28/2023 |
| Nitrite | mg/L | 3.1 | 3 | 103 | 90-110 | 04/28/2023 |
| Nitrate | mg/L | 2.5 | 2.5 | 100 | 90-110 | 04/28/2023 |
| Sulfate | mg/L | 14.9 | 15 | 99 | 90-110 | 04/28/2023 |
| Orthophosphate as P | mg/L | 7.2 | 5 | 144 | 90-110 | 04/28/2023 |
| **Sample ID: CCV4** | | | | | | |
| Bromide | mg/L | 10 | 10 | 100 | 90-110 | 04/28/2023 |
| Chloride | mg/L | 3.2 | 3 | 107 | 90-110 | 04/28/2023 |
| Fluoride | mg/L | 2 | 2 | 100 | 90-110 | 04/28/2023 |
| Nitrite | mg/L | 3.1 | 3 | 103 | 90-110 | 04/28/2023 |
| Nitrate | mg/L | 2.5 | 2.5 | 100 | 90-110 | 04/28/2023 |
| Sulfate | mg/L | 15 | 15 | 100 | 90-110 | 04/28/2023 |
| Orthophosphate as P | mg/L | 6.6 | 5 | 132 | 90-110 | 04/28/2023 |
| **Sample ID: CCV5** | | | | | | |
| Bromide | mg/L | 10 | 10 | 100 | 90-110 | 04/28/2023 |
| Chloride | mg/L | 3 | 3 | 100 | 90-110 | 04/28/2023 |
| Fluoride | mg/L | 2 | 2 | 100 | 90-110 | 04/28/2023 |

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# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125187

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|
| Nitrite | mg/L | 3.1 | 3 | 103 | 90-110 | 04/28/2023 |
| Nitrate | mg/L | 2.5 | 2.5 | 100 | 90-110 | 04/28/2023 |
| Sulfate | mg/L | 15 | 15 | 100 | 90-110 | 04/28/2023 |
| Orthophosphate as P | mg/L | 6.1 | 5 | 122 | 90-110 | 04/28/2023 |

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# Initial and Continuing Calibration Verification

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2521 |
| **Project:** | Ferry Point | **RunNo.:** | LB125189 |

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|
| **Sample ID:** ICV | | | | | | |
| pH | pH | 6.99 | 7 | 100 | 90-110 | 04/27/2023 |
| **Sample ID:** CCV1 | | | | | | |
| pH | pH | 2.01 | 2.00 | 101 | 90-110 | 04/27/2023 |
| **Sample ID:** CCV2 | | | | | | |
| pH | pH | 12.02 | 12.00 | 100 | 90-110 | 04/27/2023 |

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# Initial and Continuing Calibration Verification



| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2521 |
| **Project:** | Ferry Point | **RunNo.:** | LB125211 |

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID:** | **ICV1** | | | | | | |
| Cyanide | | mg/L | 0.096 | 0.099 | 97 | 90-110 | 04/28/2023 |
| **Sample ID:** | **CCV1** | | | | | | |
| Cyanide | | mg/L | 0.25 | 0.25 | 100 | 90-110 | 04/28/2023 |
| **Sample ID:** | **CCV2** | | | | | | |
| Cyanide | | mg/L | 0.24 | 0.25 | 96 | 90-110 | 04/28/2023 |
| **Sample ID:** | **CCV3** | | | | | | |
| Cyanide | | mg/L | 0.25 | 0.25 | 100 | 90-110 | 04/28/2023 |
| **Sample ID:** | **CCV4** | | | | | | |
| Cyanide | | mg/L | 0.24 | 0.25 | 96 | 90-110 | 04/28/2023 |
| **Sample ID:** | **CCV5** | | | | | | |
| Cyanide | | mg/L | 0.26 | 0.25 | 104 | 90-110 | 04/28/2023 |

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# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125221

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV1 | | | | | | |
| TOC | | mg/L | 10.3 | 10 | 103 | 90-110 | 04/04/2023 |
| Sample ID: | CCV1 | | | | | | |
| TOC | | mg/L | 10.9 | 10 | 109 | 90-110 | 05/01/2023 |
| Sample ID: | CCV2 | | | | | | |
| TOC | | mg/L | 10.7 | 10 | 107 | 90-110 | 05/01/2023 |
| Sample ID: | CCV3 | | | | | | |
| TOC | | mg/L | 10.7 | 10 | 107 | 90-110 | 05/01/2023 |
| Sample ID: | CCV4 | | | | | | |
| TOC | | mg/L | 10.2 | 10 | 102 | 90-110 | 05/02/2023 |
| Sample ID: | CCV5 | | | | | | |
| TOC | | mg/L | 10.8 | 10 | 108 | 90-110 | 05/02/2023 |
| Sample ID: | CCV6 | | | | | | |
| TOC | | mg/L | 10.6 | 10 | 106 | 90-110 | 05/02/2023 |
| Sample ID: | CCV7 | | | | | | |
| TOC | | mg/L | 10.4 | 10 | 104 | 90-110 | 05/03/2023 |
| Sample ID: | CCV8 | | | | | | |
| TOC | | mg/L | 10.5 | 10 | 105 | 90-110 | 05/03/2023 |

# Initial and Continuing Calibration Verification



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125248

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV1 | | | | | | |
| Ammonia as N | | mg/L | 0.91 | 1 | 91 | 90-110 | 05/02/2023 |
| Sample ID: | CCV1 | | | | | | |
| Ammonia as N | | mg/L | 0.95 | 1 | 95 | 90-110 | 05/02/2023 |
| Sample ID: | CCV2 | | | | | | |
| Ammonia as N | | mg/L | 0.94 | 1 | 94 | 90-110 | 05/02/2023 |
| Sample ID: | CCV3 | | | | | | |
| Ammonia as N | | mg/L | 0.93 | 1 | 93 | 90-110 | 05/02/2023 |
| Sample ID: | CCV4 | | | | | | |
| Ammonia as N | | mg/L | 0.97 | 1 | 97 | 90-110 | 05/02/2023 |
| Sample ID: | CCV5 | | | | | | |
| Ammonia as N | | mg/L | 1 | 1 | 100 | 90-110 | 05/02/2023 |

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# Initial and Continuing Calibration Verification

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2521 |
| **Project:** | Ferry Point | **RunNo.:** | LB125267 |

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID:** | **ICV** | | | | | | |
| COD | | mg/L | 49.991 | 50 | 100 | 95-105 | 03/10/2023 |
| **Sample ID:** | **CCV1** | | | | | | |
| COD | | mg/L | 48.990 | 50 | 98 | 95-105 | 05/03/2023 |
| **Sample ID:** | **CCV2** | | | | | | |
| COD | | mg/L | 48.990 | 50 | 98 | 95-105 | 05/03/2023 |
| **Sample ID:** | **CCV3** | | | | | | |
| COD | | mg/L | 50.992 | 50 | 102 | 95-105 | 05/03/2023 |

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# Initial and Continuing Calibration Verification

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125282

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: | ICV1 | | | | | | |
| TKN | | mg/L | 4.9 | 5 | 98 | 90-110 | 05/04/2023 |
| Sample ID: | CCV1 | | | | | | |
| TKN | | mg/L | 4.9 | 5 | 98 | 90-110 | 05/04/2023 |
| Sample ID: | CCV2 | | | | | | |
| TKN | | mg/L | 4.8 | 5 | 96 | 90-110 | 05/04/2023 |
| Sample ID: | CCV3 | | | | | | |
| TKN | | mg/L | 5.1 | 5 | 102 | 90-110 | 05/04/2023 |
| Sample ID: | CCV4 | | | | | | |
| TKN | | mg/L | 5.1 | 5 | 102 | 90-110 | 05/04/2023 |

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# Initial and Continuing Calibration Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125184

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB1 | | | | | | | |
| Phenolics | | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |
| Sample ID: | CCB1 | | | | | | | |
| Phenolics | | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |
| Sample ID: | CCB2 | | | | | | | |
| Phenolics | | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |
| Sample ID: | CCB3 | | | | | | | |
| Phenolics | | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |

# Initial and Continuing Calibration Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125187

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID: ICB1** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/24/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/24/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/24/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/24/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/24/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/24/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/24/2023 |
| **Sample ID: CCB1** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/27/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/27/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/27/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/27/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/27/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/27/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/27/2023 |
| **Sample ID: CCB2** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/27/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/27/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/27/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/27/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/27/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/27/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/27/2023 |
| **Sample ID: CCB3** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/28/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/28/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/28/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/28/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/28/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/28/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/28/2023 |
| **Sample ID: CCB4** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/28/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/28/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/28/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/28/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/28/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/28/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/28/2023 |
| **Sample ID: CCB5** | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/28/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/28/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/28/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/28/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/28/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/28/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.30 | 1 | 04/28/2023 |

# Initial and Continuing Calibration Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125211

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB1 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB1 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB2 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB3 | | | | | | | |
| Cyanide | | mg/L | 0.0011 | 0.0025 | J | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB4 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |
| Sample ID: | CCB5 | | | | | | | |
| Cyanide | | mg/L | < 0.0025 | 0.0025 | U | 0.0010 | 0.005 | 04/28/2023 |

# Initial and Continuing Calibration Blank Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125221

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB1 | | | | | | | |
| TOC | | mg/L | 0.47 | 0.5000 | J | 0.37 | 1 | 04/04/2023 |
| Sample ID: | CCB1 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/01/2023 |
| Sample ID: | CCB2 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/01/2023 |
| Sample ID: | CCB3 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/01/2023 |
| Sample ID: | CCB4 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/02/2023 |
| Sample ID: | CCB5 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/02/2023 |
| Sample ID: | CCB6 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/02/2023 |
| Sample ID: | CCB7 | | | | | | | |
| TOC | | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/03/2023 |
| Sample ID: | CCB8 | | | | | | | |
| TOC | | mg/L | 0.4 | 0.5000 | J | 0.37 | 1 | 05/03/2023 |

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# Initial and Continuing Calibration Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125248

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| Sample ID: ICB1 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB1 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB2 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB3 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB4 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |
| Sample ID: CCB5 | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |

# Initial and Continuing Calibration Blank Summary



| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2521 |
| **Project:** | Ferry Point | **RunNo.:** | LB125267 |

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID:** | **ICB** | | | | | | | |
| COD | | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10 | 03/10/2023 |
| **Sample ID:** | **CCB1** | | | | | | | |
| COD | | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10 | 05/03/2023 |
| **Sample ID:** | **CCB2** | | | | | | | |
| COD | | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10 | 05/03/2023 |
| **Sample ID:** | **CCB3** | | | | | | | |
| COD | | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10 | 05/03/2023 |

# Initial and Continuing Calibration Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **RunNo.:** LB125282

| Analyte | | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICB1 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| Sample ID: | CCB1 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| Sample ID: | CCB2 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| Sample ID: | CCB3 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| Sample ID: | CCB4 | | | | | | | |
| TKN | | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |

# Preparation Blank Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID:** LB125179BL | | | | | | | |
| TDS | mg/L | < 5.0000 | 5.0000 | U | 1.0 | 10 | 04/27/2023 |
| **Sample ID:** LB125186BL | | | | | | | |
| BOD5 | mg/L | < 0.2000 | 0.2000 | U | 0.17 | 2.0 | 04/27/2023 |
| **Sample ID:** LB125187BLW | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/27/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/27/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/27/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/27/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/27/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/27/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.3 | 1 | 04/27/2023 |
| **Sample ID:** LB125187BLW2 | | | | | | | |
| Bromide | mg/L | < 1.0000 | 1.0000 | U | 0.27 | 2 | 04/28/2023 |
| Chloride | mg/L | < 0.3000 | 0.3000 | U | 0.11 | 0.6 | 04/28/2023 |
| Fluoride | mg/L | < 0.2000 | 0.2000 | U | 0.085 | 0.4 | 04/28/2023 |
| Nitrite | mg/L | < 0.3000 | 0.3000 | U | 0.089 | 0.6 | 04/28/2023 |
| Nitrate | mg/L | < 0.2500 | 0.2500 | U | 0.084 | 0.5 | 04/28/2023 |
| Sulfate | mg/L | < 1.5000 | 1.5000 | U | 0.55 | 3 | 04/28/2023 |
| Orthophosphate as P | mg/L | < 0.5000 | 0.5000 | U | 0.3 | 1 | 04/28/2023 |
| **Sample ID:** LB125221BLW | | | | | | | |
| TOC | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/01/2023 |
| **Sample ID:** LB125221BLW2 | | | | | | | |
| TOC | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/02/2023 |
| **Sample ID:** LB125221BLW3 | | | | | | | |
| TOC | mg/L | < 0.5000 | 0.5000 | U | 0.37 | 1 | 05/03/2023 |
| **Sample ID:** LB125267BL | | | | | | | |
| COD | mg/L | < 5.0000 | 5.0000 | U | 2.52 | 10.0 | 05/03/2023 |
| **Sample ID:** LB125291BLW | | | | | | | |
| Alkalinity | mg/L | < 1.0000 | 1.0000 | U | 1 | 2 | 05/04/2023 |
| **Sample ID:** LB125301BL | | | | | | | |
| Alkalinity | mg/L | < 1.0000 | 1.0000 | U | 1 | 2 | 05/05/2023 |
| **Sample ID:** PB152437BL | | | | | | | |
| TKN | mg/L | < 0.2500 | 0.2500 | U | 0.13 | 0.5 | 05/04/2023 |
| **Sample ID:** PB152445BL | | | | | | | |
| Phenolics | mg/L | < 0.0250 | 0.0250 | U | 0.012 | 0.05 | 04/27/2023 |
| **Sample ID:** PB152488BL | | | | | | | |
| Cyanide | mg/L | < 0.0025 | 0.0025 | U | 0.001 | 0.005 | 04/28/2023 |
| **Sample ID:** PB152517BL | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.045 | 0.1 | 05/02/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | mg/L | 80-120 | 11.1 | | 0.27 | U | 10 | 1 | 111 | | 04/27/2023 |
| Ammonia as N | mg/L | 75-125 | 2.20 | OR | 1.50 | | 1 | 1 | 70 | * | 05/02/2023 |
| TOC | mg/L | 75-125 | 17.5 | | 7.90 | | 10 | 1 | 96 | | 05/01/2023 |
| COD | mg/L | 75-125 | 61.0 | | 15.0 | | 50.0 | 1 | 92 | | 05/03/2023 |
| Chloride | mg/L | 80-120 | 26.9 | OR | 24.1 | OR | 3 | 1 | 93 | | 04/27/2023 |
| Fluoride | mg/L | 80-120 | 3.60 | | 0.085 | U | 2 | 1 | 180 | * | 04/27/2023 |
| Nitrite | mg/L | 80-120 | 1.70 | | 0.089 | U | 3 | 1 | 57 | * | 04/27/2023 |
| Nitrate | mg/L | 80-120 | 4.30 | | 1.70 | | 2.5 | 1 | 104 | | 04/27/2023 |
| Sulfate | mg/L | 80-120 | 92.0 | OR | 75.7 | OR | 15 | 1 | 109 | | 04/27/2023 |
| Orthophosphate as P | mg/L | 80-120 | 8.10 | | 0.30 | U | 5 | 1 | 162 | * | 04/27/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide | mg/L | 75-125 | 0.057 | | 0.010 | | 0.04 | 1 | 117 | | 04/28/2023 |
| TKN | mg/L | 75-125 | 9.50 | | 4.70 | | 5 | 1 | 96 | | 05/04/2023 |
| Phenolics | mg/L | 75-125 | 0.44 | | 0.012 | U | 1 | 1 | 44 | * | 04/27/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | mg/L | 80-120 | 10.6 | | 0.27 | U | 10 | 1 | 106 | | 04/27/2023 |
| Ammonia as N | mg/L | 75-125 | 2.20 | OR | 1.50 | | 1 | 1 | 70 | * | 05/02/2023 |
| TOC | mg/L | 75-125 | 17.3 | | 7.90 | | 10 | 1 | 94 | | 05/01/2023 |
| COD | mg/L | 75-125 | 62.0 | | 15.0 | | 50.0 | 1 | 94 | | 05/03/2023 |
| Chloride | mg/L | 80-120 | 26.9 | OR | 24.1 | OR | 3 | 1 | 93 | | 04/27/2023 |
| Fluoride | mg/L | 80-120 | 3.40 | | 0.085 | U | 2 | 1 | 170 | * | 04/27/2023 |
| Nitrite | mg/L | 80-120 | 1.60 | | 0.089 | U | 3 | 1 | 53 | * | 04/27/2023 |
| Nitrate | mg/L | 80-120 | 4.20 | | 1.70 | | 2.5 | 1 | 100 | | 04/27/2023 |
| Sulfate | mg/L | 80-120 | 91.3 | OR | 75.7 | OR | 15 | 1 | 104 | | 04/27/2023 |
| Orthophosphate as P | mg/L | 80-120 | 8.40 | | 0.30 | U | 5 | 1 | 168 | * | 04/27/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide | mg/L | 75-125 | 0.057 | | 0.010 | | 0.04 | 1 | 117 | | 04/28/2023 |
| TKN | mg/L | 75-125 | 9.00 | | 4.70 | | 5 | 1 | 86 | | 05/04/2023 |
| Phenolics | mg/L | 75-125 | 0.41 | | 0.012 | U | 1 | 1 | 41 | * | 04/27/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2522-11
**Client ID:** MW-4MS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | mg/L | 80-120 | 12.0 | | 1.70 | J | 10 | 1 | 103 | | 04/28/2023 |
| Chloride | mg/L | 80-120 | 779 | OR | 808 | OR | 3 | 1 | -967 | * | 04/28/2023 |
| Fluoride | mg/L | 80-120 | 3.00 | | 0.085 | U | 2 | 1 | 150 | * | 04/28/2023 |
| Nitrite | mg/L | 80-120 | 2.40 | | 0.089 | U | 3 | 1 | 80 | | 04/28/2023 |
| Nitrate | mg/L | 80-120 | 15.4 | OR | 12.7 | OR | 2.5 | 1 | 108 | | 04/28/2023 |
| Sulfate | mg/L | 80-120 | 123 | OR | 109 | OR | 15 | 1 | 93 | | 04/28/2023 |
| Orthophosphate as P | mg/L | 80-120 | 8.90 | | 0.30 | U | 5 | 1 | 178 | * | 04/28/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2522-11
**Client ID:** MW-4MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | mg/L | 80-120 | 12.2 | | 1.70 | J | 10 | 1 | 105 | | 04/28/2023 |
| Chloride | mg/L | 80-120 | 779 | OR | 808 | OR | 3 | 1 | -967 | * | 04/28/2023 |
| Fluoride | mg/L | 80-120 | 3.00 | | 0.085 | U | 2 | 1 | 150 | * | 04/28/2023 |
| Nitrite | mg/L | 80-120 | 2.40 | | 0.089 | U | 3 | 1 | 80 | | 04/28/2023 |
| Nitrate | mg/L | 80-120 | 15.4 | OR | 12.7 | OR | 2.5 | 1 | 108 | | 04/28/2023 |
| Sulfate | mg/L | 80-120 | 123 | OR | 109 | OR | 15 | 1 | 93 | | 04/28/2023 |
| Orthophosphate as P | mg/L | 80-120 | 9.60 | | 0.30 | U | 5 | 1 | 192 | * | 04/28/2023 |

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# Matrix Spike Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2533-03
**Client ID:** 22-MW-3IMS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TOC | mg/L | 75-125 | 10.5 | | 1.80 | | 10 | 1 | 87 | | 05/02/2023 |

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# Matrix Spike Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Sample ID:** O2533-03

**Client ID:** 22-MW-3IMSD **Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TOC | mg/L | 75-125 | 10.7 | | 1.80 | | 10 | 1 | 89 | | 05/02/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2495-09
**Client ID:** GMW-5DUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| TDS | mg/L | +/-5 | 332 | | 333 | | 1 | 0.3 | | 04/27/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2515-11
**Client ID:** LEA-12SDUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | mg/L | +/-20 | 1.40 | J | 1.20 | J | 1 | 15.38 | | 05/05/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2521-01
**Client ID:** GMW-1DUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| pH | pH | +/-20 | 6.85 | | 6.86 | | 1 | 0.15 | | 04/27/2023 |
| Alkalinity | mg/L | +/-20 | 614 | | 613 | | 1 | 0 | | 05/04/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7DUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Phenolics | mg/L | +/-20 | 0.012 | U | 0.012 | U | 1 | 0 | | 04/27/2023 |
| BOD5 | mg/L | +/-20 | 10.2 | | 10.2 | | 1 | 0.39 | | 04/27/2023 |
| Cyanide | mg/L | +/-20 | 0.010 | | 0.0097 | | 1 | 3 | | 04/28/2023 |
| Ammonia as N | mg/L | +/-20 | 1.50 | | 1.50 | | 1 | 0 | | 05/02/2023 |
| COD | mg/L | +/-20 | 15.0 | | 14.0 | | 1 | 6.9 | | 05/03/2023 |
| TKN | mg/L | +/-20 | 4.70 | | 4.90 | | 1 | 4 | | 05/04/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | mg/L | +/-20 | 26.9 | OR | 26.9 | OR | 1 | 0 | | 04/27/2023 |
| Sulfate | mg/L | +/-20 | 92.0 | OR | 91.3 | OR | 1 | 1 | | 04/27/2023 |
| Nitrate | mg/L | +/-20 | 4.30 | | 4.20 | | 1 | 2 | | 04/27/2023 |
| Orthophosphate as P | mg/L | +/-20 | 8.10 | | 8.40 | | 1 | 4 | | 04/27/2023 |
| Bromide | mg/L | +/-20 | 11.1 | | 10.6 | | 1 | 5 | | 04/27/2023 |
| Fluoride | mg/L | +/-20 | 3.60 | | 3.40 | | 1 | 6 | | 04/27/2023 |
| Nitrite | mg/L | +/-20 | 1.70 | | 1.60 | | 1 | 6 | | 04/27/2023 |
| TOC | mg/L | +/-20 | 17.5 | | 17.3 | | 1 | 1 | | 05/01/2023 |
| Ammonia as N | mg/L | +/-20 | 2.20 | OR | 2.20 | OR | 1 | 0 | | 05/02/2023 |
| COD | mg/L | +/-20 | 61.0 | | 62.0 | | 1 | 1.63 | | 05/03/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2521-07
**Client ID:** GMW-7MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Phenolics | mg/L | +/-20 | 0.44 | | 0.41 | | 1 | 7 | | 04/27/2023 |
| Cyanide | mg/L | +/-20 | 0.057 | | 0.057 | | 1 | 0 | | 04/28/2023 |
| TKN | mg/L | +/-20 | 9.50 | | 9.00 | | 1 | 5 | | 05/04/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2522-11
**Client ID:** MW-4MSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | mg/L | +/-20 | 3.00 | | 3.00 | | 1 | 0 | | 04/28/2023 |
| Nitrite | mg/L | +/-20 | 2.40 | | 2.40 | | 1 | 0 | | 04/28/2023 |
| Chloride | mg/L | +/-20 | 779 | OR | 779 | OR | 1 | 0 | | 04/28/2023 |
| Nitrate | mg/L | +/-20 | 15.4 | OR | 15.4 | OR | 1 | 0 | | 04/28/2023 |
| Sulfate | mg/L | +/-20 | 123 | OR | 123 | OR | 1 | 0 | | 04/28/2023 |
| Bromide | mg/L | +/-20 | 12.0 | | 12.2 | | 1 | 2 | | 04/28/2023 |
| Orthophosphate as P | mg/L | +/-20 | 8.90 | | 9.60 | | 1 | 8 | | 04/28/2023 |

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# Duplicate Sample Summary

**Client:** GEI Consultants, Inc., P.C.
**SDG No.:** O2521
**Project:** Ferry Point
**Sample ID:** O2533-03
**Client ID:** 22-MW-3IMSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | mg/L | +/-20 | 10.5 | | 10.7 | | 1 | 2 | | 05/02/2023 |

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# Laboratory Control Sample Summary



| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2521 |
| **Project:** | Ferry Point | **Run No.:** | LB125179 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125179BS | | | | | | | | |
| TDS | mg/L | 100 | 94.0 | | 94 | 1 | 90-110 | 04/27/2023 |

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# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125186

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125186BS | | | | | | | | |
| BOD5 | mg/L | 198 | 170 | | 86 | 1 | 84.6-115.4 | 04/27/2023 |

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# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125187

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125187BSW | | | | | | | | |
| Bromide | mg/L | 10 | 9.70 | | 97 | 1 | 90-110 | 04/27/2023 |
| Chloride | mg/L | 3 | 2.90 | | 97 | 1 | 90-110 | 04/27/2023 |
| Fluoride | mg/L | 2 | 1.90 | | 95 | 1 | 90-110 | 04/27/2023 |
| Nitrite | mg/L | 3 | 2.90 | | 97 | 1 | 90-110 | 04/27/2023 |
| Nitrate | mg/L | 2.5 | 2.40 | | 96 | 1 | 90-110 | 04/27/2023 |
| Sulfate | mg/L | 15 | 14.5 | | 97 | 1 | 90-110 | 04/27/2023 |
| Orthophosphate as P | mg/L | 5 | 5.10 | | 102 | 1 | 90-110 | 04/27/2023 |

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# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125187

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125187BSW2 | | | | | | | | |
| Bromide | mg/L | 10 | 9.90 | | 99 | 1 | 90-110 | 04/28/2023 |
| Chloride | mg/L | 3 | 3.00 | | 100 | 1 | 90-110 | 04/28/2023 |
| Fluoride | mg/L | 2 | 2.00 | | 100 | 1 | 90-110 | 04/28/2023 |
| Nitrite | mg/L | 3 | 3.10 | | 103 | 1 | 90-110 | 04/28/2023 |
| Nitrate | mg/L | 2.5 | 2.50 | | 100 | 1 | 90-110 | 04/28/2023 |
| Sulfate | mg/L | 15 | 14.9 | | 99 | 1 | 90-110 | 04/28/2023 |
| Orthophosphate as P | mg/L | 5 | 6.90 | | 138 | 1 | 90-110 | 04/28/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125221

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125221BSW | | | | | | | | |
| TOC | mg/L | 10 | 10.6 | | 106 | 1 | 90-110 | 05/01/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125221

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125221BSW2 | | | | | | | | |
| TOC | mg/L | 10 | 10.2 | | 102 | 1 | 90-110 | 05/02/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125221

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125221BSW3 | | | | | | | | |
| TOC | mg/L | 10 | 10.3 | | 103 | 1 | 90-110 | 05/03/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125267

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125267BS | | | | | | | | |
| COD | mg/L | 50 | 50.0 | | 100 | 1 | 90-110 | 05/03/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125291

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125291BSW | | | | | | | | |
| Alkalinity | mg/L | 50 | 48.6 | | 97 | 1 | 80-120 | 05/04/2032 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125301

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB125301BS | | | | | | | | |
| Alkalinity | mg/L | 50 | 53.2 | | 106 | 1 | 80-120 | 05/05/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary



| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2521 |
| **Project:** | Ferry Point | **Run No.:** | LB125282 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** **PB152437BS** | | | | | | | | |
| TKN | mg/L | 5 | 5.10 | | 102 | 1 | 90-110 | 05/04/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary



**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125184

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** PB152445BS | | | | | | | | |
| Phenolics | mg/L | 1 | 0.97 | | 97 | 1 | 80-120 | 04/27/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary

| | | | |
|---|---|---|---|
| **Client:** | GEI Consultants, Inc., P.C. | **SDG No.:** | O2521 |
| **Project:** | Ferry Point | **Run No.:** | LB125211 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** **PB152488BS** | | | | | | | | |
| Cyanide | mg/L | 0.1 | 0.097 | | 97 | 1 | 85-115 | 04/28/2023 |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Laboratory Control Sample Summary

**Client:** GEI Consultants, Inc., P.C. **SDG No.:** O2521

**Project:** Ferry Point **Run No.:** LB125248

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** PB152517BS | | | | | | | | |
| Ammonia as N | mg/L | 1 | 0.93 | | 93 | 1 | 90-110 | 05/02/2023 |

# SHIPPING DOCUMENTS

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. 02521
COC Number 2038362

9
9.1

### CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: GEI Consultants
ADDRESS: 530 7th Ave. Suite 2007
CITY NY STATE: NY ZIP: 10018
ATTENTION: Stacey Ng
PHONE: (347) 514-3861 FAX:

### CLIENT PROJECT INFORMATION

PROJECT NAME: Ferry Point
PROJECT NO.: 2204594 LOCATION: Bronx, NY
PROJECT MANAGER: Stacey Ng
e-mail: sng@geiconsultants.com
PHONE: SAME FAX:

### CLIENT BILLING INFORMATION

BILL TO: SAME AS PO#:
ADDRESS: CLIENT
CITY STATE: ZIP:
ATTENTION: PHONE:

### DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

### DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced
- ☐ US EPA CLP
- ☒ NYS ASP A
- ☐ NYS ASP B
- ☐ Other _____
- ☐ EDD FORMAT _____

### ANALYSIS

1 Phenolics 2 TCL VOC 3 Color 4 BOD5 5 Alkalinity 6 TDS 7 TCL SVOC 8 Mercury, TAL Metals 9 Hardness

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | GMW-1 | W | | | 4/26/23 | 8:36 | 19 | X | X | X | X | X | X | X | X | X | |
| 2. | PZ-15 | | | | | 9:54 | | | | | | | | | | | |
| 3. | GMW-10 | | | | | 11:16 | | | | | | | | | | | |
| 4. | GMW-7 | | | | | 13:21 | | | | | | | | | | | |
| 5. | MS | | | | | | | | | | | | | | | | |
| 6. | MSD | | | | | | | | | | | | | | | | |
| 7. | ~~TB~~-2 | | | | | | | | | | | | | | | | |
| 8. | FB | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

### SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

| | RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|---|
| 1. | [signature] | 4/26/23 1504 | 1. [signature] 1504 4-26-23 |
| 2. | | | 2. |
| 3. | [signature] | 4.26.23 1830 | 3. SB |

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 5.1 °C
Comments:

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO



WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. 02521
COC Number 2038363

9
9.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)

COMPANY: GEI Consultants
ADDRESS: 530 7th Ave. Suite 2007
CITY NY STATE: NY ZIP: 10018
ATTENTION: Stacey Ng
PHONE: (347) 514-3861 FAX:

**CLIENT PROJECT INFORMATION**

PROJECT NAME: Ferry Point
PROJECT NO: 2204594 LOCATION: Bronx, NY
PROJECT MANAGER: Stacey Ng
e-mail: sng@geiconsultants.com
PHONE: (347) 514-3861 FAX:

**CLIENT BILLING INFORMATION**

BILL TO: SAME AS PO#:
ADDRESS: CLIENT
CITY STATE: ZIP:
ATTENTION: PHONE:

**DATA TURNAROUND INFORMATION**

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ EDD FORMAT _____
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☒ NYS ASP A ☐ NYS ASP B
- ☐ Other _____

**ANALYSIS**

1 Cyanide 2 COD 3 Ammonia 4 TKN 5 Dissolved Metals 6 Chloride, Sulfate, Nitrate, Nitrite 7 8 pH 9 TOC

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | GMW-7 | W | | | 4/26/23 | 8:36 | 19 | X | X | X | X | X | X | X | X | | |
| 2. | PZ-15 | | | | | 9:54 | | | | | | | | | | | |
| 3. | GMW-10 | | | | | 11:16 | | | | | | | | | | | |
| 4. | GMW-7 | | | | | 13:21 | | | | | | | | | | | |
| 5. | MS | | | | | | | | | | | | | | | | |
| 6. | MSD | | | | | | | | | | | | | | | | |
| 7. | ~~TB~~ B-2 | | | | | | | | | | | | | | | | |
| 8. | FB | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

Specify Preservatives: A-HCl B-HN03 C-H2SO4 D-NaOH E-ICE F-OTHER

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| | RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|---|
| 1. | [signature] | 4/26/23 15:04 | 1504 4-26-23 |
| 2. | | | |
| 3. | [signature] | 4-26-23 1830 | SB |

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 5.1 °C
Comments:

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

# Laboratory Certification

| Certified By | License No. |
|---|---|
| | |
| CAS EPA CLP Contract | 68HERH20D0011 |
| | |
| Connecticut | PH-0649 |
| | |
| DOD ELAP (L-A-B) | L2219 |
| | |
| Maine | 2022022 |
| | |
| Maryland | 296 |
| | |
| New Hampshire | 255422 |
| | |
| New Jersey | 20012 |
| | |
| New York | 11376 |
| | |
| Pennsylvania | 68-00548 |
| | |
| Soil Permit | P330-21-00137 |
| | |
| Texas | T104704488-22-15 |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** O2521 GEIC06
**Client Name :** GEI Consultants, Inc., P.C.
**Client Contact :** Stacey Ng
**Invoice Name :** GEI Consultants, Inc., P.C.
**Invoice Contact :** Stacey Ng

**Order Date :** 4/27/2023 8:52:00 AM
**Project Name :** Ferry Point
**Receive DateTime :** 4/26/2023 6:30:00 PM
**Purchase Order :**

**Project Mgr :**
**Report Type :** ~~Level 2~~ NYS ASP A SB 5/8/23
**EDD Type :** EXCEL NOCLEANUP
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| O2521-01 | GMW-1 | Water | 04/26/2023 | 08:36 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| O2521-03 | PZ-15 | Water | 04/26/2023 | 09:54 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| O2521-05 | GMW-10 | Water | 04/26/2023 | 11:16 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| O2521-07 | GMW-7 | Water | 04/26/2023 | 13:21 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| O2521-09 | O2521-07MS | Water | 04/26/2023 | 13:21 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| O2521-10 | O2521-07MSD | Water | 04/26/2023 | 13:21 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| O2521-13 | TB-2 | Water | 04/26/2023 | 00:00 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| O2521-14 | FB | Water | 04/26/2023 | 00:00 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** O2521 GEIC06
**Client Name :** GEI Consultants, Inc., P.C.
**Client Contact :** Stacey Ng
**Invoice Name :** GEI Consultants, Inc., P.C.
**Invoice Contact :** Stacey Ng

**Order Date :** 4/27/2023 8:52:00 AM
**Project Name :** Ferry Point
**Receive DateTime :** 4/26/2023 6:30:00 PM
**Purchase Order :**

**Project Mgr :**
**Report Type :** ~~Level 2~~ NYS ASP A SB 5/8/23
**EDD Type :** EXCEL NOCLEANUP
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|

**Relinguished By :**
**Date / Time :** 0953 4/27/23 9.50

**Received By :**
**Date / Time :** 04/27/23 9.50

**Storage Area :** VOA Refridgerator Room

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Materials Management, Region 2**
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4996 I F: (718) 482-6391
www.dec.ny.gov

January 7, 2020

Marty Rowland, Ph.D., P.E.
Senior Project Manager for Environmental Remediation
New York City Department of Parks and Recreation
Central Project Division, Environmental Unit
Olmstead Center
Flushing Meadows
Corona Park
Flushing, NY 11368

Re: Ferry Point Park Golf Course
Permit No. 2-6006-00014/00013
Post-Closure Groundwater Monitoring
Request for Cessation for Groundwater Monitoring

Dear Mr. Rowland,

New York State Department of Environmental Conservation (Department) staff have reviewed your November 20, 2019 request to terminate the Ferry Point Golf Course post-closure groundwater monitoring program This request is based on the relatively consistent ground water elevation and flow direction, the laboratory results from ground water samples collected during both pre-closure and post closure monitoring over an eight-year period of monitoring events, and the lack of any potential direct receptors or routes of exposure associated with ground water at Ferry Point Park.

After careful review of the post-closure groundwater monitoring program, the laboratory results from ground water samples collected during both pre-closure and post closure monitoring over an eight-year period of monitoring events and specific circumstances and history of this site, the Department cannot grant this request but rather the following frequency reduction to the Ferry Point Golf Course groundwater monitoring program can be implemented:

1) Starting immediately, the Ferry Point Golf Course groundwater monitoring frequency can be reduced from annual to once every two years through 2030.

2) After 2030, the Ferry Point Golf Course groundwater monitoring frequency can be modified from once every two years to once every five years indefinitely as custodial care consistent with Part 363-9.6(b).

If you have any questions you may contact me at 718-482-4996.

Sincerely,

Kenneth B. Brezner

Kenneth B. Brezner, P.E.
Regional Material Management Engineer

ec: J. O'Connell/W. Frank, DEC R2, DMM
S. Southwell, DEC R2, DOW
K. Zias, NYCDPR
S. Laura, Woodard and Curran

FPP_Post-Closure_Groundwater_Monitoring_request_for_Cessation.2020-01-07.Letter.docx

# Appendix C

## Landfill Gas Monitoring Reports

April 20, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: Quarterly Landfill Gas Monitoring - Quarter 1, 2023**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the quarterly post-closure landfill gas monitoring event conducted on March 28-30, 2023, at the Ferry Point Park Golf Course. Landfill gas monitoring is conducted to measure and report landfill-related parameters at on-Site and off-Site monitoring points in compliance with the NYSDEC Permit No. 2-6006-00014/00013, the October 2013 *Post Construction Custodial Care Plan*, and the October 2013 *Landfill Gas Management Plan*.

Landfill gas monitoring included the collection of methane (percent methane by volume, percent lower explosive limit [LEL]), oxygen, carbon monoxide, hydrogen sulfide, organic vapors, well pressure, humidity, air flow, vacuum pressures, and/or temperature measurements. Data was collected using a photoionization detector (PID), a TSI Velocicalc, and a Landtek GEM5000 with CO and $H_2S$. All equipment was properly calibrated prior to data collection.

The Quarter 1, 2023 data tables and figure are provided in this report. Overall, the landfill gas monitoring results are consistent with prior post-closure monitoring events and illustrates that landfill gas conditions are stable.

If you have any questions, please feel free to contact me at (347) 514–3861.



GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

Quarterly Landfill Gas Monitoring - Quarter 1, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013
Bronx, NY

Sincerely,

GEI CONSULTANTS, INC.

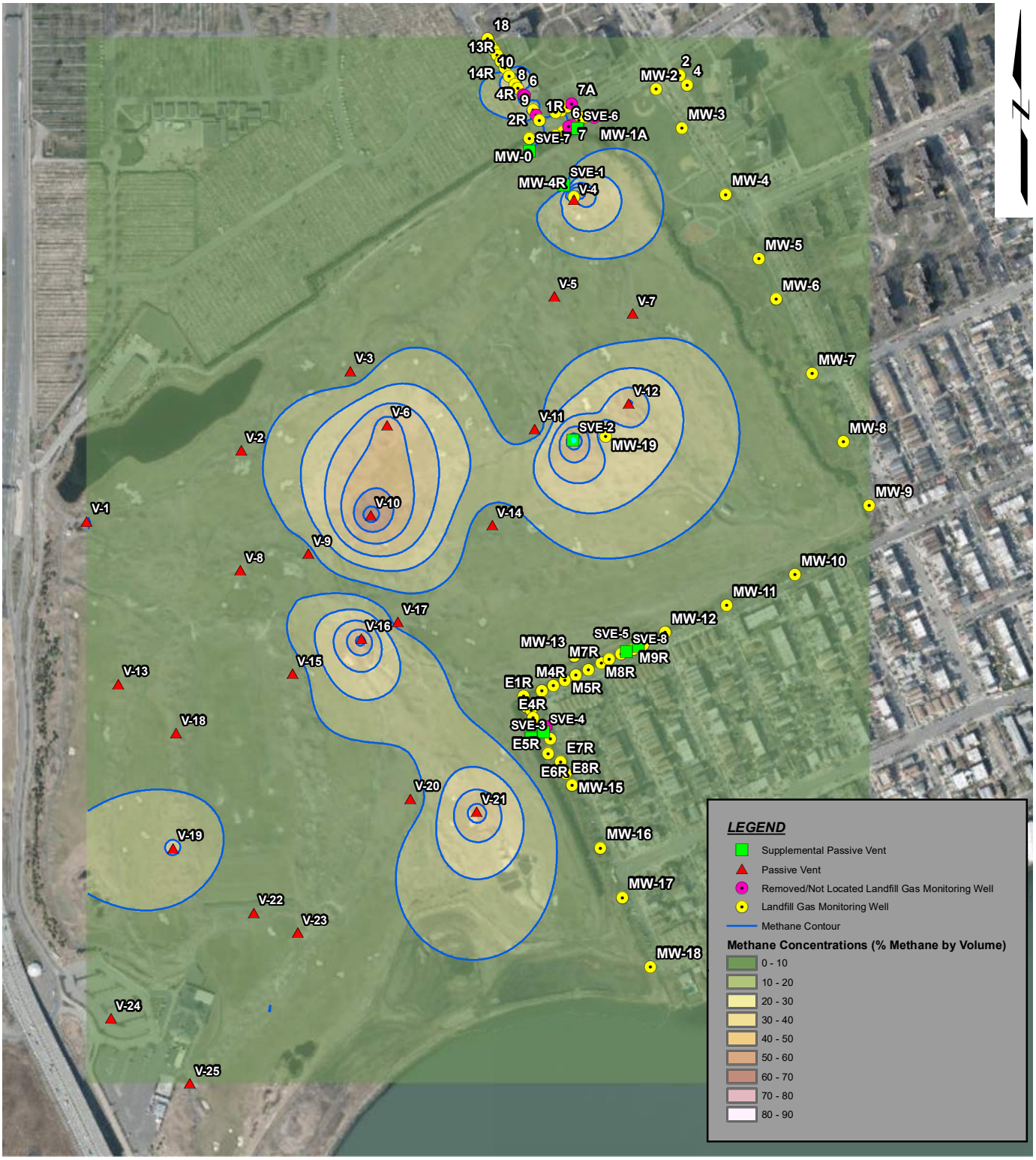


Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Quarter 1, 2023 Methane Monitoring Results
Figure 2 – Landfill Gas & Passive Vent Locations
Table 7A – Summary of Landfill Gas Monitoring Data March 28-30, 2023
Table 7B – Summary of Passive Vent Monitoring Data March 28-30, 2023

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI


GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 420 840
SCALE: 1 " = 575 '

Ferry Point Park
Bronx, New York
Landfill Gas Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

QUARTER 1, 2023
METHANE MONITORING

Project: 2204594 | April 2023 | Fig. 1

B:\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\Reports\Landfill Gas Monitoring\GEI Inspections\Q1 2023\Q1 2023 Landfill Gas Monitoring.mxd




***SOURCE:***
1. ESRI IMAGERY BASE MAP

| | | |
|---|---|---|
| Ferry Point Park<br>Bronx, New York<br>Landfill Gas Monitoring | GEI Consultants | LANDFILL GAS & PASSIVE VENT LOCATIONS |
| New York City Department of Parks & Recreation (NYCDPR) | Project 2204594 | Fig. 2 |

Table 7A -
Summary of Landfill Gas Monitoring Data March 28-30, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Location | Well ID | %LEL | % Meth by vol | $\%O_2$ | CO (ppm) | %CO2 | $H_2S$ (ppm) | Voc's (ppm) | Well Pressure (Hg) | Temperature degrees F | Vacuum (in H20) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emerson Ave | MW17 | 4 | 0.2 | 19.0 | 0 | 0.1 | 0 | 0.2 | 30.12 | 59.7 | 0.005 | |
| | MW16 | 2 | 0.1 | 20.9 | 0 | 0.2 | 0 | 0.1 | 30.16 | 55.3 | 0.006 | |
| | MW15 | 2 | 0.1 | 9.7 | 0 | 1.8 | 0 | 0.0 | 30.25 | 61.4 | 0.718 | |
| | E8R | 2 | 0.1 | 21.1 | 0 | 0.2 | 0 | -- | -- | -- | -- | Encountered water during readings collection |
| | E7R | 2 | 0.1 | 21.0 | 0 | 0.5 | 0 | 0.1 | 30.24 | 56.7 | 0.723 | |
| | E5R | 2 | 0.1 | 21.5 | 0 | 0.1 | 0 | 0.1 | 30.29 | 63.9 | -0.001 | |
| | MW14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to locate |
| Miles Ave | M1R | 0 | 0 | 17.5 | 0 | 0.9 | 0 | 0.0 | 30.28 | 58.1 | 0.009 | Located within golf course |
| | M2R | 0 | 0 | 17.9 | 0 | 0.8 | 0 | 0.0 | 30.29 | 59.6 | 0.010 | Located within golf course |
| | M3R | 2 | 0.1 | 18.2 | 0 | 0.8 | 0 | 0.0 | 30.29 | 62.6 | 0.157 | Located within golf course |
| | M4R | 10 | 0.5 | 19.6 | 0 | 0.4 | 0 | 0.0 | 30.23 | 60.5 | 0.953 | Located within golf course |
| | M5R | 2 | 0.1 | 20.9 | 0 | 0.1 | 0 | 0.1 | 30.29 | 57.2 | -0.002 | Located within golf course |
| | M6RR | 4 | 0.2 | 21.1 | 0 | 0.4 | 0 | 0.1 | 30.29 | 57.5 | -0.003 | Located within golf course |
| | M7R | 2 | 0.1 | 21.8 | 0 | 0.3 | 0 | 0.0 | 30.29 | 56.8 | -0.001 | Located within golf course |
| | M8R | 4 | 0.2 | 21.3 | 0 | 0.2 | 0 | 0.1 | 30.29 | 61.2 | -0.009 | Located within golf course |
| | M9R | 4 | 0.2 | 21.2 | 0 | 0.1 | 0 | 0.1 | 30.29 | 59.4 | -0.010 | Located within golf course |
| | M10R | 4 | 0.2 | 17.6 | 0 | 2.9 | 0 | 0.0 | 30.29 | 58.6 | -0.011 | Located within golf course |
| | MW11 | 4 | 0.2 | 20.2 | 0 | 0.6 | 0 | 0.0 | 30.28 | 59.3 | 0.005 | |
| | MW12 | 4 | 0.2 | 21.2 | 0 | 0.1 | 0 | 0.0 | 30.29 | 59.9 | 0.060 | |
| | MW10 | 4 | 0.2 | 18.2 | 0 | 2.6 | 0 | 0.1 | 30.28 | 56.1 | 0.002 | |
| Buttrick Ave | 18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to collect readings; well compacted with soil. |
| | 17R | 2 | 0.1 | 21.2 | 0 | 0.1 | 0 | 0.2 | 30.05 | 54.5 | -0.007 | |
| | 16R | 2 | 0.1 | 21.3 | 0 | 0.2 | 0 | 0.6 | 30.05 | 59.7 | -0.004 | |
| | 14R | 2 | 0.1 | 19.1 | 0 | 1.6 | 0 | 0.3 | 30.05 | 64.1 | -0.004 | |
| | 13R | 0 | 0.0 | 19.2 | 0 | 1.5 | 0 | 0.5 | 30.05 | 64.6 | -0.002 | |
| | 12R | 0 | 0.0 | 19.3 | 0 | 0.9 | 0 | 0.1 | 30.05 | 67.5 | -0.005 | J-plug cracked |
| | 10 | >100 | 30.2 | 0.5 | 0 | 10.6 | 0 | 0.0 | 30.06 | 63.7 | -0.015 | |
| | 9 | >100 | 28.6 | 2.2 | 0 | 10.3 | 0 | 0.1 | 30.06 | 62.9 | -0.009 | |
| | 8 | >100 | 27.5 | 4.7 | 0 | 9.7 | 0 | 0.1 | 30.04 | 61.3 | 0.348 | |
| | 6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 4R | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 3R | >100 | 29.1 | 1.9 | 0 | 10.0 | 0 | 0.1 | 30.06 | 59.5 | 0.004 | |
| | 2R | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 1R | 8 | 0.4 | 18.1 | 0 | 3.7 | 0 | 0.1 | 30.06 | 60.3 | -0.003 | |

Table 7A -
Summary of Landfill Gas Monitoring Data March 28-30, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Location | Well ID | %LEL | % Meth by vol | $\%O_2$ | CO (ppm) | %CO2 | $H_2S$ (ppm) | Voc's (ppm) | Well Pressure (Hg) | Temperature degrees F | Vacuum (in H20) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Schley Ave | 4A | 2 | 0.1 | 21.8 | 0 | 0.2 | 0 | 0.1 | 30.04 | 62.1 | 0.030 | Previously noted as "removed," however well was able to be located |
| | 5N | 2 | 0.1 | 20.6 | 0 | 0.7 | 0 | 0.1 | 30.06 | 64.3 | 0.007 | |
| | 7R | 2 | 0.1 | 19.6 | 0 | 1.2 | 0 | 0.1 | 30.06 | 59.6 | 0.009 | |
| | 7A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 5S | 2 | 0.1 | 21.5 | 0 | 0.5 | 0 | 0.1 | 30.03 | 58.7 | -0.007 | |
| | 6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 8 | 20 | 1.0 | 20.3 | 0 | 0.9 | 0 | 0.1 | 30.03 | 61.9 | 0.382 | |
| | 9 | 2 | 0.1 | 22.0 | 0 | 0.2 | 0 | 0.1 | 30.05 | 60.2 | 0.336 | |
| | 10 | 2 | 0.1 | 22.0 | 0 | 0.1 | 0 | 0.1 | 30.06 | 58.4 | 0.459 | |
| Balcom Ave | 2 | 2 | 0.1 | 21.3 | 0 | 0.5 | 0 | 0.1 | 30.03 | 57.3 | 0.005 | |
| | 4 | 2 | 0.1 | 21.6 | 0 | 0.3 | 0 | 0.2 | 30.01 | 58.6 | 0.014 | |
| | MW2 | 2 | 0.1 | 21.5 | 0 | 0.2 | 0 | 0.1 | 30.03 | 59.4 | 0.915 | |
| | MW3 | 2 | 0.1 | 21.5 | 0 | 0.1 | 0 | 0.1 | 30.03 | 60.1 | 0.004 | |
| Landfill | MW4R | >100 | 87.3 | 0.1 | 0 | 5.7 | 0 | 0.1 | 30.06 | 56.7 | -0.035 | |
| | MW1A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to locate |
| | MW0 | 4 | 0.2 | 16.5 | 0 | 5.5 | 0 | 0 | 30.06 | 59.1 | 0.003 | |
| | MW4 | 2 | 0.1 | 13.7 | 0 | 6.1 | 0 | 0.7 | 30.04 | 59.7 | -0.005 | Located within community park |
| | MW5 | 2 | 0.1 | 20.0 | 0 | 1.0 | 0 | 0.3 | 30.05 | 59.3 | -0.002 | Located within community park |
| | MW6 | 2 | 0.1 | 20.1 | 2 | 1.0 | 0 | 0.1 | 30.05 | 58.9 | 0.010 | Located within community park |
| | MW7 | 2 | 0.1 | 16.2 | 0 | 3.8 | 0 | 0.4 | 30.05 | 58.2 | -0.002 | Located within community park |
| | MW8 | 2 | 0.1 | 13.8 | 0 | 6.5 | 0 | 0.7 | 30.05 | 59.1 | -0.004 | Located within community park |
| | MW9 | 4 | 0.2 | 21.5 | 0 | 0.5 | 0 | 0.0 | 30.10 | 60.1 | 0.077 | |
| | MW13 | 4 | 0.2 | 21.4 | 0 | 0.6 | 0 | 0.1 | 30.17 | 55.9 | -0.015 | |
| | E1R | 2 | 0.1 | 21.1 | 0 | 0.3 | 0 | 0.1 | 30.15 | 58.3 | 0.001 | |
| | E2R | 2 | 0.1 | 20.4 | 0 | 0.5 | 0 | 0.0 | 30.14 | 57.2 | 0.007 | |
| | E3R | 2 | 0.1 | 20.4 | 0 | 0.2 | 0 | 0.1 | 30.16 | 59.4 | 0.002 | |
| | E4R | 2 | 0.1 | 21.3 | 0 | 0.1 | 0 | 0.0 | 30.11 | 56.3 | 0.395 | |
| | E6R | 2 | 0.1 | 21.4 | 0 | 0.1 | 0 | 0.1 | 30.12 | 57.9 | -0.002 | |
| | MW18 | 4 | 0.2 | 17.6 | 0 | 3 | 0 | 0.1 | 30.16 | 58.0 | 0.005 | |
| | MW19 | >100 | 22.8 | 0 | 0 | 13.9 | 1 | 0.2 | 30.10 | 59.4 | -0.191 | Broken J-plug |

NOTES:
LEL - Lower Explosive Limit
% O2 - percent Oxgyen gas
% CO2 - percent Carbon Dioxide
H2S (ppm) - Hydrogen Sulfide measured in parts per million
VOCs (ppm) - Volatile Organic Compounds measured in parts per million
"Hg - inches of mercury

Table 7B
Summary of Passive Vent Monitoring Data March 28-30, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Passive Vent ID | % LEL | % Methane by volume | % $O_2$ | CO (ppm) | % $CO_2$ | $H_2S$ (ppm) | VOC's (ppm) | Barometric Pressure (" Hg) | Vacuum (in H2O) | Flow (CFM) | Flow (Ft/min) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-1 | 2 | 0.1 | 21.5 | 0 | 0.1 | 0 | 0.0 | 30.12 | -0.004 | 0.00 | 0 | |
| V-2 | >100 | 5.2 | 17.5 | 0 | 2.7 | 0 | 0.0 | 30.09 | -0.004 | 0.00 | 0 | |
| V-3 | 8 | 0.4 | 20.8 | 0 | 0.6 | 0 | 0.0 | 30.11 | -0.004 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-4 | 4 | 0.2 | 22.3 | 0 | 0.1 | 0 | 0.0 | 30.13 | 0.000 | 0.00 | 0 | |
| V-5 | 0 | 0.0 | 21.5 | 0 | 0.0 | 0 | 0.0 | 30.10 | -0.003 | 0.00 | 0 | |
| V-6 | >100 | 47.1 | 0.1 | 0 | 8.0 | 0 | 0.5 | 30.08 | -0.003 | 0.00 | 0 | |
| V-7 | 6 | 0.3 | 21.7 | 0 | 0.1 | 0 | 0.0 | 30.12 | 0.000 | 0.00 | 0 | |
| V-8 | 4 | 0.2 | 15.1 | 0 | 1.3 | 0 | 0.1 | 30.06 | -0.004 | 0.00 | 0 | |
| V-9 | 2 | 0.1 | 21.6 | 0 | 0.1 | 0 | 0.1 | 30.07 | -0.004 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-10 | >100 | 68.0 | 2.7 | 1 | 31.0 | 5 | 2.0 | 30.09 | 0.000 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-11 | 2 | 0.1 | 21.1 | 0 | 0.1 | 0 | 0.0 | 30.09 | -0.006 | 0.00 | 0 | |
| V-12 | >100 | 41.4 | 0.2 | 1 | 11.2 | 0 | 0.0 | 30.10 | -0.004 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-13 | 2 | 0.1 | 21.0 | 0 | 0.1 | 0 | 0.0 | 30.12 | -0.003 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-14 | 2 | 0.1 | 21.6 | 0 | 0.1 | 0 | 0.0 | 30.10 | -0.004 | 0.00 | 0 | |
| V-15 | 20 | 1.0 | 21.6 | 0 | 0.1 | 0 | 0.1 | 30.05 | -0.005 | 0.00 | 0 | |
| V-16 | >100 | 56.1 | 0.1 | 3 | 20.7 | 0 | 1.6 | 30.04 | -0.004 | 5.19 | 55 | |
| V-17 | 100 | 5.0 | 6.6 | 2 | 11.6 | 0 | 0.0 | 30.10 | -0.003 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-18 | 2 | 0.1 | 21.4 | 0 | 0.1 | 0 | 0.0 | 30.12 | -0.003 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-19 | >100 | 22.5 | 0.7 | 0 | 15.3 | 0 | 0.0 | 30.13 | -0.002 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-20 | 2 | 0.1 | 21.4 | 0 | 0.1 | 0 | 0.1 | 30.13 | 0.000 | 0.00 | 0 | |
| V-21 | >100 | 48.3 | 0.2 | 0 | 18.3 | 0 | 0.0 | 30.14 | 0.009 | 0.52 | 5 | |
| V-22 | 2 | 0.1 | 21.5 | 0 | 0.1 | 0 | 0.0 | 30.09 | 0.000 | 0.00 | 0 | |
| V-23 | 2 | 0.1 | 21.5 | 0 | 0.1 | 0 | 0.0 | 30.03 | -0.003 | 0.00 | 0 | |
| V-24 | 2 | 0.1 | 21.4 | 0 | 0.1 | 0 | 0.1 | 30.14 | -0.003 | 0.00 | 0 | |
| V-25 | 4 | 0.2 | 21.3 | 0 | 0.1 | 0 | 0.0 | 30.12 | -0.005 | 0.00 | 0 | |
| SVE-1 | 6 | 0.3 | 21.7 | 0 | 0.1 | 0 | 0.0 | 30.13 | 0.000 | 0.00 | 0 | |
| SVE-2 | >100 | 61.3 | 0.0 | 0 | 9.1 | 0 | 0.2 | 30.08 | -0.044 | 0.00 | 0 | |
| SVE-3 | 2 | 0.1 | 21.4 | 0 | 0.1 | 0 | 0.0 | 30.16 | 0.000 | 0.00 | 0 | |
| SVE-4 | 2 | 0.1 | 20.9 | 0 | 0.6 | 0 | 0.1 | 30.16 | 0.000 | 0.00 | 0 | |
| SVE-5 | 4 | 0.2 | 21.1 | 0.0 | 0.2 | 0 | 0.0 | 30.28 | -0.002 | 0.00 | 0 | |
| SVE-6 | 4 | 0.2 | 22.2 | 0.0 | 0.1 | 0 | 0.0 | 30.15 | 0.000 | 0.00 | 0 | |
| SVE-7 | 4 | 0.2 | 22.1 | 0.1 | 0.0 | 0 | 0.0 | 30.14 | 0.000 | 0.00 | 0 | |
| SVE-8 | 4 | 0.2 | 21.2 | 0.0 | 0.1 | 0 | 0.0 | 30.28 | -0.001 | 0.00 | 0 | |

NOTES:
LEL - Lower Explosive Limit
% $O_2$ - percent Oxgyen gas
% $CO_2$ - percent Carbon Dioxide
$H_2S$ (ppm) - Hydrogen Sulfide measured in parts per million
VOCs (ppm) - Volatile Organic Compounds measured in parts per million
" Hg - inches of mercury

July 17, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

**Re: Quarterly Landfill Gas Monitoring - Quarter 2, 2023**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

Dear Ms. Catalanotto:

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the quarterly post-closure landfill gas monitoring event conducted on June 27-28, 2023, at the Ferry Point Park Golf Course. Landfill gas monitoring is conducted to measure and report landfill-related parameters at on-Site and off-Site monitoring points in compliance with the NYSDEC Permit No. 2-6006-00014/00013, the October 2013 *Post Construction Custodial Care Plan*, and the October 2013 *Landfill Gas Management Plan*.

Landfill gas monitoring included the collection of methane (percent methane by volume, percent lower explosive limit [LEL]), oxygen, carbon monoxide, hydrogen sulfide, organic vapors, well pressure, humidity, air flow, vacuum pressures, and/or temperature measurements. Data was collected using a photoionization detector (PID), a TSI Velocicalc, and a Landtek GEM5000 with CO and $H_2S$. All equipment was properly calibrated prior to data collection.

The Quarter 2, 2023 data tables and figure are provided in this report. Overall, the landfill gas monitoring results are consistent with prior post-closure monitoring events and illustrates that landfill gas conditions are stable.

If you have any questions, please feel free to contact me at (347) 514–3861.



GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

Quarterly Landfill Gas Monitoring - Quarter 2, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013
Bronx, NY

Sincerely,

GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Quarter 2, 2023 Methane Monitoring Results
Figure 2 – Landfill Gas & Passive Vent Locations
Table 8A – Summary of Landfill Gas Monitoring Data June 27-28, 2023
Table 8B – Summary of Passive Vent Monitoring Data June 27-28, 2023

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI


GEI Consultants, Inc.
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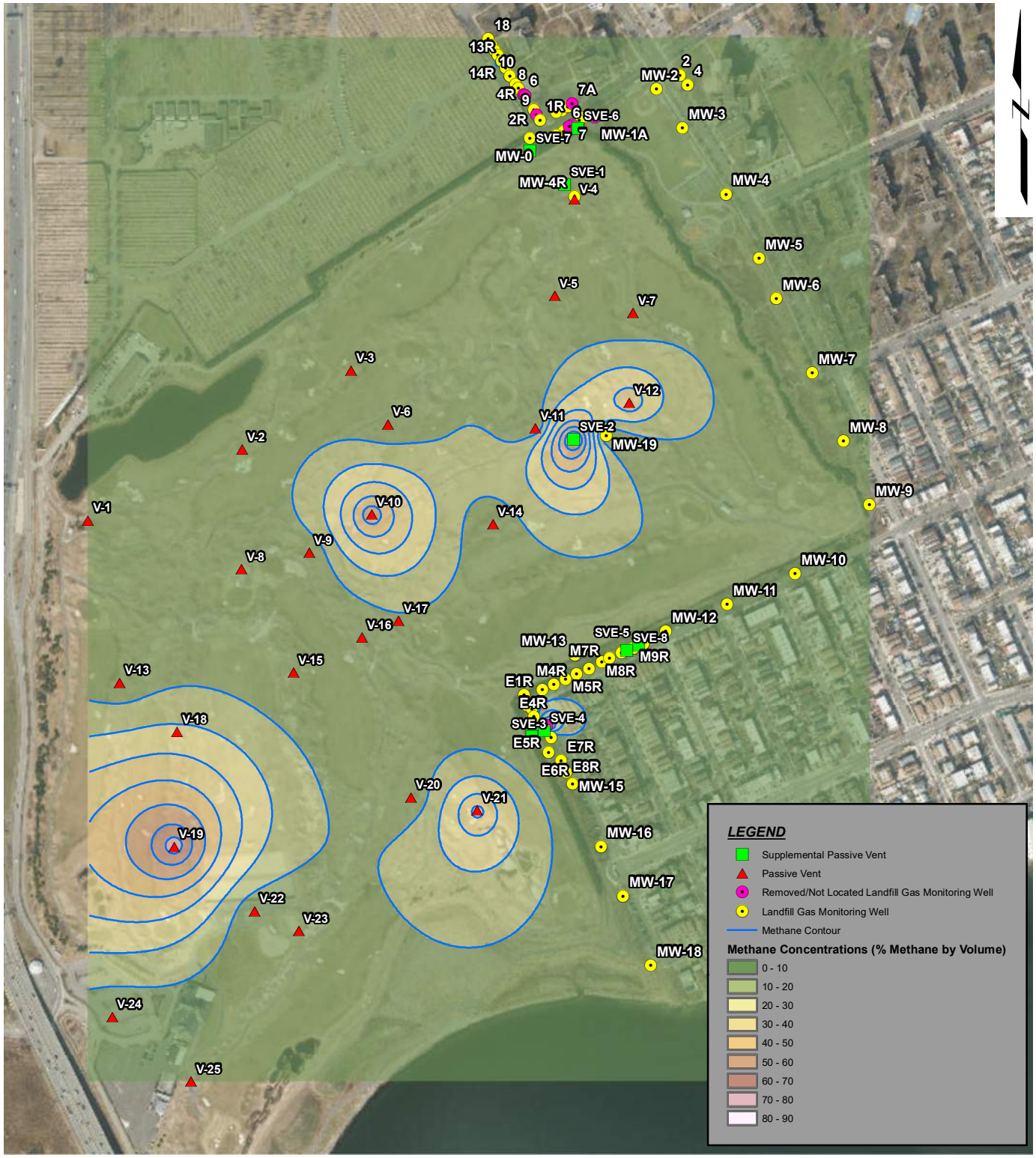


***SOURCE:***
1. ESRI IMAGERY BASE MAP

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SCALE: 1 " = 575 '

Ferry Point Park
Bronx, New York
Landfill Gas Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

QUARTER 2, 2023
METHANE MONITORING

Project: 2204594 | July 2023 | Fig. 1

B:\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\Reports\Landfill Gas Monitoring\GEI Inspections\Q2 2023\Q2 2023 Landfill Gas Monitoring.mxd




***SOURCE:***
1. ESRI IMAGERY BASE MAP

| | | |
|---|---|---|
| Ferry Point Park<br>Bronx, New York<br>Landfill Gas Monitoring | GEI Consultants | LANDFILL GAS & PASSIVE VENT LOCATIONS |
| New York City Department of Parks & Recreation (NYCDPR) | Project 2204594 | Fig. 2 |

Table 8A -
Summary of Landfill Gas Monitoring Data June 27-28, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Location | Well ID | %LEL | % Meth by vol | $\%O_2$ | CO (ppm) | %CO2 | $H_2S$ (ppm) | VOCs (ppm) | Well Pressure (Hg) | Temperature degrees F | Vacuum (in H20) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emerson Ave | MW17 | 0 | 0 | 9.5 | 0 | 0.3 | 0 | 0.2 | 29.68 | 67.1 | -0.207 | |
| | MW16 | 0 | 0 | 4.3 | 0 | 0.6 | 0 | 0.5 | 29.69 | 67.1 | 0.018 | |
| | MW15 | 0 | 0 | 3.8 | 0 | 9.5 | 0 | 0.7 | 29.81 | 66.5 | 0.021 | |
| | E8R | 14 | 0.7 | 19.9 | 0 | 0.5 | 0 | 1.1 | 29.81 | 66.7 | 0.020 | |
| | E7R | 8 | 0.4 | 19.9 | 0 | 0.3 | 0 | 1.2 | 29.81 | 67.3 | 0.006 | |
| | E5R | 0 | 0 | 18.9 | 0 | 0.1 | 0 | 0.1 | 29.81 | 66.4 | 0.114 | J-plug hose bent |
| | MW14 | >100 | 70.6 | << | 2 | 27.8 | 0 | 1.5 | 29.81 | 66.1 | -2.268 | Well was located during this monitoring event |
| Miles Ave | M1R | 0 | 0 | 16.8 | 1 | 4.3 | 0 | 0.8 | 29.80 | 57.3 | 0.016 | Located within golf course; J-plug hose bent |
| | M2R | 0 | 0 | 17.8 | 1 | 0.1 | 0 | 0.2 | 29.70 | 56.4 | 0.017 | Located within golf course |
| | M3R | 0 | 0 | 20.1 | 0 | 0 | 0 | 0.2 | 29.70 | 58.9 | 0.016 | Located within golf course |
| | M4R | 0 | 0 | 20.5 | 0 | 0.1 | 0 | 0.1 | 29.70 | 55.3 | 0.014 | Located within golf course |
| | M5R | 0 | 0 | 20.6 | 0 | 0.1 | 0 | 0.1 | 29.70 | 68.1 | 0.016 | Located within golf course |
| | M6RR | 0 | 0 | 21 | 0 | 0 | 0 | 0.1 | 29.70 | 56.9 | 0.016 | Located within golf course |
| | M7R | 0 | 0 | 21.2 | 1 | 0.1 | 0 | 0.2 | 29.70 | 54.1 | 0.015 | Located within golf course |
| | M8R | 0 | 0 | 22 | 0 | 0.1 | 0 | 0.7 | 29.69 | 67.1 | 0.014 | Located within golf course |
| | M9R | 0 | 0 | 21.9 | 0 | 0.1 | 0 | 0.1 | 29.69 | 67.1 | 0.016 | Located within golf course; J-plug hose bent |
| | M10R | 0 | 0 | 21.7 | 0 | 0.1 | 0 | 0.1 | 29.69 | 68.3 | 0.016 | Located within golf course |
| | MW10 | 0 | 0 | 21.8 | 0 | 0 | 0 | 0.2 | 29.67 | 65.4 | 0.015 | J-plug hose bent |
| | MW11 | 0 | 0 | 9.4 | 0 | 8.3 | 0 | 0.6 | 29.80 | 66.5 | 0.016 | |
| | MW12 | 0 | 0 | 22.1 | 0 | 0 | 0 | 0.4 | 29.80 | 67.1 | -0.612 | |
| Buttrick Ave | 18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to collect readings; well compacted with soil. |
| | 17R | 0 | 0 | 20.8 | 0 | 1.2 | 0 | 0.1 | 29.76 | 68.9 | 0.015 | J-plug hose bent |
| | 16R | 0 | 0 | 21.4 | 0 | 0.4 | 0 | 0.1 | 29.77 | 71.3 | 0.015 | |
| | 14R | 0 | 0 | 18.4 | 0 | 2.6 | 0 | 0.1 | 29.77 | 72.8 | 0.015 | |
| | 13R | >100 | 21.8 | << | 0 | 9.9 | 0 | 0.6 | 29.77 | 72.3 | 0.012 | |
| | 12R | 12 | 0.6 | 18.5 | 1 | 1.4 | 0 | 0.1 | 29.78 | 74.1 | 0.016 | J-plug hose bent |
| | 10 | >100 | 12.8 | 5.2 | 0 | 10.1 | 0 | 0.8 | 29.78 | 74.0 | 0.016 | |
| | 9 | 0 | 0 | 21.8 | 0 | 0.2 | 0 | 0.1 | 29.78 | 72.5 | -0.037 | J-plug hose bent |
| | 8 | 0 | 0 | 18.7 | 0 | 0.2 | 0 | 1.1 | 29.78 | 71.6 | 0.013 | |
| | 6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 4R | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 3R | 0 | 0 | 20.8 | 0 | 0.7 | 0 | 0.3 | 29.78 | 73.1 | 0.019 | J-plug hose bent |
| | 2R | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 1R | 0 | 0 | 15.9 | 0 | 5.9 | 0 | 0.2 | 29.78 | 71.8 | 0.016 | |

Table 8A -
Summary of Landfill Gas Monitoring Data June 27-28, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Location | Well ID | %LEL | % Meth by vol | $\%O_2$ | CO (ppm) | %CO2 | $H_2S$ (ppm) | VOCs (ppm) | Well Pressure (Hg) | Temperature degrees F | Vacuum (in H20) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Schley Ave | 4A | 0 | 0 | 21.3 | 0 | 0.6 | 0 | 0.2 | 29.80 | 72.3 | 0.015 | Previously noted as "removed," however well was able to be located |
| | 5N | 0 | 0 | 20.7 | 0 | 0.9 | 0 | 0.4 | 29.79 | 73.4 | 0.019 | |
| | 7R | 0 | 0 | 18.3 | 0 | 2.6 | 0 | 0.2 | 29.80 | 72.1 | 0.018 | |
| | 7A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 5S | 0 | 0 | 20.8 | 0 | 1.4 | 0 | 0.7 | 29.79 | 68.9 | 0.018 | J-plug hose bent |
| | 6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Removed |
| | 8 | 0 | 0.0 | 20.1 | 0 | 1.6 | 0 | 0.3 | 29.79 | 67.9 | 0.018 | J-plug hose bent |
| | 9 | 0 | 0 | 20.2 | 0 | 1.2 | 0 | 0.2 | 29.79 | 68.9 | 0.017 | J-plug hose bent |
| | 10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to gauge due to insect infestation |
| Balcom Ave | 2 | 0 | 0 | 21.9 | 0 | 0.1 | 0 | 0.2 | 29.8 | 78.3 | 0.006 | No well cover |
| | 4 | 0 | 0 | 21.3 | 0 | 0.4 | 0 | 0.2 | 29.8 | 78.3 | 0.005 | |
| | MW2 | 0 | 0 | 21.8 | 0 | 0.1 | 0 | 0.5 | 29.68 | 77.1 | 0.016 | |
| | MW3 | 0 | 0 | 21.8 | 0 | 0.1 | 0 | 0.3 | 29.69 | 76.3 | 0.016 | J-plug hose bent |
| Landfill | MW4R | 0 | 0 | 21.7 | 0 | 0 | 0 | 0.2 | 29.63 | 78.3 | 0.013 | |
| | MW1A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to locate |
| | MW0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to gauge due to wildlife in the area |
| | MW4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Located within community park; Unable gauge due to insect infestation |
| | MW5 | 0 | 0 | 22.0 | 0 | 0.1 | 0 | 0.5 | 29.68 | 76.5 | 0.016 | Located within community park |
| | MW6 | 0 | 0 | 21.8 | 0 | 0.1 | 0 | 0.2 | 29.68 | 75.4 | 0.018 | Located within community park; J-plug hose bent |
| | MW7 | 0 | 0 | 10.2 | 0 | 7 | 0 | 0.4 | 29.68 | 78.1 | 0.011 | Located within community park |
| | MW8 | 0 | 0 | 22.1 | 0 | 0 | 0 | 0.2 | 29.68 | 78.1 | 0.016 | Located within community park |
| | MW9 | 0 | 0 | 22.1 | 0 | 0 | 0 | 0.2 | 29.68 | 76.2 | -0.382 | Located within golf course |
| | MW13 | 0 | 0 | 21.4 | 0 | 0.1 | 0 | 0.2 | 29.7 | 73.8 | 0.028 | Located within golf course |
| | E1R | 0 | 0 | 22.6 | 1 | 0.1 | 0 | 0.1 | 29.6 | 76.1 | 0.009 | |
| | E2R | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to access due to overgrown vegetation |
| | E3R | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to access due to overgrown vegetation |
| | E4R | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to access due to overgrown vegetation |
| | E6R | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to access due to overgrown vegetation |
| | MW18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to access due to locked entrance |
| | MW19 | 12 | 0.6 | 15.6 | 0 | 4.5 | 0 | 4.2 | 29.67 | 76.5 | 0.024 | J-plug hose bent |

NOTES:
LEL - Lower Explosive Limit
% O2 - percent Oxygen gas
% CO2 - percent Carbon Dioxide
H2S (ppm) - Hydrogen Sulfide measured in parts per million
VOCs (ppm) - Volatile Organic Compounds measured in parts per million
"Hg - inches of mercury
<< - Undetectable reading on GEM5000 screen

Table 8B
Summary of Passive Vent Monitoring Data June 27-28, 2023
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Passive Vent ID | % LEL | % Methane by volume | % $O_2$ | CO (ppm) | % $CO_2$ | $H_2S$ (ppm) | VOC's (ppm) | Barometric Pressure (" Hg) | Vacuum (in H2O) | Flow (CFM) | Flow (Ft/min) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-1 | 0 | 0.0 | 19.6 | 0 | 0.0 | 0 | 0.1 | 29.68 | 0.016 | 0.00 | 0 | |
| V-2 | 0 | 0.0 | 14.4 | 0 | 0.0 | 0 | 0.2 | 29.68 | 0.015 | 0.00 | 0 | |
| V-3 | 0 | 0.0 | 0.9 | 0 | 0.0 | 0 | 0.1 | 29.67 | 0.015 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-4 | 0 | 0.0 | 21.8 | 0 | 0.0 | 0 | 0.1 | 29.65 | 0.010 | 0.00 | 0 | |
| V-5 | 0 | 0.0 | 2.2 | 0 | 0.0 | 0 | 0.0 | 29.68 | 0.016 | 0.00 | 0 | |
| V-6 | 2 | 0.1 | 21.5 | 0 | 0.1 | 0 | 1.5 | 29.68 | 0.015 | 0.00 | 0 | |
| V-7 | 0 | 0.0 | 21.8 | 0 | 0.1 | 0 | 0.1 | 29.65 | 0.012 | 0.00 | 0 | |
| V-8 | 0 | 0.0 | 21.4 | 0 | 0.1 | 0 | 1.4 | 29.67 | 0.016 | 0.00 | 0 | |
| V-9 | 0 | 0.0 | 21.8 | 0 | 0.0 | 0 | 0.0 | 29.67 | 0.026 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-10 | >100 | 60.3 | 1.4 | 0 | 30.0 | 7 | 0.3 | 29.67 | 0.016 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-11 | 0 | 0.0 | 21.2 | 0 | 0.0 | 0 | 0.1 | 29.68 | 0.016 | 0.00 | 0 | |
| V-12 | >100 | 40.3 | 0.5 | 2 | 10.1 | 5 | 0.0 | 29.68 | 0.013 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-13 | 10 | 0.5 | 21.1 | 0 | 0.1 | 0 | 1.3 | 29.68 | 0.017 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-14 | 0 | 0.0 | 21.5 | 0 | 0.0 | 0 | 0.0 | 29.68 | 0.016 | 0.00 | 30 | |
| V-15 | 0 | 0.0 | 21.5 | 0 | 0.0 | 0 | 0.0 | 29.67 | 0.017 | 0.00 | 0 | |
| V-16 | 22 | 1.1 | 19.3 | 0 | 1.4 | 0 | 0.0 | 29.68 | 0.016 | 0.00 | 29 | |
| V-17 | >100 | 8.5 | 18.5 | 1 | 6.5 | 0 | 0.0 | 29.68 | 0.016 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-18 | >100 | 22.6 | 14.0 | 0 | 3.0 | 0 | 0.9 | 29.66 | 0.017 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-19 | >100 | 78.6 | 0.0 | 2 | 19.1 | 0 | 0.5 | 29.68 | 0.017 | -- | -- | Could not get velocicalc probe down the PVC. Likely affected by outside ambient air flow. |
| V-20 | 0 | 0.0 | 21.9 | 0 | 0.2 | 0 | 0.2 | 29.67 | 0.015 | 0.00 | 33 | |
| V-21 | >100 | 45.1 | 0.8 | 1 | 18.3 | 0 | 0.1 | 29.68 | 0.012 | 0.52 | 5 | |
| V-22 | 0 | 0.0 | 22.1 | 0 | 0.2 | 0 | 0.2 | 29.66 | 0.035 | 0.00 | 0 | |
| V-23 | -- | -- | -- | -- | -- | -- | | | | 0.00 | 0 | Water present in vent up to the PVC. |
| V-24 | 0 | 0.0 | 21.5 | 0 | 0.0 | 0 | 0.1 | 29.68 | 0.016 | 0.00 | 0 | |
| V-25 | 0 | 0.0 | 17.8 | 0 | 0.0 | 0 | 0.0 | 29.68 | 0.015 | 0.00 | 0 | |
| SVE-1 | 0 | 0.0 | 22.0 | 0 | 0.0 | 0 | 0.1 | 29.64 | 0.010 | 0.00 | 0 | |
| SVE-2 | >100 | 80.4 | 1.5 | 0 | 7.5 | 0 | 1.2 | 29.67 | 0.018 | 0.00 | 0 | |
| SVE-3 | 0 | 0.0 | 21.6 | 0 | 0.2 | 0 | 0.0 | 29.68 | 0.015 | 0.00 | 0 | |
| SVE-4 | 0 | 0.0 | 19.8 | 0 | 0.0 | 0 | 0.0 | 29.67 | 0.016 | 0.00 | 0 | |
| SVE-5 | 0 | 0.0 | 19.7 | 0.0 | 0.1 | 0 | 0.0 | 29.69 | 0.013 | 0.00 | 0 | |
| SVE-6 | 0 | 0.0 | 21.7 | 0.0 | 0.0 | 0 | 0.0 | 29.66 | 0.010 | 0.00 | 0 | |
| SVE-7 | 0 | 0.0 | 22.0 | 0.0 | 0.1 | 0 | 0.0 | 29.68 | 0.009 | 0.00 | 0 | |
| SVE-8 | 0 | 0.0 | 16.5 | 0.0 | 0.1 | 0 | 0.0 | 29.69 | 0.014 | 0.00 | 0 | |

NOTES:
LEL - Lower Explosive Limit
% $O_2$ - percent Oxgyen gas
% $CO_2$ - percent Carbon Dioxide
$H_2S$ (ppm) - Hydrogen Sulfide measured in parts per million
VOCs (ppm) - Volatile Organic Compounds measured in parts per million
" Hg - inches of mercury

# Appendix D

## Piezometer Monitoring Reports

February 2, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: January 2023 Piezometer Monitoring Event**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the piezometer monitoring event conducted in January 2023 at the Ferry Point Park Golf Course. Monthly piezometer monitoring is conducted in compliance with the October 2013 *Post Construction Custodial Care Plan* and the October 2013 *Landfill Gas Management Plan.*

On January 31, 2023, GEI mobilized to Site to conduct the monthly piezometer monitoring. A summary of the weather condition during the monitoring event is included in Table 1 below:

**Table 1 - Summary of January 31, 2023, Weather Conditions**

| | | |
|---|---|---|
| **Date:** 1/31/2023 | **On site:** 07:30 | **Off site:** 13:30 |
| **Weather Conditions** | Light rain and snow | Mostly Cloudy |
| **Temperature** | 35° F | 38° F |
| **Relative Humidity** | 87% | 57% |
| **Wind** | NNW 3 mph | NNW 12 mph |
| **Barometric Pressure** | 30.17 in | 30.17 in |
| **Precipitation** | 0.0 in | 0.0 in |

GEI gathered water level readings from 24 piezometers utilizing an electronic water level meter between the hours of 7:30 am and 1:30 pm. On January 31, 2023, high


GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

tide was at 7:47 am and low tide was at 2:23 pm. Tides were going out during the data collection window.

The attached Table 2 summarizes the January 2023 monitoring event, including the groundwater elevations collected from the piezometers.

## Conclusions

The January 2023 piezometer monitoring event results indicate that all piezometers are functional and there is sufficient groundwater contouring to prevent the migration of methane off Site. The collected groundwater elevations are also consistent with historical trends and data.

A routine visual inspection of the piezometers was conducted, and the piezometers were found in good condition as follows:

- The outer protective casings remain locked.
- The inner casings and plugs remain intact and in place; and
- The outer and inner casings remain in good condition and in their intended positions.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

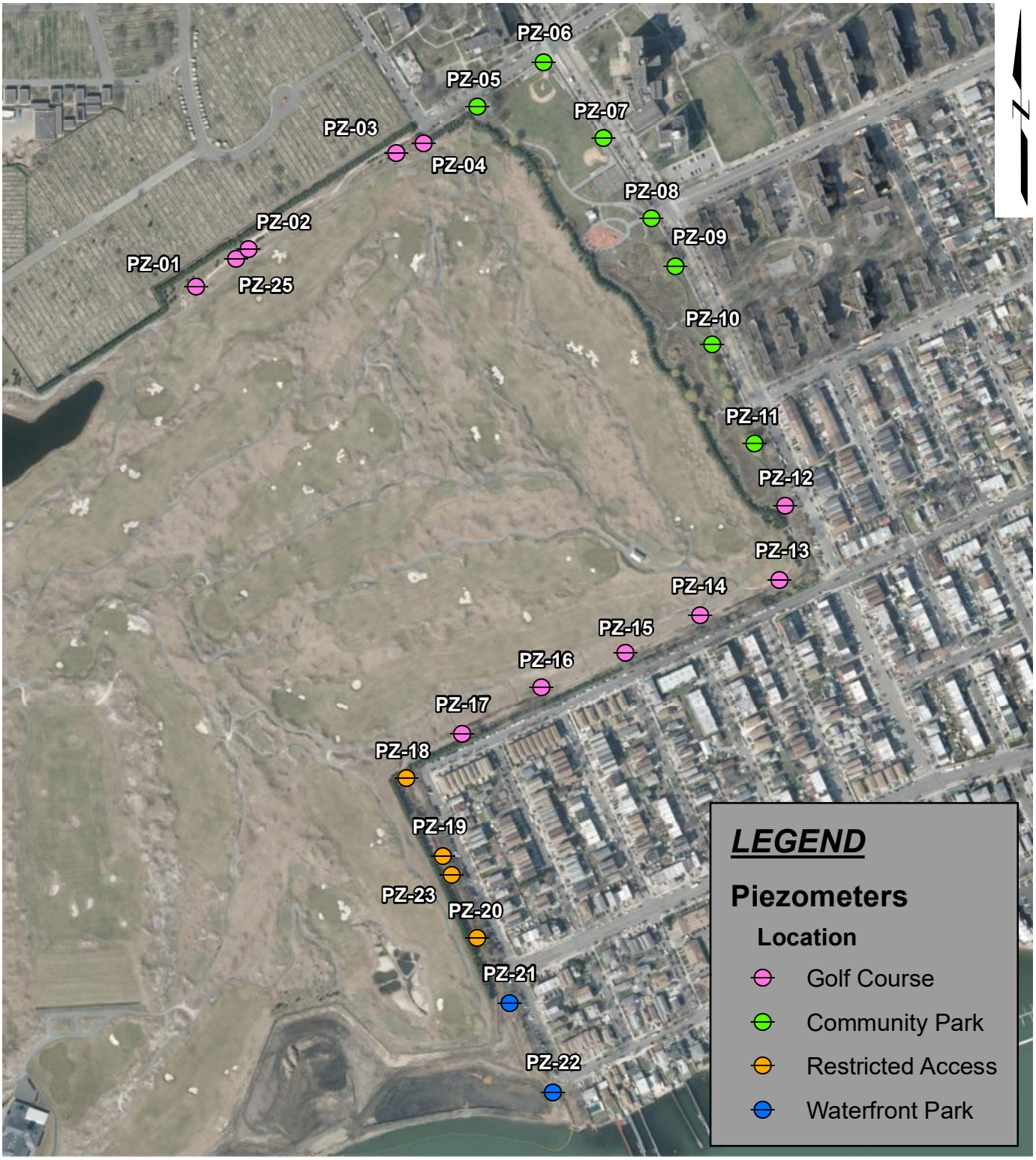
GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Piezometer Locations
Figure 2 – Summary of January 2023 Piezometer Gauging Results

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 360 720
SCALE: 1 " = 500 '

Ferry Point Park
Bronx, New York
Health and Saftey Plan

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

PIEZOMETER LOCATIONS

Project: 2204594

Fig. 1

\\geiconsultants.com\Data\Data_Storage\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\GIS Shapefiles\Figure 1 - Piezometer Locations.mxd

Table 2
Summary of January 31, 2023 Piezometer Gauging Results
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Piezometer ID | Vent Trench Bottom Elevation (feet) | Top of Casing Elevation (feet) | Measured Depth to Water (ft bToC) | Groundwater Elevation (feet) |
|---|---|---|---|---|
| PZ-1 | 3.25 | 24.63 | 18.10 | 6.53 |
| PZ-2 | 1.25 | 23.49 | 19.75 | 3.74 |
| PZ-3 | 1.2 | 21.89 | 18.54 | 3.35 |
| PZ-4 | 1.01 | 21.1 | 14.75 | 6.35 |
| PZ-5 | 0.89 | 15.72 | 11.02 | 4.70 |
| PZ-6 | 0.61 | 16.73 | 10.12 | 6.61 |
| PZ-7 | 1.2 | 16.99 | 9.99 | 7.00 |
| PZ-8 | 3.08 | 17.87 | 8.98 | 8.89 |
| PZ-9 | 2.82 | 18.89 | 9.36 | 9.53 |
| PZ-10 | 3.82 | 18.59 | 9.45 | 9.14 |
| PZ-11 | 2.7 | 17.68 | 7.82 | 9.86 |
| PZ-12 | 1.96 | 16.96 | 9.81 | 7.15 |
| PZ-13 | 2.52 | 9.67 | 2.54 | 7.13 |
| PZ-14 | NA | 10.82 | 3.24 | 7.58 |
| PZ-15 | NA | 9.26 | 3.06 | 6.20 |
| PZ-16 | NA | 9.8 | 2.72 | 7.08 |
| PZ-17 | NA | 9.38 | 2.77 | 6.61 |
| PZ-18 | 3.7 | 14.42 | 7.29 | 7.13 |
| PZ-19 | 1.6 | 16.29 | 9.74 | 6.55 |
| PZ-20 | 2.2 | 11.68 | 7.11 | 4.57 |
| PZ-21 | 1.51 | 14.46 | 11.52 | 2.94 |
| PZ-22 | -1.6 | 13.58 | 10.04 | 3.54 |
| PZ-23 | 1.4 | 16.46 | 12.78 | 3.68 |
| PZ-25 | 1.35 | 23.54 | 19.74 | 3.80 |

Note:
ft bToC - feet below top of casing

February 28, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: February 2023 Piezometer Monitoring Event**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the piezometer monitoring event conducted in February 2023 at the Ferry Point Park Golf Course. Monthly piezometer monitoring is conducted in compliance with the October 2013 *Post Construction Custodial Care Plan* and the October 2013 *Landfill Gas Management Plan.*

On February 24, 2023, GEI mobilized to Site to conduct the monthly piezometer monitoring. A summary of the weather condition during the monitoring event is included in Table 1 below:

**Table 1 - Summary of February 24, 2023, Weather Conditions**

| | | |
|---|---|---|
| **Date:** 2/24/2023 | **On site:** 08:00 | **Off site:** 13:30 |
| **Weather Conditions** | Mostly Cloudy | Mostly Sunny |
| **Temperature** | 45° F | 40° F |
| **Relative Humidity** | 76% | 43% |
| **Wind** | NW 9 mph | NW 12 mph |
| **Barometric Pressure** | 30.07 in | 30.23 in |
| **Precipitation** | 0.0 in | 0.0 in |

GEI gathered water level readings from 24 piezometers utilizing an electronic water level meter between the hours of 8:00 am and 1:30 pm. On February 24, 2023, low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tide was at 9:16 am and high tide was at 2:55 pm. Tides were rising during the majority of the data collection window.

The attached Table 2 summarizes the February 2023 monitoring event, including the groundwater elevations collected from the piezometers.

## Conclusions

The February 2023 piezometer monitoring event results indicate that all piezometers are functional and there is sufficient groundwater contouring to prevent the migration of methane off Site. The collected groundwater elevations are also consistent with historical trends and data.

A routine visual inspection of the piezometers was conducted, and the piezometers were found in good condition as follows:

- The outer protective casings remain locked.
- The inner casings and plugs remain intact and in place; and
- The outer and inner casings remain in good condition and in their intended positions.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

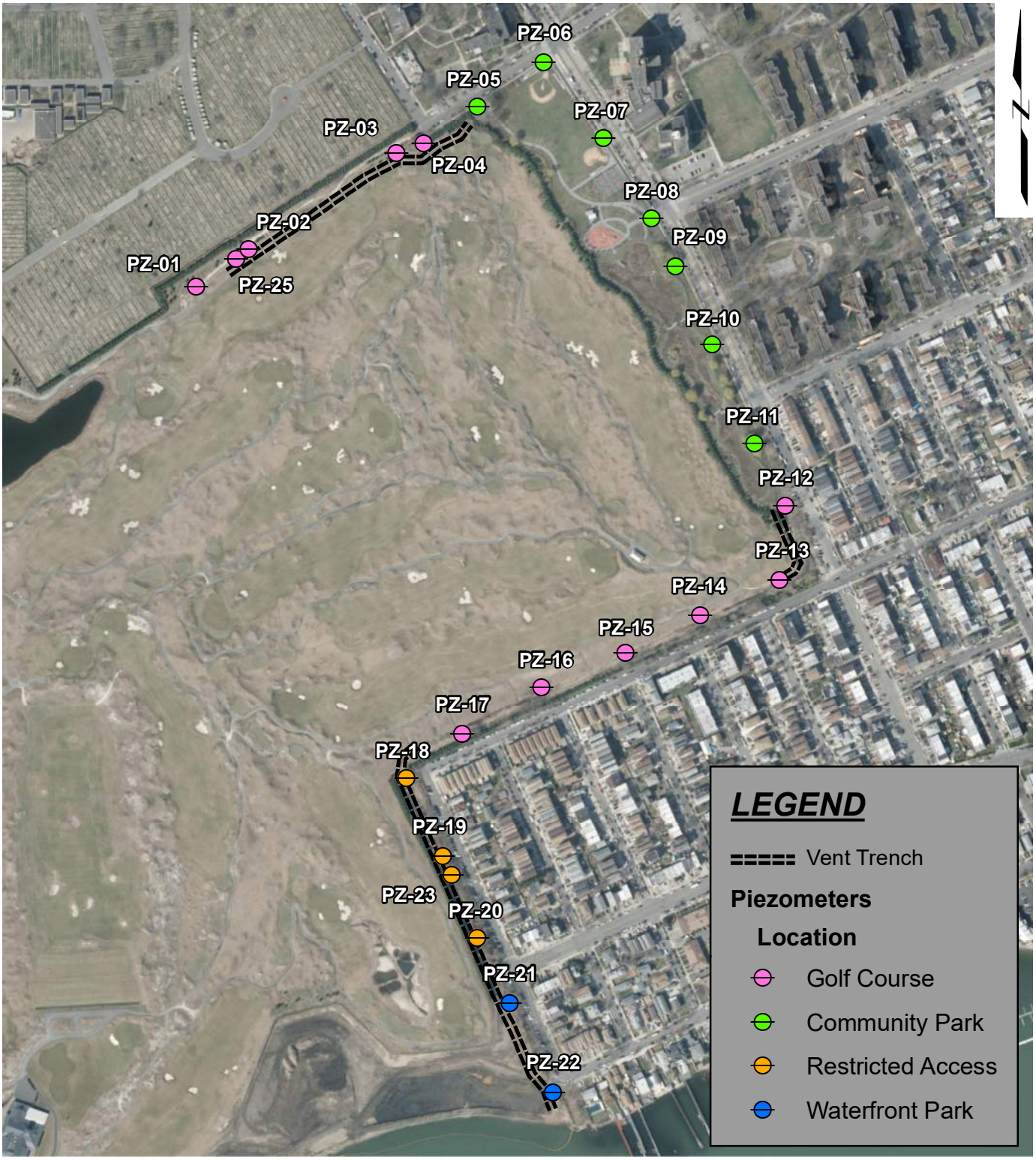
GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Piezometer Locations
Figure 2 – Summary of February 2023 Piezometer Gauging Results

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 360 720
SCALE: 1 " = 500 '

Ferry Point Park
Bronx, New York
Monthly Piezometer Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project: 2204594

PIEZOMETER LOCATIONS

Fig. 1

\\geiconsultants.com\Data\Data_Storage\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\GIS Shapefiles\Figure 1 - Piezometer Locations with Vent Trench.mxd

Table 2
Summary of February 24, 2023 Piezometer Gauging Results
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Piezometer ID | Vent Trench Bottom Elevation (feet) | Top of Casing Elevation (feet) | Measured Depth to Water (ft bToC) | Groundwater Elevation (feet) |
|---|---|---|---|---|
| PZ-1 | 3.25 | 24.63 | 18.12 | 6.51 |
| PZ-2 | 1.25 | 23.49 | 19.78 | 3.71 |
| PZ-3 | 1.20 | 21.89 | 18.56 | 3.33 |
| PZ-4 | 1.01 | 21.1 | 14.71 | 6.39 |
| PZ-5 | 0.89 | 15.72 | 10.99 | 4.73 |
| PZ-6 | 0.61 | 16.73 | 10.08 | 6.65 |
| PZ-7 | 1.20 | 16.99 | 9.97 | 7.02 |
| PZ-8 | 3.08 | 17.87 | 8.92 | 8.95 |
| PZ-9 | 2.82 | 18.89 | 9.1 | 9.79 |
| PZ-10 | 3.82 | 18.59 | 9.15 | 9.44 |
| PZ-11 | 2.70 | 17.68 | 7.75 | 9.93 |
| PZ-12 | 1.96 | 16.96 | 9.75 | 7.21 |
| PZ-13 | 2.52 | 9.67 | 2.51 | 7.16 |
| PZ-14 | NA | 10.82 | 3.20 | 7.62 |
| PZ-15 | NA | 9.26 | 2.98 | 6.28 |
| PZ-16 | NA | 9.8 | 2.71 | 7.09 |
| PZ-17 | NA | 9.38 | 2.75 | 6.63 |
| PZ-18 | 3.70 | 14.42 | 8.61 | 5.81 |
| PZ-19 | 1.60 | 16.29 | 10.43 | 5.86 |
| PZ-20 | 2.20 | 11.68 | 7.71 | 3.97 |
| PZ-21 | 1.51 | 14.46 | 12.16 | 2.30 |
| PZ-22 | -1.60 | 13.58 | 12.85 | 0.73 |
| PZ-23 | 1.40 | 16.46 | 10.61 | 5.85 |
| PZ-25 | 1.35 | 23.54 | 19.71 | 3.83 |

Note:
ft bToC - feet below top of casing

March 30, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: March 2023 Piezometer Monitoring Event**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the piezometer monitoring event conducted in March 2023 at the Ferry Point Park Golf Course. Monthly piezometer monitoring is conducted in compliance with the October 2013 *Post Construction Custodial Care Plan* and the October 2013 *Landfill Gas Management Plan.*

On March 29, 2023, GEI mobilized to Site to conduct the monthly piezometer monitoring. A summary of the weather conditions during the monitoring event is included in Table 1 below:

**Table 1 - Summary of March 29, 2023, Weather Conditions**

| | | |
|---|---|---|
| **Date:** 3/29/2023 | **On site:** 07:00 | **Off site:** 15:30 |
| **Weather Conditions** | Sunny | Mostly Sunny |
| **Temperature** | 39°F | 53°F |
| **Relative Humidity** | 37% | 20% |
| **Wind** | NNW 2 mph | SW 8 mph |
| **Barometric Pressure** | 30.17 in | 30.04 in |
| **Precipitation** | 0.0 in | 0.0 in |

GEI gathered water level readings from 23 out of 24 currently known piezometers utilizing an electronic water level meter between the hours of 7:00 am and 3:30 pm.



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212.687.8282

On March 29, 2023, low tide was at 11:29 am and high tide was at 5:13 pm. Tides were alternating during the data collection window.

PZ-11 was unable to be located in the southeastern area of the Community Park. The well location was previously marked out on the fronting fence post, adjacent to the park entrance. However, upon inspection of the area, PZ-11 could not be located, possibly due to vegetation, vandalism, or landscaping (downed tree nearby).

Table 2 attached summarizes the March 2023 monitoring event, including the groundwater elevations collected from the accessible piezometers.

## Conclusions

The March 2023 piezometer monitoring event results indicate that all piezometers, except PZ-11, are functional and there is sufficient groundwater contouring to prevent the migration of methane off Site. The collected groundwater elevations are also consistent with historical trends and data.

A routine visual inspection of the piezometers was conducted, and all located piezometers were found in good condition as follows:

- The outer protective casings remain locked;
- The inner casings and plugs remain intact and in place; and
- The outer and inner casings remain in good condition and in their intended positions.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

GEI CONSULTANTS, INC.



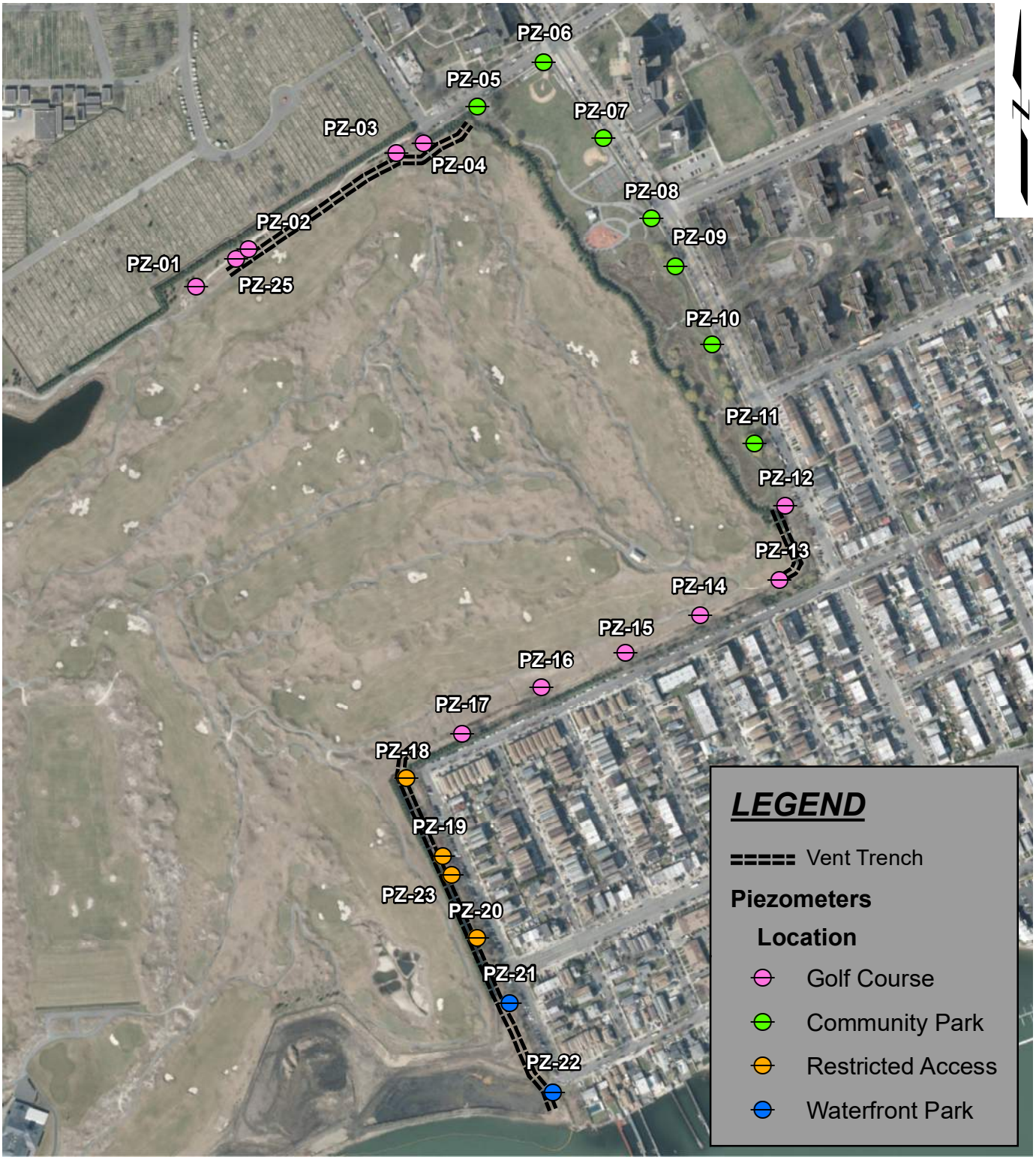
Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Piezometer Locations
Figure 2 – Summary of March 2023 Piezometer Gauging Results

c: M. Rowland, NYCDPR

K. Zias, NYCDPR

K. McCarty, GEI




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 360 720
SCALE: 1 " = 500 '

Ferry Point Park
Bronx, New York
Monthly Piezometer Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project: 2204594

PIEZOMETER LOCATIONS

Fig. 1

\\geiconsultants.com\Data\Data_Storage\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\GIS Shapefiles\Figure 1 - Piezometer Locations with Vent Trench.mxd

Table 2
Summary of March 29, 2023 Piezometer Gauging Results
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Piezometer ID | Vent Trench Bottom Elevation (feet) | Top of Casing Elevation (feet) | Measured Depth to Water (ft bToC) | Groundwater Elevation (feet) |
|---|---|---|---|---|
| PZ-1 | 3.25 | 24.63 | 21.02 | 3.61 |
| PZ-2 | 1.25 | 23.49 | 19.87 | 3.62 |
| PZ-3 | 1.20 | 21.89 | 18.69 | 3.20 |
| PZ-4 | 1.01 | 21.1 | 14.86 | 6.24 |
| PZ-5 | 0.89 | 15.72 | 11.16 | 4.56 |
| PZ-6 | 0.61 | 16.73 | 9.99 | 6.74 |
| PZ-7 | 1.20 | 16.99 | 9.95 | 7.04 |
| PZ-8 | 3.08 | 17.87 | 8.98 | 8.89 |
| PZ-9 | 2.82 | 18.89 | 9.62 | 9.27 |
| PZ-10 | 3.82 | 18.59 | 9.74 | 8.85 |
| PZ-11 | 2.70 | 17.68 | -- | -- |
| PZ-12 | 1.96 | 16.96 | 10.02 | 6.94 |
| PZ-13 | 2.52 | 9.67 | 2.69 | 6.98 |
| PZ-14 | NA | 10.82 | 3.01 | 7.81 |
| PZ-15 | NA | 9.26 | 2.81 | 6.45 |
| PZ-16 | NA | 9.8 | 2.70 | 7.10 |
| PZ-17 | NA | 9.38 | 2.79 | 6.59 |
| PZ-18 | 3.70 | 14.42 | 7.42 | 7.00 |
| PZ-19 | 1.60 | 16.29 | 10.10 | 6.19 |
| PZ-20 | 2.20 | 11.68 | 7.43 | 4.25 |
| PZ-21 | 1.51 | 14.46 | 12.05 | 2.41 |
| PZ-22 | -1.60 | 13.58 | 12.24 | 1.34 |
| PZ-23 | 1.40 | 16.46 | 13.12 | 3.34 |
| PZ-25 | 1.35 | 23.54 | 19.83 | 3.71 |

Note:
ft bToC - feet below top of casing
NA = PZ's not adjacent to the vent trench
PZ-1 through PZ-22 installed with 5' screen
PZ-23 and PZ-25 installed with 10' screen
Could not locate PZ-11 (within Community Park)

April 27, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: April 2023 Piezometer Monitoring Event**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the piezometer monitoring event conducted in April 2023 at the Ferry Point Park Golf Course. Monthly piezometer monitoring is conducted in compliance with the October 2013 *Post Construction Custodial Care Plan* and the October 2013 *Landfill Gas Management Plan.*

On April 24, 2023, GEI mobilized to Site to conduct the monthly piezometer monitoring. A summary of the weather conditions during the monitoring event is included in Table 1 below:

**Table 1 - Summary of April 24, 2023, Weather Conditions**

| **Date:** 4/24/2023 | **On site:** 07:00 | **Off site:** 13:30 |
|---|---|---|
| **Weather Conditions** | Sunny | Partly Sunny |
| **Temperature** | 45°F | 56°F |
| **Relative Humidity** | 78% | 44% |
| **Wind** | NW 3 mph | WNW 3 mph |
| **Barometric Pressure** | 30.04 in | 30.02 in |
| **Precipitation** | 0.0 in | 0.0 in |

GEI gathered water level readings from 23 out of 24 currently known piezometers utilizing an electronic water level meter between the hours of 7:00 am and 1:30 pm.



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530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

On April 24, 2023, low tide was at 11:37 am and high tide was at 5:03 pm. Tides were going out during the majority of the data collection window.

Since the March 2023 monitoring event, PZ-11 is still unable to be located in the southeastern area of the Community Park. The well location is marked out on the fronting fence post, adjacent to the park entrance, however, following closer inspection of the area, PZ-11 cannot be located, possibly due to vegetation, vandalism, or landscaping (downed tree nearby).

Evidence of well tampering was noted at PZ-05, also located within the Community Park. Upon arrival, the well cover was found open, leaving the j-plug to the piezometer exposed. GEI re-secured the cover in place following monitoring.

Table 2 attached summarizes the April 2023 monitoring event, including the groundwater elevations collected from the accessible piezometers.

## Conclusions

The April 2023 piezometer monitoring event results indicate that all piezometers, except PZ-11, are functional and there is sufficient groundwater contouring to prevent the migration of methane off Site. The collected groundwater elevations are also consistent with historical trends and data.

A routine visual inspection of the piezometers was conducted, and all located piezometers were found in good condition as follows:

- The outer protective casings remain locked (if applicable);
- The inner casings and plugs remain intact and in place; and
- The outer and inner casings remain in good condition and in their intended positions.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

GEI CONSULTANTS, INC.

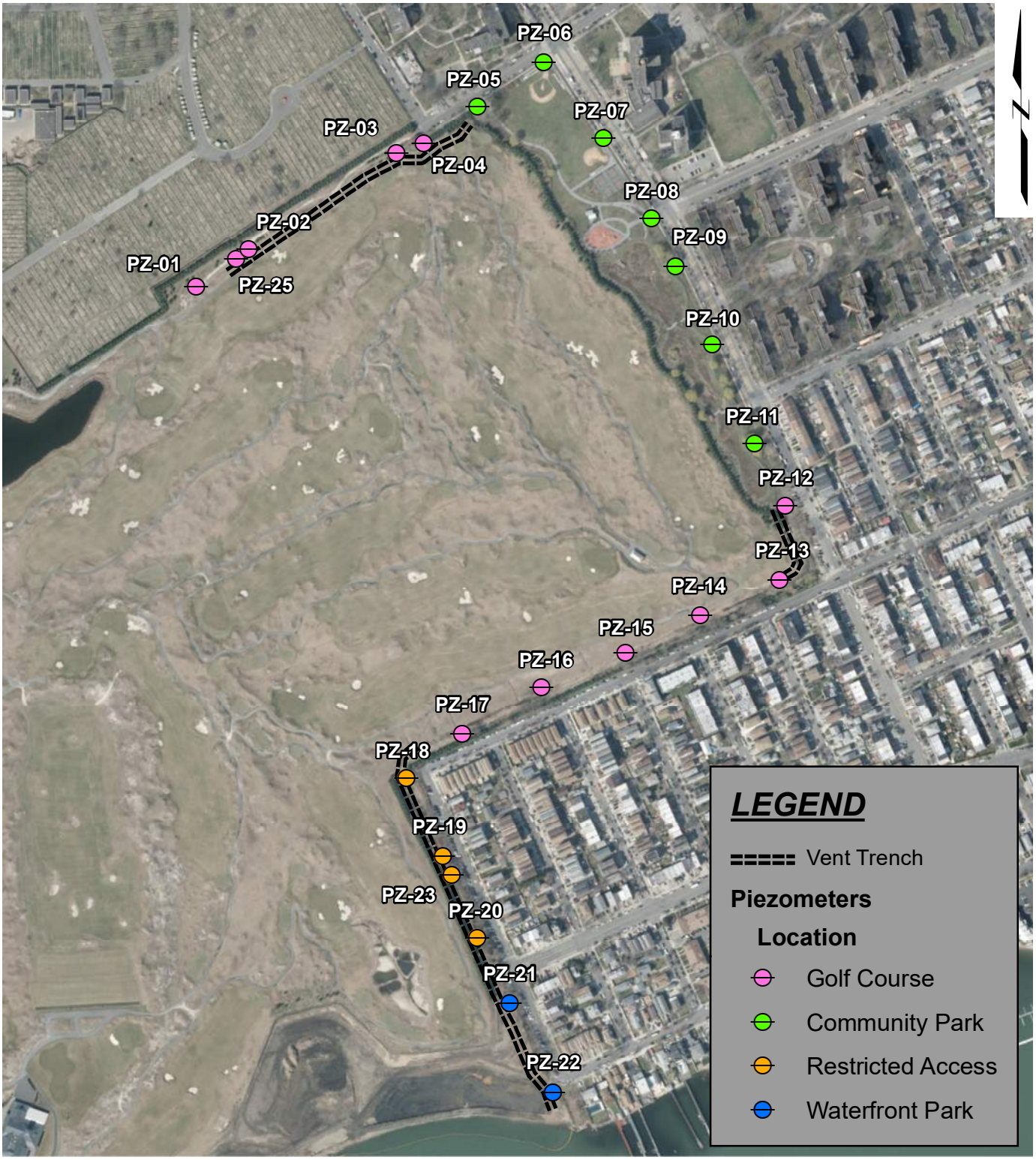


Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Piezometer Locations
Figure 2 – Summary of April 2023 Piezometer Gauging Results

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI


GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 360 720
SCALE: 1 " = 500 '

Ferry Point Park
Bronx, New York
Monthly Piezometer Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project: 2204594

PIEZOMETER LOCATIONS

Fig. 1

\\geiconsultants.com\Data\Data_Storage\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\GIS Shapefiles\Figure 1 - Piezometer Locations with Vent Trench.mxd

Table 2
Summary of April 24, 2023 Piezometer Gauging Results
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Piezometer ID | Vent Trench Bottom Elevation (feet) | Top of Casing Elevation (feet) | Measured Depth to Water (ft bToC) | Groundwater Elevation (feet) |
|---|---|---|---|---|
| PZ-1 | 3.25 | 24.63 | 20.09 | 4.54 |
| PZ-2 | 1.25 | 23.49 | 19.92 | 3.57 |
| PZ-3 | 1.20 | 21.89 | 18.71 | 3.18 |
| PZ-4 | 1.01 | 21.1 | 16.53 | 4.57 |
| PZ-5 | 0.89 | 15.72 | 11.31 | 4.41 |
| PZ-6 | 0.61 | 16.73 | 9.78 | 6.95 |
| PZ-7 | 1.20 | 16.99 | 11.24 | 5.75 |
| PZ-8 | 3.08 | 17.87 | 9.12 | 8.75 |
| PZ-9 | 2.82 | 18.89 | 9.81 | 9.08 |
| PZ-10 | 3.82 | 18.59 | 9.98 | 8.61 |
| PZ-11 | 2.70 | 17.68 | -- | -- |
| PZ-12 | 1.96 | 16.96 | 10.21 | 6.75 |
| PZ-13 | 2.52 | 9.67 | 2.60 | 7.07 |
| PZ-14 | NA | 10.82 | 3.41 | 7.41 |
| PZ-15 | NA | 9.26 | 3.11 | 6.15 |
| PZ-16 | NA | 9.8 | 2.55 | 7.25 |
| PZ-17 | NA | 9.38 | 2.65 | 6.73 |
| PZ-18 | 3.70 | 14.42 | 7.59 | 6.83 |
| PZ-19 | 1.60 | 16.29 | 9.26 | 7.03 |
| PZ-20 | 2.20 | 11.68 | 7.12 | 4.56 |
| PZ-21 | 1.51 | 14.46 | 11.96 | 2.50 |
| PZ-22 | -1.60 | 13.58 | 12.45 | 1.13 |
| PZ-23 | 1.40 | 16.46 | 12.92 | 3.54 |
| PZ-25 | 1.35 | 23.54 | 19.87 | 3.67 |

Note:
ft bToC - feet below top of casing
NA = PZ's not adjacent to the vent trench
PZ-1 through PZ-22 installed with 5' screen
PZ-23 and PZ-25 installed with 10' screen
Could not locate PZ-11 (within Community Park)

May 23, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: May 2023 Piezometer Monitoring Event**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the piezometer monitoring event conducted in May 2023 at the Ferry Point Park Golf Course. Monthly piezometer monitoring is conducted in compliance with the October 2013 *Post Construction Custodial Care Plan* and the October 2013 *Landfill Gas Management Plan.*

On May 22, 2023, GEI mobilized to Site to conduct the monthly piezometer monitoring. A summary of the weather conditions during the monitoring event is included in Table 1 below:

**Table 1 - Summary of May 22, 2023, Weather Conditions**

| **Date:** 5/22/2023 | **On site:** 08:00 | **Off site:** 14:00 |
|---|---|---|
| **Weather Conditions** | Partly Sunny | Partly Sunny |
| **Temperature** | 62°F | 67°F |
| **Relative Humidity** | 73% | 64% |
| **Wind** | N 3 mph | NE 4 mph |
| **Barometric Pressure** | 30.11 in | 30.15 in |
| **Precipitation** | 0.0 in | 0.0 in |

GEI gathered water level readings from the 24 piezometers utilizing an electronic water level meter between the hours of 8:00 am and 2:00 pm. On May 22, 2023,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212.687.8282

high tide was at 8:51 am and low tide was at 2:31 pm. Tides were going out during the majority of the data collection window.

During this piezometer monitoring event, PZ-11, which was previously unable to be located due to vegetation, was found and gauged along with the other piezometers located in the Community Park.

Table 2 attached summarizes the May 2023 monitoring event, including the groundwater elevations collected from the accessible piezometers.

## Conclusions

The May 2023 piezometer monitoring event results indicate that all piezometers are functional and there is sufficient groundwater contouring to prevent the migration of methane off Site. The collected groundwater elevations are also consistent with historical trends and data.

A routine visual inspection of the piezometers was conducted, and the piezometers were found in good condition as follows:

- The outer protective casings remain locked.
- The inner casings and plugs remain intact and in place; and
- The outer and inner casings remain in good condition and in their intended positions.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Piezometer Locations
Figure 2 – Summary of May 2023 Piezometer Gauging Results

c: M. Rowland, NYCDPR

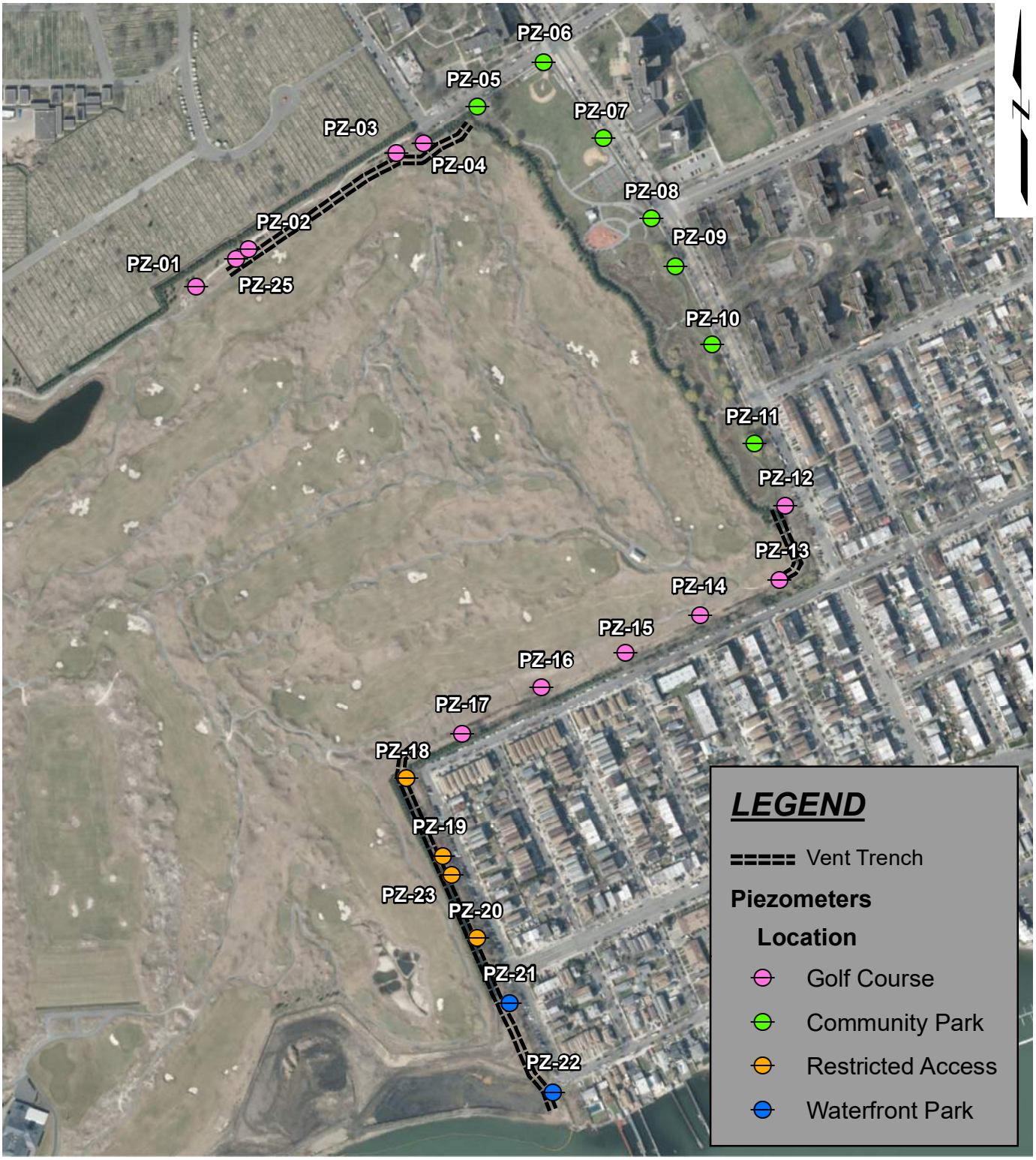
May 2023 Piezometer Monitoring Event
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013
Bronx, NY

K. Zias, NYCDPR

K. McCarty, GEI



GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 360 720
SCALE: 1 " = 500 '

Ferry Point Park
Bronx, New York
Monthly Piezometer Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project: 2204594

PIEZOMETER LOCATIONS

Fig. 1

\\geiconsultants.com\Data\Data_Storage\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\GIS Shapefiles\Figure 1 - Piezometer Locations with Vent Trench.mxd

Table 2
Summary of May 22, 2023 Piezometer Gauging Results
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Piezometer ID | Vent Trench Bottom Elevation (feet) | Top of Casing Elevation (feet) | Measured Depth to Water (ft bToC) | Groundwater Elevation (feet) |
|---|---|---|---|---|
| PZ-1 | 3.25 | 24.63 | 20.78 | 3.85 |
| PZ-2 | 1.25 | 23.49 | 19.55 | 3.94 |
| PZ-3 | 1.20 | 21.89 | 18.41 | 3.48 |
| PZ-4 | 1.01 | 21.1 | 16.19 | 4.91 |
| PZ-5 | 0.89 | 15.72 | 11.08 | 4.64 |
| PZ-6 | 0.61 | 16.73 | 10.17 | 6.56 |
| PZ-7 | 1.20 | 16.99 | 11.22 | 5.77 |
| PZ-8 | 3.08 | 17.87 | 11.15 | 6.72 |
| PZ-9 | 2.82 | 18.89 | 9.74 | 9.15 |
| PZ-10 | 3.82 | 18.59 | 9.87 | 8.72 |
| PZ-11 | 2.70 | 17.68 | 7.69 | 9.99 |
| PZ-12 | 1.96 | 16.96 | 10.01 | 6.95 |
| PZ-13 | 2.52 | 9.67 | 2.71 | 6.96 |
| PZ-14 | NA | 10.82 | 3.34 | 7.48 |
| PZ-15 | NA | 9.26 | 3.40 | 5.86 |
| PZ-16 | NA | 9.8 | 2.54 | 7.26 |
| PZ-17 | NA | 9.38 | 2.81 | 6.57 |
| PZ-18 | 3.70 | 14.42 | 7.50 | 6.92 |
| PZ-19 | 1.60 | 16.29 | 9.81 | 6.48 |
| PZ-20 | 2.20 | 11.68 | 7.21 | 4.47 |
| PZ-21 | 1.51 | 14.46 | 12.03 | 2.43 |
| PZ-22 | -1.60 | 13.58 | 10.60 | 2.98 |
| PZ-23 | 1.40 | 16.46 | 13.21 | 3.25 |
| PZ-25 | 1.35 | 23.54 | 19.55 | 3.99 |

Note:
ft bToC - feet below top of casing
NA = PZ's not adjacent to the vent trench
PZ-1 through PZ-22 installed with 5' screen
PZ-23 and PZ-25 installed with 10' screen

July 11, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: June 2023 Piezometer Monitoring Event**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the piezometer monitoring event conducted in June 2023 at the Ferry Point Park Golf Course. Monthly piezometer monitoring is conducted in compliance with the October 2013 *Post Construction Custodial Care Plan* and the October 2013 *Landfill Gas Management Plan.*

On June 27, 2023, GEI mobilized to Site to conduct the monthly piezometer monitoring. A summary of the weather conditions during the monitoring event is included in Table 1 below:

**Table 1 - Summary of June 27, 2023, Weather Conditions**

| | | |
|---|---|---|
| **Date:** 6/27/2023 | **On site:** 07:00 | **Off site:** 15:00 |
| **Weather Conditions** | Fog | Partly Sunny |
| **Temperature** | 66°F | 78°F |
| **Relative Humidity** | 79% | 83% |
| **Wind** | W 1 mph | N 2 mph |
| **Barometric Pressure** | 29.8 in | 29.7 in |
| **Precipitation** | 0.0 in | 0.0 in |

GEI gathered water level readings from the 18 of the 24 piezometers utilizing an electronic water level meter between the hours of 7:00 am and 3:00 pm. On June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27, 2023, high tide was at 6:14 am and low tide was at 12:31 pm. Tides were going out during the majority of the data collection window.

During this piezometer monitoring event, PZ-18, PZ-19, PZ-20 and PZ-23, located in a gated area along the southeastern boundary of the golf course, were unable to be gauged due to overgrown vegetation limiting access in the area. Additionally, PZ-21 and PZ-23, located in a gated area within the Waterfront Park, were also unable to be accessed due to a locked entrance.

Table 2 attached summarizes the June 2023 monitoring event, including the groundwater elevations collected from the accessible piezometers.

## Conclusions

The June 2023 piezometer monitoring event results indicate that the 18 accessible piezometers are functional and there is sufficient groundwater contouring to prevent the migration of methane off Site. The collected groundwater elevations are also consistent with historical trends and data.

A routine visual inspection of the piezometers was conducted, and the accessible piezometers were found in good condition as follows:

- The outer protective casings remain locked.
- The inner casings and plugs remain intact and in place; and
- The outer and inner casings remain in good condition and in their intended positions.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

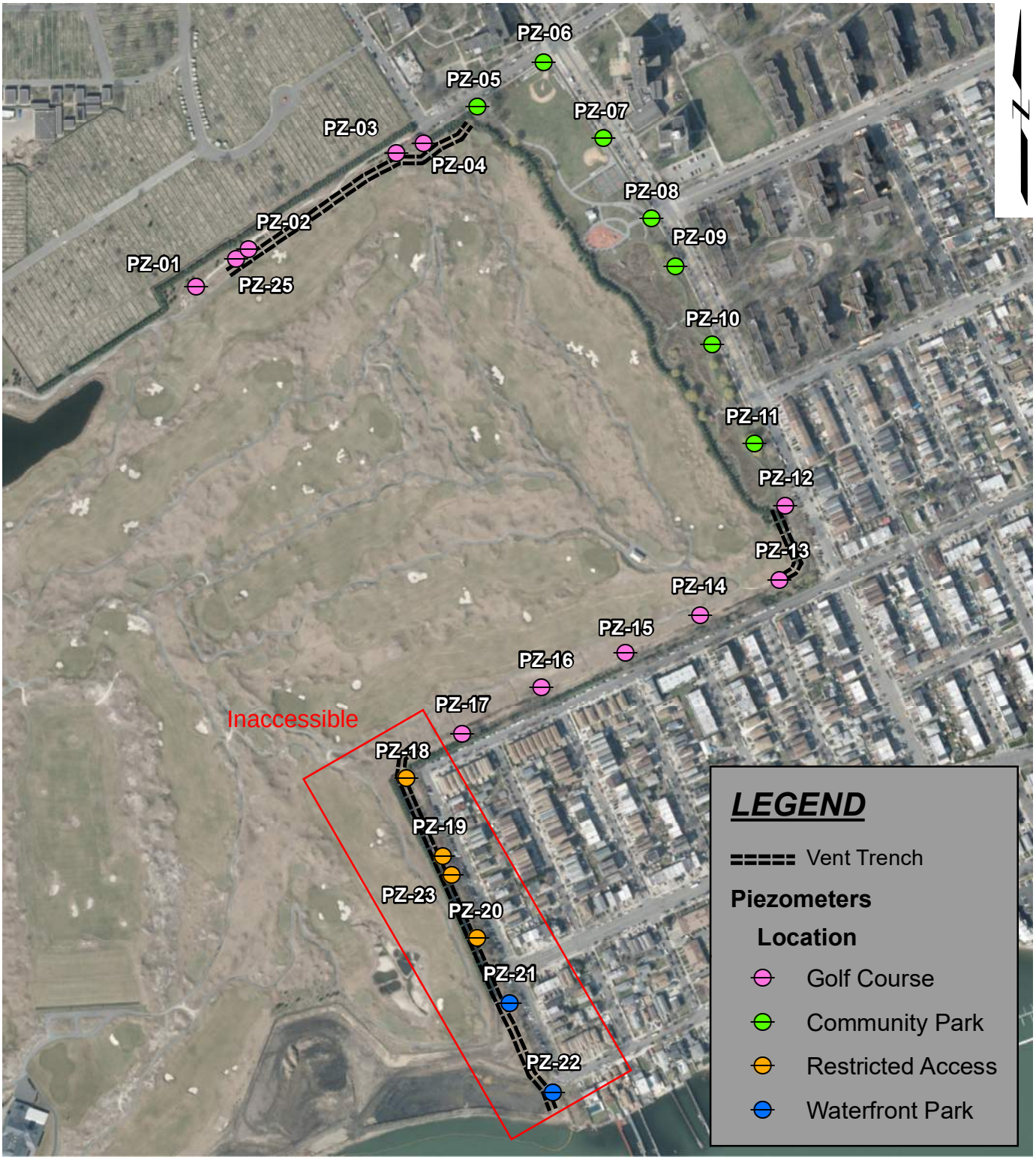
GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – Piezometer Locations
Figure 2 – Summary of June 2023 Piezometer Gauging Results

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 360 720
SCALE: 1 " = 500 '

Ferry Point Park
Bronx, New York
Monthly Piezometer Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project: 2204594

PIEZOMETER LOCATIONS

Fig. 1

\\geiconsultants.com\Data\Data_Storage\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\GIS Shapefiles\Figure 1 - Piezometer Locations with Vent Trench.mxd

Table 2
Summary of June 27, 2023 Piezometer Gauging Results
Ferry Point Park Golf Course
NYSDEC Permit No. 2-6006-00014/00013

| Piezometer ID | Vent Trench Bottom Elevation (feet) | Top of Casing Elevation (feet) | Measured Depth to Water (ft bToC) | Groundwater Elevation (feet) |
|---|---|---|---|---|
| PZ-1 | 3.25 | 24.63 | 21.03 | 3.60 |
| PZ-2 | 1.25 | 23.49 | 19.86 | 3.63 |
| PZ-3 | 1.20 | 21.89 | 18.71 | 3.18 |
| PZ-4 | 1.01 | 21.1 | 16.53 | 4.57 |
| PZ-5 | 0.89 | 15.72 | 11.37 | 4.35 |
| PZ-6 | 0.61 | 16.73 | 10.41 | 6.32 |
| PZ-7 | 1.20 | 16.99 | 10.52 | 6.47 |
| PZ-8 | 3.08 | 17.87 | 11.02 | 6.85 |
| PZ-9 | 2.82 | 18.89 | 10.34 | 8.55 |
| PZ-10 | 3.82 | 18.59 | 10.54 | 8.05 |
| PZ-11 | 2.70 | 17.68 | 8.13 | 9.55 |
| PZ-12 | 1.96 | 16.96 | 10.64 | 6.32 |
| PZ-13 | 2.52 | 9.67 | 3.62 | 6.05 |
| PZ-14 | NA | 10.82 | 3.85 | 6.97 |
| PZ-15 | NA | 9.26 | 4.11 | 5.15 |
| PZ-16 | NA | 9.8 | 2.49 | 7.31 |
| PZ-17 | NA | 9.38 | 2.91 | 6.47 |
| PZ-18 | 3.70 | 14.42 | -- | Inaccessible |
| PZ-19 | 1.60 | 16.29 | -- | |
| PZ-20 | 2.20 | 11.68 | -- | |
| PZ-21 | 1.51 | 14.46 | -- | |
| PZ-22 | -1.60 | 13.58 | -- | |
| PZ-23 | 1.40 | 16.46 | -- | |
| PZ-25 | 1.35 | 23.54 | 19.83 | 3.71 |

Note:
ft bToC - feet below top of casing
NA = PZ's not adjacent to the vent trench
PZ-1 through PZ-22 installed with 5' screen
PZ-23 and PZ-25 installed with 10' screen
PZ-18 through PZ-23 inaccessible during June monitoring event

# Appendix E

## Settlement Plate Monitoring Report

## NYSDEC Settlement Plate Monitoring Termination Letter

REV June 5, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: 2023 Annual Settlement Plate Monitoring Report**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the annual settlement plate monitoring event conducted on March 29, 2023, at the Ferry Point Park Golf Course.

Long-term settlement monitoring initially began following completion of the golf course, which included the importation and placement of significant volumes of fill material in various thicknesses around the site, as well as construction of a large Clubhouse structure. Monitoring is currently conducted on an annual basis to survey and report elevation data, and to determine if significant changes (rise or fall) have occurred at the any of the nine (9) plate locations since the last monitoring event.

Monitoring/surveying was performed in compliance with Section 3.3.2.4 of the October 2013 *Post Construction Custodial Care Plan, DEC Permit No. 2-6006-00014/000013,* and the New York State Department of Environmental Conservation (NYSDEC) letter, dated January 7, 2020, providing approval to modify the settlement plate monitoring frequency from quarterly to annually.

The settlement plate surveying was performed by GEI's subcontractor, Contractors Line and Grade of Elmsford, NY. Enclosed is a copy of the latest report, signed and sealed by a licensed surveyor, providing elevation data since October 2013. A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530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

summary of the last few years since commencing annual monitoring is provided below.

| Date Surveyed | Settlement (feet) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Plate 1 | Plate 2 | Plate 3 | Plate 4 | Plate 5 | Plate 6 | Plate 7 | Plate 8 | Plate 9 |
| **3/5/2020** | -0.04 | -0.01 | 0.00 | 0.01 | -0.02 | -0.11 | -0.02 | 0.01 | -0.04 |
| **4/8/2021** | 0.02 | 0.01 | 0.02 | -0.02 | 0.02 | 0.12 | -0.01 | -0.01 | 0.01 |
| **3/17/2022** | -0.08 | -0.03 | -0.01 | -0.01 | 0.00 | -0.03 | -0.02 | -0.01 | 0.00 |
| **3/29/2023** | 0.04 | 0.00 | 0.02 | -0.02 | 0.01 | -0.01 | -0.01 | 0.02 | -0.01 |
| **Cumulative Settlement (2020-2023)** | -0.02 | -0.02 | 0.03 | -0.04 | 0.03 | -0.08 | -0.04 | 0.00 | 0.00 |
| **Cumulative Settlement Since 10/3/2013** | -0.06 | -0.06 | 0.12 | -0.06 | 0.09 | -0.11 | -0.30 | 0.01 | 0.00 |

Based on review of recent data, GEI notes the following:

- No significant changes in elevation have been observed since the last reporting period or since transitioning to annual monitoring in 2020.
- Cumulative settlement since 2013 is negligible and ranges from 0.00 ft to -0.30 ft across all nine (9) plates.
- Fluctuations in elevation measurements are likely due to human error such as changes between surveying personnel and accuracy of the equipment (generally +/- 0.01 ft).
- Any future minor fluctuations (rise or fall) in plate elevations, indicating potential movement of the overall landfill, do not have an impact on the current site operations.

Based on the March 2023 results and assessment of historic settlement data, GEI recommends to NYCDPR that a request be made to NYSDEC to terminate all future settlement plate monitoring, as long as the former landfill continues to be utilized and maintained in its current condition as a golf course.

If you have any questions, please feel free to contact me at (347) 514–3861.


GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

Sincerely,

GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
January 7, 2020, letter addressed to NYCDPR from NYSDEC re: Settlement Plate Monitoring – Request to Change the Monitoring Frequency from Quarterly to Annual
Settlement Plate Monitoring Report (Contractors Line and Grade LLC)
Ferry Point Golf Course Settlement Plate Locations (KS Engineers, P.C.)

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI


GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Materials Management, Region 2**
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4996 I F: (718) 482-6391
www.dec.ny.gov

January 7, 2020

Marty Rowland, Ph.D., P.E.
Senior Project Manager for Environmental Remediation
New York City Department of Parks and Recreation
Central Project Division, Environmental Unit
Olmstead Center
Flushing Meadows
Corona Park
Flushing, NY 11368

Re: Ferry Point Park Golf Course
Permit No. 2-6006-00014/00013
Settlement Plate Monitoring
Request to Change the Monitoring Frequency from Quarterly to Annual

Dear Mr. Rowland,

New York State Department of Environmental Conservation (Department) staff have reviewed your December 19, 2019 request to modify the Ferry Point Golf Course settlement plate monitoring frequency from quarterly to annual. This request is based on the negligible changes in the settlement plate data from the quarterly reports for the last four years.

After careful review of the settlement plate data from the quarterly reports for the last four years and specific circumstances and history of this site, the Department hereby grants this request to modify the Ferry Point Golf Course settlement plate monitoring frequency from quarterly to annual starting immediately.

If you have any questions you may contact me at 718-482-4996.

Sincerely,

Kenneth B. Brezner

Kenneth B. Brezner, P.E.
Regional Material Management Engineer

ec: J. O'Connell/W. Frank, R2 DMM
K. Zias, NYCDPR
S. Laura, Woodard and Curran

FPP_Settlement_Monitoring_Change_Frequecy_Quaterly_to_Annual.2020-01-07.Letter.docx

# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 1

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 32.96 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 32.95 | -0.01 | -0.01 | -0.12 |
| 11/26/13 | 27 | 32.96 | 0.01 | 0.00 | 0.00 |
| 12/09/13 | 40 | 32.95 | -0.01 | -0.01 | -0.12 |
| 12/23/13 | 54 | 32.96 | 0.01 | 0.00 | 0.00 |
| 01/08/14 | 70 | 32.94 | -0.02 | -0.02 | -0.24 |
| 01/27/14 | 89 | 32.96 | 0.02 | 0.00 | 0.00 |
| 02/19/14 | 112 | 32.95 | -0.01 | -0.01 | -0.12 |
| 03/06/14 | 127 | 32.95 | 0.00 | -0.01 | -0.12 |
| 03/19/14 | 140 | 32.95 | 0.00 | -0.01 | -0.12 |
| 04/03/14 | 156 | 32.95 | 0.00 | -0.01 | -0.12 |
| 04/21/14 | 173 | 32.96 | 0.01 | 0.00 | 0.00 |
| 05/05/14 | 187 | 32.96 | 0.00 | 0.00 | 0.00 |
| 05/30/14 | 212 | 32.95 | -0.01 | -0.01 | -0.12 |
| 06/13/14 | 226 | 32.96 | 0.01 | 0.00 | 0.00 |
| 06/23/14 | 236 | 32.96 | 0.00 | 0.00 | 0.00 |
| 07/09/14 | 252 | 32.96 | 0.00 | 0.00 | 0.00 |
| 07/23/14 | 266 | 32.96 | 0.00 | 0.00 | 0.00 |
| 08/04/14 | 278 | 32.96 | 0.00 | 0.00 | 0.00 |
| 08/21/14 | 295 | 32.96 | 0.00 | 0.00 | 0.00 |
| 09/03/14 | 308 | 32.96 | 0.00 | 0.00 | 0.00 |
| 09/23/14 | 328 | 32.96 | 0.00 | 0.00 | 0.00 |
| 10/06/14 | 341 | 32.96 | 0.00 | 0.00 | 0.00 |
| 10/21/14 | 356 | 32.96 | 0.00 | 0.00 | 0.00 |
| 11/04/14 | 370 | 32.96 | 0.00 | 0.00 | 0.00 |
| 11/18/14 | 384 | 32.95 | -0.01 | -0.01 | -0.12 |
| 12/05/14 | 401 | 32.95 | 0.00 | -0.01 | -0.12 |
| 12/19/14 | 415 | 32.96 | 0.01 | 0.00 | 0.00 |
| 01/09/15 | 436 | 32.96 | 0.00 | 0.00 | 0.00 |
| 01/23/15 | 450 | 32.95 | -0.01 | -0.01 | -0.12 |
| 02/12/15 | 470 | 32.96 | 0.01 | 0.00 | 0.00 |
| 02/27/15 | 485 | 32.96 | 0.00 | 0.00 | 0.00 |
| 03/13/15 | 499 | 32.95 | -0.01 | -0.01 | -0.12 |
| 03/27/15 | 513 | 32.95 | 0.00 | -0.01 | -0.12 |
| 04/10/15 | 527 | 32.96 | 0.01 | 0.00 | 0.00 |
| 04/24/15 | 541 | 32.96 | 0.00 | 0.00 | 0.00 |
| 06/19/15 | 597 | 32.96 | 0.00 | 0.00 | 0.00 |
| 07/07/15 | 615 | 32.96 | 0.00 | 0.00 | 0.00 |
| 07/17/15 | 625 | 32.96 | 0.00 | 0.00 | 0.00 |
| 07/31/15 | 639 | 32.96 | 0.00 | 0.00 | 0.00 |
| 08/14/15 | 653 | 32.96 | 0.00 | 0.00 | 0.00 |
| 08/28/15 | 667 | 32.96 | 0.00 | 0.00 | 0.00 |
| 09/11/15 | 681 | 32.96 | 0.00 | 0.00 | 0.00 |
| 09/25/15 | 695 | 32.96 | 0.00 | 0.00 | 0.00 |
| 10/09/15 | 709 | 32.96 | 0.00 | 0.00 | 0.00 |
| 10/23/15 | 723 | 32.95 | -0.01 | -0.01 | -0.12 |
| 11/06/15 | 737 | 32.95 | 0.00 | -0.01 | -0.12 |
| 11/20/15 | 751 | 32.95 | 0.00 | -0.01 | -0.12 |
| 12/04/15 | 765 | 32.95 | 0.00 | -0.01 | -0.12 |
| 12/18/15 | 779 | 32.95 | 0.00 | -0.01 | -0.12 |
| 01/07/16 | 799 | 32.95 | 0.00 | -0.01 | -0.12 |
| 01/22/16 | 814 | 32.95 | 0.00 | -0.01 | -0.12 |
| 02/08/16 | 831 | 32.94 | -0.01 | -0.02 | -0.24 |
| 03/04/16 | 856 | 32.95 | 0.01 | -0.01 | -0.12 |
| 03/18/16 | 870 | 32.95 | 0.00 | -0.01 | -0.12 |
| 04/01/16 | 884 | 32.94 | -0.01 | -0.02 | -0.24 |
| 04/15/16 | 898 | 32.95 | 0.01 | -0.01 | -0.12 |
| 04/29/16 | 912 | 32.95 | 0.00 | -0.01 | -0.12 |
| 05/13/16 | 926 | 32.95 | 0.00 | -0.01 | -0.12 |
| 05/27/16 | 940 | 32.95 | 0.00 | -0.01 | -0.12 |
| 09/08/16 | 1044 | 32.95 | 0.00 | -0.01 | -0.12 |
| 01/12/17 | 1170 | 32.94 | -0.01 | -0.02 | -0.24 |
| 03/23/17 | 1240 | 32.94 | 0.00 | -0.02 | -0.24 |
| 06/17/17 | 1326 | 32.95 | 0.01 | -0.01 | -0.12 |
| 09/19/17 | 1420 | 32.97 | 0.02 | 0.01 | 0.12 |
| 03/12/18 | 1594 | 32.94 | -0.03 | -0.02 | -0.24 |
| 03/28/18 | 1610 | 32.94 | 0.00 | -0.01 | -0.12 |
| 06/15/18 | 1689 | 32.94 | 0.00 | -0.01 | -0.12 |
| 09/19/18 | 1785 | 32.94 | 0.00 | -0.01 | -0.12 |
| 01/10/19 | 1898 | 32.92 | -0.02 | -0.04 | -0.48 |
| 03/19/19 | 1966 | 32.94 | 0.02 | -0.01 | -0.12 |
| 07/15/19 | 2084 | 32.94 | 0.00 | -0.01 | -0.12 |
| 11/19/19 | 2211 | 32.96 | 0.00 | 0.02 | 0.24 |
| 03/05/20 | 2318 | 32.92 | -0.04 | -0.04 | -0.48 |
| 04/08/21 | 2717 | 32.94 | 0.02 | -0.02 | -0.24 |
| 03/17/22 | 3060 | 32.86 | -0.08 | -0.10 | -1.20 |
| 03/29/23 | 3423 | 32.90 | 0.04 | -0.06 | -0.72 |



# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 2

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 46.27 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 46.27 | 0.00 | 0.00 | 0.00 |
| 11/26/13 | 27 | 46.26 | -0.01 | -0.01 | -0.12 |
| 12/09/13 | 40 | 46.26 | 0.00 | -0.01 | -0.12 |
| 12/23/13 | 54 | 46.27 | 0.01 | 0.00 | 0.00 |
| 01/08/14 | 70 | 46.27 | 0.00 | 0.00 | 0.00 |
| 01/27/14 | 89 | 46.27 | 0.00 | 0.00 | 0.00 |
| 02/19/14 | 112 | 46.27 | 0.00 | 0.00 | 0.00 |
| 03/06/14 | 127 | 46.26 | -0.01 | -0.01 | -0.12 |
| 03/19/14 | 140 | 46.27 | 0.01 | 0.00 | 0.00 |
| 04/03/14 | 156 | 46.27 | 0.00 | 0.00 | 0.00 |
| 04/21/14 | 173 | 46.26 | -0.01 | -0.01 | -0.12 |
| 05/05/14 | 187 | 46.27 | 0.01 | 0.00 | 0.00 |
| 05/30/14 | 212 | 46.26 | -0.01 | -0.01 | -0.12 |
| 06/13/14 | 226 | 46.25 | -0.01 | -0.02 | -0.24 |
| 06/23/14 | 236 | 46.25 | 0.00 | -0.02 | -0.24 |
| 07/09/14 | 252 | 46.26 | 0.01 | -0.01 | -0.12 |
| 07/23/14 | 266 | 46.25 | -0.01 | -0.02 | -0.24 |
| 08/04/14 | 278 | 46.25 | 0.00 | -0.02 | -0.24 |
| 08/21/14 | 295 | 46.24 | -0.01 | -0.03 | -0.36 |
| 09/03/14 | 308 | 46.25 | 0.01 | -0.02 | -0.24 |
| 09/23/14 | 328 | 46.25 | 0.00 | -0.02 | -0.24 |
| 10/06/14 | 341 | 46.25 | 0.00 | -0.02 | -0.24 |
| 10/21/14 | 356 | 46.25 | 0.00 | -0.02 | -0.24 |
| 11/04/14 | 370 | 46.25 | 0.00 | -0.02 | -0.24 |
| 11/18/14 | 384 | 46.26 | 0.01 | -0.01 | -0.12 |
| 12/05/14 | 401 | 46.26 | 0.00 | -0.01 | -0.12 |
| 12/19/14 | 415 | 46.25 | -0.01 | -0.02 | -0.24 |
| 01/09/15 | 436 | 46.26 | 0.01 | -0.01 | -0.12 |
| 01/23/15 | 450 | 46.26 | 0.00 | -0.01 | -0.12 |
| 02/12/15 | 470 | 46.25 | -0.01 | -0.02 | -0.24 |
| 02/27/15 | 485 | 46.25 | 0.00 | -0.02 | -0.24 |
| 03/13/15 | 499 | 46.25 | 0.00 | -0.02 | -0.24 |
| 03/27/15 | 513 | 46.25 | 0.00 | -0.02 | -0.24 |
| 04/10/15 | 527 | 46.26 | 0.01 | -0.01 | -0.12 |
| 04/24/15 | 541 | 46.25 | -0.01 | -0.02 | -0.24 |
| 06/19/15 | 597 | 46.24 | -0.01 | -0.03 | -0.36 |
| 07/07/15 | 615 | 46.24 | 0.00 | -0.03 | -0.36 |
| 07/17/15 | 625 | 46.25 | 0.01 | -0.02 | -0.24 |
| 07/31/15 | 639 | 46.25 | 0.00 | -0.02 | -0.24 |
| 08/14/15 | 653 | 46.25 | 0.00 | -0.02 | -0.24 |
| 08/28/15 | 667 | 46.25 | 0.00 | -0.02 | -0.24 |
| 09/11/15 | 681 | 46.25 | 0.00 | -0.02 | -0.24 |
| 09/25/15 | 695 | 46.25 | 0.00 | -0.02 | -0.24 |
| 10/09/15 | 709 | 46.24 | -0.01 | -0.03 | -0.36 |
| 10/23/15 | 723 | 46.24 | 0.00 | -0.03 | -0.36 |
| 11/06/15 | 737 | 46.24 | 0.00 | -0.03 | -0.36 |
| 11/20/15 | 751 | 46.24 | 0.00 | -0.03 | -0.36 |
| 12/04/15 | 765 | 46.24 | 0.00 | -0.03 | -0.36 |
| 12/18/15 | 779 | 46.24 | 0.00 | -0.03 | -0.36 |
| 01/07/16 | 799 | 46.24 | 0.00 | -0.03 | -0.36 |
| 01/22/16 | 814 | 46.25 | 0.01 | -0.02 | -0.24 |
| 02/08/16 | 831 | 46.24 | -0.01 | -0.03 | -0.36 |
| 03/04/16 | 856 | 46.24 | 0.00 | -0.03 | -0.36 |
| 03/18/16 | 870 | 46.24 | 0.00 | -0.03 | -0.36 |
| 04/01/16 | 884 | 46.24 | 0.00 | -0.03 | -0.36 |
| 04/15/16 | 898 | 46.24 | 0.00 | -0.03 | -0.36 |
| 04/29/16 | 912 | 46.24 | 0.00 | -0.03 | -0.36 |
| 05/13/16 | 926 | 46.24 | 0.00 | -0.03 | -0.36 |
| 05/27/16 | 940 | 46.24 | 0.00 | -0.03 | -0.36 |
| 09/08/16 | 1044 | 46.24 | 0.00 | -0.03 | -0.36 |
| 01/12/17 | 1170 | 46.24 | 0.00 | -0.03 | -0.36 |
| 03/23/17 | 1240 | 46.24 | 0.00 | -0.03 | -0.36 |
| 06/17/17 | 1326 | 46.24 | 0.00 | -0.03 | -0.36 |
| 09/19/17 | 1420 | 46.23 | -0.01 | -0.04 | -0.48 |
| 03/12/18 | 1594 | 46.24 | 0.01 | -0.03 | -0.36 |
| 03/28/18 | 1610 | 46.24 | 0.00 | -0.03 | -0.36 |
| 06/15/18 | 1689 | 46.25 | 0.01 | -0.02 | -0.24 |
| 09/19/18 | 1785 | 46.22 | -0.03 | -0.05 | -0.60 |
| 01/10/19 | 1898 | 46.23 | 0.01 | -0.04 | -0.48 |
| 03/19/19 | 1966 | 46.23 | 0.00 | -0.04 | -0.48 |
| 07/15/19 | 2084 | 46.23 | 0.00 | -0.04 | -0.48 |
| 11/19/19 | 2211 | 46.24 | -0.03 | -0.03 | -0.36 |
| 03/05/20 | 2318 | 46.23 | -0.01 | -0.04 | -0.48 |
| 04/08/21 | 2717 | 46.24 | 0.01 | -0.03 | -0.36 |
| 03/17/22 | 3060 | 46.21 | -0.03 | -0.06 | -0.72 |
| 03/29/23 | 3423 | 46.21 | 0.00 | -0.06 | -0.72 |

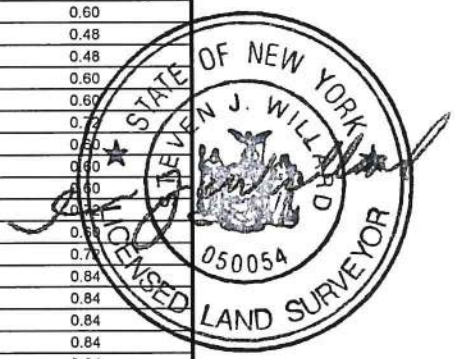


# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 3

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 29.65 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 29.65 | 0.00 | 0.00 | 0.00 |
| 11/26/13 | 27 | 29.65 | 0.00 | 0.00 | 0.00 |
| 12/09/13 | 40 | 29.66 | 0.01 | 0.01 | 0.12 |
| 12/23/13 | 54 | 29.65 | -0.01 | 0.00 | 0.00 |
| 01/08/14 | 70 | 29.67 | 0.02 | 0.02 | 0.24 |
| 01/27/14 | 89 | 29.66 | -0.01 | 0.01 | 0.12 |
| 02/19/14 | 112 | 29.66 | 0.00 | 0.01 | 0.12 |
| 03/06/14 | 127 | 29.67 | 0.01 | 0.02 | 0.24 |
| 03/19/14 | 140 | 29.66 | -0.01 | 0.01 | 0.12 |
| 04/03/14 | 156 | 29.66 | 0.00 | 0.01 | 0.12 |
| 04/21/14 | 173 | 29.67 | 0.01 | 0.02 | 0.24 |
| 05/05/14 | 187 | 29.67 | 0.00 | 0.02 | 0.24 |
| 05/30/14 | 212 | 29.66 | -0.01 | 0.01 | 0.12 |
| 06/13/14 | 226 | 29.67 | 0.01 | 0.02 | 0.24 |
| 06/23/14 | 236 | 29.67 | 0.00 | 0.02 | 0.24 |
| 07/09/14 | 252 | 29.66 | -0.01 | 0.01 | 0.12 |
| 07/23/14 | 266 | 29.67 | 0.01 | 0.02 | 0.24 |
| 08/04/14 | 278 | 29.67 | 0.00 | 0.02 | 0.24 |
| 08/21/14 | 295 | 29.67 | 0.00 | 0.02 | 0.24 |
| 09/03/14 | 308 | 29.67 | 0.00 | 0.02 | 0.24 |
| 09/23/14 | 328 | 29.67 | 0.00 | 0.02 | 0.24 |
| 10/06/14 | 341 | 29.67 | 0.00 | 0.02 | 0.24 |
| 10/21/14 | 356 | 29.68 | 0.01 | 0.03 | 0.36 |
| 11/04/14 | 370 | 29.68 | 0.00 | 0.03 | 0.36 |
| 11/18/14 | 384 | 29.67 | -0.01 | 0.02 | 0.24 |
| 12/05/14 | 401 | 29.68 | 0.01 | 0.03 | 0.36 |
| 12/19/14 | 415 | 29.67 | -0.01 | 0.02 | 0.24 |
| 01/09/15 | 436 | 29.68 | 0.01 | 0.03 | 0.36 |
| 01/23/15 | 450 | 29.67 | -0.01 | 0.02 | 0.24 |
| 02/12/15 | 470 | 29.67 | 0.00 | 0.02 | 0.24 |
| 02/27/15 | 485 | 29.67 | 0.00 | 0.02 | 0.24 |
| 03/13/15 | 499 | 29.67 | 0.00 | 0.02 | 0.24 |
| 03/27/15 | 513 | 29.68 | 0.01 | 0.03 | 0.36 |
| 04/10/15 | 527 | 29.68 | 0.00 | 0.03 | 0.36 |
| 04/24/15 | 541 | 29.68 | 0.00 | 0.03 | 0.36 |
| 06/19/15 | 597 | 29.68 | 0.00 | 0.03 | 0.36 |
| 07/07/15 | 615 | 29.68 | 0.00 | 0.03 | 0.36 |
| 07/17/15 | 625 | 29.68 | 0.00 | 0.03 | 0.36 |
| 07/31/15 | 639 | 29.68 | 0.00 | 0.03 | 0.36 |
| 08/14/15 | 653 | 29.68 | 0.00 | 0.03 | 0.36 |
| 08/28/15 | 667 | 29.68 | 0.00 | 0.03 | 0.36 |
| 09/11/15 | 681 | 29.68 | 0.00 | 0.03 | 0.36 |
| 09/25/15 | 695 | 29.68 | 0.00 | 0.03 | 0.36 |
| 10/09/15 | 709 | 29.69 | 0.01 | 0.04 | 0.48 |
| 10/23/15 | 723 | 29.70 | 0.01 | 0.05 | 0.60 |
| 11/06/15 | 737 | 29.69 | -0.01 | 0.04 | 0.48 |
| 11/20/15 | 751 | 29.69 | 0.00 | 0.04 | 0.48 |
| 12/04/15 | 765 | 29.70 | 0.01 | 0.05 | 0.60 |
| 12/18/15 | 779 | 29.70 | 0.00 | 0.05 | 0.60 |
| 01/07/16 | 799 | 29.70 | 0.00 | 0.05 | 0.60 |
| 01/22/16 | 814 | 29.70 | 0.00 | 0.05 | 0.60 |
| 02/08/16 | 831 | 29.70 | 0.00 | 0.05 | 0.60 |
| 03/04/16 | 856 | 29.69 | -0.01 | 0.04 | 0.48 |
| 03/18/16 | 870 | 29.69 | 0.00 | 0.04 | 0.48 |
| 04/01/16 | 884 | 29.70 | 0.01 | 0.05 | 0.60 |
| 04/15/16 | 898 | 29.70 | 0.00 | 0.05 | 0.60 |
| 04/29/16 | 912 | 29.71 | 0.01 | 0.06 | 0.72 |
| 05/13/16 | 926 | 29.70 | -0.01 | 0.05 | 0.60 |
| 05/27/16 | 940 | 29.70 | 0.00 | 0.05 | 0.60 |
| 09/08/16 | 1044 | 29.70 | 0.00 | 0.05 | 0.60 |
| 01/12/17 | 1170 | 29.71 | 0.01 | 0.06 | 0.72 |
| 03/23/17 | 1240 | 29.70 | -0.01 | 0.05 | 0.60 |
| 06/17/17 | 1326 | 29.71 | 0.01 | 0.06 | 0.72 |
| 09/20/17 | 1420 | 29.72 | 0.01 | 0.07 | 0.84 |
| 03/12/18 | 1594 | 29.72 | 0.00 | 0.07 | 0.84 |
| 03/28/18 | 1610 | 29.72 | 0.00 | 0.07 | 0.84 |
| 06/15/18 | 1689 | 29.72 | 0.00 | 0.07 | 0.84 |
| 09/19/18 | 1785 | 29.72 | 0.00 | 0.07 | 0.84 |
| 01/10/19 | 1898 | 29.73 | 0.01 | 0.08 | 0.96 |
| 03/19/19 | 1966 | 29.73 | 0.00 | 0.08 | 0.96 |
| 07/15/19 | 2084 | 29.72 | -0.01 | 0.07 | 0.84 |
| 11/19/19 | 2211 | 29.74 | 0.02 | 0.09 | 1.08 |
| 03/05/20 | 2318 | 29.74 | 0.00 | 0.09 | 1.08 |
| 04/08/21 | 2717 | 29.76 | 0.02 | 0.11 | 1.32 |
| 03/17/22 | 3060 | 29.75 | -0.01 | 0.10 | 1.20 |
| 03/29/23 | 3437 | 29.77 | 0.02 | 0.12 | 1.44 |



# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 4

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 47.56 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 47.56 | 0.00 | 0.00 | 0.00 |
| 11/26/13 | 27 | 47.56 | 0.00 | 0.00 | 0.00 |
| 12/09/13 | 40 | 47.56 | 0.00 | 0.00 | 0.00 |
| 12/23/13 | 54 | 47.56 | 0.00 | 0.00 | 0.00 |
| 01/08/14 | 70 | 47.55 | -0.01 | -0.01 | -0.12 |
| 01/27/14 | 89 | 47.55 | 0.00 | -0.01 | -0.12 |
| 02/19/14 | 112 | 47.55 | 0.00 | -0.01 | -0.12 |
| 03/06/14 | 127 | 47.55 | 0.00 | -0.01 | -0.12 |
| 03/19/14 | 140 | 47.55 | 0.00 | -0.01 | -0.12 |
| 04/03/14 | 156 | 47.56 | 0.01 | 0.00 | 0.00 |
| 04/21/14 | 173 | 47.55 | -0.01 | -0.01 | -0.12 |
| 05/05/14 | 187 | 47.55 | 0.00 | -0.01 | -0.12 |
| 05/30/14 | 212 | 47.55 | 0.00 | -0.01 | -0.12 |
| 06/13/14 | 226 | 47.55 | 0.00 | -0.01 | -0.12 |
| 06/23/14 | 236 | 47.55 | 0.00 | -0.01 | -0.12 |
| 07/09/14 | 252 | 47.55 | 0.00 | -0.01 | -0.12 |
| 07/23/14 | 266 | 47.53 | -0.02 | -0.03 | -0.36 |
| 08/04/14 | 278 | 47.53 | 0.00 | -0.03 | -0.36 |
| 08/21/14 | 295 | 47.54 | 0.01 | -0.02 | -0.24 |
| 09/03/14 | 308 | 47.54 | 0.00 | -0.02 | -0.24 |
| 09/23/14 | 328 | 47.53 | -0.01 | -0.03 | -0.36 |
| 10/06/14 | 341 | 47.54 | 0.01 | -0.02 | -0.24 |
| 10/21/14 | 356 | 47.54 | 0.00 | -0.02 | -0.24 |
| 11/04/14 | 370 | 47.54 | 0.00 | -0.02 | -0.24 |
| 11/18/14 | 384 | 47.54 | 0.00 | -0.02 | -0.24 |
| 12/05/14 | 401 | 47.53 | -0.01 | -0.03 | -0.36 |
| 12/19/14 | 415 | 47.53 | 0.00 | -0.03 | -0.36 |
| 01/09/15 | 436 | 47.54 | 0.01 | -0.02 | -0.24 |
| 01/23/15 | 450 | 47.54 | 0.00 | -0.02 | -0.24 |
| 02/12/15 | 470 | 47.53 | -0.01 | -0.03 | -0.36 |
| 02/27/15 | 485 | 47.54 | 0.01 | -0.02 | -0.24 |
| 03/13/15 | 499 | 47.54 | 0.00 | -0.02 | -0.24 |
| 03/27/15 | 513 | 47.55 | 0.01 | -0.01 | -0.12 |
| 04/10/15 | 527 | 47.54 | -0.01 | -0.02 | -0.24 |
| 04/24/15 | 541 | 47.54 | 0.00 | -0.02 | -0.24 |
| 06/19/15 | 597 | 47.53 | -0.01 | -0.03 | -0.36 |
| 07/07/15 | 615 | 47.53 | 0.00 | -0.03 | -0.36 |
| 07/17/15 | 625 | 47.54 | 0.01 | -0.02 | -0.24 |
| 07/31/15 | 639 | 47.52 | -0.02 | -0.04 | -0.48 |
| 08/14/15 | 653 | 47.52 | 0.00 | -0.04 | -0.48 |
| 08/28/15 | 667 | 47.52 | 0.00 | -0.04 | -0.48 |
| 09/11/15 | 681 | 47.52 | 0.00 | -0.04 | -0.48 |
| 09/25/15 | 695 | 47.52 | 0.00 | -0.04 | -0.48 |
| 10/09/15 | 709 | 47.52 | 0.00 | -0.04 | -0.48 |
| 10/23/15 | 723 | 47.51 | -0.01 | -0.05 | -0.60 |
| 11/06/15 | 737 | 47.53 | 0.02 | -0.03 | -0.36 |
| 11/20/15 | 751 | 47.55 | 0.02 | -0.01 | -0.12 |
| 12/04/15 | 765 | 47.55 | 0.00 | -0.01 | -0.12 |
| 12/18/15 | 779 | 47.55 | 0.00 | -0.01 | -0.12 |
| 01/07/16 | 799 | 47.55 | 0.00 | -0.01 | -0.12 |
| 01/22/16 | 814 | 47.54 | -0.01 | -0.02 | -0.24 |
| 02/08/16 | 831 | 47.56 | 0.02 | 0.00 | 0.00 |
| 03/04/16 | 856 | 47.57 | 0.01 | 0.01 | 0.12 |
| 03/18/16 | 870 | 47.56 | 0.00 | 0.00 | 0.00 |
| 04/01/16 | 884 | 47.56 | 0.00 | 0.00 | 0.00 |
| 04/15/16 | 898 | 47.57 | 0.01 | 0.01 | 0.12 |
| 04/29/16 | 912 | 47.56 | -0.01 | 0.00 | 0.00 |
| 05/13/16 | 926 | 47.56 | 0.00 | 0.00 | 0.00 |
| 05/27/16 | 940 | 47.57 | 0.01 | 0.01 | 0.12 |
| 09/08/16 | 1044 | 47.56 | -0.01 | 0.00 | 0.00 |
| 01/12/17 | 1170 | 47.58 | 0.01 | 0.02 | 0.24 |
| 03/23/17 | 1240 | 47.58 | 0.00 | 0.02 | 0.24 |
| 06/17/17 | 1326 | 47.56 | -0.02 | 0.00 | 0.00 |
| 09/19/17 | 1420 | 47.54 | -0.02 | -0.02 | -0.24 |
| 03/12/18 | 1594 | 47.54 | 0.00 | -0.02 | -0.24 |
| 03/28/18 | 1610 | 47.54 | 0.00 | -0.02 | -0.24 |
| 06/15/18 | 1689 | 47.52 | -0.02 | -0.04 | -0.48 |
| 09/19/18 | 1785 | 47.51 | -0.01 | -0.05 | -0.60 |
| 01/10/19 | 1898 | 47.51 | 0.00 | -0.05 | -0.60 |
| 03/19/19 | 1966 | 47.53 | 0.02 | -0.03 | -0.36 |
| 07/15/19 | 2084 | 47.52 | -0.01 | -0.04 | -0.48 |
| 11/19/19 | 2211 | 47.54 | 0.02 | -0.02 | -0.24 |
| 03/05/20 | 2318 | 47.55 | 0.01 | -0.01 | -0.12 |
| 04/08/21 | 2717 | 47.53 | -0.02 | -0.03 | -0.36 |
| 03/17/22 | 3060 | 47.52 | -0.01 | -0.04 | -0.48 |
| 03/29/23 | 3437 | 47.50 | -0.02 | -0.06 | -0.72 |



# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 5

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 34.78 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 34.78 | 0.00 | 0.00 | 0.00 |
| 11/26/13 | 27 | 34.77 | -0.01 | -0.01 | -0.12 |
| 12/09/13 | 40 | 34.77 | 0.00 | -0.01 | -0.12 |
| 12/23/13 | 54 | 34.78 | 0.01 | 0.00 | 0.00 |
| 01/08/14 | 70 | 34.77 | -0.01 | -0.01 | -0.12 |
| 01/27/14 | 89 | 34.78 | 0.01 | 0.00 | 0.00 |
| 02/19/14 | 112 | 34.78 | 0.00 | 0.00 | 0.00 |
| 03/06/14 | 127 | 34.78 | 0.00 | 0.00 | 0.00 |
| 03/19/14 | 140 | 34.78 | 0.00 | 0.00 | 0.00 |
| 04/03/14 | 156 | 34.77 | -0.01 | -0.01 | -0.12 |
| 04/21/14 | 173 | 34.78 | 0.01 | 0.00 | 0.00 |
| 05/05/14 | 187 | 34.78 | 0.00 | 0.00 | 0.00 |
| 05/30/14 | 212 | 34.78 | 0.00 | 0.00 | 0.00 |
| 06/13/14 | 226 | 34.78 | 0.00 | 0.00 | 0.00 |
| 06/23/14 | 236 | 34.78 | 0.00 | 0.00 | 0.00 |
| 07/09/14 | 252 | 34.78 | 0.00 | 0.00 | 0.00 |
| 07/23/14 | 266 | 34.77 | -0.01 | -0.01 | -0.12 |
| 08/04/14 | 278 | 34.77 | 0.00 | -0.01 | -0.12 |
| 08/21/14 | 295 | 34.77 | 0.00 | -0.01 | -0.12 |
| 09/03/14 | 308 | 34.78 | 0.01 | 0.00 | 0.00 |
| 09/23/14 | 328 | 34.77 | -0.01 | -0.01 | -0.12 |
| 10/06/14 | 341 | 34.77 | 0.00 | -0.01 | -0.12 |
| 10/21/14 | 356 | 34.77 | 0.00 | -0.01 | -0.12 |
| 11/04/14 | 370 | 34.78 | 0.01 | 0.00 | 0.00 |
| 11/18/14 | 384 | 34.77 | -0.01 | -0.01 | -0.12 |
| 12/05/14 | 401 | 34.78 | 0.01 | 0.00 | 0.00 |
| 12/19/14 | 415 | 34.77 | -0.01 | -0.01 | -0.12 |
| 01/09/15 | 436 | 34.78 | 0.01 | 0.00 | 0.00 |
| 01/23/15 | 450 | 34.78 | 0.00 | 0.00 | 0.00 |
| 02/12/15 | 470 | 34.78 | 0.00 | 0.00 | 0.00 |
| 02/27/15 | 485 | 34.78 | 0.00 | 0.00 | 0.00 |
| 03/13/15 | 499 | 34.79 | 0.01 | 0.01 | 0.12 |
| 03/27/15 | 513 | 34.78 | -0.01 | 0.00 | 0.00 |
| 04/10/15 | 527 | 34.78 | 0.00 | 0.00 | 0.00 |
| 04/24/15 | 541 | 34.79 | 0.01 | 0.01 | 0.12 |
| 06/19/15 | 597 | 34.78 | -0.01 | 0.00 | 0.00 |
| 07/07/15 | 615 | 34.78 | 0.00 | 0.00 | 0.00 |
| 07/17/15 | 625 | 34.78 | 0.00 | 0.00 | 0.00 |
| 07/31/15 | 639 | 34.78 | 0.00 | 0.00 | 0.00 |
| 08/14/15 | 653 | 34.78 | 0.00 | 0.00 | 0.00 |
| 08/28/15 | 667 | 34.78 | 0.00 | 0.00 | 0.00 |
| 09/11/15 | 681 | 34.78 | 0.00 | 0.00 | 0.00 |
| 09/25/15 | 695 | 34.79* | 0.01 | 0.01 | 0.12 |
| 10/09/15 | 709 | 34.80 | 0.01 | 0.02 | 0.24 |
| 10/23/15 | 723 | 34.81 | 0.01 | 0.03 | 0.36 |
| 11/06/15 | 737 | 34.81 | 0.00 | 0.03 | 0.36 |
| 11/20/15 | 751 | 34.80 | -0.01 | 0.02 | 0.24 |
| 12/04/15 | 765 | 34.79 | -0.01 | 0.01 | 0.12 |
| 12/18/15 | 779 | 34.79 | 0.00 | 0.01 | 0.12 |
| 01/07/16 | 799 | 34.79 | 0.00 | 0.01 | 0.12 |
| 01/22/16 | 814 | 34.80 | 0.01 | 0.02 | 0.24 |
| 02/08/16 | 831 | 34.80 | 0.00 | 0.02 | 0.24 |
| 03/04/16 | 856 | 34.78 | -0.02 | 0.00 | 0.00 |
| 03/18/16 | 870 | 34.80 | 0.02 | 0.02 | 0.24 |
| 04/01/16 | 884 | 34.78 | -0.02 | 0.00 | 0.00 |
| 04/15/16 | 898 | 34.80 | 0.02 | 0.02 | 0.24 |
| 04/29/16 | 912 | 34.79 | -0.01 | 0.01 | 0.12 |
| 05/13/16 | 926 | 34.79 | 0.00 | 0.01 | 0.12 |
| 05/27/16 | 940 | 34.82 | 0.03 | 0.04 | 0.48 |
| 09/08/16 | 1044 | 34.80 | -0.02 | 0.02 | 0.24 |
| 01/12/17 | 1170 | 34.80 | -0.02 | 0.02 | 0.24 |
| 03/23/17 | 1240 | 34.82 | 0.02 | 0.04 | 0.48 |
| 06/17/17 | 1326 | 34.82 | 0.00 | 0.04 | 0.48 |
| 09/19/17 | 1420 | 34.82 | 0.00 | 0.04 | 0.48 |
| 03/12/18 | 1594 | 34.82 | 0.00 | 0.04 | 0.48 |
| 03/28/18 | 1610 | 34.82 | 0.00 | 0.04 | 0.48 |
| 06/15/18 | 1689 | 34.83 | 0.01 | 0.05 | 0.60 |
| 09/19/18 | 1785 | 34.83 | 0.00 | 0.05 | 0.60 |
| 01/10/19 | 1898 | 34.84 | 0.01 | 0.06 | 0.72 |
| 03/19/19 | 1966 | 34.83 | -0.01 | 0.05 | 0.60 |
| 07/15/19 | 2084 | 34.85 | 0.02 | 0.07 | 0.84 |
| 11/19/19 | 2211 | 34.86 | 0.01 | 0.08 | 0.96 |
| 03/05/20 | 2318 | 34.84 | -0.02 | 0.06 | 0.72 |
| 04/08/21 | 2717 | 34.86 | 0.02 | 0.08 | 0.96 |
| 03/17/22 | 3060 | 34.86 | 0.00 | 0.08 | 0.96 |
| 03/29/23 | 3437 | 34.87 | 0.01 | 0.09 | 1.08 |



# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 6

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 32.06 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 32.06 | 0.00 | 0.00 | 0.00 |
| 11/26/13 | 27 | 32.05 | -0.01 | -0.01 | -0.12 |
| 12/09/13 | 40 | 32.05 | 0.00 | -0.01 | -0.12 |
| 12/23/13 | 54 | 32.05 | 0.00 | -0.01 | -0.12 |
| 01/08/14 | 70 | 32.05 | 0.00 | -0.01 | -0.12 |
| 01/27/14 | 89 | 32.05 | 0.00 | -0.01 | -0.12 |
| 02/19/14 | 112 | 32.05 | 0.00 | -0.01 | -0.12 |
| 03/06/14 | 127 | 32.05 | 0.00 | -0.01 | -0.12 |
| 03/19/14 | 140 | 32.04 | -0.01 | -0.02 | -0.24 |
| 04/03/14 | 156 | 32.04 | 0.00 | -0.02 | -0.24 |
| 04/21/14 | 173 | 32.04 | 0.00 | -0.02 | -0.24 |
| 05/05/14 | 187 | 32.05 | 0.01 | -0.01 | -0.12 |
| 05/30/14 | 212 | 32.04 | -0.01 | -0.02 | -0.24 |
| 06/13/14 | 226 | 32.04 | 0.00 | -0.02 | -0.24 |
| 06/23/14 | 236 | 32.04 | 0.00 | -0.02 | -0.24 |
| 07/09/14 | 252 | 32.03 | -0.01 | -0.03 | -0.36 |
| 07/23/14 | 266 | 32.04 | 0.01 | -0.02 | -0.24 |
| 08/04/14 | 278 | 32.04 | 0.00 | -0.02 | -0.24 |
| 08/21/14 | 295 | 32.04 | 0.00 | -0.02 | -0.24 |
| 09/03/14 | 308 | 32.04 | 0.00 | -0.02 | -0.24 |
| 09/23/14 | 328 | 32.04 | 0.00 | -0.02 | -0.24 |
| 10/06/14 | 341 | 32.04 | 0.00 | -0.02 | -0.24 |
| 10/21/14 | 356 | 32.03 | -0.01 | -0.03 | -0.36 |
| 11/04/14 | 370 | 32.03 | 0.00 | -0.03 | -0.36 |
| 11/18/14 | 384 | 32.03 | 0.00 | -0.03 | -0.36 |
| 12/05/14 | 401 | 32.03 | 0.00 | -0.03 | -0.36 |
| 12/19/14 | 415 | 32.03 | 0.00 | -0.03 | -0.36 |
| 01/09/15 | 436 | 32.04 | 0.01 | -0.02 | -0.24 |
| 01/23/15 | 450 | 32.03 | -0.01 | -0.03 | -0.36 |
| 02/12/15 | 470 | n/a | n/a | n/a | n/a |
| 02/27/15 | 485 | n/a | n/a | n/a | n/a |
| 03/13/15 | 499 | 32.03 | 0.00 | -0.03 | -0.36 |
| 03/27/15 | 513 | 32.03 | 0.00 | -0.03 | -0.36 |
| 04/10/15 | 527 | 32.03 | 0.00 | -0.03 | -0.36 |
| 04/24/15 | 541 | 32.03 | 0.00 | -0.03 | -0.36 |
| 06/19/15 | 597 | 32.03 | 0.00 | -0.03 | -0.36 |
| 07/07/15 | 615 | 32.04 | 0.01 | -0.02 | -0.24 |
| 07/17/15 | 625 | 32.04 | 0.00 | -0.02 | -0.24 |
| 07/31/15 | 639 | 32.02 | -0.02 | -0.04 | -0.48 |
| 08/14/15 | 653 | 32.02 | 0.00 | -0.04 | -0.48 |
| 08/28/15 | 667 | 32.02 | 0.00 | -0.04 | -0.48 |
| 09/11/15 | 681 | 32.02 | 0.00 | -0.04 | -0.48 |
| 09/25/15 | 695 | 32.02 | 0.00 | -0.04 | -0.48 |
| 10/09/15 | 709 | 32.02 | 0.00 | -0.04 | -0.48 |
| 10/23/15 | 723 | 32.02 | 0.00 | -0.04 | -0.48 |
| 11/06/15 | 737 | 32.02 | 0.00 | -0.04 | -0.48 |
| 11/20/15 | 751 | 32.02 | 0.00 | -0.04 | -0.48 |
| 12/04/15 | 765 | 32.03 | 0.01 | -0.03 | -0.36 |
| 12/18/15 | 779 | 32.03 | 0.00 | -0.03 | -0.36 |
| 01/07/16 | 799 | 32.03 | 0.00 | -0.03 | -0.36 |
| 01/22/16 | 814 | 32.04 | 0.01 | -0.02 | -0.24 |
| 02/08/16 | 831 | 32.03 | -0.01 | -0.03 | -0.36 |
| 03/04/16 | 856 | 32.03 | 0.00 | -0.03 | -0.36 |
| 03/18/16 | 870 | 32.01 | -0.02 | -0.05 | -0.60 |
| 04/01/16 | 884 | 31.99 | -0.02 | -0.07 | -0.84 |
| 04/15/16 | 898 | 32.02 | 0.03 | -0.04 | -0.48 |
| 04/29/16 | 912 | 32.01 | -0.01 | -0.05 | -0.60 |
| 05/13/16 | 926 | 32.02 | 0.01 | -0.04 | -0.48 |
| 05/27/16 | 940 | 32.01 | -0.01 | -0.05 | -0.60 |
| 09/08/16 | 1044 | 32.01 | 0.00 | -0.05 | -0.60 |
| 01/12/17 | 1170 | 32.01 | 0.00 | -0.05 | -0.60 |
| 03/23/17 | 1240 | 32.00 | -0.01 | -0.06 | -0.72 |
| 06/17/17 | 1326 | 32.00 | 0.00 | -0.06 | -0.72 |
| 09/19/17 | 1420 | 32.00 | 0.00 | -0.06 | -0.72 |
| 03/12/18 | 1594 | 32.01 | 0.01 | -0.05 | -0.60 |
| 03/28/18 | 1610 | 32.01 | 0.00 | -0.05 | -0.60 |
| 06/15/18 | 1689 | 32.00 | -0.01 | -0.06 | -0.72 |
| 09/19/18 | 1785 | 31.99 | -0.01 | -0.07 | -0.84 |
| 01/10/19 | 1898 | 31.98 | -0.01 | -0.08 | -0.96 |
| 03/19/19 | 1966 | 31.95 | -0.03 | -0.11 | -1.32 |
| 07/15/19 | 2084 | 31.98 | 0.03 | -0.08 | -0.96 |
| 11/19/19 | 2211 | 31.98 | 0.00 | -0.08 | -0.96 |
| 03/05/20 | 2318 | 31.87 | -0.11 | -0.19 | -2.28 |
| 04/08/21 | 2717 | 31.99 | 0.12 | -0.07 | -0.84 |
| 03/17/22 | 3060 | 31.96 | -0.03 | -0.10 | -1.20 |
| 03/29/23 | 3437 | 31.95 | -0.01 | -0.11 | -1.32 |

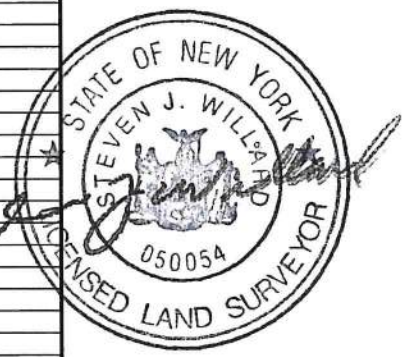


# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 7

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 36.81 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 36.81 | 0.00 | 0.00 | 0.00 |
| 11/26/13 | 27 | 36.80 | -0.01 | -0.01 | -0.12 |
| 12/09/13 | 40 | 36.80 | 0.00 | -0.01 | -0.12 |
| 12/23/13 | 54 | 36.80 | 0.00 | -0.01 | -0.12 |
| 01/08/14 | 70 | 36.79 | -0.01 | -0.02 | -0.24 |
| 01/27/14 | 89 | 36.79 | 0.00 | -0.02 | -0.24 |
| 02/19/14 | 112 | 36.79 | 0.00 | -0.02 | -0.24 |
| 03/06/14 | 127 | 36.78 | -0.01 | -0.03 | -0.36 |
| 03/19/14 | 140 | 36.77 | -0.01 | -0.04 | -0.48 |
| 04/03/14 | 156 | 36.77 | 0.00 | -0.04 | -0.48 |
| 04/21/14 | 173 | 36.77 | 0.00 | -0.04 | -0.48 |
| 05/05/14 | 187 | 36.76 | -0.01 | -0.05 | -0.60 |
| 05/30/14 | 212 | 36.75 | -0.01 | -0.06 | -0.72 |
| 06/13/14 | 226 | 36.76 | 0.01 | -0.05 | -0.60 |
| 06/23/14 | 236 | 36.76 | 0.00 | -0.05 | -0.60 |
| 07/09/14 | 252 | 36.75 | -0.01 | -0.06 | -0.72 |
| 07/23/14 | 266 | 36.74 | -0.01 | -0.07 | -0.84 |
| 08/04/14 | 278 | 36.73 | -0.01 | -0.08 | -0.96 |
| 08/21/14 | 295 | 36.74 | 0.01 | -0.07 | -0.84 |
| 09/03/14 | 308 | 36.74 | 0.00 | -0.07 | -0.84 |
| 09/23/14 | 328 | 36.74 | 0.00 | -0.07 | -0.84 |
| 10/06/14 | 341 | 36.74 | 0.00 | -0.07 | -0.84 |
| 10/21/14 | 356 | 36.73 | -0.01 | -0.08 | -0.96 |
| 11/04/14 | 370 | 36.73 | 0.00 | -0.08 | -0.96 |
| 11/18/14 | 384 | 36.72 | -0.01 | -0.09 | -1.08 |
| 12/05/14 | 401 | 36.71 | -0.01 | -0.10 | -1.20 |
| 12/19/14 | 415 | 36.71 | 0.00 | -0.10 | -1.20 |
| 01/09/15 | 436 | 36.71 | 0.00 | -0.10 | -1.20 |
| 01/23/15 | 450 | 36.70 | -0.01 | -0.11 | -1.32 |
| 02/12/15 | 470 | 36.70 | 0.00 | -0.11 | -1.32 |
| 02/27/15 | 485 | 36.70 | 0.00 | -0.11 | -1.32 |
| 03/13/15 | 499 | 36.70 | 0.00 | -0.11 | -1.32 |
| 03/27/15 | 513 | 36.70 | 0.00 | -0.11 | -1.32 |
| 04/10/15 | 527 | 36.70 | 0.00 | -0.11 | -1.32 |
| 04/24/15 | 541 | 36.69 | -0.01 | -0.12 | -1.44 |
| 06/19/15 | 597 | 36.69 | 0.00 | -0.12 | -1.44 |
| 07/07/15 | 615 | 36.69 | 0.00 | -0.12 | -1.44 |
| 07/17/15 | 625 | 36.69 | 0.00 | -0.12 | -1.44 |
| 07/31/15 | 639 | 36.67 | -0.02 | -0.14 | -1.68 |
| 08/14/15 | 653 | 36.67 | 0.00 | -0.14 | -1.68 |
| 08/28/15 | 667 | 36.67 | 0.00 | -0.14 | -1.68 |
| 09/11/15 | 681 | 36.67 | 0.00 | -0.14 | -1.68 |
| 09/25/15 | 695 | 36.67 | 0.00 | -0.14 | -1.68 |
| 10/09/15 | 709 | 36.67 | 0.00 | -0.14 | -1.68 |
| 10/23/15 | 723 | 36.67 | 0.00 | -0.14 | -1.68 |
| 11/06/15 | 737 | 36.66 | -0.01 | -0.15 | -1.80 |
| 11/20/15 | 751 | 36.66 | 0.00 | -0.15 | -1.80 |
| 12/04/15 | 765 | 36.67 | 0.01 | -0.14 | -1.68 |
| 12/18/15 | 779 | 36.67 | 0.00 | -0.14 | -1.68 |
| 01/07/16 | 799 | 36.67 | 0.00 | -0.14 | -1.68 |
| 01/22/16 | 814 | 36.66 | -0.01 | -0.15 | -1.80 |
| 02/08/16 | 831 | 36.67 | 0.01 | -0.14 | -1.68 |
| 03/04/16 | 856 | 36.67 | 0.00 | -0.14 | -1.68 |
| 03/18/16 | 870 | 36.67 | 0.00 | -0.14 | -1.68 |
| 04/01/16 | 884 | 36.66 | -0.01 | -0.15 | -1.80 |
| 04/15/16 | 898 | 36.66 | 0.00 | -0.15 | -1.80 |
| 04/29/16 | 912 | 36.67 | 0.01 | -0.14 | -1.68 |
| 05/13/16 | 926 | 36.66 | -0.01 | -0.15 | -1.80 |
| 05/27/16 | 940 | 36.66 | 0.00 | -0.15 | -1.80 |
| 09/08/16 | 1044 | 36.65 | -0.01 | -0.16 | -1.92 |
| 01/12/17 | 1170 | 36.64 | -0.01 | -0.17 | -2.04 |
| 03/23/17 | 1240 | 36.64 | 0.00 | -0.17 | -2.04 |
| 06/17/17 | 1326 | 36.62 | -0.02 | -0.19 | -2.28 |
| 09/19/17 | 1420 | 36.62 | 0.00 | -0.19 | -2.28 |
| 03/12/18 | 1594 | 36.61 | -0.01 | -0.20 | -2.40 |
| 03/28/18 | 1610 | 36.61 | 0.00 | -0.20 | -2.40 |
| 06/15/18 | 1689 | 36.60 | -0.01 | -0.21 | -2.52 |
| 09/19/18 | 1785 | 36.59 | -0.01 | -0.22 | -2.64 |
| 01/10/19 | 1898 | 36.58 | -0.01 | -0.23 | -2.76 |
| 03/19/19 | 1966 | 36.58 | 0.00 | -0.23 | -2.76 |
| 07/15/19 | 2084 | 36.58 | 0.00 | -0.23 | -2.76 |
| 11/19/19 | 2211 | 36.57 | -0.01 | -0.24 | -2.88 |
| 03/05/20 | 2318 | 36.55 | -0.02 | -0.26 | -3.12 |
| 04/08/21 | 2717 | 36.54 | -0.01 | -0.27 | -3.24 |
| 03/17/22 | 3060 | 36.52 | -0.02 | -0.29 | -3.48 |
| 03/29/23 | 3437 | 36.51 | -0.01 | -0.30 | -3.60 |



# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 8

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 29.41 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 29.41 | 0.00 | 0.00 | 0.00 |
| 11/26/13 | 27 | 29.41 | 0.00 | 0.00 | 0.00 |
| 12/09/13 | 40 | 29.40 | -0.01 | -0.01 | -0.12 |
| 12/23/13 | 54 | 29.41 | 0.01 | 0.00 | 0.00 |
| 01/08/14 | 70 | 29.41 | 0.00 | 0.00 | 0.00 |
| 01/27/14 | 89 | 29.41 | 0.00 | 0.00 | 0.00 |
| 02/19/14 | 112 | 29.41 | 0.00 | 0.00 | 0.00 |
| 03/06/14 | 127 | 29.41 | 0.00 | 0.00 | 0.00 |
| 03/19/14 | 140 | 29.40 | -0.01 | -0.01 | -0.12 |
| 04/03/14 | 156 | 29.40 | 0.00 | -0.01 | -0.12 |
| 04/21/14 | 173 | 29.41 | 0.01 | 0.00 | 0.00 |
| 05/05/14 | 187 | 29.41 | 0.00 | 0.00 | 0.00 |
| 05/30/14 | 212 | 29.41 | 0.00 | 0.00 | 0.00 |
| 06/13/14 | 226 | 29.42 | 0.01 | 0.01 | 0.12 |
| 06/23/14 | 236 | 29.42 | 0.00 | 0.01 | 0.12 |
| 07/09/14 | 252 | 29.40 | -0.02 | -0.01 | -0.12 |
| 07/23/14 | 266 | 29.41 | 0.01 | 0.00 | 0.00 |
| 08/04/14 | 278 | 29.42 | 0.01 | 0.01 | 0.12 |
| 08/21/14 | 295 | 29.41 | -0.01 | 0.00 | 0.00 |
| 09/03/14 | 308 | 29.41 | 0.00 | 0.00 | 0.00 |
| 09/23/14 | 328 | 29.41 | 0.00 | 0.00 | 0.00 |
| 10/06/14 | 341 | 29.41 | 0.00 | 0.00 | 0.00 |
| 10/21/14 | 356 | 29.41 | 0.00 | 0.00 | 0.00 |
| 11/04/14 | 370 | 29.42 | 0.01 | 0.01 | 0.12 |
| 11/18/14 | 384 | 29.41 | -0.01 | 0.00 | 0.00 |
| 12/05/14 | 401 | 29.42 | 0.01 | 0.01 | 0.12 |
| 12/19/14 | 415 | 29.41 | -0.01 | 0.00 | 0.00 |
| 01/09/15 | 436 | 29.41 | 0.00 | 0.00 | 0.00 |
| 01/23/15 | 450 | 29.41 | 0.00 | 0.00 | 0.00 |
| 02/12/15 | 470 | 29.41 | 0.00 | 0.00 | 0.00 |
| 02/27/15 | 485 | 29.41 | 0.00 | 0.00 | 0.00 |
| 03/13/15 | 499 | 29.41 | 0.00 | 0.00 | 0.00 |
| 03/27/15 | 513 | 29.41 | 0.00 | 0.00 | 0.00 |
| 04/10/15 | 527 | 29.42 | 0.01 | 0.01 | 0.12 |
| 04/24/15 | 541 | 29.41 | -0.01 | 0.00 | 0.00 |
| 06/19/15 | 597 | 29.42 | 0.01 | 0.01 | 0.12 |
| 07/07/15 | 615 | 29.42 | 0.00 | 0.01 | 0.12 |
| 07/17/15 | 625 | 29.41 | -0.01 | 0.00 | 0.00 |
| 07/31/15 | 639 | 29.41 | 0.00 | 0.00 | 0.00 |
| 08/14/15 | 653 | 29.41 | 0.00 | 0.00 | 0.00 |
| 08/28/15 | 667 | 29.41 | 0.00 | 0.00 | 0.00 |
| 09/11/15 | 681 | 29.41 | 0.00 | 0.00 | 0.00 |
| 09/25/15 | 695 | 29.41 | 0.00 | 0.00 | 0.00 |
| 10/09/15 | 709 | 29.42 | 0.01 | 0.01 | 0.12 |
| 10/23/15 | 723 | 29.42 | 0.00 | 0.01 | 0.12 |
| 11/06/15 | 737 | 29.42 | 0.00 | 0.01 | 0.12 |
| 11/20/15 | 751 | 29.42 | 0.00 | 0.01 | 0.12 |
| 12/04/15 | 765 | 29.42 | 0.00 | 0.01 | 0.12 |
| 12/18/15 | 779 | 29.42 | 0.00 | 0.01 | 0.12 |
| 01/07/16 | 799 | 29.42 | 0.00 | 0.01 | 0.12 |
| 01/22/16 | 814 | 29.41 | -0.01 | 0.00 | 0.00 |
| 02/08/16 | 831 | 29.42 | 0.01 | 0.01 | 0.12 |
| 03/04/16 | 856 | 29.41 | -0.01 | 0.00 | 0.00 |
| 03/18/16 | 870 | 29.42 | 0.01 | 0.01 | 0.12 |
| 04/01/16 | 884 | 29.42 | 0.00 | 0.01 | 0.12 |
| 04/15/16 | 898 | 29.42 | 0.00 | 0.01 | 0.12 |
| 04/29/16 | 912 | 29.42 | 0.00 | 0.01 | 0.12 |
| 05/13/16 | 926 | 29.41 | -0.01 | 0.00 | 0.00 |
| 05/27/16 | 940 | 29.42 | 0.01 | 0.01 | 0.12 |
| 09/08/16 | 1044 | 29.42 | 0.00 | 0.01 | 0.12 |
| 01/12/17 | 1170 | 29.42 | 0.00 | 0.01 | 0.12 |
| 03/23/17 | 1240 | 29.42 | 0.00 | 0.01 | 0.12 |
| 06/17/17 | 1326 | 29.41 | -0.01 | 0.00 | 0.00 |
| 09/19/17 | 1420 | 29.42 | 0.01 | 0.01 | 0.12 |
| 03/12/18 | 1594 | 29.41 | -0.01 | 0.00 | 0.00 |
| 03/28/18 | 1610 | 29.41 | 0.00 | 0.00 | 0.00 |
| 06/15/18 | 1689 | 29.41 | 0.00 | 0.00 | 0.00 |
| 09/19/18 | 1785 | 29.42 | 0.01 | 0.01 | 0.12 |
| 01/10/19 | 1898 | 29.42 | 0.00 | 0.01 | 0.12 |
| 03/19/19 | 1966 | 29.41 | -0.01 | 0.00 | 0.00 |
| 07/15/19 | 2084 | 29.41 | 0.00 | 0.00 | 0.00 |
| 11/19/19 | 2211 | 29.41 | 0.00 | 0.00 | 0.00 |
| 03/05/20 | 2318 | 29.42 | 0.01 | 0.01 | 0.12 |
| 04/08/21 | 2717 | 29.41 | -0.01 | 0.00 | 0.00 |
| 03/17/22 | 3060 | 29.40 | -0.01 | -0.01 | -0.12 |
| 03/29/23 | 3437 | 29.42 | 0.02 | 0.01 | 0.12 |

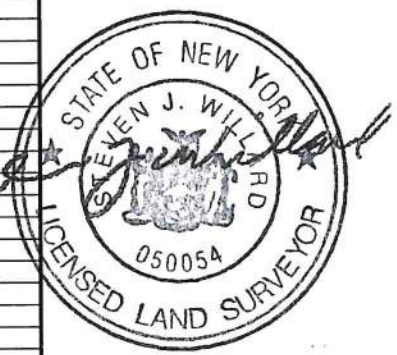


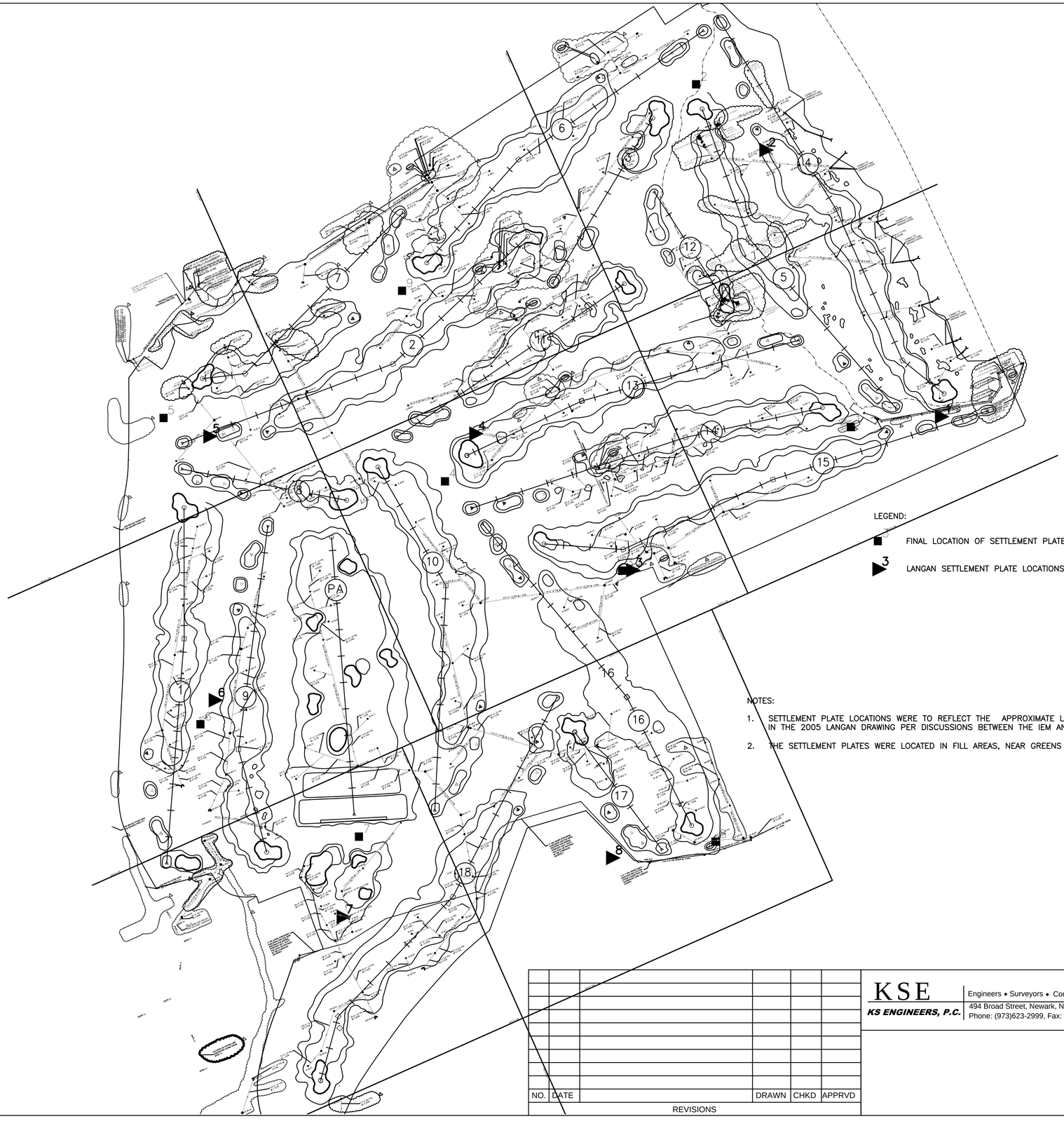
# FERRY POINT PARK

SETTLEMENT PLATE MONITORING

## SETTLEMENT PLATE - 9

| DATE | CUMULATIVE TIME (days) | RISER ELEVATION (feet) | SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (feet) | CUMULATIVE SETTLEMENT (inches) |
|---|---|---|---|---|---|
| 10/30/13 | | 37.63 | 0.00 | 0.00 | 0.00 |
| 11/13/13 | 14 | 37.63 | 0.00 | 0.00 | 0.00 |
| 11/26/13 | 27 | 37.63 | 0.00 | 0.00 | 0.00 |
| 12/09/13 | 40 | 37.64 | 0.01 | 0.01 | 0.12 |
| 12/23/13 | 54 | 37.63 | -0.01 | 0.00 | 0.00 |
| 01/08/14 | 70 | 37.64 | 0.01 | 0.01 | 0.12 |
| 01/27/14 | 89 | 37.63 | -0.01 | 0.00 | 0.00 |
| 02/19/14 | 112 | 37.64 | 0.01 | 0.01 | 0.12 |
| 03/06/14 | 127 | 37.64 | 0.00 | 0.01 | 0.12 |
| 03/19/14 | 140 | 37.65 | 0.01 | 0.02 | 0.24 |
| 04/03/14 | 156 | 37.64 | -0.01 | 0.01 | 0.12 |
| 04/21/14 | 173 | 37.64 | 0.00 | 0.01 | 0.12 |
| 05/05/14 | 187 | 37.65 | 0.01 | 0.02 | 0.24 |
| 05/30/14 | 212 | 37.63 | -0.02 | 0.00 | 0.00 |
| 06/13/14 | 226 | 37.64 | 0.01 | 0.01 | 0.12 |
| 06/23/14 | 236 | 37.64 | 0.00 | 0.01 | 0.12 |
| 07/09/14 | 252 | 37.62 | -0.02 | -0.01 | -0.12 |
| 07/23/14 | 266 | 37.64 | 0.02 | 0.01 | 0.12 |
| 08/04/14 | 278 | 37.63 | -0.01 | 0.00 | 0.00 |
| 08/21/14 | 295 | 37.63 | 0.00 | 0.00 | 0.00 |
| 09/03/14 | 308 | 37.64 | 0.01 | 0.01 | 0.12 |
| 09/23/14 | 328 | 37.63 | -0.01 | 0.00 | 0.00 |
| 10/06/14 | 341 | 37.63 | 0.00 | 0.00 | 0.00 |
| 10/21/14 | 356 | 37.63 | 0.00 | 0.00 | 0.00 |
| 11/04/14 | 370 | 37.64 | 0.01 | 0.01 | 0.12 |
| 11/18/14 | 384 | 37.63 | -0.01 | 0.00 | 0.00 |
| 12/05/14 | 401 | 37.63 | 0.00 | 0.00 | 0.00 |
| 12/19/14 | 415 | 37.63 | 0.00 | 0.00 | 0.00 |
| 01/09/15 | 436 | 37.64 | 0.01 | 0.01 | 0.12 |
| 01/23/15 | 450 | 37.63 | -0.01 | 0.00 | 0.00 |
| 02/12/15 | 470 | 37.62 | -0.01 | -0.01 | -0.12 |
| 02/27/15 | 485 | 37.62 | 0.00 | -0.01 | -0.12 |
| 03/13/15 | 499 | 37.62 | 0.00 | -0.01 | -0.12 |
| 03/27/15 | 513 | 37.64 | 0.02 | 0.01 | 0.12 |
| 04/10/15 | 527 | 37.63 | -0.01 | 0.00 | 0.00 |
| 04/24/15 | 541 | 37.62 | -0.01 | -0.01 | -0.12 |
| 06/19/15 | 597 | 37.63 | 0.01 | 0.00 | 0.00 |
| 07/07/15 | 615 | 37.63 | 0.00 | 0.00 | 0.00 |
| 07/17/15 | 625 | 37.63 | 0.00 | 0.00 | 0.00 |
| 07/31/15 | 639 | 37.62 | -0.01 | -0.01 | -0.12 |
| 08/14/15 | 653 | 37.62 | 0.00 | -0.01 | -0.12 |
| 08/28/15 | 667 | 37.62 | 0.00 | -0.01 | -0.12 |
| 09/11/15 | 681 | 37.62 | 0.00 | -0.01 | -0.12 |
| 09/25/15 | 695 | 37.62 | 0.00 | -0.01 | -0.12 |
| 10/09/15 | 709 | 37.63 | 0.01 | 0.00 | 0.00 |
| 10/23/15 | 723 | 37.64 | 0.01 | 0.01 | 0.12 |
| 11/06/15 | 737 | 37.65 | 0.01 | 0.02 | 0.24 |
| 11/20/15 | 751 | 37.66 | 0.01 | 0.03 | 0.36 |
| 12/04/15 | 765 | 37.64 | -0.02 | 0.01 | 0.12 |
| 12/18/15 | 779 | 37.64 | 0.00 | 0.01 | 0.12 |
| 01/07/16 | 799 | 37.64 | 0.00 | 0.01 | 0.12 |
| 01/22/16 | 814 | 37.64 | 0.00 | 0.01 | 0.12 |
| 02/08/16 | 831 | 37.64 | 0.00 | 0.01 | 0.12 |
| 03/04/16 | 856 | 37.66 | 0.02 | 0.03 | 0.36 |
| 03/18/16 | 870 | 37.63 | -0.03 | 0.00 | 0.00 |
| 04/01/16 | 884 | 37.63 | 0.00 | 0.00 | 0.00 |
| 04/15/16 | 898 | 37.64 | 0.01 | 0.01 | 0.12 |
| 04/29/16 | 912 | 37.64 | 0.00 | 0.01 | 0.12 |
| 05/13/16 | 926 | 37.63 | -0.01 | 0.00 | 0.00 |
| 05/27/16 | 940 | 37.65 | 0.02 | 0.02 | 0.24 |
| 09/08/16 | 1044 | 37.64 | -0.01 | 0.01 | 0.12 |
| 01/12/17 | 1170 | 37.64 | -0.01 | 0.01 | 0.12 |
| 03/23/17 | 1240 | 37.63 | -0.01 | 0.00 | 0.00 |
| 06/17/17 | 1326 | 37.61 | -0.02 | -0.02 | -0.24 |
| 09/19/17 | 1420 | 37.64 | 0.03 | 0.01 | 0.12 |
| 03/12/18 | 1594 | 37.64 | 0.00 | 0.01 | 0.12 |
| 03/28/18 | 1610 | 37.64 | 0.00 | 0.01 | 0.12 |
| 06/15/18 | 1689 | 37.64 | 0.00 | 0.01 | 0.12 |
| 09/19/18 | 1785 | 37.63 | -0.01 | 0.00 | 0.00 |
| 01/10/19 | 1898 | 37.63 | 0.00 | 0.00 | 0.00 |
| 03/19/19 | 1966 | 37.63 | 0.00 | 0.00 | 0.00 |
| 07/15/19 | 2084 | 37.64 | 0.01 | 0.01 | 0.12 |
| 11/19/19 | 2211 | 37.67 | 0.03 | 0.04 | 0.48 |
| 03/05/20 | 2318 | 37.63 | -0.04 | 0.00 | 0.00 |
| 04/08/21 | 2717 | 37.64 | 0.01 | 0.01 | 0.12 |
| 03/17/22 | 3060 | 37.64 | 0.00 | 0.01 | 0.12 |
| 03/29/23 | 3437 | 37.63 | -0.01 | 0.00 | 0.00 |






LEGEND:

■ FINAL LOCATION OF SETTLEMENT PLATES

▶ 3 LANGAN SETTLEMENT PLATE LOCATIONS, (2005)

NOTES:

1. SETTLEMENT PLATE LOCATIONS WERE TO REFLECT THE APPROXIMATE LOCATIONS SHOWN IN THE 2005 LANGAN DRAWING PER DISCUSSIONS BETWEEN THE IEM AND SANFORD GOLF.
2. THE SETTLEMENT PLATES WERE LOCATED IN FILL AREAS, NEAR GREENS AND/OR UTILITIES.

| NO. | DATE | REVISIONS | DRAWN | CHKD | APPRVD |
|---|---|---|---|---|---|
| | | | | | |

KSE
KS ENGINEERS, P.C.
Engineers • Surveyors • Construction Managers
494 Broad Street, Newark, N.J. 07102
Phone: (973)623-2999, Fax: (973)623-2988

# FERRY POINT GOLF COURSE
# SETTLEMENT PLATE LOCATIONS

DESIGN BY: L.KERN
DRAWN BY: M. CHOUDHURY
CHECKED BY: H. BAKER
SCALE: N.T.S.
DATE: 04/11/2012

Mizanur Choudhury
12/6/2007 4:36:28 PM
J:\2011\11-1195\KSE\DWG\Settlement Plate Locations.dwg
KseFs.ctb

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**Regional Director, Region 2**
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4949 I F: (718) 482-4026
www.dec.ny.gov

June 15, 2023

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Re: **2023 Annual Settlement Plate Monitoring Report**
**Ferry Point Park Golf Course, Bronx, NY**
**NYSDEC Permit No. 2-6006-00014/00013**

New York State Department of Environmental Conservation (Department) staff have received the subject report prepared by GEI Consultants, Inc. (GEI) dated June 15, 2023, on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the annual settlement plate monitoring event conducted on March 29, 2023, at the Ferry Point.

Based on the March 2023 results and assessment of historic settlement data, GEI has recommended that NYCDPR make a request to NYSDEC to terminate all future settlement plate monitoring, as long as the former landfill continues to be utilized and maintained in its current condition as a golf course.

After careful review of the settlement plate data from the last four annual reports from 2020-2023 and previously performed quarterly monitoring (later reduced to annual monitoring as per NYSDEC approval dated Jan 7, 2020) along with specific circumstances and history of this site, the Department hereby grants your request to suspend all future annual settlement plate monitoring.

If you have any questions regarding this matter or need additional information on the regulatory requirements, please feel free to contact our office at 718 482-4996.

Sincerely,

**Mahmoud Assi, P.E.**
Regional Materials Management Engineer

cc: M. Rowland, NYCDPR.
K. Zias, NYCDPR
W. Frank/S. Samuel, R2 DMM
Stacey Ng, GEI Consultants

2023-06-16.03S25.FerryPointParkLandfill_SuspensionofSettlementPlateMonitoring.cr.assi

# Appendix F

## Sub-Slab Depressurization System Monitoring Reports

April 20, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

Dear Ms. Catalanotto:

**Re: Quarterly Sub-Slab Depressurization System (SSDS) Monitoring - Quarter 1, 2023**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the SSDS infrastructure monitoring event conducted on March 28, 2023, at the Ferry Point Park Golf Course and Community Park. Quarterly sub-slab depressurization (SSD) and combustible gas (CG) monitoring system operations, maintenance, and monitoring (OM&M) is performed in compliance with the NYSDEC Permit No. 2-6006-00014/00013, the October 2013 *Post Construction Custodial Care Plan*, the October 2013 *Landfill Gas Management Plan*, and the site-specific OM&M Manual.

The following locations are included in the SSDS and/or CG OM&M:

- Community Park Comfort Station (CPCS);
- Golf Course Maintenance Building (Maintenance Building):
- Golf Course Comfort Station (GCCS);
- Golf Course Cart Storage Barn (Cart Barn); and
- Golf Course Clubhouse (Clubhouse).


GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

## Summary of OM&M Inspection Activities

SSD and CG monitoring systems OM&M activities included visual inspections and collection of oxygen, organic vapor, and methane (percent methane by volume, percent lower explosive limit [LEL]) readings from beneath the building slabs. In locations with sub-slab monitoring points, sub-slab pressure was measured to determine if the SSDS is creating a negative pressure beneath the structures. The location of on- and off-Site buildings with SSD and CG systems are depicted on Figure 1, and the system layout and components for each building are depicted on Figure 2 through 6.

## OM&M Observations and Results

Community Park Comfort Station (CPCS)

OM&M was performed at the CPCS on March 28, 2023, which included the collection of sub-slab pressure CG readings, inspection of the SSDS to verify it was operational, as well as a review of the real-time data at the CG sensor. Table 1 contains a summary of the OM&M visit results, with historical data presented on Table 2A. Below is a summary of the observations made during the CPCS monitoring event:

- The SSD and CG systems were operational during, and prior to, the Q1 monitoring event;
- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;
- Low levels of volatile organic compounds (VOCs) were detected within the building;
- Methane and VOCs were detected at low concentrations under the building;
- Sub-slab pressure measurements collected from the sub-slab monitoring point (Figure 2) during the Q1 monitoring event indicated that there was not a negative pressure gradient being generated beneath the building slab by the SSDS, however the blower was operational and CG concentrations were low within the building. The pressure issue has occurred during previous events and is thought to be associated with seasonal variations.

Golf Course Maintenance Building (Maintenance Building)

OM&M performed at the Maintenance Building included the inspection of the SSDS to verify it was operational, collection of sub-slab pressure CG readings, and

review of the real-time data at the CG sensor. A summary of the Q1 monitoring results is presented on Table 1, with historical data presented on Table 2B. Below is a summary of the observations denoted at the Maintenance Building during the OM&M event:

- The SSD and CG systems were operational during, and prior to, the Q1 monitoring event;
- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;
- Low levels of volatile organic compounds (VOCs) were detected within the building;
- Methane and VOCs were detected at low concentrations under the building;
- Sub-slab pressure measurements collected from the sub-slab monitoring points (Figure 3) during the Q1 monitoring event indicated that the SSDS was generating negative pressure beneath the building slab. The negative pressure was greater than Q4 2022, and of similar to that of Q1 2022. The methane LEL detected at MP-1 was lesser than that of Q4 2022 (8% and 34%, respectively) while the methane LEL was greater at MP-2 and MP-3 than Q4 2022 (2% and 0%, respectively).

Golf Course Comfort Station (GCCS)

GCCS monitoring included the review of the real-time data at the CG sensor, the inspection of the SSDS to verify it was operational, and collection of sub-slab pressure CG readings. Table 1 contains a summary of the OM&M visit results, with historical data presented on Table 2C. Below is a summary of the observations made at the GCCS during the OM&M event:

- The SSD and CG systems were operational prior to and during the Q1 monitoring event;
- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;
- Low levels of volatile organic compounds (VOCs) were detected within the building at MP-1;

- Methane and VOCs were detected at low concentrations under the building at all three monitoring points;

- Sub-slab pressure measurements collected from the three sub-slab monitoring points (Figure 4) during the Q1 monitoring event indicated that the SSDS is generating negative pressure beneath the slab. The vacuum pressure recorded at MP-3 was significantly lower than that of Q4 2022, however it was consistent with historical data.

Golf Course Cart Storage Barn (Cart Barn)

OM&M performed at the Cart Barn included the inspection of the SSDS to verify it was operational, collection of sub-slab pressure CG readings, and review of the real-time data at the CG sensor. A summary of the Q1 monitoring results is presented on Table 1, with historical data presented on Table 2D. Below is a summary of the observations made during the OM&M event at the Cart Barn:

- The SSD and CG systems were operational during, and prior to, the Q1 monitoring event;

- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;

- Low levels of volatile organic compounds (VOCs) were detected at all monitoring points within the building;

- Methane and VOCs were detected at low concentrations under the Cart Barn;

- Sub-slab pressure measurements collected from all four sub-slab monitoring points (Figure 5) during the Q1 monitoring event indicated that the SSDS was generating negative pressure beneath the building slab, consistent with historical data. However, the flow pressure measured at the blower was significantly lower than that of previous OM&M events.

Golf Course Clubhouse (Clubhouse)

The Clubhouse OM&M event included the review of the real-time data at the CG sensor, the inspection of the SSDS to verify it was operational, and collection of sub-slab pressure CG readings. Table 1 contains a summary of the OM&M visit results, with historical data presented on Table 2E. Below is a summary of the observations made at the Clubhouse during the monitoring event:

- The SSD and CG systems were operational prior to and during the Q1 monitoring event;

- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;

- Low levels of volatile organic compounds (VOCs) were detected within the building at all ten monitoring point locations;

- Methane and VOCs were detected at low concentrations under the building at all monitoring points (MP-1 to MP-10);

- Sub-slab pressure measurements collected from the ten sub-slab monitoring points (Figure 6) during the Q1 monitoring event indicated that the SSDS is generating negative pressure beneath the slab, consistent with measurements collected during previous events. The vacuum pressure noted at MP-3 (located in the dining area) was greater than that of historical events.

Conclusions and Recommendations

From the Quarter 1 OM&M event, the results confirm that the SSD and GC systems are operational. Sub-slab pressure readings collected from the on- and off-Site monitoring points indicated that the SSDS in the Golf Course Comfort Station, Golf Course Cart Storage Barn, Golf Course Maintenance Building and Golf Course Clubhouse are creating a negative pressure gradient beneath the building slabs. The Community Park Comfort Station did not demonstrate negative pressure conditions; however, the blower was operational and only low levels of volatile organic compounds (VOCs) were detected within the building.

All CG sensors were communicating with their respective control panels and registered ambient methane readings of 0.0% LEL. The main datalogging panel, located in the Golf Course Maintenance Building, is receiving data from the Golf Course Cart Barn, Golf Course Clubhouse, Community Park and Golf Course Comfort Stations, and Golf Course Maintenance Building. Combustible gas data is accessed remotely, reviewed and downloaded periodically. Methane readings from the CG sensor data are monitored and downloaded periodically, and no alarm conditions have been registered.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – SSD and CG System Locations
Figure 2 – Community Park Comfort Station
Figure 3 – Golf Course Maintenance Building
Figure 4 – Golf Course Comfort Station
Figure 5 – Golf Course Cart Storage Barn
Figure 6 – Golf Course Clubhouse
Table 1 - Summary of 2023 Q1 OM&M Data
Table 2A - Comparison of Community Park Comfort Station OM&M Data
Table 2B - Comparison of Golf Course Maintenance Building OM&M Data
Table 2C - Comparison of Golf Course Comfort Station OM&M Data
Table 2D - Comparison of Golf Course Cart Storage Barn OM&M Data
Table 2E - Comparison of Golf Course Clubhouse OM&M Data

c: M. Rowland, NYCDPR
K. Zias, NYCDPR
K. McCarty, GEI




N

**LEGEND**

- Cart Barn
- Golf Course Comfort Station
- Maintenance Building
- Golf Course Clubhouse
- Community Park Comfort Station

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 300 600
SCALE: 1 " = 409 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project 2204594

SSD AND CG SYSTEM

Fig. 1

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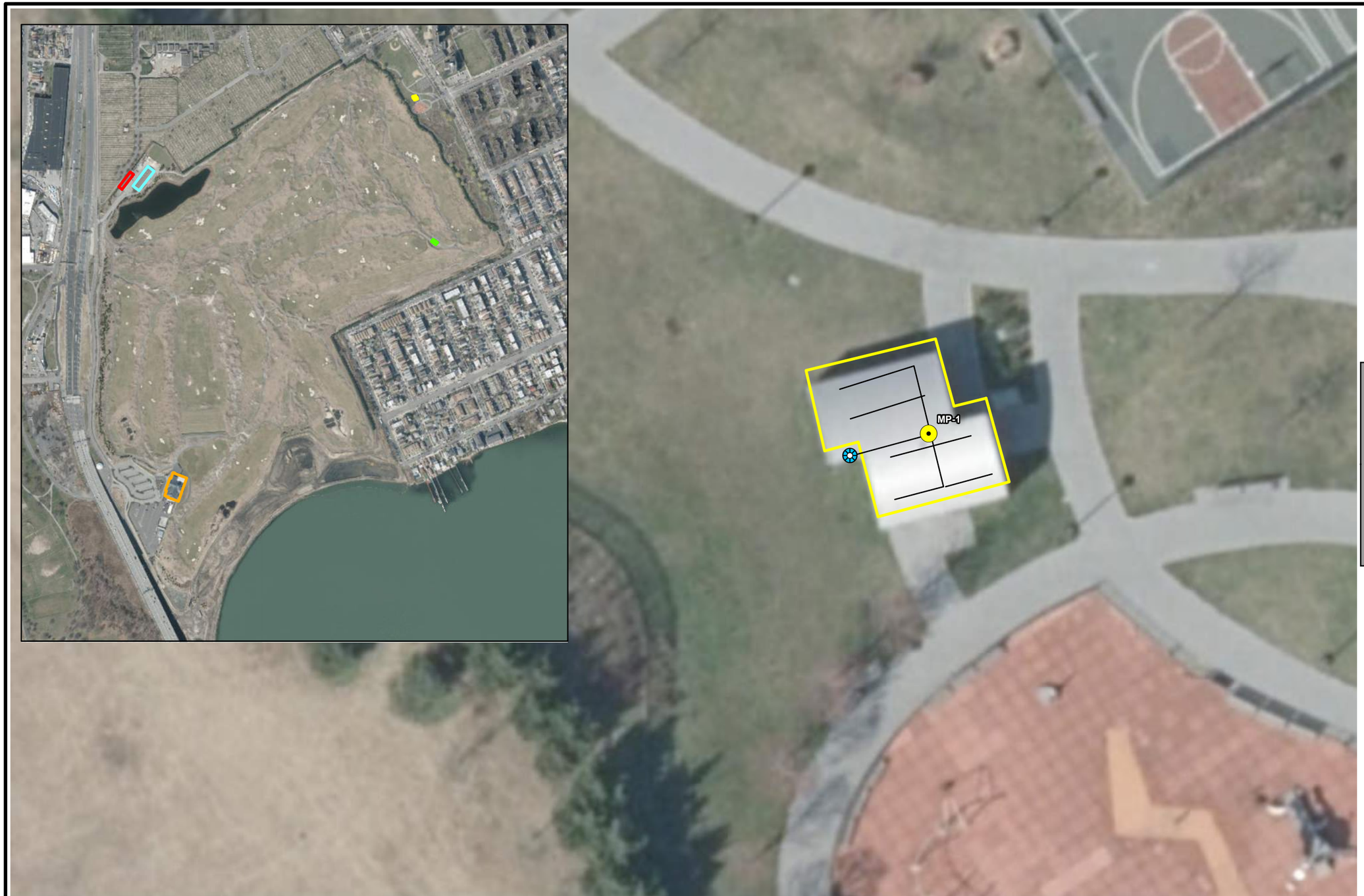


**LEGEND**

- Vertical Riser with Sampling Point
- Sub-Slab Monitoring Point
- SSDS Piping
- Cart Barn
- Golf Course Comfort Station
- Maintenance Building
- Golf Course Clubhouse
- Community Park Comfort Station

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 10 20
SCALE:1 " = 20 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project 2204594

COMMUNITY PARK
COMFORT STATION

Fig. 2

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## LEGEND

- CG Control Panel
- Combustible Gas Meter
- Sub-Slab Depressurization Pit
- Sub-Slab Monitoring Point
- Vertical Riser
- SSDS Piping
- Cart Barn
- Golf Course Comfort Station
- Maintenance Building
- Golf Course Clubhouse
- Community Park Comfort Station

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 10 20
SCALE:1 " = 27 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project 2204594

MAINTENANCE BUILDING

Fig. 3

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## LEGEND

- Controller
- Exterior SSDS Monitoring Point
- Interior SSDS Monitoring Point
- Methane and H2S Sensor
- Methane Sensor
- 6" PVC
- Sub-Slab Depressurization Pit
- SSDS Piping
- Maintenance Building
- Cart Barn
- Golf Course Comfort Station
- Community Park Comfort Station
- Golf Course Clubhouse

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 10 20

SCALE: 1 " = 10 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

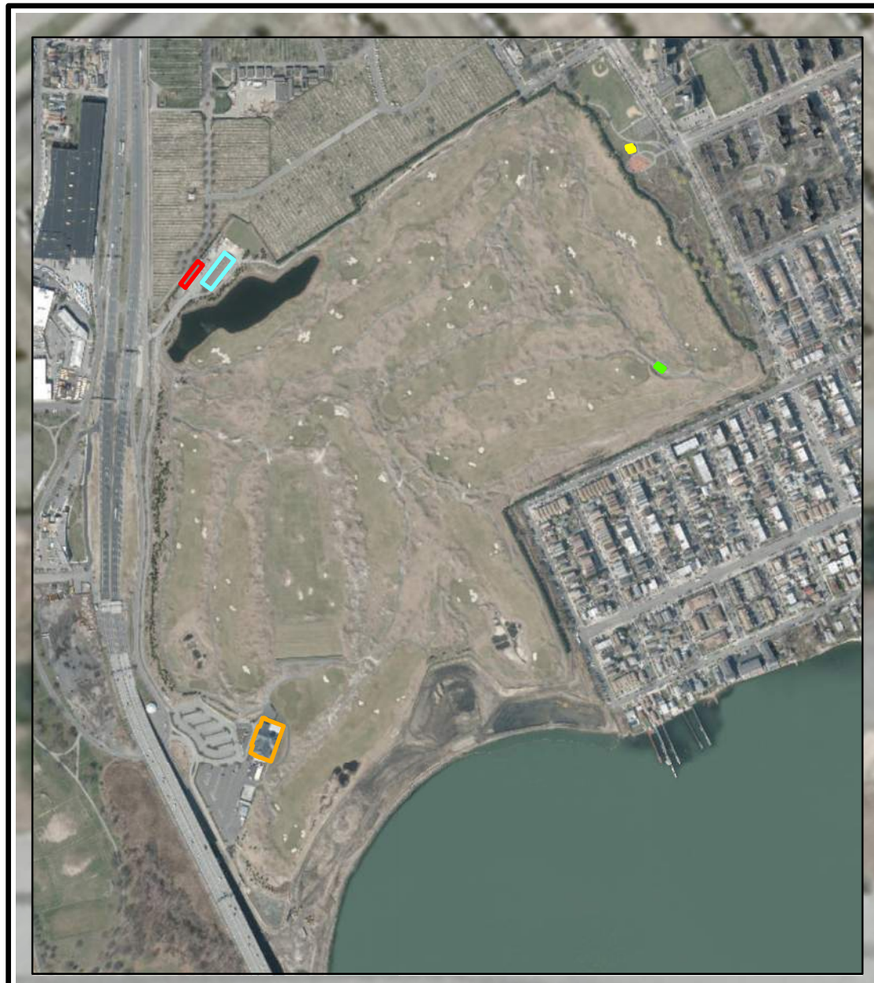
GEI Consultants

Project 2204594

GOLF COURSE COMFORT STATION

Fig. 4

B:\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\Reports\SSDS\2023 Reports\Q1\Figure 4.mxd






LEGEND

- 2 Combustible Point
- Combustible Point
- Controller
- Monitoring Point
- Pit
- Sub-slab monitoring
- SSDS Piping
- Cart Barn
- Golf Course Comfort Station
- Maintenance Building
- Golf Course Clubhouse
- Community Park Comfort Station

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 10 20
SCALE:1 " = 26 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

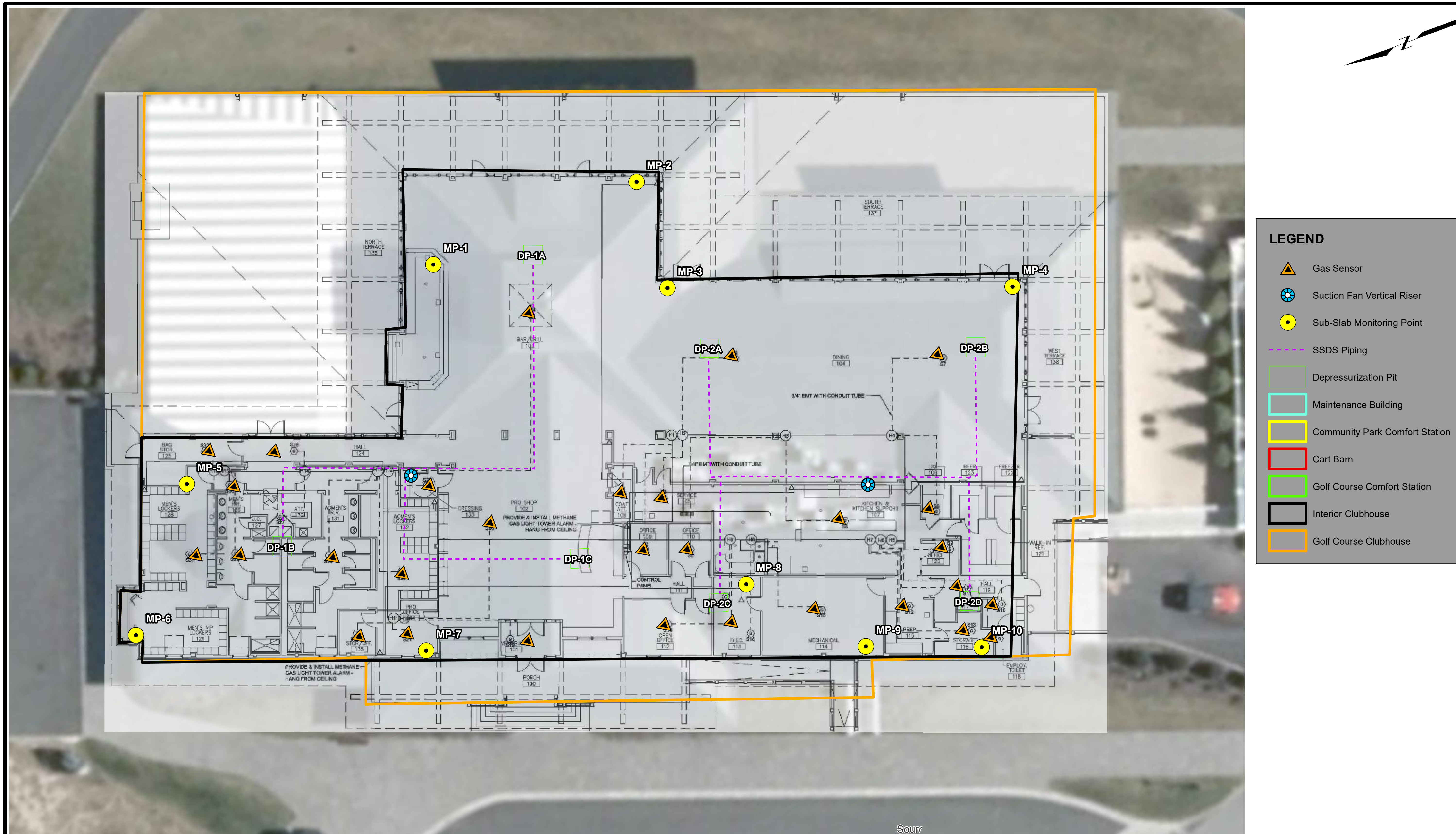
GEI Consultants

Project 2204594

CART BARN

Fig. 5

B:\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\Reports\SSDS\2023 Reports\Q1\Figure 5.mxd




***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 10 20
SCALE: 1 " = 20 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

GEI Consultants

Project 2204594

GOLF COURSE CLUBHOUSE

Fig. 6

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Table 1
Summary of 2023 Q1 OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Ferry Point Park, Bronx, NY

| Sub-slab Depressurization (SSD) and Combustible Gas (CG) System Status | Community Park Comfort Station | Golf Course Maintenance Building | | | Golf Course Comfort Station | | | Cart Storage Barn | | | | | Golf Course Clubhouse Building | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | 3/28/2023 | 3/28/2023 | | | 3/28/2023 | | | 3/28/2023 | | | | | 3/28/2023 | | | | | | | | | |
| SSD System | Operational | Operational | | | Operational | | | Operational | | | | | Operational | | | | | | | | | |
| CG System | Operational | Operational | | | Operational | | | Operational | | | | | Operational | | | | | | | | | |
| CG System Alarm Status | No Alarm Conditions | No Alarm Conditions | | | No Alarm Conditions | | | No Alarm Conditions | | | | | No Alarm Conditions | | | | | | | | | |
| SSD/CG System OM&M Data | MP-1 | MP-1 | MP-2 | MP-3 | MP-1 | MP-2 | MP-3 | Blower | MP-1 | MP-2 | MP-3 | MP-4 | MP-1 | MP-2 | MP-3 | MP-4 | MP-5 | MP-6 | MP-7 | MP-8 | MP-9 | MP-10 |
| Pressure ("WC) | 0.012 | -2.430 | -1.863 | -1.415 | -5.567 | -5.580 | -0.816 | -0.450 | -0.729 | -0.678 | -0.717 | -0.721 | -0.427 | -0.002 | -2.55 | -0.063 | -0.003 | -0.439 | -0.406 | -0.055 | -0.056 | -0.069 |
| LEL (%) | 2 | 8 | 2 | 2 | 4 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 2 | 2 | 2 |
| Methane By Volume (%) | 0.1 | 0.4 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 |
| Ambient LEL (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oxygen (%) | 21.6 | 20.6 | 21.0 | 20.9 | 21.9 | 21.8 | 21.5 | 21.3 | 21.2 | 21.1 | 21.3 | 21.4 | 21.5 | 21.3 | 20.9 | 21.1 | 21.7 | 22.0 | 22.0 | 20.9 | 20.9 | 21.0 |
| Maximum Ambient PID (ppm) | 0.1 | 0.4 | 0.7 | 0.3 | 0.1 | 0.0 | 0.0 | 0.2 | 0.3 | 0.3 | 0.5 | 0.6 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 | 0.2 |
| Sub-Slab PID (ppm) | 0.2 | 0.6 | 0.5 | 0.3 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.4 | 0.4 | 0.2 | 0.4 | 0.3 | 0.2 | 0.4 | 0.2 | 0.3 |

**Notes:**
"WC - Inches of Water
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figures 2 through 5 for locations)
cfm - cubic feet per minute
N/A - not applicable
NM - not measured
IA - inaccessible
*No pressure reading in blower however flow reading provided in cubic feet per minute (cfm)

Table 2A
Comparison of OM Data
Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Community Park Comfort Station
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Community Park Comfort Station | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-1 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 3/22/2017 | 30.14 | 37 | Yes | Sub-slab monitoring point MP-1 installed on August 15, 2018 | | | | | | |
| 6/19/2017 | 29.78 | 84 | Yes | | | | | | | |
| 9/22/2017 | 29.98 | 75 | Yes | | | | | | | |
| 12/20/2017[1] | 29.84 | 45 | Yes | | | | | | | |
| 3/28/2018 | 30.04 | 50 | Yes | | | | | | | |
| 6/25/2018 | 30.03 | 70 | Yes | | | | | | | |
| 9/27/2018 and 10/3/2018 | 30.03 | 60 | Yes | -0.14 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 12/17-18/2018[2] | 29.62-29.94 | 45-35 | Yes | 0.003[3] | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 2/4/2019[4] | 30 | 55 | Yes | -0.012 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 3/14/2019 | 30.07 | 48 | Yes | -0.009 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 6/27/2019 | 30.11 | 79 | Yes | -0.013 | 0 | 0 | 0 | 19.7 | 0.2 | 0.7 |
| 9/4/2019 | 29.94 | 75 | Yes | -0.018 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 1/8/2020 | 30.03 | 35 | Yes | -0.009 | 0 | 0 | 0 | 20.3 | 0 | 0.1 |
| 4/28/2020 | 30.15 | 45 | Yes | -0.003 | 0 | 0 | 0 | 21.3 | 0.1 | 0.1 |
| 6/29/2020 | 29.83 | 75 | Yes | -0.03 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 9/24/2020 | 29.95 | 64 | Yes | -0.067 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 12/14/2020 | 29.96 | 40 | Yes | -0.011 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 3/22/2021 | 30.37 | 46 | Yes | -0.004 | 0 | 0 | 0 | 22 | 0 | 0 |
| 6/28/2021 | 30.29 | 78 | Yes | 0.002 | 0 | 0 | 0 | 20.4 | 0.4 | 0.4 |
| 9/28/2021 | 29.81 | 71 | Yes | -0.004 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 12/20/2021 | 30.29 | 27 | Yes | -0.009 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.024 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.06 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 9/20/2022 | 29.85 | 70 | Yes | 0.06 | 0 | 0 | 0 | 22.2 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | 0.123 | 0 | 0 | 0 | 21 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | 0.012 | 2 | 0.1 | 0 | 21.6 | 0.1 | 0.2 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 2 for locations)
cfm - cubic feet per minute
N/A - not applicable
% $O_2$ - percent oxygen
°F - degrees Fahrenheit
[1]Ambient % Ox reading of 23.5% due to inability to field calibrate GEM5000 oxygen sensor
[2]Monitoring event split between two days due to access issues
[3]Vacuum fluctuated between +0.024 to -0.018. Average = +0.003
[4]Recheck to see if Vacuum is generating negative pressure at MP-1

Table 2B
Comparison of OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Golf Course Maintenance Building
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Maintenance Building | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-1 | | | | | | | MP-2 | | | | | | | MP-3 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 3/22/2017 | 30.02 | 61.7 | Yes | -0.112 | 0 | 0 | 0 | 20.7 | 8 | 0 | -0.197 | 2 | 0.1 | 0 | 19.3 | 8 | 19 | -0.153 | >100 | 20.3 | 0 | 0 | 8 | 0 |
| 6/21/2017 | 29.91 | 70 | Yes | -0.123 | 2 | 0.1 | 0 | N/A | 0 | 0 | -0.090 | 0 | 0 | 0 | 20.6 | 0 | 0 | -0.025 | 0 | 0 | 0 | 20.9 | 0.1 | 0.3 |
| 9/22/2017 | 29.93 | 75 | Yes | -0.058 | 76 | 3.8 | 0 | 4.2 | 0 | 0 | -0.031 | 2 | 0.1 | 0 | 19.3 | 0 | 0 | -0.04 | >100% | 23.1 | 1 | 0 | 0 | 0.2 |
| 12/20/2017[1] | 29.92 | 65 | Yes | -0.089 | 44 | 2.2 | 0 | 13.3 | 0 | 0 | -0.025 | 12 | 0.6 | 0 | 20.8 | 0 | 1 | -0.056 | >100% | 24.6 | 0 | 0.4 | 0.1 | 0.2 |
| 3/28/2018 | 30.04 | 68 | Yes | -2.800 | 0 | 0 | 0 | 21.1 | 0 | 0 | -2.817 | 0 | 0 | 0 | 2.2[2] | 0 | 0 | Inaccessible | | | | | | |
| 6/25/2018 | 30.03 | 70 | Yes | -2.768 | 2 | 0.1 | 2 | 19.8 | 0 | 0 | -2.779 | 2 | 0.1 | 2 | 20.7 | 0 | 0 | Inaccessible | | | | | | |
| 9/27/2018 | 30 | 57 | Yes | -0.050 | 28 | 1.4 | 0 | 6.2 | 0 | 1 | -0.074 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.036 | >100 | 7.7 | 0 | 1.2 | 0 | 0 |
| 12/17/2018 | 29.62 | 45 | Yes | -0.077 | 44 | 2.2 | 0.1 | 10 | 0 | 0 | -0.084 | 2 | 0.1 | 0.1 | 18.8 | 0 | 0 | Inaccessible | | | | | | |
| 2/4/2019[3] | 30 | 55 | Yes | - | - | - | - | - | - | - | - | - | - | - | - | - | - | -0.033 | >100 | 15.2 | 0 | 1.3 | 0.4 | 0.3 |
| 3/15/2019 | 29.64 | 62 | Yes | -0.054 | 44 | 2.2 | 0 | 12 | 1.5 | 1.5 | -0.054 | 16 | 0.8 | 0 | 18.9 | 1.4 | 1.4 | -0.063 | >100 | 19.9 | 0 | 0.5 | 4.6 | 0 |
| 6/13/2019 | 29.63 | 77 | Yes | -0.029 | 30 | 1.5 | 0 | 8.4 | 0.2 | 0.4 | -0.022 | 30 | 1.5 | 0 | 11.3 | 0 | 0 | -0.057 | >100 | 17.7 | 0 | 0.4 | 0 | 0 |
| 9/4/2019 | 29.94 | 78 | Yes | -2.650 | 0 | 0 | 0 | 20.6 | 0.1 | 0 | -2.663 | 0 | 0 | 0 | 20.3 | 0 | 0 | -2.666 | 0 | 0 | 0 | 15.9 | 0 | 0 |
| 1/8/2020 | 30.04 | 36 | Yes | -2.710 | 0 | 0 | 0 | 20.3 | 0.1 | 0.2 | -2.730 | 0 | 0 | 0 | 20.0 | 1.3 | 0.8 | -2.729 | 0 | 0 | 0 | 16.2 | 0.6 | 0.8 |
| 4/7/2020 | 29.9 | 53 | Yes | -2.679 | 0 | 0 | 0 | 21 | 0.4 | 0 | -2.698 | 0 | 0 | 0 | 21.0 | 1.8 | 0 | -2.704 | 0 | 0 | 0 | 21 | 0.4 | 0 |
| 6/29/2020 | 29.83 | 75 | Yes | -2.605 | 0 | 0 | 0 | 20.6 | 0.2 | 0 | -2.606 | 0 | 0 | 0 | 20.7 | 0 | 0 | -2.602 | 0 | 0 | 0 | 16.1 | 0 | 0 |
| 9/24/2020 | 29.95 | 64 | Yes | -1.570 | 0 | 0 | 0 | 20.8 | 0 | 0 | -2.500 | 0 | 0 | 0 | 20.1 | 0 | 0 | -1.92 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -1.892 | 0 | 0 | 0 | 21.1 | 0 | 0 | -2.618 | 0 | 0 | 0 | 20.3 | 0 | 0 | -2.005 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 3/22/2021 | 30.38 | 46 | Yes | -2.517 | 0 | 0 | 0 | 21.2 | 0 | 0 | -2.516 | 0 | 0 | 0 | 21.0 | 0 | 0 | -2.621 | 0 | 0 | 0 | 21.6 | 0 | 0 |
| 6/28/2021 | 30.21 | 81 | Yes | -2.541 | 0 | 0 | 0 | 20.1 | 0 | 0 | -2.549 | 0 | 0 | 0 | 20.7 | 0 | 0 | -2.542 | 0 | 0 | 0 | 17.5 | 0.2 | 0.2 |
| 9/28/2021 | 29.81 | 72 | Yes | -2.604 | 0 | 0 | 0 | 21.6 | 0 | 0 | -2.651 | 0 | 0 | 0 | 20.2 | 0 | 0.8 | -2.611 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 12/20/2021 | 30.28 | 28 | Yes | -1.957 | 0 | 0 | 0 | 20.9 | 0 | 0 | -1.979 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.968 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -2.143 | 0 | 0 | 0 | 20.9 | 0 | 0 | -2.099 | 0 | 0 | 0 | 20.2 | 0 | 0 | -2.159 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.030 | 0 | 0 | 0 | 15.2 | 0 | 0 | -0.013 | 0 | 0 | 0 | 15.5 | 0 | 0 | -0.023 | 0 | 0 | 0 | 9 | 0 | 0 |
| 7/20/2022 | 29.77 | 85 | Yes | -2.417 | 0 | 0 | 0 | NM | NM | NM | -2.430 | 0 | 0 | 0 | NM | NM | NM | -2.432 | 0 | 0 | 0 | NM | NM | NM |
| 9/20/2022 | 29.85 | 70 | Yes | -0.130 | 6 | 0.3 | 0 | 21.1 | 0 | 0 | -0.302 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.156 | 0 | 0 | 0 | 18.4 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | -0.200 | 34 | 1.7 | 0 | 10.9 | 0 | 0.1 | -0.010 | 0 | 0 | 0 | 4.8 | 0.7 | 0.7 | -0.03 | 0 | 3.6 | 0 | 14.7 | 0.2 | 0.2 |
| 3/28/2023 | 30.05 | 52 | Yes | -2.430 | 8 | 0.4 | 0 | 20.6 | 0.4 | 0.6 | -1.863 | 2 | 0.1 | 0 | 21.0 | 0.7 | 0.5 | -1.415 | 2 | 0.1 | 0 | 20.9 | 0.3 | 0.3 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 3 for locations)
cfm - cubic feet per minute
N/A - not applicable
NM - not measured
% $O_2$ - percent oxygen
°F - degrees Fahrenheit
[1]Ambient % Ox reading of 23.5% due to inability to field calibrate GEM5000 oxygen sensor
[2]Monitoring event conducted under ambient humid conditions
[3]Monitoring point MP-3 was not accessible during last quarter monitoring

Table 2C
Comparison of OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Golf Course Comfort Station
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Comfort Station | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-1 | | | | | | | MP-2 | | | | | | | MP-3 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 3/22/2017 | 30.09 | 59.4 | Yes | -5.371 | 2 | 0.1 | 0 | 21.6 | 0 | 0 | Sub-slab monitoring point MP-2 installed on August 15, 2018 | | | | | | | Sub-slab monitoring point MP-2 installed on August 15, 2018 | | | | | | |
| 6/19/2017 | 29.81 | 84 | Yes | -5 | 2 | 0.1 | 0 | 20.4 | 0 | 0 | | | | | | | | | | | | | |
| 9/22/2017 | 29.96 | 75 | Yes | -4.8 | 0 | 0 | 0 | 21.1 | 0 | 0 | | | | | | | | | | | | | |
| 12/20/2017[1] | 29.91 | 65 | Yes | -5.095 | 2 | 0.1 | 2 | 23.5 | 0.1 | 0.1 | | | | | | | | | | | | | |
| 3/28/2018[2] | 30.07 | 68 | Yes | -0.038 | 0 | 0 | 0 | 21.2 | 80 | 0 | | | | | | | | | | | | | |
| 6/25/2018 | 30.03 | 75 | Yes | -0.09 | 2 | 0.1 | 2 | 20.7 | 0 | 0 | | | | | | | | | | | | | |
| 9/27/2018 | 30 | 60 | Yes | -0.023 | 0 | 0 | 0 | 21.7 | 0 | 0 | -0.67 | 4 | 0.2 | 0 | 19.4 | 0 | 0 | -0.024 | 2 | 0.1 | 0 | 21.4 | 0 | 0.2 |
| 12/17-18/2018[3] | 29.59-29.91 | 40-35 | Yes | -4.777 | 0 | 0 | 0 | 19.7 | 0 | 0 | -5.532 | 2 | 0.1 | 0.1 | 22.6 | 0 | 0 | -4.414 | 2 | 0.1 | 0.1 | 21.9 | 0 | 0 |
| 3/15/2019 | 29.65 | 64 | Yes | -5.385 | 0 | 0 | 0 | 20.3 | 0.5 | 0.6 | -5.596 | 0 | 0 | 0 | 20.3 | 0.5 | 0.1 | -2.63 | 0 | 0 | 0 | 20.2 | 0.5 | 0 |
| 6/13/2019 | 29.62 | 77 | Yes | -3.684 | >100 | 13.5 | 0 | 11.1 | 3.5 | 399.1 | -5.607 | 0 | 0 | 0 | 21.8 | 0 | 0 | -5.409 | 2 | 0.1 | 0 | 18.9 | 0.3 | 0.4 |
| 9/4/2019 | 29.9 | 80 | Yes | -3.21 | 0 | 0 | 0 | 19.1 | 0 | 0 | -0.02 | 2 | 0 | 0 | 17 | 0 | 0 | -6.116 | 6 | 0.3 | 0 | 15.6 | 0 | 0 |
| 1/8/2020 | 30.01 | 37 | Yes | -5.923 | 0 | 0 | 0 | 19.9 | 0 | 0 | -6.531 | 0 | 0 | 0 | 19.9 | 0 | 0 | -4.931 | 0 | 0 | 0 | 18.3 | 0 | 0 |
| 4/7/2020 | 29.9 | 53 | Yes | -5.49 | 0 | 0 | 0 | 21.4 | 0 | 0 | -5.719 | 0 | 0 | 0 | 21.2 | 0 | 0 | -1.476 | 0 | 0 | 0 | 20 | 0 | 0 |
| 6/29/2020 | 29.83 | 75 | Yes | -6.165 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.79 | 0 | 0 | 0 | 20.7 | 0 | 0 | -6.392 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 9/24/2020 | 29.98 | 64 | Yes | -0.016 | 0 | 0 | 0 | 20.7 | 0 | 0 | -0.023 | 0 | 0 | 0 | 19.3 | 0 | 0 | -0.013 | 0 | 0 | 0 | 18.5 | 0 | 0 |
| 12/14/2020 | 29.96 | 40 | Yes | -1.848 | 0 | 0 | 0 | 22.3 | 0 | 0 | -0.934 | 0 | 0 | 0 | 21.6 | 0 | 0 | -0.178 | 0 | 0 | 0 | 21.6 | 0 | 0 |
| 3/22/2021 | 30.35 | 46 | Yes | -0.002 | 0 | 0 | 0 | 21.3 | 0 | 0 | 0.002 | 0 | 0 | 0 | 21.2 | 0 | 0 | 0.171 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/28/2021 | 30.19 | 85 | Yes | -6.894 | 0 | 0 | 0 | 20.7 | 0 | 0 | -6.733 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.72 | 0 | 0 | 0 | 20.1 | 0 | 0 |
| 9/28/2021 | 29.81 | 71 | Yes | -0.182 | 0 | 0 | 0 | 21 | 0 | 1 | -0.949 | 0 | 0 | 0 | 21 | 0 | 0 | -0.137 | 0 | 0 | 0 | 21 | 0 | 0 |
| 12/20/2021 | 30.28 | 28 | Yes | -4.668 | 0 | 0 | 0 | 21.1 | 0 | 0 | -4.643 | 0 | 0 | 0 | 20.9 | 0 | 0 | -3.713 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -7.148 | 0 | 0 | 0 | 21.2 | 0 | 0 | -7.081 | 0 | 0 | 0 | 21.1 | 0 | 0 | -6.231 | 0 | 0 | 0 | 19.9 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -5.647 | 0 | 0 | 0 | 20.1 | 0 | 0 | -4.922 | 0 | 0 | 0 | 19.8 | 0 | 0 | -0.074 | 0 | 0 | 0 | 19.6 | 0 | 0 |
| 9/20/2022 | 29.85 | 70 | Yes | -6.183 | 0 | 0 | 0 | 20.1 | 0 | 0 | -6.088 | 0 | 0 | 0 | 22 | 0 | 0 | -0.667 | 0 | 0 | 0 | 21.8 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | -5.818 | 0 | 0 | 0 | 21 | 0 | 0 | -5.845 | 0 | 0 | 0 | 21.2 | 0 | 0 | -4.075 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -5.567 | 4 | 0.2 | 0 | 21.9 | 0.1 | 0.1 | -5.580 | 2 | 0.1 | 0 | 21.8 | 0 | 0.1 | -0.816 | 4 | 0.2 | 0 | 21.5 | 0 | 0.2 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 4 for locations)
cfm - cubic feet per minute: Due to instrumentation malfunction this reading was collected in cfm instead of WC to ensure accuracy
NM - not measured
% $O_2$ - percent oxygen
°F - degrees Fahrenheit
[1]Ambient % O2 reading of 23.5% due to inability to field calibrate GEM5000 oxygen sensor
[2]Monitoring event conducted under ambient humid conditions
[3]Monitoring event split between two days due to access issues. MP-1 monitored 12/18/18; MP-2 and MP-3 monitored 12/17/18

Table 2D
Comparison of OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Golf Course Cart Storage Barn
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Cart Storage Barn | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Blower Effluent | | | | | | | MP-1 | | | | | | | MP-2 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 4/19/2017 | 30.51 | 55 | Yes | - | - | - | - | - | - | - | -0.819 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.824 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 6/19/2017 | 29.79 | 80 | Yes | 357-410 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.916 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.915 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 9/22/2017 | 29.93 | 75 | Yes | 300-800 | 2 | 0.1 | 0 | 20.1 | 0 | 0 | -0.92 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.915 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 12/20/2017[1] | 29.9 | 45 | Yes | 395 | 2 | 0.1 | 2 | 23.2 | 0 | 0 | -0.741 | 0 | 0 | 0 | 23.8 | 0 | 0 | -0.725 | 0 | 0 | 0 | 23.8 | 0 | 0 |
| 3/28/2018 | 30.03 | 55 | Yes | 635 | 0 | 0 | 0 | 21.8 | 0 | 0 | -0.937 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.938 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/25/2018 | 30.03 | 70 | Yes | 585 | 2 | 0.1 | 2 | 20.5 | 0 | 0 | -0.905 | 2 | 0.1 | 2 | 20.4 | 0.5 | 0.1 | -0.911 | 2 | 0.1 | 2 | 20.4 | 0 | 0 |
| 9/27/2018 | 30.3 | 62 | Yes | 234 | 2 | 0.1 | 0 | 20.6 | 0 | 0 | -0.76 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.753 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 12/17/2018[2] | 29.62 | 45 | Yes | 100 | 2 | 0.1 | 0 | 20.3 | 0 | 0 | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 2/4/2019[3] | 30 | 55 | Yes | - | - | - | - | - | - | - | Inaccessible | | | | | | | -0.728 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 3/15/19-4/3/2019[4] | 29.80/29.90 | 67/63 | Yes | 645 | 0 | 0 | 0 | 20.3 | 1.1 | 0.6 | Inaccessible | | | | | | | -0.853 | 0.5 | 0.1 | 0 | 20.5 | 0.2 | 0.1 |
| 6/13/2019 | 29.68 | 71 | Yes | 83 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.946 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.952 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 9/4/2019 | 29.94 | 80 | Yes | 39 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.945 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.93 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 1/8/2020 | 30.03 | 36 | Yes | 31 | 0 | 0 | 0 | 20.2 | 0 | 0 | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 4/7/2020 | 29.94 | 53 | Yes | 250-800 | 0 | 0 | 0 | 21.3 | 0 | 0 | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 6/29/2020 | 29.83 | 75 | Yes | 400-700 | 0 | 0 | 0 | 20.6 | 0 | 0 | -0.894 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.893 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | 250-400 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.895 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.909 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | 350-600 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.937 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.95 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 3/22/2021 | 320.38 | 46 | Yes | 350-600 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.718 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.726 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 6/28/2021 | 30.2 | 86 | Yes | 200-700 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.66 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.801 | 0 | 0 | 0 | 21 | 0 | 0 |
| 9/28/2021 | 29.81 | 70 | Yes | 250-400 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.904 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.906 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 12/20/2021 | 30.28 | 28 | Yes | 300-500 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.623 | 0 | 0 | 0 | 21.1 | 0.1 | 0 | -0.723 | 0 | 0 | 0 | 21 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | 350-600 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.775 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.769 | 0 | 0 | 0 | 20 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | 230-330 | 0 | 0 | 0 | 19.7 | 0 | 0 | -0.933 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.931 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 9/20/2022 | 29.85 | 70 | Yes | 35 | 0 | 0 | 0 | 22.3 | 0 | 0 | -0.896 | 0 | 0 | 0 | 22 | 0 | 0 | -0.153 | 0 | 0 | 0 | 21.8 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | 22.15 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.764 | 0 | 0 | 0 | 20.6 | 0 | 0 | -0.705 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | 0.450 | 2 | 0.1 | 0 | 21.3 | 0.2 | 0.1 | -0.729 | 2 | 0.1 | 0 | 21.2 | 0.3 | 0.2 | -0.678 | 2 | 0.1 | 0 | 21.1 | 0.3 | 0.2 |

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Cart Storage Barn | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-3 | | | | | | | MP-4 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 4/19/2017 | 30.51 | 55 | Yes | -0.926 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.932 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/19/2017 | 29.79 | 80 | Yes | -0.943 | 0 | 0 | 0 | 20.7 | 0 | 0 | -0.93 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 9/22/2017 | 29.93 | 75 | Yes | -0.91 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.905 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 12/20/2017[1] | 29.9 | 45 | Yes | -0.745 | 2 | 0.1 | 2 | 23.7 | 0 | 0 | -0.731 | 2 | 0.1 | 2 | 23.6 | 0 | 0 |
| 3/28/2018 | 30.03 | 55 | Yes | -0.926 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.932 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/25/2018 | 30.03 | 70 | Yes | -0.905 | 2 | 0.1 | 2 | 20.5 | 0 | 0 | -0.91 | 2 | 0.1 | 2 | 20.5 | 0 | 0 |
| 9/27/2018 | 30.3 | 60 | Yes | -0.756 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.764 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 12/17/2018[2] | 29.62 | 45 | Yes | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 2/4/2019[3] | 30 | 55 | Yes | Inaccessible | | | | | | | -0.733 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 3/15/19-4/3/2019[4] | 29.80/29.90 | 67/63 | Yes | Inaccessible | | | | | | | -0.834 | 0.5 | 0.1 | 0 | 20.6 | 0.1 | 0.1 |
| 6/13/2019 | 29.68 | 71 | Yes | -0.948 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.944 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 9/4/2019 | 29.94 | 80 | Yes | -0.929 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.943 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 1/8/2020 | 30.03 | 36 | Yes | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 4/7/2020 | 29.94 | 53 | Yes | -0.905 | 0 | 0 | 0 | 21.5 | 0.1 | 0 | -0.908 | 0 | 0 | 0 | 21.3 | 0.1 | 0 |
| 6/29/2020 | 29.83 | 75 | Yes | -0.894 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.894 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | -0.904 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.896 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -0.929 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.985 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 3/22/2021 | 30.38 | 46 | Yes | -0.733 | 0 | 0 | 0 | 21.6 | 0 | 0 | -0.73 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 6/28/2021 | 30.2 | 86 | Yes | -0.011 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.013 | 0 | 0 | 0 | 21 | 0 | 0 |
| 9/28/2021 | 29.81 | 70 | Yes | -0.888 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.898 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 12/20/2021 | 30.28 | 28 | Yes | Inaccessible | | | | | | | -0.718 | 0 | 0 | 0 | 21 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.861 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.733 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.904 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.929 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 9/20/2022 | 29.85 | 70 | Yes | -0.907 | 0 | 0 | 0 | 22.4 | 0 | 0 | -1.11 | 0 | 0 | 0 | 22.3 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | Inaccessible | | | | | | | -0.781 | 0 | 0 | 0 | 20.2 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -0.717 | 2 | 0.1 | 0 | 21.3 | 0.5 | 0.3 | -0.721 | 2 | 0.1 | 0 | 21.4 | 0.6 | 0.2 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 5 for locations)
cfm - cubic feet per minute
NM - not measured
% $O_2$ - percent oxygen
°F - degrees Fahrenheit
[1]Ambient % O2 reading of 23.5% due to inability to field calibrate GEM5000 oxygen sensor
[2]Sub-Slab monitoring points all inaccessible due to golf carts being stored for winter
[3]Only Subslab monitoring points MP-2 and MP-4 were accessible during remobilization on 2/4/2019
[4]Blower was accessible on 3/15/2019. Only Subslab monitoring points MP-2 and MP-4 were accessible during remobilization on 4/3/2019

Table 2E
Comparison of OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Golf Course Clubhouse
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Clubhouse Building | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-1 | | | | | | | MP-2 | | | | | | | MP-3 | | | | | | | MP-4 | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 6/7/2018[1] | 30.1 | 70 | Yes | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9/27/2018 | 29.94 | 55 | Yes | -1.555 | 0 | 0 | 0 | 20.4 | 0.8 | 0.7 | - | - | - | - | - | - | - | -0.247 | 0 | 0 | 0 | 16 | 0.1 | 0 | -1.494 | 0 | 0 | 0 | 21.1 | 0.3 | 0.1 |
| 12/17/2018 | 29.73 | 45 | Yes | -1.187 | 0 | 0 | 0 | 20.3 | 0 | 0 | - | - | - | - | - | - | - | -1.749 | 0 | 0 | 0 | 17 | 0 | 0 | -1.133 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 3/15/2019 | 29.63 | 62 | Yes | -1.174 | 0 | 0 | 0 | 20.3 | 1 | 1 | - | - | - | - | - | - | - | -0.593 | 0 | 0 | 0 | 18.4 | 1.2 | 1.4 | -1.099 | 0 | 0 | 0 | 20 | 1.4 | 1.6 |
| 6/13/2019 | 29.78 | 88 | Yes | -1.322 | 0 | 0 | 0 | 21.1 | 0 | 0 | - | - | - | - | - | - | - | -0.013 | 0 | 0 | 0 | 21.4 | 0 | 0 | -1.226 | 0 | 0 | 0 | 21.2 | 0 | 0.2 |
| 9/4/2019 | 29.97 | 28 | Yes | -1.338 | 0 | 0 | 0 | 20.5 | 0 | 0 | - | - | - | - | - | - | - | -1.476 | 0 | 0 | 0 | 20 | 20 | 0 | -1.286 | 0 | 0 | 0 | 20.4 | 0 | 0 |
| 1/8/2020 | 30.03 | 35 | Yes | -1.121 | 0 | 0 | 0 | 20 | 0 | 0.1 | - | - | - | - | - | - | - | -0.965 | 0 | 0 | 0 | 19.6 | 0 | 0.1 | -1.061 | 0 | 0 | 0 | 19.9 | 0 | 0.4 |
| 4/7/2020 | 29.97 | 53 | Yes | -1.145 | 8 | 0.4 | 0 | 18.2 | 0 | 0 | - | - | - | - | - | - | - | 0.325/0.237/0.069[2] | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.063 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 6/29/2020 | 29.83 | 70 | Yes | -1.236 | 0 | 0 | 0 | 18.7 | 0 | 0 | - | - | - | - | - | - | - | -0.041 | 0 | 0 | 0 | 19.2 | 0 | 0 | -1.155 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | -1.257 | 0 | 0 | 0 | 19.8 | 0 | 0 | - | - | - | - | - | - | - | -0.023 | 0 | 0 | 0 | 20.3 | 0 | 0 | -1.153 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -1.27 | 0 | 0 | 0 | 21 | 0 | 0 | - | - | - | - | - | - | - | -0.519 | 0 | 0 | 0 | 20.8 | 0 | 0 | -1.102 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 3/22/2021 | 30.32 | 46 | Yes | -0.89 | 0 | 0 | 0 | 18.9 | 0 | 0 | - | - | - | - | - | - | - | 0.008 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.948 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 6/28/2021 | 30.19 | 78 | Yes | -0.88 | 18 | 0.9 | 0 | 17.9 | 0 | 0 | - | - | - | - | - | - | - | 0.159 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.617 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 9/28/2021 | 29.81 | 72 | Yes | -0.704 | 18 | 0.9 | 0 | 21.2 | 0 | 0 | - | - | - | - | - | - | - | -0.005 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.381 | 0 | 0 | 0 | 21 | 0 | 0 |
| 12/20/2021 | 30.29 | 28 | Yes | -0.606 | 8 | 0.4 | 0 | 20.6 | 0 | 0 | - | - | - | - | - | - | - | -0.006 | 0 | 0 | 0 | 21.7 | 0 | 0 | -0.264 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.591 | 0 | 0 | 0 | 20 | 0 | 0 | - | - | - | - | - | - | - | -0.168 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.169 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 3/31/2022 | 30.56 | 29 | Yes | -0.586 | 0 | 0 | 0 | 21.8 | 0 | 0 | -0.022 | 0 | 0 | 0 | 21.9 | 0 | 0 | -0.015 | 0 | 0 | 0 | 19.9 | 0 | 0 | -0.17 | 0 | 0 | 0 | 21.6 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.6 | 14 | 0.7 | 0 | 16.3 | 0 | 0 | -0.003 | 0 | 0 | 0 | 20.2 | 0 | 0 | -0.001 | 0 | 0 | 0 | 20.2 | 0 | 0 | -0.147 | 0 | 0 | 0 | 20.3 | 0 | 0 |
| 7/20/2022 | 29.77 | 85 | Yes | NM | NM | NM | NM | NM | NM | NM | -0.073 | NM | NM | NM | NM | NM | NM | -0.638 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 9/20/2022 | 29.85 | 70 | Yes | -0.063 | 0 | 0 | 0 | 22.7 | 0 | 0 | -0.011 | 0 | 0 | 0 | 23.2 | 0 | 0 | -0.513 | 0 | 0 | 0 | 23.4 | 0 | 0 | -0.162 | 0 | 0 | 0 | 23.5 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | -0.42 | 14 | 0.7 | 0 | 18.5 | 0 | 0 | 0.04 | 0 | 0 | 0 | 21 | 0 | 0 | -0.818 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.13 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -0.427 | 2 | 0.1 | 0 | 21.5 | 0.2 | 0.1 | -0.002 | 2 | 0.1 | 0 | 21.3 | 0.1 | 0.4 | -2.55 | 2 | 0.1 | 0 | 20.9 | 0.2 | 0.4 | -0.063 | 2 | 0.1 | 0 | 21.1 | 0.1 | 0.2 |

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Clubhouse Building | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-5 | | | | | | | MP-6 | | | | | | | MP-7 | | | | | | | MP-8 | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 6/7/2018[1] | 30.1 | 70 | Yes | -1.149 | NM | NM | 0 | NM | 0 | NM | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9/27/2018 | 29.94 | 55 | Yes | -0.033 | 0 | 0 | 0 | 21.2 | 0 | 0 | -1.587 | 0 | 0 | 0 | 21 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12/17/2018 | 29.73 | 45 | Yes | -0.014 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.217 | 0 | 0 | 0 | 20.6 | 0 | 0 | - | - | - | - | - | - | - | -1.131 | 0 | 0 | 0 | 20.4 | 0 | 0 |
| 3/15/2019 | 29.63 | 62 | Yes | -0.009 | 0 | 0 | 0 | 19.4 | 1.8 | 1.8 | -1.185 | 0 | 0 | 0 | 20.2 | 1.8 | 1.8 | - | - | - | - | - | - | - | -1.084 | 0 | 0 | 0 | 20 | 1.4 | 1.4 |
| 6/13/2019 | 29.78 | 88 | Yes | -0.018 | 0 | 0 | 0 | 21.1 | 0 | 0.3 | -1.312 | 0 | 0 | 0 | 21.1 | 0 | 0 | - | - | - | - | - | - | - | -1.195 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 9/4/2019 | 29.97 | 78 | Yes | -0.019 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.319 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.341 | 0 | 0 | 0 | 20.4 | 6 | 0 | -1.271 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 1/8/2020 | 30.03 | 35 | Yes | -0.02 | 0 | 0 | 0 | 20 | 0 | 0.4 | -1.196 | 0 | 0 | 0 | 20.3 | 0 | 0 | -1.201 | 0 | 0 | 0 | 19.7 | 0.1 | 0.2 | -1.092 | 0 | 0 | 0 | 19.7 | 0 | 0 |
| 4/7/2020 | 29.97 | 53 | Yes | -0.005 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.21 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.137 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.062 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 6/29/2020 | 29.83 | 70 | Yes | -0.002 | 0 | 0 | 0 | 20.8 | 0 | 0 | -1.305 | 0 | 0 | 0 | 20.9 | 0 | 0 | -1.1223 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.138 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | -0.01 | 0 | 0 | 0 | 20.8 | 0 | 0 | -1.304 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.237 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.144 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -0.027 | 0 | 0 | 0 | 20.8 | 0 | 0 | -1.296 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.261 | 0 | 0 | 0 | 21.2 | 0 | 0 | -1.237 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 3/22/2021 | 30.32 | 46 | Yes | -0.001 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.679 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.872 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.675 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 6/28/2021 | 30.19 | 78 | Yes | -0.902 | 0 | 0 | 0 | 21 | 0 | 0 | -0.876 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.869 | 0 | 0 | 0 | 21 | 0 | 0 | -0.571 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 9/28/2021 | 29.81 | 72 | Yes | -0.014 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.761 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.858 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.266 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 12/20/2021 | 30.29 | 28 | Yes | -0.009 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.629 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.587 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.222 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.019 | 0 | 0 | 0 | 20.7 | 0 | 0 | -0.719 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.594 | 0 | 0 | 0 | 21 | 0 | 0 | -0.23 | 0 | 0 | 0 | 20.3 | 0 | 0 |
| 3/31/2022 | 30.56 | 29 | Yes | -0.022 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.75 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.538 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.217 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | 0 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.59 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.556 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.168 | 0 | 0 | 0 | 20.4 | 0 | 0 |
| 7/20/2022 | 29.77 | 85 | Yes | -2.89 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 9/20/2022 | 29.85 | 70 | Yes | -0.004 | 0 | 0 | 0 | 23.1 | 0 | 0 | -0.664 | 0 | 0 | 0 | 23.1 | 0 | 0 | -0.601 | 0 | 0 | 0 | 23.1 | 0 | 0 | -0.151 | 0.1 | 0 | 0 | 23.5 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | 0.07 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.455 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.395 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.142 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -0.003 | 2 | 0.1 | 0 | 21.7 | 0.1 | 0.4 | -0.439 | 4 | 0.2 | 0 | 22.0 | 0.1 | 0.3 | -0.406 | 4 | 0.2 | 0 | 22.0 | 0.1 | 0.2 | -0.055 | 2 | 0.1 | 0 | 20.9 | 0.3 | 0.4 |

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Clubhouse Building | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-9 | | | | | | | MP-10 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 6/7/2018[1] | 30.1 | 70 | Yes | - | - | - | - | - | - | - | -1.491 | NM | NM | 0 | NM | 0 | NM |
| 9/27/2018 | 29.94 | 55 | Yes | -1.485 | 0 | 0 | 0 | 21 | 0 | 0 | | | | | | | |
| 12/17/2018 | 29.73 | 45 | Yes | -1.115 | 0 | 0 | 0 | 20.3 | 0 | 0 | -1.124 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 3/15/2019 | 29.63 | 62 | Yes | -1.095 | 0 | 0 | 0 | 19.4 | 1.5 | 1.6 | -1.087 | 0 | 0 | 0 | 19.9 | 1.5 | 1.6 |
| 6/13/2019 | 29.78 | 88 | Yes | -1.157 | 0 | 0 | 0 | 21.2 | 0.1 | 0.1 | -1.183 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 9/4/2019 | 29.97 | 78 | Yes | -1.253 | 0 | 0 | 0 | 20.4 | 0 | 0 | -1.258 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 1/8/2020 | 30.03 | 35 | Yes | -1.049 | 0 | 0 | 0 | 19.6 | 0 | 0.2 | -1.089 | 0 | 0 | 0 | 19.8 | 0 | 1.5 |
| 4/7/2020 | 29.97 | 53 | Yes | -1.03 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.057 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 6/29/2020 | 29.83 | 70 | Yes | -1.116 | 0 | 0 | 0 | 20.5 | 0 | 0 | -1.1201 | 0 | 0 | 0 | 20.3 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | -1.115 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.125 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -1.084 | 0 | 0 | 0 | 21.5 | 0 | 0 | -1.197 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 3/22/2021 | 30.32 | 46 | Yes | -0.506 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.694 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 6/28/2021 | 30.19 | 78 | Yes | -0.578 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.58 | 0 | 0 | 0 | 19.7 | 0 | 0 |
| 9/28/2021 | 29.81 | 72 | Yes | -0.246 | 0 | 0 | 0 | 21 | 0 | 0 | -0.381 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 12/20/2021 | 30.29 | 28 | Yes | -0.19 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.192 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.187 | 0 | 0 | 0 | 20.2 | 0 | 0 | -0.199 | 0 | 0 | 0 | 21 | 0 | 0 |
| 3/31/2022 | 30.56 | 29 | Yes | -0.159 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.22 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.14 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.128 | 0 | 0 | 0 | 20.3 | 0 | 0 |
| 7/20/2022 | 29.77 | 85 | Yes | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 9/20/2022 | 29.85 | 70 | Yes | -0.013 | 0 | 0 | 0 | 23.4 | 0 | 0 | -0.11 | 0 | 0 | 0 | 23.4 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | -0.125 | 0 | 0 | 0 | 20.7 | 0 | 0 | -0.1 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -0.056 | 2 | 0.1 | 0 | 20.9 | 0.2 | 0.2 | -0.069 | 2 | 0.1 | 0 | 21.0 | 0.2 | 0.3 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 6 for locations)
cfm - cubic feet per minute
NM - not measured
% $O_2$ - percent oxygen
°F - degrees Fahrenheit
[1] System only partially installed
[2]Data Collected from three separate Site Visits: April 7, 2020 = +0.325; April 28, 2020 = +0.237 ; May 12, 2020 = -0.069

July 17, 2023
Project 2204594

Geotechnical
Environmental
Water Resources
Ecological

VIA EMAIL: samantha.catalanotto@parks.nyc.gov

Ms. Samantha Catalanotto
Environmental Project Manager
Capital Projects – Environmental Remediation Unit
New York City Department of Parks & Recreation
Olmsted Center
117-02 Roosevelt Avenue
Corona, NY 11368

**Re: Quarterly Sub-Slab Depressurization System (SSDS) Monitoring - Quarter 2, 2023**
**Ferry Point Park Golf Course**
**NYSDEC Permit No. 2-6006-00014/00013**
**Bronx, NY**

Dear Ms. Catalanotto:

GEI Consultants, Inc. (GEI) has prepared the following report on behalf of the New York City Department of Parks & Recreation (NYCDPR) to document the SSDS infrastructure monitoring event conducted on June 26, 2023, at the Ferry Point Park Golf Course and Community Park. Quarterly sub-slab depressurization (SSD) and combustible gas (CG) monitoring system operations, maintenance, and monitoring (OM&M) is performed in compliance with the NYSDEC Permit No. 2-6006-00014/00013, the October 2013 *Post Construction Custodial Care Plan*, the October 2013 *Landfill Gas Management Plan*, and the site-specific OM&M Manual.

The following locations are included in the SSDS and/or CG OM&M:

- Community Park Comfort Station (CPCS);
- Golf Course Maintenance Building (Maintenance Building):
- Golf Course Comfort Station (GCCS);
- Golf Course Cart Storage Barn (Cart Barn); and
- Golf Course Clubhouse (Clubhouse).


GEI Consultants, Inc.
530 7th Avenue, Suite 2007, New York, NY 10018
212.687.8282

## Summary of OM&M Inspection Activities

SSD and CG monitoring systems OM&M activities included visual inspections and collection of oxygen, organic vapor, and methane (percent methane by volume, percent lower explosive limit [LEL]) readings from beneath the building slabs. In locations with sub-slab monitoring points, sub-slab pressure was measured to determine if the SSDS is creating a negative pressure beneath the structures. The location of on- and off-Site buildings with SSD and CG systems are depicted on Figure 1, and the system layout and components for each building are depicted on Figure 2 through 6.

## OM&M Observations and Results

Community Park Comfort Station (CPCS)

OM&M was performed at the CPCS on June 26, 2023, which included the collection of sub-slab pressure CG readings, inspection of the SSDS to verify it was operational, as well as a review of the real-time data at the CG sensor. Table 1 contains a summary of the OM&M visit results, with historical data presented on Table 2A. Below is a summary of the observations made during the CPCS monitoring event:

- The SSD and CG systems were operational during, and prior to, the Q2 monitoring event;
- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;
- Low levels of volatile organic compounds (VOCs) were detected within and under the building;
- No methane was detected under the building;
- Sub-slab pressure measurements collected from the sub-slab monitoring points (Figure 2) during the Q2 monitoring event indicated that the SSDS was generating negative pressure beneath the building slab. The pressure gradient was positive during the last three quarterly reports; the Q2 2023 reading was greater than previous negative pressure readings in the building. No methane was detected at MP-1, compared to 0.1% detected in Q1 2023.

Golf Course Maintenance Building (Maintenance Building)

OM&M performed at the Maintenance Building included the inspection of the SSDS to verify it was operational, collection of sub-slab pressure CG readings, and

review of the real-time data at the CG sensor. A summary of the Q2 monitoring results is presented on Table 1, with historical data presented on Table 2B. Below is a summary of the observations denoted at the Maintenance Building during the OM&M event:

- The SSD and CG systems were operational during, and prior to, the Q2 monitoring event;
- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;
- Low levels of volatile organic compounds (VOCs) were detected within and under the Maintenance Building;
- No methane was detected under the building;
- Sub-slab pressure measurements collected from the sub-slab monitoring points (Figure 3) during the Q2 monitoring event indicated that the SSDS was generating negative pressure beneath the building slab. The negative pressure was greater than Q1 2023, and similar to that of July 2022. The methane LEL detected at MP-1 through MP-3 was lesser than that of Q1 2023.

Golf Course Comfort Station (GCCS)

GCCS monitoring included the review of the real-time data at the CG sensor, the inspection of the SSDS to verify it was operational, and collection of sub-slab pressure CG readings. Table 1 contains a summary of the OM&M visit results, with historical data presented on Table 2C. Below is a summary of the observations made at the GCCS during the OM&M event:

- The SSD and CG systems were operational prior to and during the Q2 monitoring event;
- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;
- Low levels of volatile organic compounds (VOCs) were detected within and under the building;
- No methane was detected under the station;

- Sub-slab pressure measurements collected from the three sub-slab monitoring points (Figure 4) during the Q2 monitoring event indicated that the SSDS is generating negative pressure beneath the slab. The vacuum pressure recorded at MP-1 through MP-3 was significantly lower than that of Q1 2023, however they are consistent with historical data.

Golf Course Cart Storage Barn (Cart Barn)

OM&M performed at the Cart Barn included the inspection of the SSDS to verify it was operational, collection of sub-slab pressure CG readings, and review of the real-time data at the CG sensor. A summary of the Q2 monitoring results is presented on Table 1, with historical data presented on Table 2D. Below is a summary of the observations made during the OM&M event at the Cart Barn:

- The SSD and CG systems were operational during, and prior to, the Q2 monitoring event;

- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;

- Low levels of volatile organic compounds (VOCs) were detected within and under the building;

- No methane was detected under the Cart Barn;

- Sub-slab pressure measurements collected from MP-1, MP-3 and MP-4 sub-slab monitoring points (Figure 5) during the Q2 monitoring event indicated that the SSDS was generating a negative pressure beneath the building slab, consistent with historical data. MP-2 displayed a positive pressure gradient, dissimilar to previous collection events. Oxygen was also abnormally low, (detected at 1.8% compared to 21.1% in Q1 2023) possibly associated with the positive pressure gradient. The flow pressure measured at the blower continues to be lower than historical OM&M events, similar to Q1 2023.

Golf Course Clubhouse (Clubhouse)

The Clubhouse OM&M event included the review of the real-time data at the CG sensor, the inspection of the SSDS to verify it was operational, and collection of sub-slab pressure CG readings. Table 1 contains a summary of the OM&M visit results, with historical data presented on Table 2E. Below is a summary of the observations made at the Clubhouse during the monitoring event:

- The SSD and CG systems were operational prior to and during the Q2 monitoring event;

- The combustible gas data logging system was online, operational and transmitting data to the central datalogging panel, registering the ambient readings of 0.0% LEL;

- Low levels of volatile organic compounds (VOCs) were detected within and under the building at all ten monitoring point locations;

- No methane was detected underneath the Clubhouse;

- Sub-slab pressure measurements collected from eight of the ten sub-slab monitoring points (Figure 6) during the Q2 monitoring event indicated that the SSDS is generating negative pressure beneath the slab, consistent with measurements collected during previous events. MP-3 and MP-5 displayed positive pressure gradients, which has occurred in previous monitoring events.

Conclusions and Recommendations

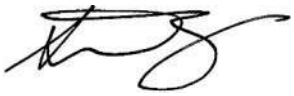
From the Quarter 2 OM&M event, the results confirm that the SSD and GC systems are operational. Sub-slab pressure readings collected from the on- and off-Site monitoring points indicated that the SSDS in the Golf Course Comfort Station, Community Park Comfort Station, Golf Course Cart Storage Barn, Golf Course Maintenance Building and Golf Course Clubhouse are creating a negative pressure gradient beneath the building slabs. Certain monitoring points did not demonstrate negative pressure conditions; however, other monitoring points within the buildings were displaying negative pressures and only low levels of volatile organic compounds (VOCs) were detected within the buildings.

All CG sensors were communicating with their respective control panels and registered ambient methane readings of 0.0% LEL. The main datalogging panel, located in the Golf Course Maintenance Building, is receiving data from the Golf Course Cart Barn, Golf Course Clubhouse, Community Park and Golf Course Comfort Stations, and Golf Course Maintenance Building. Combustible gas data is accessed remotely, reviewed and downloaded periodically. Methane readings from the CG sensor data are monitored and downloaded periodically, and no alarm conditions have been registered.

If you have any questions, please feel free to contact me at (347) 514–3861.

Sincerely,

GEI CONSULTANTS, INC.



Stacey Ng, P.G
Project Manager

Enclosures:
Figure 1 – SSD and CG System Locations
Figure 2 – Community Park Comfort Station
Figure 3 – Golf Course Maintenance Building
Figure 4 – Golf Course Comfort Station
Figure 5 – Golf Course Cart Storage Barn
Figure 6 – Golf Course Clubhouse
Table 1 - Summary of 2023 Q2 OM&M Data
Table 2A - Comparison of Community Park Comfort Station OM&M Data
Table 2B - Comparison of Golf Course Maintenance Building OM&M Data
Table 2C - Comparison of Golf Course Comfort Station OM&M Data
Table 2D - Comparison of Golf Course Cart Storage Barn OM&M Data
Table 2E - Comparison of Golf Course Clubhouse OM&M Data

c: K. Zias, NYCDPR
K. McCarty, GEI




N

***LEGEND***

- Cart Barn
- Golf Course Comfort Station
- Maintenance Building
- Golf Course Clubhouse
- Community Park Comfort Station

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 300 600
SCALE: 1 " = 409 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

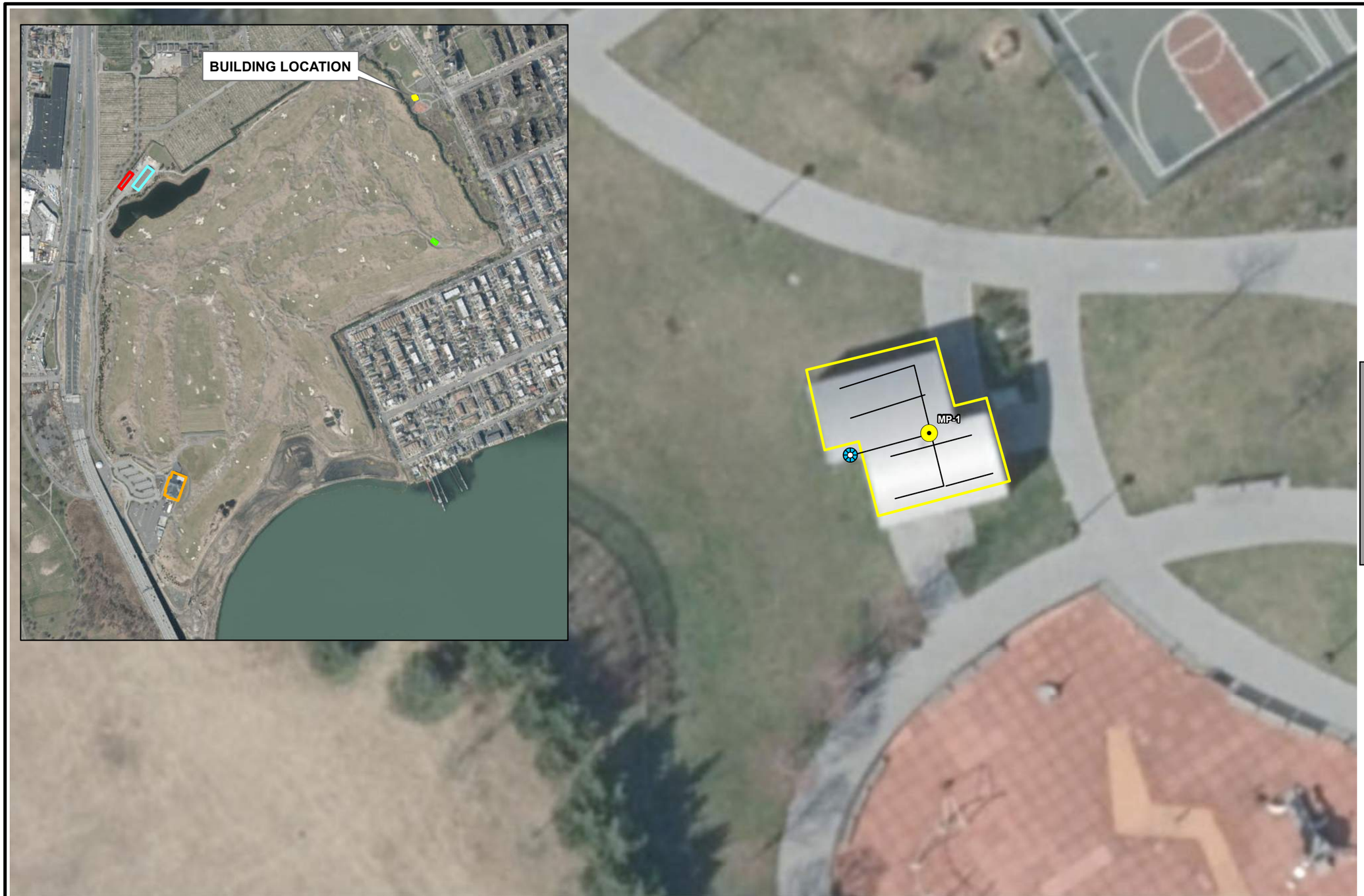
GEI Consultants

Project 2204594

SSD AND CG SYSTEM

Fig. 1

B:\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\Reports\SSDS\2023 Reports\Q1\Figure 1.mxd




N

**LEGEND**

- Vertical Riser with Sampling Point
- Sub-Slab Monitoring Point
- SSDS Piping
- Cart Barn
- Golf Course Comfort Station
- Maintenance Building
- Golf Course Clubhouse
- Community Park Comfort Station

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 10 20
SCALE:1 " = 20 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

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COMMUNITY PARK
COMFORT STATION

Fig. 2

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***SOURCE:***
1. ESRI IMAGERY BASE MAP

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Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

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MAINTENANCE BUILDING

Fig. 3

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N

## LEGEND

- Controller
- Exterior SSDS Monitoring Point
- Interior SSDS Monitoring Point
- Methane and H2S Sensor
- Methane Sensor
- 6" PVC
- Sub-Slab Depressurization Pit
- SSDS Piping
- Maintenance Building
- Cart Barn
- Golf Course Comfort Station
- Community Park Comfort Station
- Golf Course Clubhouse

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 6 12
SCALE: 1 " = 10 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

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GOLF COURSE COMFORT STATION

Fig. 4

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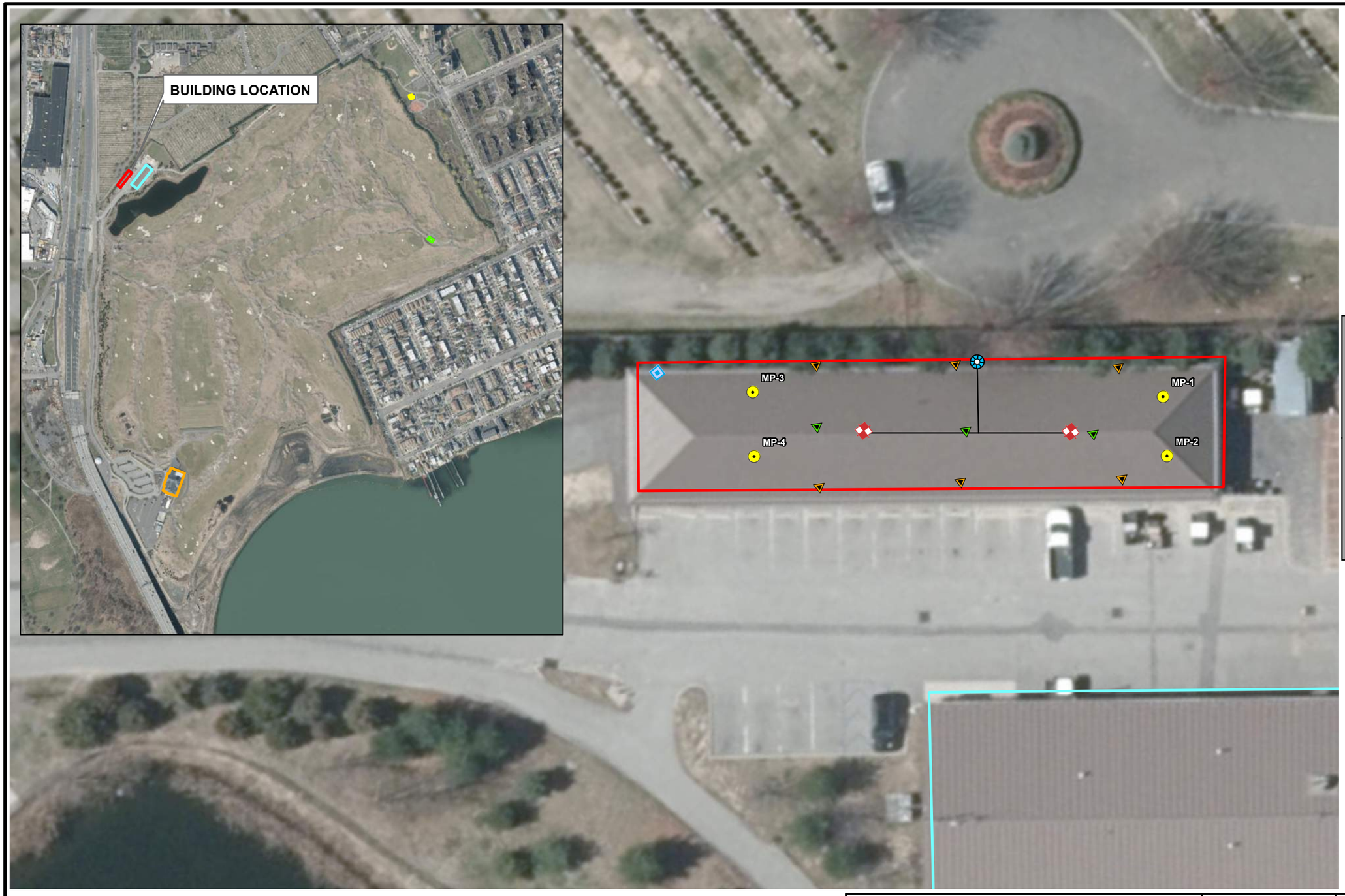


**LEGEND**

- Second Floor Combustible Gas (CG) Sensor
- First Floor CG Sensor
- Controller
- Vertical Riser
- Sub-Slab Depressurization Pit
- Sub-Slab Monitoring Point
- SSDS Piping
- Cart Barn
- Golf Course Comfort Station
- Maintenance Building
- Golf Course Clubhouse
- Community Park Comfort Station

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 10 20
SCALE:1 " = 26 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

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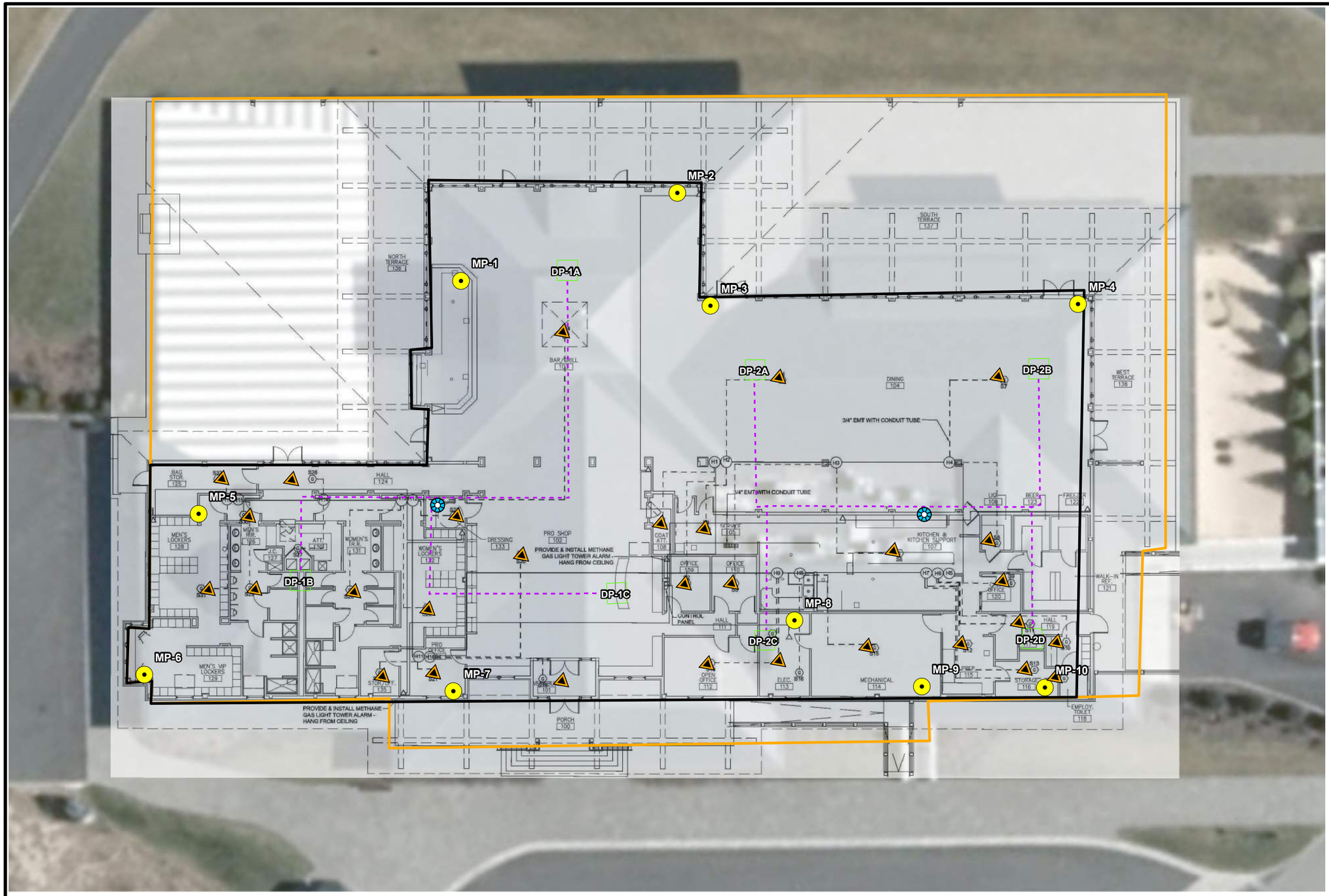
Project 2204594

CART BARN

Fig. 5

B:\Working\NYCDPR\2204594 Ferry Point Park Environmental Engineering\Reports\SSDS\2023 Reports\Q1\Figure 5.mxd




## LEGEND

- Gas Sensor
- Suction Fan Vertical Riser
- Sub-Slab Monitoring Point
- SSDS Piping
- Depressurization Pit
- Maintenance Building
- Community Park Comfort Station
- Cart Barn
- Golf Course Comfort Station
- Interior Clubhouse
- Golf Course Clubhouse

***SOURCE:***
1. ESRI IMAGERY BASE MAP

0 10 20
SCALE: 1 " = 20 '

Ferry Point Park
Bronx, New York
Sub-Slab Depressurization System Monitoring

New York City Department of Parks & Recreation (NYCDPR)
Queens, NY

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GOLF COURSE CLUBHOUSE

Fig. 6

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Table 1
Summary of 2023 Q2 OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Ferry Point Park, Bronx, NY

| Sub-slab Depressurization (SSD) and Combustible Gas (CG) System Status | Community Park Comfort Station | Golf Course Maintenance Building | | | Golf Course Comfort Station | | | Cart Storage Barn | | | | | Golf Course Clubhouse Building | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | 6/26/2023 | 6/26/2023 | | | 6/26/2023 | | | 6/26/2023 | | | | | 6/26/2023 | | | | | | | | | |
| SSD System | Operational | Operational | | | Operational | | | Operational | | | | | Operational | | | | | | | | | |
| CG System | Operational | Operational | | | Operational | | | Operational | | | | | Operational | | | | | | | | | |
| CG System Alarm Status | No Alarm Conditions | No Alarm Conditions | | | No Alarm Conditions | | | No Alarm Conditions | | | | | No Alarm Conditions | | | | | | | | | |
| SSD/CG System OM&M Data | MP-1 | MP-1 | MP-2 | MP-3 | MP-1 | MP-2 | MP-3 | Blower | MP-1 | MP-2 | MP-3 | MP-4 | MP-1 | MP-2 | MP-3 | MP-4 | MP-5 | MP-6 | MP-7 | MP-8 | MP-9 | MP-10 |
| Pressure ("WC) | -0.093 | -2.436 | -2.430 | -2.293 | -3.639 | -3.721 | -0.012 | 0.008 | -0.903 | 0.007 | -0.896 | -0.919 | -0.494 | -0.016 | 0.375 | -0.881 | 0.007 | -0.434 | -0.462 | -0.051 | -0.061 | -0.066 |
| LEL (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Methane By Volume (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Ambient LEL (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oxygen (%) | 21.9 | 21.6 | 21.6 | 1.5 | 21.7 | 21.8 | 21.9 | 21.7 | 21.5 | 1.8 | 21.7 | 21.7 | 21.9 | 22.0 | 22.0 | 22.2 | 22.0 | 22.0 | 22.0 | 21.5 | 20.6 | 21.9 |
| Maximum Ambient PID (ppm) | 0.2 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 |
| Sub-Slab PID (ppm) | 0.3 | 0.3 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 |

**Notes:**
"WC - Inches of Water
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figures 2 through 5 for locations)
cfm - cubic feet per minute
N/A - not applicable
NM - not measured
IA - inaccessible
*No pressure reading in blower however flow reading provided in cubic feet per minute (cfm)

Table 2A
Comparison of OM Data
Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Community Park Comfort Station
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Community Park Comfort Station | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-1 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 3/22/2017 | 30.14 | 37 | Yes | Sub-slab monitoring point MP-1 installed on August 15, 2018 | | | | | | |
| 6/19/2017 | 29.78 | 84 | Yes | | | | | | | |
| 9/22/2017 | 29.98 | 75 | Yes | | | | | | | |
| 12/20/2017[1] | 29.84 | 45 | Yes | | | | | | | |
| 3/28/2018 | 30.04 | 50 | Yes | | | | | | | |
| 6/25/2018 | 30.03 | 70 | Yes | | | | | | | |
| 9/27/2018 and 10/3/2018 | 30.03 | 60 | Yes | -0.14 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 12/17-18/2018[2] | 29.62-29.94 | 45-35 | Yes | 0.003[3] | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 2/4/2019[4] | 30 | 55 | Yes | -0.012 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 3/14/2019 | 30.07 | 48 | Yes | -0.009 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 6/27/2019 | 30.11 | 79 | Yes | -0.013 | 0 | 0 | 0 | 19.7 | 0.2 | 0.7 |
| 9/4/2019 | 29.94 | 75 | Yes | -0.018 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 1/8/2020 | 30.03 | 35 | Yes | -0.009 | 0 | 0 | 0 | 20.3 | 0 | 0.1 |
| 4/28/2020 | 30.15 | 45 | Yes | -0.003 | 0 | 0 | 0 | 21.3 | 0.1 | 0.1 |
| 6/29/2020 | 29.83 | 75 | Yes | -0.03 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 9/24/2020 | 29.95 | 64 | Yes | -0.067 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 12/14/2020 | 29.96 | 40 | Yes | -0.011 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 3/22/2021 | 30.37 | 46 | Yes | -0.004 | 0 | 0 | 0 | 22 | 0 | 0 |
| 6/28/2021 | 30.29 | 78 | Yes | 0.002 | 0 | 0 | 0 | 20.4 | 0.4 | 0.4 |
| 9/28/2021 | 29.81 | 71 | Yes | -0.004 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 12/20/2021 | 30.29 | 27 | Yes | -0.009 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.024 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.06 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 9/20/2022 | 29.85 | 70 | Yes | 0.06 | 0 | 0 | 0 | 22.2 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | 0.123 | 0 | 0 | 0 | 21 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | 0.012 | 2 | 0.1 | 0 | 21.6 | 0.1 | 0.2 |
| 6/26/2023 | 29.78 | 73 | Yes | -0.093 | 0 | 0 | 0 | 21.9 | 0.2 | 0.3 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 2 for locations)
cfm - cubic feet per minute
N/A - not applicable
% $O_2$ - percent oxygen
°F - degrees Fahrenheit
[1]Ambient % Ox reading of 23.5% due to inability to field calibrate GEM5000 oxygen sensor
[2]Monitoring event split between two days due to access issues
[3]Vacuum fluctuated between +0.024 to -0.018. Average = +0.003
[4]Recheck to see if Vacuum is generating negative pressure at MP-1

Table 2B
Comparison of OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Golf Course Maintenance Building
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Maintenance Building | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-1 | | | | | | | MP-2 | | | | | | | MP-3 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 3/22/2017 | 30.02 | 61.7 | Yes | -0.112 | 0 | 0 | 0 | 20.7 | 8 | 0 | -0.197 | 2 | 0.1 | 0 | 19.3 | 8 | 19 | -0.153 | >100 | 20.3 | 0 | 0 | 8 | 0 |
| 6/21/2017 | 29.91 | 70 | Yes | -0.123 | 2 | 0.1 | 0 | N/A | 0 | 0 | -0.090 | 0 | 0 | 0 | 20.6 | 0 | 0 | -0.025 | 0 | 0 | 0 | 20.9 | 0.1 | 0.3 |
| 9/22/2017 | 29.93 | 75 | Yes | -0.058 | 76 | 3.8 | 0 | 4.2 | 0 | 0 | -0.031 | 2 | 0.1 | 0 | 19.3 | 0 | 0 | -0.04 | >100% | 23.1 | 1 | 0 | 0 | 0.2 |
| 12/20/2017[1] | 29.92 | 65 | Yes | -0.089 | 44 | 2.2 | 0 | 13.3 | 0 | 0 | -0.025 | 12 | 0.6 | 0 | 20.8 | 0 | 1 | -0.056 | >100% | 24.6 | 0 | 0.4 | 0.1 | 0.2 |
| 3/28/2018 | 30.04 | 68 | Yes | -2.800 | 0 | 0 | 0 | 21.1 | 0 | 0 | -2.817 | 0 | 0 | 0 | 2.2[2] | 0 | 0 | Inaccessible | | | | | | |
| 6/25/2018 | 30.03 | 70 | Yes | -2.768 | 2 | 0.1 | 2 | 19.8 | 0 | 0 | -2.779 | 2 | 0.1 | 2 | 20.7 | 0 | 0 | Inaccessible | | | | | | |
| 9/27/2018 | 30 | 57 | Yes | -0.050 | 28 | 1.4 | 0 | 6.2 | 0 | 1 | -0.074 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.036 | >100 | 7.7 | 0 | 1.2 | 0 | 0 |
| 12/17/2018 | 29.62 | 45 | Yes | -0.077 | 44 | 2.2 | 0.1 | 10 | 0 | 0 | -0.084 | 2 | 0.1 | 0.1 | 18.8 | 0 | 0 | Inaccessible | | | | | | |
| 2/4/2019[3] | 30 | 55 | Yes | - | - | - | - | - | - | - | - | - | - | - | - | - | - | -0.033 | >100 | 15.2 | 0 | 1.3 | 0.4 | 0.3 |
| 3/15/2019 | 29.64 | 62 | Yes | -0.054 | 44 | 2.2 | 0 | 12 | 1.5 | 1.5 | -0.054 | 16 | 0.8 | 0 | 18.9 | 1.4 | 1.4 | -0.063 | >100 | 19.9 | 0 | 0.5 | 4.6 | 0 |
| 6/13/2019 | 29.63 | 77 | Yes | -0.029 | 30 | 1.5 | 0 | 8.4 | 0.2 | 0.4 | -0.022 | 30 | 1.5 | 0 | 11.3 | 0 | 0 | -0.057 | >100 | 17.7 | 0 | 0.4 | 0 | 0 |
| 9/4/2019 | 29.94 | 78 | Yes | -2.650 | 0 | 0 | 0 | 20.6 | 0.1 | 0 | -2.663 | 0 | 0 | 0 | 20.3 | 0 | 0 | -2.666 | 0 | 0 | 0 | 15.9 | 0 | 0 |
| 1/8/2020 | 30.04 | 36 | Yes | -2.710 | 0 | 0 | 0 | 20.3 | 0.1 | 0.2 | -2.730 | 0 | 0 | 0 | 20.0 | 1.3 | 0.8 | -2.729 | 0 | 0 | 0 | 16.2 | 0.6 | 0.8 |
| 4/7/2020 | 29.9 | 53 | Yes | -2.679 | 0 | 0 | 0 | 21 | 0.4 | 0 | -2.698 | 0 | 0 | 0 | 21.0 | 1.8 | 0 | -2.704 | 0 | 0 | 0 | 21 | 0.4 | 0 |
| 6/29/2020 | 29.83 | 75 | Yes | -2.605 | 0 | 0 | 0 | 20.6 | 0.2 | 0 | -2.606 | 0 | 0 | 0 | 20.7 | 0 | 0 | -2.602 | 0 | 0 | 0 | 16.1 | 0 | 0 |
| 9/24/2020 | 29.95 | 64 | Yes | -1.570 | 0 | 0 | 0 | 20.8 | 0 | 0 | -2.500 | 0 | 0 | 0 | 20.1 | 0 | 0 | -1.92 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -1.892 | 0 | 0 | 0 | 21.1 | 0 | 0 | -2.618 | 0 | 0 | 0 | 20.3 | 0 | 0 | -2.005 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 3/22/2021 | 30.38 | 46 | Yes | -2.517 | 0 | 0 | 0 | 21.2 | 0 | 0 | -2.516 | 0 | 0 | 0 | 21.0 | 0 | 0 | -2.621 | 0 | 0 | 0 | 21.6 | 0 | 0 |
| 6/28/2021 | 30.21 | 81 | Yes | -2.541 | 0 | 0 | 0 | 20.1 | 0 | 0 | -2.549 | 0 | 0 | 0 | 20.7 | 0 | 0 | -2.542 | 0 | 0 | 0 | 17.5 | 0.2 | 0.2 |
| 9/28/2021 | 29.81 | 72 | Yes | -2.604 | 0 | 0 | 0 | 21.6 | 0 | 0 | -2.651 | 0 | 0 | 0 | 20.2 | 0 | 0.8 | -2.611 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 12/20/2021 | 30.28 | 28 | Yes | -1.957 | 0 | 0 | 0 | 20.9 | 0 | 0 | -1.979 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.968 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -2.143 | 0 | 0 | 0 | 20.9 | 0 | 0 | -2.099 | 0 | 0 | 0 | 20.2 | 0 | 0 | -2.159 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.030 | 0 | 0 | 0 | 15.2 | 0 | 0 | -0.013 | 0 | 0 | 0 | 15.5 | 0 | 0 | -0.023 | 0 | 0 | 0 | 9 | 0 | 0 |
| 7/20/2022 | 29.77 | 85 | Yes | -2.417 | 0 | 0 | 0 | NM | NM | NM | -2.430 | 0 | 0 | 0 | NM | NM | NM | -2.432 | 0 | 0 | 0 | NM | NM | NM |
| 9/20/2022 | 29.85 | 70 | Yes | -0.130 | 6 | 0.3 | 0 | 21.1 | 0 | 0 | -0.302 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.156 | 0 | 0 | 0 | 18.4 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | -0.200 | 34 | 1.7 | 0 | 10.9 | 0 | 0.1 | -0.010 | 0 | 0 | 0 | 4.8 | 0.7 | 0.7 | -0.03 | 0 | 3.6 | 0 | 14.7 | 0.2 | 0.2 |
| 3/28/2023 | 30.05 | 52 | Yes | -2.430 | 8 | 0.4 | 0 | 20.6 | 0.4 | 0.6 | -1.863 | 2 | 0.1 | 0 | 21.0 | 0.7 | 0.5 | -1.415 | 2 | 0.1 | 0 | 20.9 | 0.3 | 0.3 |
| 6/26/2023 | 29.78 | 73 | Yes | -2.436 | 0 | 0 | 0 | 21.6 | 0.3 | 0.3 | -2.430 | 0 | 0 | 0 | 21.6 | 0.1 | 0.1 | -2.293 | 0 | 0 | 0 | 1.5 | 0 | 0 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 3 for locations)
cfm - cubic feet per minute
N/A - not applicable
NM - not measured
% $O_2$ - percent oxygen
°F - degrees Fahrenheit

[1]Ambient % Ox reading of 23.5% due to inability to field calibrate GEM5000 oxygen sensor

[2]Monitoring event conducted under ambient humid conditions

[3]Monitoring point MP-3 was not accessible during last quarter monitoring

Table 2C
Comparison of OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Golf Course Comfort Station
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Comfort Station | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-1 | | | | | | | MP-2 | | | | | | | MP-3 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 3/22/2017 | 30.09 | 59.4 | Yes | -5.371 | 2 | 0.1 | 0 | 21.6 | 0 | 0 | Sub-slab monitoring point MP-2 installed on August 15, 2018 | | | | | | | Sub-slab monitoring point MP-2 installed on August 15, 2018 | | | | | | |
| 6/19/2017 | 29.81 | 84 | Yes | -5 | 2 | 0.1 | 0 | 20.4 | 0 | 0 | | | | | | | | | | | | | |
| 9/22/2017 | 29.96 | 75 | Yes | -4.8 | 0 | 0 | 0 | 21.1 | 0 | 0 | | | | | | | | | | | | | |
| 12/20/2017[1] | 29.91 | 65 | Yes | -5.095 | 2 | 0.1 | 2 | 23.5 | 0.1 | 0.1 | | | | | | | | | | | | | |
| 3/28/2018[2] | 30.07 | 68 | Yes | -0.038 | 0 | 0 | 0 | 21.2 | 80 | 0 | | | | | | | | | | | | | |
| 6/25/2018 | 30.03 | 75 | Yes | -0.09 | 2 | 0.1 | 2 | 20.7 | 0 | 0 | | | | | | | | | | | | | |
| 9/27/2018 | 30 | 60 | Yes | -0.023 | 0 | 0 | 0 | 21.7 | 0 | 0 | -0.67 | 4 | 0.2 | 0 | 19.4 | 0 | 0 | -0.024 | 2 | 0.1 | 0 | 21.4 | 0 | 0.2 |
| 12/17-18/2018[3] | 29.59-29.91 | 40-35 | Yes | -4.777 | 0 | 0 | 0 | 19.7 | 0 | 0 | -5.532 | 2 | 0.1 | 0.1 | 22.6 | 0 | 0 | -4.414 | 2 | 0.1 | 0.1 | 21.9 | 0 | 0 |
| 3/15/2019 | 29.65 | 64 | Yes | -5.385 | 0 | 0 | 0 | 20.3 | 0.5 | 0.6 | -5.596 | 0 | 0 | 0 | 20.3 | 0.5 | 0.1 | -2.63 | 0 | 0 | 0 | 20.2 | 0.5 | 0 |
| 6/13/2019 | 29.62 | 77 | Yes | -3.684 | >100 | 13.5 | 0 | 11.1 | 3.5 | 399.1 | -5.607 | 0 | 0 | 0 | 21.8 | 0 | 0 | -5.409 | 2 | 0.1 | 0 | 18.9 | 0.3 | 0.4 |
| 9/4/2019 | 29.9 | 80 | Yes | -3.21 | 0 | 0 | 0 | 19.1 | 0 | 0 | -0.02 | 2 | 0 | 0 | 17 | 0 | 0 | -6.116 | 6 | 0.3 | 0 | 15.6 | 0 | 0 |
| 1/8/2020 | 30.01 | 37 | Yes | -5.923 | 0 | 0 | 0 | 19.9 | 0 | 0 | -6.531 | 0 | 0 | 0 | 19.9 | 0 | 0 | -4.931 | 0 | 0 | 0 | 18.3 | 0 | 0 |
| 4/7/2020 | 29.9 | 53 | Yes | -5.49 | 0 | 0 | 0 | 21.4 | 0 | 0 | -5.719 | 0 | 0 | 0 | 21.2 | 0 | 0 | -1.476 | 0 | 0 | 0 | 20 | 0 | 0 |
| 6/29/2020 | 29.83 | 75 | Yes | -6.165 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.79 | 0 | 0 | 0 | 20.7 | 0 | 0 | -6.392 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 9/24/2020 | 29.98 | 64 | Yes | -0.016 | 0 | 0 | 0 | 20.7 | 0 | 0 | -0.023 | 0 | 0 | 0 | 19.3 | 0 | 0 | -0.013 | 0 | 0 | 0 | 18.5 | 0 | 0 |
| 12/14/2020 | 29.96 | 40 | Yes | -1.848 | 0 | 0 | 0 | 22.3 | 0 | 0 | -0.934 | 0 | 0 | 0 | 21.6 | 0 | 0 | -0.178 | 0 | 0 | 0 | 21.6 | 0 | 0 |
| 3/22/2021 | 30.35 | 46 | Yes | -0.002 | 0 | 0 | 0 | 21.3 | 0 | 0 | 0.002 | 0 | 0 | 0 | 21.2 | 0 | 0 | 0.171 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/28/2021 | 30.19 | 85 | Yes | -6.894 | 0 | 0 | 0 | 20.7 | 0 | 0 | -6.733 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.72 | 0 | 0 | 0 | 20.1 | 0 | 0 |
| 9/28/2021 | 29.81 | 71 | Yes | -0.182 | 0 | 0 | 0 | 21 | 0 | 1 | -0.949 | 0 | 0 | 0 | 21 | 0 | 0 | -0.137 | 0 | 0 | 0 | 21 | 0 | 0 |
| 12/20/2021 | 30.28 | 28 | Yes | -4.668 | 0 | 0 | 0 | 21.1 | 0 | 0 | -4.643 | 0 | 0 | 0 | 20.9 | 0 | 0 | -3.713 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -7.148 | 0 | 0 | 0 | 21.2 | 0 | 0 | -7.081 | 0 | 0 | 0 | 21.1 | 0 | 0 | -6.231 | 0 | 0 | 0 | 19.9 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -5.647 | 0 | 0 | 0 | 20.1 | 0 | 0 | -4.922 | 0 | 0 | 0 | 19.8 | 0 | 0 | -0.074 | 0 | 0 | 0 | 19.6 | 0 | 0 |
| 9/20/2022 | 29.85 | 70 | Yes | -6.183 | 0 | 0 | 0 | 20.1 | 0 | 0 | -6.088 | 0 | 0 | 0 | 22 | 0 | 0 | -0.667 | 0 | 0 | 0 | 21.8 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | -5.818 | 0 | 0 | 0 | 21 | 0 | 0 | -5.845 | 0 | 0 | 0 | 21.2 | 0 | 0 | -4.075 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -5.567 | 4 | 0.2 | 0 | 21.9 | 0.1 | 0.1 | -5.580 | 2 | 0.1 | 0 | 21.8 | 0 | 0.1 | -0.816 | 4 | 0.2 | 0 | 21.5 | 0 | 0.2 |
| 6/26/2023 | 29.78 | 73 | Yes | -3.639 | 0 | 0 | 0 | 21.7 | 0 | 0 | -3.721 | 0 | 0 | 0 | 21.8 | 0 | 0.1 | -0.012 | 0 | 0 | 0 | 21.9 | 0 | 0.1 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 4 for locations)
cfm - cubic feet per minute: Due to instrumentation malfunction this reading was collected in cfm instead of WC to ensure accuracy
NM - not measured
% $O_2$ - percent oxygen
°F - degrees Fahrenheit
[1]Ambient % O2 reading of 23.5% due to inability to field calibrate GEM5000 oxygen sensor
[2]Monitoring event conducted under ambient humid conditions
[3]Monitoring event split between two days due to access issues. MP-1 monitored 12/18/18; MP-2 and MP-3 monitored 12/17/18

Table 2D
Comparison of OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Golf Course Cart Storage Barn
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Cart Storage Barn | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Blower Effluent | | | | | | | MP-1 | | | | | | | MP-2 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 4/19/2017 | 30.51 | 55 | Yes | - | - | - | - | - | - | - | -0.819 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.824 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 6/19/2017 | 29.79 | 80 | Yes | 357-410 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.916 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.915 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 9/22/2017 | 29.93 | 75 | Yes | 300-800 | 2 | 0.1 | 0 | 20.1 | 0 | 0 | -0.92 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.915 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 12/20/2017[1] | 29.9 | 45 | Yes | 395 | 2 | 0.1 | 2 | 23.2 | 0 | 0 | -0.741 | 0 | 0 | 0 | 23.8 | 0 | 0 | -0.725 | 0 | 0 | 0 | 23.8 | 0 | 0 |
| 3/28/2018 | 30.03 | 55 | Yes | 635 | 0 | 0 | 0 | 21.8 | 0 | 0 | -0.937 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.938 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/25/2018 | 30.03 | 70 | Yes | 585 | 2 | 0.1 | 2 | 20.5 | 0 | 0 | -0.905 | 2 | 0.1 | 2 | 20.4 | 0.5 | 0.1 | -0.911 | 2 | 0.1 | 2 | 20.4 | 0 | 0 |
| 9/27/2018 | 30.3 | 62 | Yes | 234 | 2 | 0.1 | 0 | 20.6 | 0 | 0 | -0.76 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.753 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 12/17/2018[2] | 29.62 | 45 | Yes | 100 | 2 | 0.1 | 0 | 20.3 | 0 | 0 | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 2/4/2019[3] | 30 | 55 | Yes | - | - | - | - | - | - | - | Inaccessible | | | | | | | -0.728 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 3/15/19-4/3/2019[4] | 29.80/29.90 | 67/63 | Yes | 645 | 0 | 0 | 0 | 20.3 | 1.1 | 0.6 | Inaccessible | | | | | | | -0.853 | 0.5 | 0.1 | 0 | 20.5 | 0.2 | 0.1 |
| 6/13/2019 | 29.68 | 71 | Yes | 83 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.946 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.952 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 9/4/2019 | 29.94 | 80 | Yes | 39 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.945 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.93 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 1/8/2020 | 30.03 | 36 | Yes | 31 | 0 | 0 | 0 | 20.2 | 0 | 0 | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 4/7/2020 | 29.94 | 53 | Yes | 250-800 | 0 | 0 | 0 | 21.3 | 0 | 0 | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 6/29/2020 | 29.83 | 75 | Yes | 400-700 | 0 | 0 | 0 | 20.6 | 0 | 0 | -0.894 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.893 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | 250-400 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.895 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.909 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | 350-600 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.937 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.95 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 3/22/2021 | 320.38 | 46 | Yes | 350-600 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.718 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.726 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 6/28/2021 | 30.2 | 86 | Yes | 200-700 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.66 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.801 | 0 | 0 | 0 | 21 | 0 | 0 |
| 9/28/2021 | 29.81 | 70 | Yes | 250-400 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.904 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.906 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 12/20/2021 | 30.28 | 28 | Yes | 300-500 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.623 | 0 | 0 | 0 | 21.1 | 0.1 | 0 | -0.723 | 0 | 0 | 0 | 21 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | 350-600 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.775 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.769 | 0 | 0 | 0 | 20 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | 230-330 | 0 | 0 | 0 | 19.7 | 0 | 0 | -0.933 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.931 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 9/20/2022 | 29.85 | 70 | Yes | 35 | 0 | 0 | 0 | 22.3 | 0 | 0 | -0.896 | 0 | 0 | 0 | 22 | 0 | 0 | -0.153 | 0 | 0 | 0 | 21.8 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | 22.15 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.764 | 0 | 0 | 0 | 20.6 | 0 | 0 | -0.705 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | 0.450 | 2 | 0.1 | 0 | 21.3 | 0.2 | 0.1 | -0.729 | 2 | 0.1 | 0 | 21.2 | 0.3 | 0.2 | -0.678 | 2 | 0.1 | 0 | 21.1 | 0.3 | 0.2 |
| 6/26/2023 | 29.78 | 73 | Yes | 0.008 | 0 | 0 | 0 | 21.7 | 0 | 0 | -0.903 | 0 | 0 | 0 | 21.5 | 0 | 0.1 | 0.007 | 0 | 0 | 0 | 1.8 | 0 | 0 |

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Cart Storage Barn | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-3 | | | | | | | MP-4 | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 4/19/2017 | 30.51 | 55 | Yes | -0.926 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.932 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/19/2017 | 29.79 | 80 | Yes | -0.943 | 0 | 0 | 0 | 20.7 | 0 | 0 | -0.93 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 9/22/2017 | 29.93 | 75 | Yes | -0.91 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.905 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 12/20/2017[1] | 29.9 | 45 | Yes | -0.745 | 2 | 0.1 | 2 | 23.7 | 0 | 0 | -0.731 | 2 | 0.1 | 2 | 23.6 | 0 | 0 |
| 3/28/2018 | 30.03 | 55 | Yes | -0.926 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.932 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 6/25/2018 | 30.03 | 70 | Yes | -0.905 | 2 | 0.1 | 2 | 20.5 | 0 | 0 | -0.91 | 2 | 0.1 | 2 | 20.5 | 0 | 0 |
| 9/27/2018 | 30.3 | 60 | Yes | -0.756 | 0 | 0 | 0 | 21.5 | 0 | 0 | -0.764 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 12/17/2018[2] | 29.62 | 45 | Yes | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 2/4/2019[3] | 30 | 55 | Yes | Inaccessible | | | | | | | -0.733 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 3/15/19-4/3/2019[4] | 29.80/29.90 | 67/63 | Yes | Inaccessible | | | | | | | -0.834 | 0.5 | 0.1 | 0 | 20.6 | 0.1 | 0.1 |
| 6/13/2019 | 29.68 | 71 | Yes | -0.948 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.944 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 9/4/2019 | 29.94 | 80 | Yes | -0.929 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.943 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 1/8/2020 | 30.03 | 36 | Yes | Inaccessible | | | | | | | Inaccessible | | | | | | |
| 4/7/2020 | 29.94 | 53 | Yes | -0.905 | 0 | 0 | 0 | 21.5 | 0.1 | 0 | -0.908 | 0 | 0 | 0 | 21.3 | 0.1 | 0 |
| 6/29/2020 | 29.83 | 75 | Yes | -0.894 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.894 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | -0.904 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.896 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -0.929 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.985 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 3/22/2021 | 30.38 | 46 | Yes | -0.733 | 0 | 0 | 0 | 21.6 | 0 | 0 | -0.73 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 6/28/2021 | 30.2 | 86 | Yes | -0.011 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.013 | 0 | 0 | 0 | 21 | 0 | 0 |
| 9/28/2021 | 29.81 | 70 | Yes | -0.888 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.898 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 12/20/2021 | 30.28 | 28 | Yes | Inaccessible | | | | | | | -0.718 | 0 | 0 | 0 | 21 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.861 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.733 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.904 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.929 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 9/20/2022 | 29.85 | 70 | Yes | -0.907 | 0 | 0 | 0 | 22.4 | 0 | 0 | -1.11 | 0 | 0 | 0 | 22.3 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | Inaccessible | | | | | | | -0.781 | 0 | 0 | 0 | 20.2 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -0.717 | 2 | 0.1 | 0 | 21.3 | 0.5 | 0.3 | -0.721 | 2 | 0.1 | 0 | 21.4 | 0.6 | 0.2 |
| 6/26/2023 | 29.78 | 73 | Yes | -0.896 | 0 | 0 | 0 | 21.7 | 0 | 0 | -0.919 | 0 | 0 | 0 | 21.7 | 0 | 0 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 5 for locations)
cfm - cubic feet per minute
NM - not measured
% $O_2$ - percent oxygen
°F - degrees Fahrenheit

[1]Ambient % O2 reading of 23.5% due to inability to field calibrate GEM5000 oxygen sensor
[2]Sub-Slab monitoring points all inaccessible due to golf carts being stored for winter
[3]Only Subslab monitoring points MP-2 and MP-4 were accessible during remobilization on 2/4/2019
[4]Blower was accessible on 3/15/2019. Only Subslab monitoring points MP-2 and MP-4 were accessible during remobilization on 4/3/2019

Table 2E
Comparison of OM Data - Sub-Slab Depressurization and Combustible Gas Monitoring Systems
Golf Course Clubhouse
Ferry Point Park, Bronx, NY

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Clubhouse Building | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-1 | | | | | | | MP-2 | | | | | | | MP-3 | | | | | | | MP-4 | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 6/7/2018[1] | 30.1 | 70 | Yes | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9/27/2018 | 29.94 | 55 | Yes | -1.555 | 0 | 0 | 0 | 20.4 | 0.8 | 0.7 | - | - | - | - | - | - | - | -0.247 | 0 | 0 | 0 | 16 | 0.1 | 0 | -1.494 | 0 | 0 | 0 | 21.1 | 0.3 | 0.1 |
| 12/17/2018 | 29.73 | 45 | Yes | -1.187 | 0 | 0 | 0 | 20.3 | 0 | 0 | - | - | - | - | - | - | - | -1.749 | 0 | 0 | 0 | 17 | 0 | 0 | -1.133 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 3/15/2019 | 29.63 | 62 | Yes | -1.174 | 0 | 0 | 0 | 20.3 | 1 | 1 | - | - | - | - | - | - | - | -0.593 | 0 | 0 | 0 | 18.4 | 1.2 | 1.4 | -1.099 | 0 | 0 | 0 | 20 | 1.4 | 1.6 |
| 6/13/2019 | 29.78 | 88 | Yes | -1.322 | 0 | 0 | 0 | 21.1 | 0 | 0 | - | - | - | - | - | - | - | -0.013 | 0 | 0 | 0 | 21.4 | 0 | 0 | -1.226 | 0 | 0 | 0 | 21.2 | 0 | 0.2 |
| 9/4/2019 | 29.97 | 28 | Yes | -1.338 | 0 | 0 | 0 | 20.5 | 0 | 0 | - | - | - | - | - | - | - | -1.476 | 0 | 0 | 0 | 20 | 20 | 0 | -1.286 | 0 | 0 | 0 | 20.4 | 0 | 0 |
| 1/8/2020 | 30.03 | 35 | Yes | -1.121 | 0 | 0 | 0 | 20 | 0 | 0.1 | - | - | - | - | - | - | - | -0.965 | 0 | 0 | 0 | 19.6 | 0 | 0.1 | -1.061 | 0 | 0 | 0 | 19.9 | 0 | 0.4 |
| 4/7/2020 | 29.97 | 53 | Yes | -1.145 | 8 | 0.4 | 0 | 18.2 | 0 | 0 | - | - | - | - | - | - | - | 0.325/0.237 /-0.069[2] | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.063 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 6/29/2020 | 29.83 | 70 | Yes | -1.236 | 0 | 0 | 0 | 18.7 | 0 | 0 | - | - | - | - | - | - | - | -0.041 | 0 | 0 | 0 | 19.2 | 0 | 0 | -1.155 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | -1.257 | 0 | 0 | 0 | 19.8 | 0 | 0 | - | - | - | - | - | - | - | -0.023 | 0 | 0 | 0 | 20.3 | 0 | 0 | -1.153 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -1.27 | 0 | 0 | 0 | 21 | 0 | 0 | - | - | - | - | - | - | - | -0.519 | 0 | 0 | 0 | 20.8 | 0 | 0 | -1.102 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 3/22/2021 | 30.32 | 46 | Yes | -0.89 | 0 | 0 | 0 | 18.9 | 0 | 0 | - | - | - | - | - | - | - | 0.008 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.948 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 6/28/2021 | 30.19 | 78 | Yes | -0.88 | 18 | 0.9 | 0 | 17.9 | 0 | 0 | - | - | - | - | - | - | - | 0.159 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.617 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 9/28/2021 | 29.81 | 72 | Yes | -0.704 | 18 | 0.9 | 0 | 21.2 | 0 | 0 | - | - | - | - | - | - | - | -0.005 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.381 | 0 | 0 | 0 | 21 | 0 | 0 |
| 12/20/2021 | 30.29 | 28 | Yes | -0.606 | 8 | 0.4 | 0 | 20.6 | 0 | 0 | - | - | - | - | - | - | - | -0.006 | 0 | 0 | 0 | 21.7 | 0 | 0 | -0.264 | 0 | 0 | 0 | 21.5 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.591 | 0 | 0 | 0 | 20 | 0 | 0 | - | - | - | - | - | - | - | -0.168 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.169 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 3/31/2022 | 30.56 | 29 | Yes | -0.586 | 0 | 0 | 0 | 21.8 | 0 | 0 | -0.022 | 0 | 0 | 0 | 21.9 | 0 | 0 | -0.015 | 0 | 0 | 0 | 19.9 | 0 | 0 | -0.17 | 0 | 0 | 0 | 21.6 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.6 | 14 | 0.7 | 0 | 16.3 | 0 | 0 | -0.003 | 0 | 0 | 0 | 20.2 | 0 | 0 | -0.001 | 0 | 0 | 0 | 20.2 | 0 | 0 | -0.147 | 0 | 0 | 0 | 20.3 | 0 | 0 |
| 7/20/2022 | 29.77 | 85 | Yes | NM | NM | NM | NM | NM | NM | NM | -0.073 | NM | NM | NM | NM | NM | NM | -0.638 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 9/20/2022 | 29.85 | 70 | Yes | -0.063 | 0 | 0 | 0 | 22.7 | 0 | 0 | -0.011 | 0 | 0 | 0 | 23.2 | 0 | 0 | -0.513 | 0 | 0 | 0 | 23.4 | 0 | 0 | -0.162 | 0 | 0 | 0 | 23.5 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | -0.42 | 14 | 0.7 | 0 | 18.5 | 0 | 0 | 0.04 | 0 | 0 | 0 | 21 | 0 | 0 | -0.818 | 0 | 0 | 0 | 20.4 | 0 | 0 | -0.13 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -0.427 | 2 | 0.1 | 0 | 21.5 | 0.2 | 0.1 | -0.002 | 2 | 0.1 | 0 | 21.3 | 0.1 | 0.4 | -2.55 | 2 | 0.1 | 0 | 20.9 | 0.2 | 0.4 | -0.063 | 2 | 0.1 | 0 | 21.1 | 0.1 | 0.2 |
| 6/26/2023 | 29.78 | 73 | Yes | -0.494 | 0 | 0 | 0 | 21.9 | 0.2 | 0.2 | -0.016 | 0 | 0 | 0 | 22.0 | 0.1 | 0.2 | 0.375 | 0 | 0 | 0 | 22 | 0.1 | 0.2 | -0.881 | 0 | 0 | 0 | 22.2 | 0.1 | 0.2 |

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Clubhouse Building | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-5 | | | | | | | MP-6 | | | | | | | MP-7 | | | | | | | MP-8 | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 6/7/2018[1] | 30.1 | 70 | Yes | -1.149 | NM | NM | 0 | NM | 0 | NM | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9/27/2018 | 29.94 | 55 | Yes | -0.033 | 0 | 0 | 0 | 21.2 | 0 | 0 | -1.587 | 0 | 0 | 0 | 21 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12/17/2018 | 29.73 | 45 | Yes | -0.014 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.217 | 0 | 0 | 0 | 20.6 | 0 | 0 | - | - | - | - | - | - | - | -1.131 | 0 | 0 | 0 | 20.4 | 0 | 0 |
| 3/15/2019 | 29.63 | 62 | Yes | -0.009 | 0 | 0 | 0 | 19.4 | 1.8 | 1.8 | -1.185 | 0 | 0 | 0 | 20.2 | 1.8 | 1.8 | - | - | - | - | - | - | - | -1.084 | 0 | 0 | 0 | 20 | 1.4 | 1.4 |
| 6/13/2019 | 29.78 | 88 | Yes | -0.018 | 0 | 0 | 0 | 21.1 | 0 | 0.3 | -1.312 | 0 | 0 | 0 | 21.1 | 0 | 0 | - | - | - | - | - | - | - | -1.195 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 9/4/2019 | 29.97 | 78 | Yes | -0.019 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.319 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.341 | 0 | 0 | 0 | 20.4 | 6 | 0 | -1.271 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 1/8/2020 | 30.03 | 35 | Yes | -0.02 | 0 | 0 | 0 | 20 | 0 | 0.4 | -1.196 | 0 | 0 | 0 | 20.3 | 0 | 0 | -1.201 | 0 | 0 | 0 | 19.7 | 0.1 | 0.2 | -1.092 | 0 | 0 | 0 | 19.7 | 0 | 0 |
| 4/7/2020 | 29.97 | 53 | Yes | -0.005 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.21 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.137 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.062 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 6/29/2020 | 29.83 | 70 | Yes | -0.002 | 0 | 0 | 0 | 20.8 | 0 | 0 | -1.305 | 0 | 0 | 0 | 20.9 | 0 | 0 | -1.1223 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.138 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | -0.01 | 0 | 0 | 0 | 20.8 | 0 | 0 | -1.304 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.237 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.144 | 0 | 0 | 0 | 20.7 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -0.027 | 0 | 0 | 0 | 20.8 | 0 | 0 | -1.296 | 0 | 0 | 0 | 20.7 | 0 | 0 | -1.261 | 0 | 0 | 0 | 21.2 | 0 | 0 | -1.237 | 0 | 0 | 0 | 21.1 | 0 | 0 |
| 3/22/2021 | 30.32 | 46 | Yes | -0.001 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.679 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.872 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.675 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 6/28/2021 | 30.19 | 78 | Yes | -0.902 | 0 | 0 | 0 | 21 | 0 | 0 | -0.876 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.869 | 0 | 0 | 0 | 21 | 0 | 0 | -0.571 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 9/28/2021 | 29.81 | 72 | Yes | -0.014 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.761 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.858 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.266 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 12/20/2021 | 30.29 | 28 | Yes | -0.009 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.629 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.587 | 0 | 0 | 0 | 20.9 | 0 | 0 | -0.222 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.019 | 0 | 0 | 0 | 20.7 | 0 | 0 | -0.719 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.594 | 0 | 0 | 0 | 21 | 0 | 0 | -0.23 | 0 | 0 | 0 | 20.3 | 0 | 0 |
| 3/31/2022 | 30.56 | 29 | Yes | -0.022 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.75 | 0 | 0 | 0 | 21.2 | 0 | 0 | -0.538 | 0 | 0 | 0 | 20.8 | 0 | 0 | -0.217 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | 0 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.59 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.556 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.168 | 0 | 0 | 0 | 20.4 | 0 | 0 |
| 7/20/2022 | 29.77 | 85 | Yes | -2.89 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 9/20/2022 | 29.85 | 70 | Yes | -0.004 | 0 | 0 | 0 | 23.1 | 0 | 0 | -0.664 | 0 | 0 | 0 | 23.1 | 0 | 0 | -0.601 | 0 | 0 | 0 | 23.1 | 0 | 0 | -0.151 | 0.1 | 0 | 0 | 23.5 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | 0.07 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.455 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.395 | 0 | 0 | 0 | 21.1 | 0 | 0 | -0.142 | 0 | 0 | 0 | 20.8 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -0.003 | 2 | 0.1 | 0 | 21.7 | 0.1 | 0.4 | -0.439 | 4 | 0.2 | 0 | 22.0 | 0.1 | 0.3 | -0.406 | 4 | 0.2 | 0 | 22.0 | 0.1 | 0.2 | -0.055 | 2 | 0.1 | 0 | 20.9 | 0.3 | 0.4 |
| 6/26/2023 | 29.78 | 73 | Yes | 0.007 | 0 | 0 | 0 | 22 | 0.1 | 0.3 | -0.434 | 0 | 0 | 0 | 22.0 | 0.1 | 0.1 | -0.462 | 0 | 0 | 0 | 22 | 0.3 | 0.2 | -0.051 | 0 | 0 | 0 | 21.5 | 0.1 | 0.2 |

| Date | Barometric Pressure ("Hg) | Ambient Temperature (°F) | System Operational (Y/N) | Golf Course Clubhouse Building | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MP-9 | | | | | | | MP-10 | | | | | | |
| | | | | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) | Vacuum (WC) | LEL (%) | Methane by Vol (%) | Ambient LEL (%) | % $O_2$ | Max Ambient PID (ppm) | PID (ppm) |
| 6/7/2018[1] | 30.1 | 70 | Yes | - | - | - | - | - | - | - | -1.491 | NM | NM | 0 | NM | 0 | NM |
| 9/27/2018 | 29.94 | 55 | Yes | -1.485 | 0 | 0 | 0 | 21 | 0 | 0 | | | | | | | |
| 12/17/2018 | 29.73 | 45 | Yes | -1.115 | 0 | 0 | 0 | 20.3 | 0 | 0 | -1.124 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 3/15/2019 | 29.63 | 62 | Yes | -1.095 | 0 | 0 | 0 | 19.4 | 1.5 | 1.6 | -1.087 | 0 | 0 | 0 | 19.9 | 1.5 | 1.6 |
| 6/13/2019 | 29.78 | 88 | Yes | -1.157 | 0 | 0 | 0 | 21.2 | 0.1 | 0.1 | -1.183 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 9/4/2019 | 29.97 | 78 | Yes | -1.253 | 0 | 0 | 0 | 20.4 | 0 | 0 | -1.258 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 1/8/2020 | 30.03 | 35 | Yes | -1.049 | 0 | 0 | 0 | 19.6 | 0 | 0.2 | -1.089 | 0 | 0 | 0 | 19.8 | 0 | 1.5 |
| 4/7/2020 | 29.97 | 53 | Yes | -1.03 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.057 | 0 | 0 | 0 | 20.6 | 0 | 0 |
| 6/29/2020 | 29.83 | 70 | Yes | -1.116 | 0 | 0 | 0 | 20.5 | 0 | 0 | -1.1201 | 0 | 0 | 0 | 20.3 | 0 | 0 |
| 9/24/2020 | 29.94 | 64 | Yes | -1.115 | 0 | 0 | 0 | 20.6 | 0 | 0 | -1.125 | 0 | 0 | 0 | 20.5 | 0 | 0 |
| 12/15/2020 | 30.26 | 39 | Yes | -1.084 | 0 | 0 | 0 | 21.5 | 0 | 0 | -1.197 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 3/22/2021 | 30.32 | 46 | Yes | -0.506 | 0 | 0 | 0 | 21.4 | 0 | 0 | -0.694 | 0 | 0 | 0 | 20.9 | 0 | 0 |
| 6/28/2021 | 30.19 | 78 | Yes | -0.578 | 0 | 0 | 0 | 20.5 | 0 | 0 | -0.58 | 0 | 0 | 0 | 19.7 | 0 | 0 |
| 9/28/2021 | 29.81 | 72 | Yes | -0.246 | 0 | 0 | 0 | 21 | 0 | 0 | -0.381 | 0 | 0 | 0 | 21.3 | 0 | 0 |
| 12/20/2021 | 30.29 | 28 | Yes | -0.19 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.192 | 0 | 0 | 0 | 21.4 | 0 | 0 |
| 3/16/2022 | 30.2 | 55 | Yes | -0.187 | 0 | 0 | 0 | 20.2 | 0 | 0 | -0.199 | 0 | 0 | 0 | 21 | 0 | 0 |
| 3/31/2022 | 30.56 | 29 | Yes | -0.159 | 0 | 0 | 0 | 21.3 | 0 | 0 | -0.22 | 0 | 0 | 0 | 21.2 | 0 | 0 |
| 6/28/2022 | 30.04 | 67 | Yes | -0.14 | 0 | 0 | 0 | 20.3 | 0 | 0 | -0.128 | 0 | 0 | 0 | 20.3 | 0 | 0 |
| 7/20/2022 | 29.77 | 85 | Yes | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 9/20/2022 | 29.85 | 70 | Yes | -0.013 | 0 | 0 | 0 | 23.4 | 0 | 0 | -0.11 | 0 | 0 | 0 | 23.4 | 0 | 0 |
| 12/6/2022 | 30.25 | 50 | Yes | -0.125 | 0 | 0 | 0 | 20.7 | 0 | 0 | -0.1 | 0 | 0 | 0 | 20.1 | 0 | 0 |
| 3/28/2023 | 30.05 | 52 | Yes | -0.056 | 2 | 0.1 | 0 | 20.9 | 0.2 | 0.2 | -0.069 | 2 | 0.1 | 0 | 21.0 | 0.2 | 0.3 |
| 6/26/2023 | 29.78 | 73 | Yes | -0.061 | 0 | 0 | 0 | 20.6 | 0.2 | 0.2 | -0.066 | 0 | 0 | 0 | 21.9 | 0.1 | 0.1 |

**Notes:**
"WC - Inches of Water
"Hg - inches of mercury
LEL - Lower Explosive Limit
PID - Photoionization Detector (Total Organic Vapors)
ppm - Parts per million
MP - Sub-slab monitoring point (see Figure 6 for locations)
cfm - cubic feet per minute
NM - not measured
% $O_2$ - percent oxygen
°F - degrees Fahrenheit
[1] System only partially installed
[2] Data Collected from three separate Site Visits: April 7, 2020 = +0.325; April 28, 2020 = +0.237 ; May 12, 2020 = -0.069

# E-5

Bally's Bronx
Phase I ESA for Ring Road
*Prepared by: Langan Engineering*

LANGAN

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

# for

# PROPOSED BALLY'S CASINO – RING ROAD
# at FERRY POINT PARK
# Bronx, New York 10465

***Prepared for:***

**Bally's Corporation**
**100 Westminster Street**
**Providence, Rhode Island 02903**

***Prepared by:***

**Langan Engineering, Environmental, Surveying,**
**Landscape Architecture and Geology, D.P.C.**
**360 West 31st Street, 8th Floor**
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**Lamees Esmail, PE**
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**Associate Principal/Vice President**

**Report Date:** **12 September 2024**
**180-Day Viability Date:** **31 January 2025**
**170773001**

LANGAN

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# EXECUTIVE SUMMARY

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) completed a Phase I Environmental Site Assessment (ESA) for a section of Hutchinson River Parkway, referred to as Ring Road, located within Ferry Point Park, Bronx, New York (the "Subject Property") under the written authorization of Bally's Corporation LLC (Bally's, "Client" and the "user").

The Phase I ESA was completed following the guidelines of ASTM International Standard Practice E1527-21 (ASTM E1527-21), the United States Environmental Protection Agency's (US EPA) All Appropriate Inquiries (AAI) Rule, and industry standard practice. The user requested this ESA to identify recognized environmental conditions (REC), controlled recognized environmental conditions (CREC), historical recognized environmental conditions (HREC), and de minimis conditions associated with the Subject Property.

*Subject Property Layout*

The Subject Property is an approximately 9.85-acre, U-shaped section of Ferry Point Park that primarily serves as a park thoroughfare and public recreation space. The Subject Property is improved with an uninterrupted, circular roadway, referred to as Ring Road. Ring Road is a one-lane, one-way, asphalt-paved roadway and is bordered on either side by concrete curbing, metal guardrails, and grass shoulders. The remainder of the Subject Property includes vegetated areas and footpaths associated with Ferry Point Park. The section of Ring Road comprising the Subject Property totals about 1 mile.

Improvements to the Subject Property, including widening of Ring Road are contemplated by Bally's as part of the proposed development of a gaming facility. The Subject Property encompasses the total area of proposed roadway improvements, which includes park land extending between about 40 and 60 feet beyond the current extents of Ring Road.

*Subject Property Current Use*

The Subject Property is used as a park roadway and also contains vegetation and footpaths. Vehicles must travel along Ring Road to enter Ferry Point Park, the adjoining Bally's Golf Links at Ferry Point golf course, and adjoining Bronx-Whitestone Bridge Metropolitan Transportation Authority (MTA) facility.

*Subject Property History*

The majority of the Subject Property was part of Westchester Creek and the Baxter Creek Inlet (now the East River) before infilling and development of Ferry Point Park in the 1940s. By 1947, the Subject Property and surrounding area had been infilled to create new land, and Ring Road had been constructed. Improvements to the Subject Property continued through 2015, when adjoining park and golf course construction were completed, and the Subject Property appeared as it does today.

*Adjoining Properties and Surrounding Area*

The surrounding area was depicted as mostly undeveloped and inundated in the topographic maps in the late 1800s and early 1900s. During the 1940s, the general area was infilled, and the Bronx-Whitestone Bridge was constructed on the southern-adjoining property. The supporting toll plaza and MTA structures were also erected north of the Subject Property during this time period. Landfilling operations took place on the eastern- and southern-adjoining properties

between 1950 and the 1960s. Development related to Ferry Point Park operations continued east, south, and west of the Subject Property until the current configuration was achieved circa 2015. North of the Subject Property, commercial development continued through the 1990s, until the existing buildings were constructed.

*Conclusions*

Langan completed a Phase I ESA of the Subject Property using the scope guidelines and inherent limitations of ASTM E1527-21. Table ES-1 presents the conclusions of the Phase I ESA.

**Table ES-1 Conclusions, Findings and Opinions**

| **ASTM E1527-21 Scope Items** |
|---|
| **Recognized Environmental Conditions (RECs)** |
| *Current and Historical Use of the Adjoining and Surrounding Properties:* Historical adjoining and surrounding property use includes a municipal solid waste landfill (1950-1960s), a United Parcel Service (UPS) facility with petroleum and chemical bulk storage (1985 - present), and a Metropolitan Transportation Authority (MTA) bridge support facility with petroleum bulk storage (1951 - present). Documented and undocumented spills or releases of petroleum products or hazardous substances associated with these properties may have adversely affected groundwater and/or soil vapor on the Subject Property.<br><br>*Non-native Fill:* Non-native fill is expected to underly the site above native soil. Non-native fill in New York City may contain contaminants, particularly metals and semi-volatile organic compounds (SVOCs), at concentrations that exceed applicable state and/or federal standards. Non-native fill does not trigger a regulatory reporting requirement, but may require implementation of special soil handling, management, and off-site disposal procedures if disturbed during development of the Subject Property. |
| **Controlled Recognized Environmental Conditions (CRECs)** |
| Langan did not identify CRECs. |
| **Historical Recognized Environmental Conditions (HRECs)** |
| Langan did not identify HRECs. |
| **De Minimis Conditions** |
| Langan did not identify de minimis conditions. |
| **Significant Data Gaps** |
| Langan did not identify significant data gaps. |
| **Non-ASTM E1527-21 Scope Items** |
| **Business Environmental Risks (BERs)** |
| Langan did not identify BERs. |

# 1. INTRODUCTION

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) completed a Phase I Environmental Site Assessment (ESA) for a section of Hutchinson River Parkway, referred to as Ring Road, located within Ferry Point Park, Bronx, New York (the "Subject Property") under the written authorization of Bally's Corporation LLC (Bally's, "Client" and the "user"). A Subject Property Location Map is provided in Appendix A (Figure 1).

The Phase I ESA was completed following the guidelines of ASTM International Standard Practice E1527-21 (ASTM E1527-21), the United States Environmental Protection Agency's (US EPA) All Appropriate Inquiries (AAI) Rule, and industry standard practice. The user requested this ESA to identify recognized environmental conditions (REC), controlled recognized environmental conditions (CREC), historical recognized environmental conditions (HREC), and de minimis conditions associated with the Subject Property.

## 1.1 Purpose

The purpose of this Phase I ESA is to identify RECs associated with the Subject Property. This purpose also includes identifying CRECs, HRECs, de minimis conditions, and significant data gaps. The definitions of REC, CREC, HREC, de minimis condition and other select ASTM terms used in this report are in Section 8.

## 1.2 Scope of Services

Langan's scope of services consisted of the completion of a Phase I ESA following the guidelines of ASTM E1527-21. Langan's scope of services as it pertains to the elements of a Phase I ESA as specified in ASTM E1527-21 is described below.

On 8 July 2024, the US EPA final rule designating two per- and polyfluoroalkyl substances (PFAS) – perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) including their salts and structural isomers – as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) became effective. Because of the complex and varied historical use of PFAS in various industries; limited prior disclosures of PFAS content on product specification sheets, Material Safety Data Sheets (MSDS), and Safety Data Sheets (SDS); the complex chemistry and chemical transformations associated with some PFAS; and the ever-growing and varied list of state regulations, it is not feasible to evaluate PFOA and PFOS without also considering other PFAS. As such, absent analytical data, Langan incorporated a review of PFAS as a general class into this Phase I ESA.

PFAS and other CERCLA hazardous substances and petroleum products have been detected in background environmental samples across the globe, including in areas removed from specific recognized sources. This Phase I ESA was not intended to evaluate background concentrations of CERCLA hazardous substances or petroleum products, regardless of whether the source is naturally occurring or anthropogenic. The objective of Langan's scope of services was to identify the presence, likely presence, and/or material threat of a release of CERCLA hazardous substances and petroleum products related to specific property uses that are generally recognized as known or potential sources of such substances and products.

### *1.2.1 Records Review and Local Government Interviews*

Langan contracted a third-party provider to search environmental regulatory databases and provide historical records. The database search included select federal, state, local and tribal standard source environmental databases within the approximate search radii specified by ASTM E1527-21.

Langan submitted Freedom of Information Act (FOIA) requests to supplement environmental database listing information. The FOIA requests were submitted to the New York City Department of Environmental Protection (NYCDEP), New York City Department of Health and Mental Hygiene (NYCDHMH), New York City Fire Department (FDNY), New York State Department of Health (NYSDOH), New York State Department of Environmental Conservation (NYSDEC) and US EPA Region 2.

Langan supplemented the third-party-provided historical records with review of online historical record sources including Google Earth Pro, the New York City Department of Buildings (NYCDOB) online query system, New York City Department of City Planning Commission (NYCDCP) zoning maps, the City Environmental Quality Review (CEQR) Environmental Designation list, the Automated City Register Information System (ACRIS) website, and US EPA databases. Agency FOIA-requested information, where received, is discussed in relevant sections of this report and referenced in Section 7. Pertinent documents are provided in Appendix B.

### *1.2.2 Site Reconnaissance and Owner/Operator/Occupant Interviews*

Langan completed the site reconnaissance on 9 August 2024. Kaitlyn Gioia of Langan coordinated with Brian Crowell (General Manager with Bally's Golf Links at Ferry Point [the User]; the "key site manager") to schedule the site reconnaissance for the Subject Property.

Langan walked the periphery of the Subject Property and observed the Subject Property from adjoining public thoroughfares. Langan observed the adjoining properties and the surrounding area from the periphery of the Subject Property and from public thoroughfares adjoining to or traveled on to access the Subject Property. The weather at the time of the site reconnaissance was approximately 80°F and rainy. Photographs from the site reconnaissance are provided in Appendix C.

An owner/operator questionnaire was completed by Ms. Kay Zias, a representative of the current owner of the Subject Property, the NYC Department of Parks and Recreation (NYCDPR). Ms. Zias is the Director of the Environmental Remediation Unit with NYCDPR. Ms. Zias noted that she is not aware of litigation administrative proceedings, or environmental notices related to hazardous substances or petroleum products at the Subject Property. A summary of the owner's responses is provided in Appendix D and relevant information from environmental reports provided from NYCDPR is discussed in applicable sections of this report.

### *1.2.3 Evaluation, Report and Parts Used in Concert*

Langan evaluated the information obtained from the records reviews, site reconnaissance and interviews described above, and from the user as described in Section 1.3 in concert with each other. Langan's findings, opinions, and conclusions are discussed throughout this report. Significant assumptions, or deletions, deviations or exceptions to ASTM E1527-21 are noted in Section 1.4.

### *1.2.4 Non-ASTM Scope Services*

The scope of services for the Phase I ESA did not include non-scope ASTM considerations including, but not limited to, asbestos, biological agents, mold, etc.

## 1.3 User Responsibilities

Langan requested that the user provide the results of tasks the user is responsible for completing to satisfy the requirements of AAI. The tasks include: providing information related to specialized knowledge or experience of the user or the degree of obviousness relative to conditions indicative of releases or threatened releases; actual knowledge of the user regarding environmental liens or activity and use limitations (AULs) related to the Subject Property; specialized knowledge or experience of the user; reasons for significantly lower purchase prices, and commonly known or reasonably ascertainable information within the local community about the Subject Property. Langan also requested that the user state the reason the Phase I ESA was requested. A summary of the user's responses is provided in Appendix D and relevant information provided by the user is discussed in applicable sections of this report.

Langan contracted Environmental Data Resources, Inc. (EDR) to conduct an environmental lien and AUL search for the Subject Property. The result of the search, which included a compilation of available data and verification of the findings with the appropriate regulatory authorities, did not reveal environmental liens or AULs. A copy of the environmental lien search is provided in Appendix B.

## 1.4 Limiting Conditions/Deviations

Langan was unable to observe the ground surface throughout unpaved sections of the Subject Property exterior due to vegetation overgrowth. This limiting condition did not impact Langan's conclusions based on review of aerial photographs.

Langan did not delete or deviate from the ASTM E1527-21 guidelines during this Phase I ESA.

## 1.5 Data Gaps

Data gaps, if encountered, are discussed throughout the report. Significant data gaps, if any, are summarized in Section 5.0.

# 2. SUBJECT PROPERTY DESCRIPTION AND CURRENT USE

The following sections describe the Subject Property location, ownership, physical setting, and current layout and operations.

## 2.1 Location, Legal Description, and Ownership

The approximately 9.85-acre Subject Property is identified on the New York City Bronx Borough Tax Map as part of Block 5622, Lot 1. The Subject Property is bound by Schley Avenue, the Hutchinson River Parkway, and service roads to the north; Bally's Golf Links at Ferry Point golf course to the east; Ferry Point Park and the Bronx-Whitestone Bridge to the south; and Ferry Point Park to the west. Between the western and eastern legs of the U-shape formed by the Subject Property lies public parking areas for Ferry Point Park and the Bronx-Whitestone Bridge Metropolitan Transit Authority (MTA) Building. According to ACRIS, the Subject Property is owned by the NYCDPR.

## 2.2 Physical Setting

The physical setting that includes the geologic, hydrogeologic, hydrologic, and topographic characteristics of the Subject Property and surrounding area is discussed below.

### *2.2.1 Topography*

The 2019 United States Geological Survey (USGS) 7.5-minute quadrangle topographic map for Flushing depicts the Subject Property at an elevation of approximately 16 feet above mean sea level (msl) with a gentle slope downward toward the west-southwest. The regional topography slopes downward toward the west-southwest and Westchester Creek, which is located approximately 320 feet west of the Subject Property.

### *2.2.2 Geology*

According to the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) data for Summit County, soils at the Subject Property consist primarily of urban land with tidal marsh stratum, and lesser amounts of Greenbelt loam, Greatkills gravelly sandy loam, and North Meadow sandy loam. Urban Land refers to soils that have been altered by human activities thus making them unidentifiable. Typically, these soils have been mixed with other materials, such as brick, concrete, and demolition debris of unknown origin (non-native fill). Non-native fill found in urban environments typically contains ash, demolition debris, and/or municipal waste products and may contain contaminants (e.g., semi volatile organic compounds [SVOCs] or metals) at concentrations above current regulatory standards. Non-native fill does not trigger a regulatory reporting requirement, but may require implementation of special soil handling, management, and off-site disposal procedures if disturbed during development of the Subject Property. The presence of non-native fill is considered a REC.

According to the USGS Bedrock and engineering geologic maps of New York County and parts of Kings and Queens Counties, New York, and parts of Bergen and Hudson Counties, New Jersey (Baskerville, C.A., 1994), the Subject Property is in the Pelham Bay Member, which consists of sillimanite-grade gneisses. According to previous geotechnical investigations in the surrounding area, subsurface conditions generally consist of a layer of miscellaneous fill, overlying natural,

soft, silty, clayey, peat and sands, which overly glacial till. Bedrock is expected to be 80 to 120 feet below current grade.

### *2.2.3 Hydrogeology*

Surface water bodies are not present within the boundary of the Subject Property. The nearest surface water bodies are Westchester Creek and the East River. Information regarding Subject Property-specific groundwater flow direction is unavailable. Groundwater flow can be influenced by several factors such as surface water bodies, wetlands, hydrogeologic and anthropogenic variables. However, based on topographic gradient and proximity to Westchester Creek and the East River, it is expected that groundwater generally flows to the west-southwest.

A review of the Geocheck section of the LightBox Environmental Data Resources (EDR) Regulatory Database Report (Appendix E) and site reconnaissance observations did not identify groundwater wells on the Subject Property. The EDR report identified one groundwater monitoring well within a quarter mile of the Subject Property. No groundwater elevation data from the well is available; however, based on Langan's experience with, and previous reports for the area, groundwater is tidally influenced and estimated between 2 and 20 feet below grade surface (bgs).

## 2.3 Subject Property Description

The Subject Property is an approximately 9.85-acre, U-shaped section of Ferry Point Park that primarily serves as a park thoroughfare and public space. The Subject Property is improved with an uninterrupted, circular roadway, referred to as Ring Road. Ring Road is a one-lane, one-way, asphalt-paved park roadway and is bordered on either side by concrete curbing, metal guardrails, and grass shoulders. The remainder of the Subject Property includes vegetated areas and footpaths associated with Ferry Point Park. The section of Ring Road comprising the Subject Property totals about 1 mile.

Improvements to the Subject Property, including widening of Ring Road are contemplated by Bally's as part of the proposed development of a gaming facility. The Subject Property encompasses the total area of proposed roadway improvements, which includes park land extending between about 40 and 60 feet beyond the current extents of Ring Road.

A Subject Property Layout Map is provided in Figure 2 of Appendix A. Photographs of the Subject Property and a checklist documenting Langan's observations relative to the features, activities, uses and conditions outlined in Section 9.4 of ASTM E1527-21 are in Appendix C.

## 2.4 Current Subject Property Use

The Subject Property is used as a park roadway and also contains vegetation and footpaths. Vehicles must travel along Ring Road to enter Ferry Point Park, the adjoining Bally's Golf Links at Ferry Point golf course, and adjoining Bronx-Whitestone Bridge MTA facility.

The following table summarizes Subject Property utility providers.

**Table 2-1 Utility Providers**

| Utility | Providers |
|---|---|
| Electricity | Consolidated Edison (Con Edison) |
| Natural gas | None – within the Con Edison service area |

| Utility | Providers |
|---|---|
| Water | NYCDEP |
| Sewer | NYCDEP |

## 2.5 Hazardous Substances and Petroleum Products

Langan did not observe hazardous waste or petroleum products at the Subject Property. According to EDR database records, no hazardous waste is currently being generated at the Subject Property.

### *2.5.1 Underground Storage Tanks (USTs)*

Langan did not observe evidence of USTs at the Subject Property.

### *2.5.2 Aboveground Storage Tanks (ASTs)*

Langan did not observe evidence of ASTs at the Subject Property.

### *2.5.3 Drums, Totes, and Intermediate Bulk Containers*

Langan did not observe drums, totes, or other intermediate bulk containers at the Subject Property.

### *2.5.4 Other Chemical Storage, Containers, or Equipment*

Langan did not observe chemical storage, containers or equipment at the Subject Property.

## 2.6 Air Emissions

Langan did not identify sources of air emissions at the Subject Property.

## 2.7 Waste Management

The following sections describe current hazardous and non-hazardous waste streams, and observations of fill areas or other solid waste throughout the Subject Property.

### *2.7.1 Hazardous Waste*

According to EDR database records, no hazardous waste is currently being generated at the Subject Property. Langan did not observe hazardous waste at the Subject Property.

### *2.7.2 Non-Hazardous Waste*

Langan did not observe non-hazardous waste at the Subject Property.

### *2.7.3 Fill Areas or Solid Waste*

Langan observed several about 1-inch-diameter holes adjacent to the metal guardrail along the eastern leg of the Subject Property. The holes are presumed to be associated with guardrail installation.

Langan did not observe areas that were apparently filled or graded by non-natural causes (or filled with material of unknown origin) that suggest the presence of garbage, construction debris,

demolition debris, or other solid waste disposal, or mounds or depressions suggesting solid waste disposal.

## 2.8 Wastewater

No wastewater streams are generated at the Subject Property. Connection to the municipal sanitary sewer has not yet been provided to the Subject Property but is available through the City of New York. Langan did not observe or identify evidence of septic systems or cesspools at the Subject Property.

## 2.9 Storm Water

Storm water at the Subject Property percolates through pervious areas or sheet flows to the into the municipal storm sewer system. Several storm drains are located throughout Ring Road. Langan did not observe evidence of impact (e.g., sheens, staining) to storm water pathways. As indicated by the user, Ring Road is prone to flooding during extreme weather events.

# 3. SUBJECT PROPERTY HISTORY AND RECORDS REVIEW

The following sections provide summaries of the historical uses of the Subject Property, and available information regarding documented environmental conditions associated with the historical uses.

## 3.1 Historical Summary

Langan compiled the following summary of the Subject Property history based on a review of readily available and reasonably ascertainable sources and interviews. Historical resources are provided in Appendix F.

**Table 3-1 Subject Property History**

| Time Period | Historical Discussion |
|---|---|
| 1890s – 1930s | The Subject Property is depicted as undeveloped and predominantly marsh- and swampland on topographic maps during this period. The majority of the Subject Property is part of the Westchester Creek and Baxter Creek Inlet and entirely submerged in the aerial photograph from 1924. |
| 1940 – 1960s | According to the 1947 topographic map, the former marsh was filled in and Ring Road is visible on the Subject Property. Baxter Creek Inlet adjoins the Subject Property to the east. The Subject Property is bisected by a newly-constructed Bronx-Whitestone Bridge and associated toll plaza. Based on aerial photographs between 1950 and 1966, development of Ring Road continues, including widening the road and paving its surface. Connections from Ring Road are also made to the adjoining toll plaza. |
| 1970s – 2010s | Between the 1970s and 2010s, Ring Road appears to remain relatively unchanged in aerial photographs, topographic maps, and Sanborn maps. Beyond Ring Road, the shoulder along the eastern part of the Subject Property is decreased circa 2011 to add a park footpath and accommodate development of the east-adjoining property. |
| 2015 – Present | Based on the 2015 aerial photograph, development of the east-adjoining property is completed, and the Subject Property appears in its current configuration. |

The majority of the Subject Property was part of Westchester Creek and the Baxter Creek Inlet (now the East River) before infilling and development of Ferry Point Park in the 1940s. During infilling, the Subject Property was backfilled with fill of unknown quality. As discussed in Section 2.2.2, the presence of non-native fill is considered a REC.

## 3.2 Regulatory Database Review

The Subject Property is identified in the NYC Land Use database. The NYC Land Use database listing relates to general information regarding the current zoning as a park and building class information for the Subject Property. No violations are reported in this database; therefore, the listing is not considered a REC.

## 3.3 Prior Report Review

Prior reports were not provided for review.

# 4. ADJOINING PROPERTIES AND SURROUNDING AREA

The following sections describe current and historical uses of and database listings for adjoining properties and the surrounding area.

## 4.1 Current Use of Adjoining Properties and Surrounding Area

The current use of adjoining and surrounding properties is summarized in Table 4-1.

**Table 4-1 Current Use of Adjoining Properties and Surrounding Area**

| Direction | Adjoining Properties | Surrounding Area |
|---|---|---|
| **North** | Schley Avenue, Ferry Point Park, and Bronx-Whitestone Bridge MTA Building (492 Hutchinson River Parkway, Bronx, NY 10465) | Interstate 678, St. Raymond New Cemetery and commercial buildings |
| **East** | Bally's Golf Links at Ferry Point (500 Hutchinson River Parkway, Bronx, NY 10465) | Residential buildings |
| **South** | Bronx-Whitestone Bridge and Ferry Point Park (no address) | East River |
| **West** | Ferry Point Park (no address) | Westchester Creek |

A diesel-fired generator was observed along the perimeter of Ring Road at the eastern adjoining property during the site reconnaissance. Langan did not observe indications of leaks or releases from the generator.

Langan did not observe obvious conditions likely to represent environmental concerns for the Subject Property from current uses of adjoining or surrounding properties.

## 4.2 Adjoining Properties and Surrounding Area History

Langan compiled the following summaries of the adjoining properties and surrounding area history based on a review of historical resources and interviews. Historical resources are provided in Appendix F.

**Table 4-2 Historical Use of Adjoining Properties**

| Direction | Adjoining Properties |
|---|---|
| **North** | The northern-adjoining properties are depicted as undeveloped on topographic maps in the late 1800s. The 1924 aerial photograph shows that some of the properties are inundated and part of Westchester Creek. By 1947, topographic maps depict one of the northern-adjoining properties to be developed as part of the Bronx-Whitestone Bridge and associated toll plaza. Continued development through the late-1900s includes construction of an additional support facility for the Bronx-Whitestone Bridge, a warehouse along Schley Avenue, and several parking lots.<br><br>Langan does not consider the historical uses of the northern-adjoining properties an environmental concern for the Subject Property. |
| **East** | The eastern-adjoining property is depicted as undeveloped on topographic maps and aerial photographs from the 1890s to 1920s. Based on aerial photographs, between the 1950s and 1960s, the east-adjoining property is part of landfilling operations that form the present-day shoreline. Limited road development on the eastern-adjoining property continues |

| Direction | Adjoining Properties |
|---|---|
| | through the 1990s, until the construction of the present-day golf course begins in the 2000s. The golf course was completed circa 2015.<br><br>Landfilling operations are further discussed in Section 4.3.1. |
| **South** | The southern adjoining property is depicted as undeveloped on topographic maps and aerial photographs between the 1890s and 1920s. By 1947, the Bronx-Whitestone Bridge is constructed. The remaining property south of the Subject Property consists of Ferry Point Park and also includes landfilling operations described above, as further discussed in Section 4.3.1. |
| **West** | Based on topographic maps, the western-adjoining property was developed with a roadway as early as the late-1800s, and Sanborn maps show that this property is part of Ferry Point Park. Aerial photographs and Sanborn maps indicate limited development of the western-adjoining property, until about 1985, when an athletic field and additional park footpaths are constructed. This configuration is generally consistent with present day.<br><br>Langan does not consider the historical use of the western-adjoining property an environmental concern for the Subject Property. |

The surrounding area was depicted as mostly undeveloped and inundated in the topographic maps in the late 1800s and early 1900s. During the 1940s, the general area was infilled, and the Bronx-Whitestone Bridge was constructed on the southern-adjoining property. Supporting toll plaza and MTA structures were also erected north of the Subject Property during this time period. Landfilling operations took place on the eastern- and southern-adjoining properties between 1950 and the 1960s. Development related to Ferry Point Park operations continued east, south, and west of the Subject Property until the current configuration was achieved circa 2015. North of the Subject Property, commercial development continued through the 1990s, until the existing buildings were constructed.

Between 1950 and the 1960s, landfilling operations appear to take place on the eastern- and southern adjoining properties. Contaminants of concern on the eastern- and southern- adjoining properties include municipal solid waste and landfill gas (including methane) generated from the decomposition of residual landfill contents. Operations are further discussed in Section 4.3.1.

## 4.3 Regulatory Database Review

Langan reviewed the environmental database report to evaluate if adjoining or surrounding area properties identified in the database report are suspected to represent an environmental concern for the Subject Property (see Section 8.2). Unless discussed in Section 4.3.1 or 4.3.2 below, Langan did not consider the associated regulatory agency files potential RECs for the Subject Property.

### *4.3.1 Adjoining Properties*

Database listings for adjoining properties are summarized as follows. Adjoining and nearby properties of concern are depicted on Figure 3 of Appendix A.

Ferry Point Park Recreational Facility – 500 Hutchinson River Parkway (eastern/southern-adjoining, inferred upgradient/cross-gradient)

This facility, also identified as "NYCP&R – Ferry Point Waterfront Park", "Ferry Point Golf Course", "Ferry Point Recreational Fac.", and "NYC Parks – Ferry Point Park", was identified on the PFAS Enforcement and Compliance History Online (ECHO), State Pollutant Discharge Elimination System (SPDES), Facility Index System (FINDS), ECHO, and NY Spills databases.

The area of Ferry Point Park east of the Whitestone Bridge was formerly used as a municipal solid waste landfill. In 2000, the NYSDEC issued a Part 360 Permit (Permit No. 2-6006-00014) to allow the import and placement of nonhazardous regulated fill and soil for the construction of the current the golf course. Golf course construction was completed by 2015. The PFAS ECHO, SPDES, FINDS, and ECHO listings are related to former landfill operations as well as golf course construction activities. The site is also identified as a Resource Conservation and Recovery Act (RCRA) – Large Quantity Generator (LQG) in 2009 for the disposal of 10.4 tons of lead waste. No violations were reported related to the database entries. Further information regarding operational use of PFAS was unavailable.

The NY Spills listing is related to NY Spill No. 0913675 and the release of about 5 gallons of diesel fuel in January 2010. According to the listing, a generator was overfilled, and diesel overflowed onto the surrounding ground affecting an approximately 20-foot-long by 10-foot-wide area. Impacted soil was excavated and disposed of, and the spill was closed on 25 March 2010.

Langan did not identify evidence of release of PFAS. However, given the reported history of a chemical release and operations as a municipal solid waste landfill, Langan cannot rule out the potential for PFAS and other contaminant impacts to soil and/or groundwater at the Subject Property from former operations at this eastern/southern-adjoining and inferred upgradient/cross-gradient facility. Therefore, this adjoining property is considered a REC.

Bronx-Whitestone Bridge Facility – 1 Hutchinson River Parkway (northern-adjoining, inferred cross-gradient)

This facility, also identified as "NYSDOT BIN 55211229 – Bronx Whitestone Bridge", and "Bronx Whitestone Bridge", and "Bronx Whitestone Bridge", was listed in the FINDS, NY Spills, UST, AST, Leaking Tanks (LTANKS), Manifest, UST Finder Release, and RCRA-LQG databases.

The UST, UST Finder Release, and AST listings are related to petroleum bulk storage at this facility. According to these databases and the NYSDEC Petroleum Bulk Storage Database (PBS) listing for the site (ID No. 2-481645), there have been 15 tanks at this facility. Four are currently listed in-service, and the remaining 11 tanks have been closed/removed. Tanks sizes range from 550 gallons to 20,000 gallons, and contents include diesel, No. 2 fuel oil, and gasoline. The active tanks include three USTs and one AST.

Several releases related to petroleum bulk storage are associated with this site. The following spills were reported for the site: 8807410, 9201985, 9303540, 9408139, 9501417, 9503672, 9601373, 9607895, 9801266, 9906022, and 0100477. Most of the spills are noted as the result of equipment failure; product releases include diesel, No. 2 fuel oil, ethylene glycol, and gasoline. Spill Nos. 9201985, 9501417, 9601373, 9801266 and 0100477 note impacts to groundwater. Each spill incident has been granted closed status by the NYSDEC, indicating that NYSDEC is satisfied with spill remediation; however, based on the frequency of releases from the facility, variety of products released, and causes of releases, residual contamination or unknown releases may have impacted subsurface conditions at the Subject Property.

The facility is listed in the RCRA generator databases for generation of corrosive-, ignitable-, benzene-, lead-, and mercury-hazardous-wastes. The facility has been listed as a LQG in 1989, 1992, 1994, 1995, 1998, 2001, 2002, 2004, 2006, 2007, 2010, 2012, 2018, and a Small Quantity Generator (SQG) in 2006. Manifests documenting waste disposal are available between 2011 and 2016. Several violations are listed during operations, including compliance evaluation-inspection-, general-generator-, and pre-transport-violations. Undocumented spills or releases of solvents or other hazardous substances associated with operations may have migrated and adversely affected groundwater, and/or soil vapor on the Subject Property.

Petroleum bulk storage, documented releases, and potential releases of solvents or other hazardous substances associated with operations at this adjoining property are considered a REC.

Manhole 15002 – 80 North Hutchinson River Parkway (western adjoining, inferred upgradient)

This facility was identified in the NY Spills database under Spill No. 1000322. The spill was reported on 8 April 2010 for the release of 25 gallons of dielectric cable fluid from a Con Edison pole-mounted transformer onto the adjoining sidewalk and soil. The spill was remediated and subsequently closed on 22 April 2010.

Similar listings are noted for several Con Edison structures surrounding the Subject Property. Con Edison maintains an internal protocol for managing hazardous substances, and none of the database listings indicate open spills or violations for these facilities; therefore, the listings are not considered RECs.

MTA Bridges & Tunnels (BWB) (southern adjoining, inferred cross-gradient)

This facility, also identified as "Whitestone Bridge BX", and "Whitestone Bridge", is listed in the NY Spills, LTANKS, RCRA –SQG, and Manifest databases. The facility is listed in the RCRA generator databases for generation of ignitable-, benzene-, and lead-hazardous-wastes. The facility is listed as a SQG in 2007. Manifests documenting waste disposal are available between 2011 and 2016. No violations were reported for this facility.

Whitestone Bridge BX is listed in the LTANKS database under Spill No. 8912020. The spill was reported on 19 March 1990 when a commercial vehicle pulled off-road and spilled oil from its saddle tank into a drain. FDNY hosed spillage into the drain and the spill was closed on the same day.

The NY Spills database listing is related to Spill No. 0011525, reported on 25 January 2001. The spill was caused by the release of 1 pint of dielectric fluid onto the floor of a Con Edison vault. The spill was remediated and subsequently closed 1 June 2001.

Based on the lack of violations and closed status of the above listings, this facility is not considered a REC.

### *4.3.2 Surrounding Area*

Langan evaluated each of the database listings for surrounding area properties (see Section 8.2). Those warranting further discussion in the context of potential to represent an environmental concern for the Subject Property are discussed below.

Vault #2232 – 555 Hutchinson River Parkway (approximately 0.08 miles north, inferred cross-gradient)

This facility is listed in the AST and NY Spills databases. According to the AST listing, there is one 6,000-gallon No. 2 fuel oil storage tank at the property used for on-site consumption. The tank reportedly rests on soil, allowing for no visual inspection; however, there are no reported releases related to this tank system.

The site is listed in the NY Spills database under Spill No. 0813834, which is related to equipment failure within a Con Edison vault adjacent to the building located at 555 Hutchinson River Parkway. About 5 gallons of transformer oil was released into the vault on 23 March 2009. The spill was remediated, and the spill number was closed on 8 June 2009.

Based on the lack of reported releases or closed status of the above listings, this facility is not considered a REC.

United Parcel Service (UPS) – 545 Brush Avenue (approximately 0.13 miles north, inferred cross-gradient)

This facility is listed in the LTANKS, RCRA-SQG, Chemical Bulk Storage (CBS) AST, E Manifest, Manifest, Tanks, SPDES, AST, UST, UST Finder, NY Spills, and CBS databases.

The following NY Spill Numbers are associated with the facility: 8909242, 8908245, 9307821, 9507165, 1807344, and 2207848. Most of the spills are noted as the result of equipment failure, and product releases include diesel, unknown petroleum, gasoline, and unknown material. Spill Nos. 8908245 and 9507165 note impacts to groundwater. With the exception of Spill No. 2207848, each spill incident has been granted closed status by the NYSDEC, indicating that NYSDEC is satisfied with spill remediation; however, based on the frequency of releases from the facility, variety of products released, and causes of releases, residual contamination or unknown releases may have impacted subsurface conditions at the Subject Property.

Spill No. 2207848, reported on 21 December 2022, is related to a punctured saddle tank that spilled 20 gallons of diesel to the road adjoining the facility. Spill closure is still pending.

The facility is listed in the RCRA generator databases for generation of ignitable-, corrosive-, reactive-, chromium-, silver-, benzene-, carbon-tetrachloride-, chlorobenzene-, cresol-, 1,2-dichloroethane-, methyl-ethyl-ketone-, tetrachloroethylene-, undefined-, nicotine-, salts-, dichloro-methane-, acetic-acid-, formaldehyde-, hydrofluoric-acid-, methanol-, 2-propenoic-acid-, furan-, and ester-hazardous-wastes. The facility has been listed as a Conditionally Exempt Small Quantity Generator (CESQG) in 1995, 2006, and a SQG in 1990, 2007, and 2022. There are fourteen violations recorded for this facility. Undocumented spills or releases of solvents or other hazardous substances associated with operations may have migrated and adversely affected groundwater, and/or soil vapor on the Subject Property.

The facility is listed in the CBS AST database for active chemical-bulk storage, including two 200-gallon ethylene glycol storage tanks. Based on the aforementioned documented releases, chemical-bulk storage at this facility poses an environmental concern for the Subject Property.

Chemical bulk storage, documented releases, and potential releases of petroleum products, chemicals, or other hazardous substances associated with this surrounding property may have adversely affected groundwater, and/or soil vapor on the Subject Property; therefore, this site is a REC.

# 5. CONCLUSIONS, FINDINGS AND OPINIONS

Langan completed a Phase I ESA consistent with the scope and limitations of ASTM E1527-21 for the Subject Property, referred to as Ring Road, located within Ferry Point Park, Bronx, New York. Exceptions to, or deletions from, ASTM E1527-21 are described in Section 8 of this report.

This assessment has revealed the following RECs in connection with the Subject Property as presented in Table 5-1.

**Table 5-1 Conclusions, Findings and Opinions**

| **ASTM E1527-21 Scope Items** |
|---|
| **Recognized Environmental Conditions (RECs)** |
| *Current and Historical Use of the Adjoining and Surrounding Properties:* Historical adjoining and surrounding property use includes a municipal solid waste landfill (1950-1960s), a UPS facility with petroleum and chemical bulk storage (1985 - present), and a MTA bridge support facility with petroleum bulk storage (1951 - present). Documented and undocumented spills or releases of petroleum products or hazardous substances associated with these properties may have adversely affected groundwater and/or soil vapor on the Subject Property.<br><br>*Non-native Fill:* Non-native fill is expected to underly the site above native soil. Non-native fill in New York City may contain contaminants, particularly metals and SVOCs, at concentrations that exceed applicable state and/or federal standards. Non-native fill does not trigger a regulatory reporting requirement, but may require implementation of special soil handling, management, and off-site disposal procedures if disturbed during development of the Subject Property. |
| **Controlled Recognized Environmental Conditions (CRECs)** |
| Langan did not identify CRECs. |
| **Historical Recognized Environmental Conditions (HRECs)** |
| Langan did not identify HRECs. |
| **De Minimis Conditions** |
| Langan did not identify de minimis conditions. |
| **Significant Data Gaps** |
| Langan did not identify significant data gaps. |
| **Non-ASTM E1527-21 Scope Items** |
| **Business Environmental Risks (BERs)** |
| Langan did not identify any BERs. |

## 6. ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR Part 312 and I have the specific qualifications based on my education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Brian Gochenaur, QEP
Associate Principal/Vice President (Environmental Professional)

Resumes outlining the qualifications of the project team and the Environmental Professional are included in Appendix G.

## 7. REFERENCES

Langan used the following sources to complete this Phase I ESA.


- ASTM E1527-21, Standard Practice for Environmental Property Assessments: Phase I Environmental Property Assessment Process, published 16 November 2021
- City Online Register, https://a836-acris.nyc.gov/DS/DocumentSearch/Index searched 7 August 2024
- Department of Environmental Conservation Bulk Storage Database Search, http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=4, searched 7 August 2024
- Department of Environmental Conservation Spills Incidents Database Search, http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=2, searched 7 August 2024
- EDR, Inc., Radius Map Report with GeoCheck, 29 July 2024
- EDR, Inc., City Directory Image Report, 30 July 2024
- EDR, Inc., Aerial Photographs, 30 July 2024
- EDR, Inc., Historical Topographic Map Report, 29 July 2024
- EDR, Inc., Sanborn Map Report, 31 July 2024
- New York City Department of Buildings, Building Information System, http://a810-bisweb.nyc.gov/bisweb/bsqpm01.jsp searched 7 August 2024
- New York City Planning Commission, New York City's Zoning & Land Use Map, https://zola.planning.nyc.gov/about#9.72/40.7125/-73.733, searched 7 August 2024
- PFAS Exchange GIS Webviewer, https://experience.arcgis.com/experience/12412ab41b3141598e0bb48523a7c940/
- US EPA 40 CFR Part 302 (EPA-HQ-OLEM-2019-0341; FRL-7204-03-OLEM), RIN 2050-AH09, Designation of PFOA and PFOS as CERCLA Hazardous Substances, Final Rule, 8 May 2024
- US EPA ECHO database: http://echo.epa.gov/facilities searched 9 August 2024
- US EPA ECHO: PFAS Analytic Tools - https://echo.epa.gov/trends/pfas-tools
- US EPA ENVIROFACTS database: https://www3.epa.gov/enviro/ searched 9 August 2024
- US EPA MyProperty database: https://www3.epa.gov/enviro/facts/myproperty/ searched 9 August 2024
- United States Geological Survey, Baskerville, C.A., 1994; Bedrock and engineering geologic maps of New York County and parts of Kings and Queens Counties, New York, and parts of Bergen and Hudson Counties, New Jersey

**Table 7-1 Dates of Assessment Components**

| COMPONENT | DATE |
|---|---|
| Interviews | 8/15/2024 |
| Review of government records | 7/30/2024 |
| Site reconnaissance | 8/9/2024 |
| Declaration by Environmental Professional | 9/12/2024 |

# 8. LIMITATIONS AND DEFINITIONS

This Phase I ESA report was prepared for Client and is intended to be used in its entirety. Excerpts taken from this report are not necessarily representative of the assessment findings. The Client is the sole intended beneficiary of the report. The user requested no special terms or conditions regarding this Phase I ESA.

Langan's scope of services, which is described in Section 1.2 and in the contract executed between Langan and the Client, was limited to that agreed to with the Client/user and no other services beyond those explicitly stated are implied. To the extent possible, the services performed and agreed upon for this Phase I ESA are consistent with the guidelines of ASTM E1527-21.

This report is not intended to be an exhaustive assessment of the Subject Property. The purpose of the Phase I ESA is to reduce uncertainty about unknown conditions at the Subject Property. No environmental site assessment can wholly eliminate uncertainty regarding the potential for RECs in connection with a Subject Property. Therefore, Langan cannot "verify", "insure", "certify", or "guarantee" that the Subject Property is free of environmental concerns.

No expressed or implied representation or warranty is included or intended in this report, except that our services were completed using the care and skill ordinarily followed by professionals providing similar services under similar circumstances in similar locations at the same point in time.

The conclusions provided in this report are based solely on information obtained through completing the standard activities required by ASTM E1527-21 and are intended exclusively for the purpose stated herein, at the specified Subject Property, as it existed at the point in time the assessment was completed. The conclusions provided in this report do not apply to conditions and features of which Langan was not made aware of through good faith efforts to complete the activities required by ASTM E1527-21 and did not have the opportunity to evaluate.

## 8.1 ASTM Definitions

The following definitions are provided in ASTM E1527-21 and presented below for reference. This section is not a comprehensive list of definitions provided in ASTM E1527-21 and is intended to summarize those pertinent to this Phase I ESA report.

Activity and use limitations (AULs): legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effective-ness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, soil vapor, groundwater, and/or surface water on a property.

Adjoining properties: any real property or properties the border of which is contiguous or partially contiguous with that of the Subject Property, or that would be contiguous or partially contiguous with that of the Subject Property but for a street, road, or other public thoroughfare separating them.

All Appropriate Inquiries: that inquiry constituting all appropriate inquiries into the previous ownership and uses of the Subject Property consistent with good commercial and customary practice as defined in CERCLA, 42 U.S.C.§ 9601(35)(B) and 40 C.F.R. Part 312, that will qualify a party to a commercial real estate transaction for one of the threshold criteria for satisfying the LLPs to CERCLA liability (42U.S.C. §§ 9601(35)(A) & (B), § 9607(b)(3), § 9607(q), and§ 9607(r)), assuming compliance with other elements of the defense.

Approximate minimum search distance: the area for which records must be obtained and reviewed pursuant to ASTM E1527-21 Section 8 subject to the limitations provided in that section. This may include areas outside the Subject Property and shall be measured from the nearest Subject Property boundary. This term is used in lieu of radius to include irregularly shaped properties.

Business environmental risk (BER): a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. Consideration of BER issues may involve addressing one or more non-scope considerations.

Controlled recognized environmental condition (CREC): recognized environmental condition affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations).

Data gap: a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to, site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.).

De minimis condition: a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a de minimis condition is not a recognized environmental condition nor a controlled recognized environmental condition.

Engineering controls: physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to hazardous substances or petroleum products in the soil or groundwater on a property. Engineering controls are a type of activity and use limitation (AUL).

Environment: environment shall have the same meaning as the definition of environment in CERCLA 42 U.S.C. § 9601(8).

Historical recognized environmental condition (HREC): previous release of hazardous substances or petroleum products affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the Subject Property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition.

Institutional controls (IC): a legal or administrative mechanism (for example, "deed restrictions," restrictive covenants, easements, or zoning) on the use of, or access to, a site or facility to (1) reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or groundwater on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. An institutional control is a type of activity and use limitation (AUL).

Key site manager: the person identified by the owner or operator of a Subject Property as having good knowledge of the uses and physical characteristics of the Subject Property.

Material threat: obvious threat which is likely to lead to a release and that, in the opinion of the environmental professional, would likely result in impact to public health or the environment.

Obvious: that which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer.

Property use limitation: limitation or restriction on current or future use of a property in connection with a response to a release, in accordance with the applicable regulatory authority or authorities that allows hazardous sub-stances or petroleum products to remain in place at concentrations exceeding unrestricted use criteria.

Reasonably ascertainable: information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints, and (3) practically reviewable.

Recognized environmental conditions: (1) the presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the Subject Property under conditions that pose a material threat of a future release to the environment. For the purposes of this definition, "likely" is that which is neither certain nor proved, but can be expected or believed by a reasonable observer based on the logic and/or experience of the environmental professional, and/or available evidence, as stated in the report to support the opinions given therein.

Release: a release of any hazardous substance or petroleum product shall have the same meaning as the definition of "release" in CERCLA 42 U.S.C. § 9601(22). There are a number of statutory exclusions from the definition of release that may impact the environmental professional's opinions and conclusions, such as the normal application of fertilizer.

Significant data gap: a data gap that affects the ability of the environmental professional to identify a recognized environmental condition.

Site reconnaissance: that part that is contained in Section 9 of ASTM E1527-21 and addresses what should be done in connection with the site visit. The site reconnaissance includes, but is not limited to, the site visit done in connection with such a Phase I Environmental Site Assessment.

Site visit: the visit of the Subject Property during which observations are made constituting the site reconnaissance section of this practice.

Subject property: the property that is the subject of the environmental site assessment described in this practice.

User: the party seeking to use ASTM E1527-21 to complete an environmental site assessment of the Subject Property.

## 8.2 Standard Environmental Record Sources

Langan reviewed an environmental database search report prepared by an environmental database search provider for the Subject Property and surrounding area. The database search report includes a listing of properties identified on select federal, state, local and tribal standard source environmental databases within the approximate minimum search radii outlined in ASTM E1527-21. This information was supplied to Langan by the environmental database search provider, and to the environmental database search provider by government sources; therefore, neither Langan nor the environmental database search provider can verify the completeness and accuracy of the database information. Appendix E contains a copy of the report, with specific source and property descriptions, and the dates of the last update for each database searched. Langan reviewed the database search report on a record-by-record basis to evaluate if certain properties identified in the database report are likely to represent an environmental concern for the Subject Property. The evaluation criteria included factors such as distance, groundwater gradient, nature of the listing, and regulatory status. Unless specifically discussed in the body of this report, the facilities listed on the database do not appear to represent an environmental concern to the Subject Property.

# Appendix A Figures




Notes:
1. Flushing, NY USGS Quadrangle Map Topographic basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online Copyright: © 2013 National Geographic Society, i-cubed.
**WARNING:** It is a violation of the NYS Education Law Article 145 for any person, unless he is acting under the direction of a licensed professional engineer, to alter this item in any way.


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Project
**PROPOSED BALLY'S CASINO – RING ROAD AT FERRY POINT PARK**
BRONX NEW YORK

Figure Title
**SUBJECT PROPERTY LOCATION MAP**

| Project No. | Figure |
|---|---|
| 170773001 | 1 |
| Date: 8/9/2024 | |
| Scale: 1" = 2,000 feet | |
| Drawn By: MG | |

© 2023 Langan

Path: \\langan.com\data\NYC\data0\170773001\Project Data\ArcGIS\APRX\170773001\170773001.aprx




Notes:
1. Imagery provided through Langan's subscription to Nearmap.com. Flown on 06/16/24.
2. All locations of Site reconnaissance observations are approximate.


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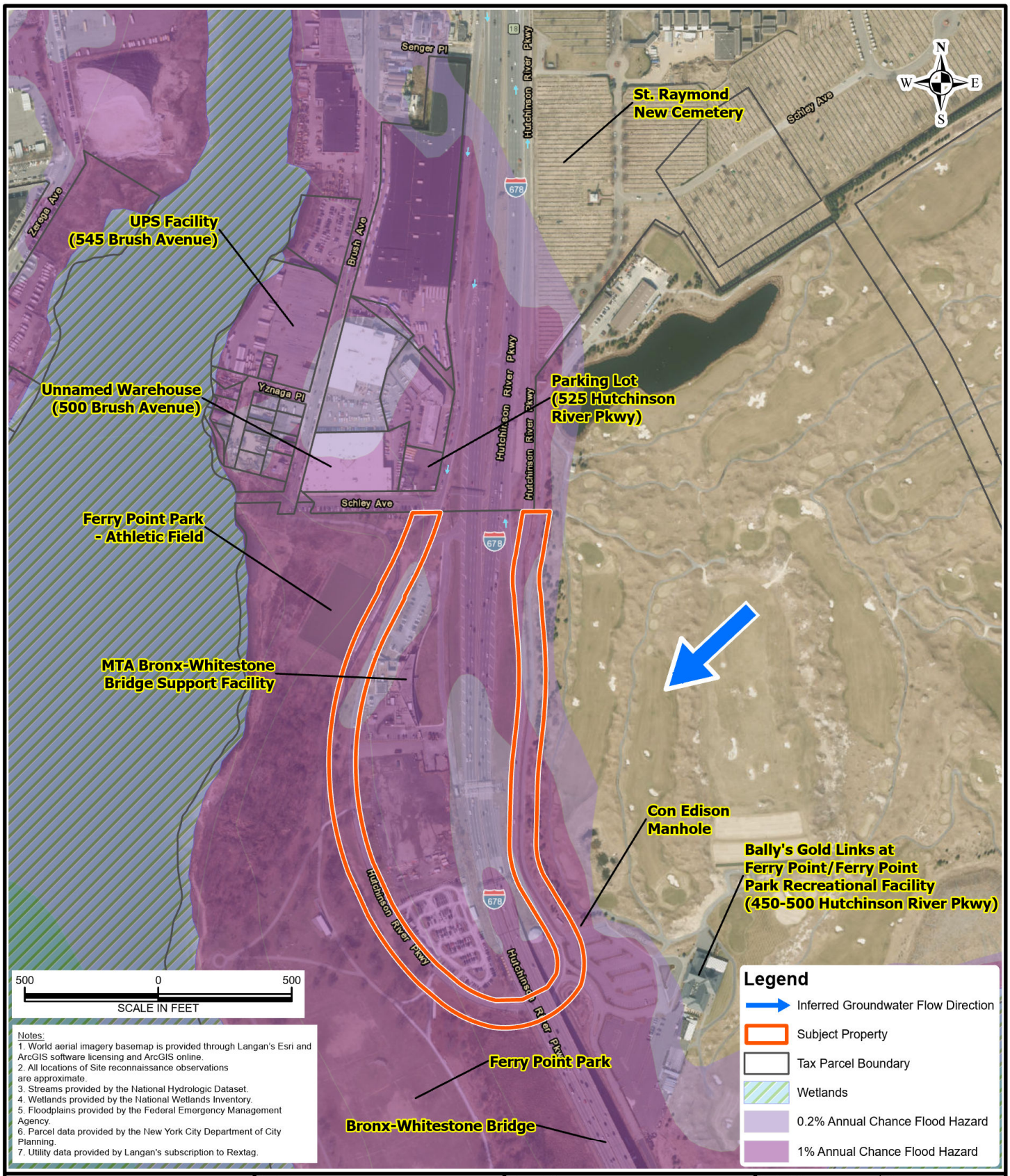
Project
PROPOSED BALLY'S CASINO – RING ROAD AT FERRY POINT PARK
BRONX NEW YORK

Figure Title
SUBJECT PROPERTY LAYOUT

| Project No. | Figure |
|---|---|
| 170773001 | 2 |
| Date: 8/15/2024 | |
| Scale: 1" = 300 feet | |
| Drawn By: MG | |

© 2023 Langan

Path: \\langan.com\data\NYC\data0\170773001\Project Data\ArcGIS\APRX\170773001\170773001.aprx




Notes:
1. World aerial imagery basemap is provided through Langan's Esri and ArcGIS software licensing and ArcGIS online.
2. All locations of Site reconnaissance observations are approximate.
3. Streams provided by the National Hydrologic Dataset.
4. Wetlands provided by the National Wetlands Inventory.
5. Floodplains provided by the Federal Emergency Management Agency.
6. Parcel data provided by the New York City Department of City Planning.
7. Utility data provided by Langan's subscription to Rextag.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Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
360 West 31st Street, 8th Floor
New York, NY 10001-2727
T: 212.479.5400 F: 212.479.5444
www.langan.com


Project
PROPOSED BALLY'S CASINO – RING ROAD AT FERRY POINT PARK
BRONX NEW YORK

Figure Title
NEARBY PROPERTIES MAP

| Project No. | Figure |
|---|---|
| 170773001 | 3 |
| Date: 9/10/2024 | |
| Scale: 1" = 500 feet | |
| Drawn By: MG | |

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Path: \\langan.com\data\NYC\data0\170773001\Project Data\ArcGIS\APRX\170773001\170773001.aprx

# Appendix B Agency Records and Other Reports

## Kaitlyn Gioia

**From:** donotreply@records.nyc.gov
**Sent:** Wednesday, August 7, 2024 2:44 PM
**To:** Kaitlyn Gioia
**Subject:** [External] [OpenRecords] Request FOIL-2024-826-03671 Submitted to Department of Environmental Protection (DEP)

Your request FOIL-2024-826-03671 has been successfully submitted to the Department of Environmental Protection (DEP). The details of your request are shown below.

Request Title: Environmental Conditions

Request Description: Re: Freedom of Information Request 450 Hutchinson River Parkway Block 5622, Lot 1 Bronx, New York Langan Project No. 170773001 Dear Sir or Madam: Pursuant to the Federal Freedom of Information Act (5 U.S.C 552 et seq.) dealing with the examination and duplication of documents maintained by public agencies, Langan is requesting any information or copies of files regarding environmental conditions on the above property, such as environmental permits, notices of violations, spill/discharge incidents, storage or disposal of hazardous substances, Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LTANKs), asbestos abatement, and any other environmental reports that your department may have. The Subject Property is located at 450 Hutchinson River Parkway in the Bronx, New York and is identified as Tax Block 5622, Lot 1. The site is located entirely within Ferry Point Park and is bisected by Hutchinson River Expressway. Please contact me at 212-479-5531 with any questions or send your response to my attention at kgioia@langan.com or at the below address: Langan Engineering and Environmental Services, P.C. 21 Penn Plaza 360 West 31st Street, 8th floor New York, New York 10001-2727 Thank you in advance for your cooperation. Sincerely, Langan Engineering, Environmental, Surveying Landscape Architecture, and Geology, D.P.C. Kaitlyn Gioia Senior Staff Scientist

Requester's Contact Information

**Name:**
Kaitlyn Gioia
**Title:**
Senior Staff Scientist
**Organization:**
Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C.
**Email:**
kgioia@langan.com
**Phone Number:**
(212) 479-5531
**Fax Number:**
Not provided
**Street Address (line 1):**
360 West 31st Street, 8th Floor
**Street Address (line 2):**
Not provided
**City:**
New York
**State:**
NY
**Zip Code:**
10001

You can view the request and take any necessary action at the following webpage: https://a860-openrecords.nyc.gov/request/view/FOIL-2024-826-03671.

## Kaitlyn Gioia

**From:** donotreply@records.nyc.gov
**Sent:** Friday, August 9, 2024 6:13 AM
**To:** Kaitlyn Gioia
**Subject:** [External] [OpenRecords] Request FOIL-2024-826-03671 Acknowledged

The Department of Environmental Protection (DEP) has **acknowledged** your FOIL request FOIL-2024-826-03671.

You can expect a response on or about Tuesday, November 12, 2024.

Please visit FOIL-2024-826-03671 to view additional information and take any necessary action.

## Kaitlyn Gioia

**From:** donotreply@records.nyc.gov
**Sent:** Monday, August 12, 2024 11:30 AM
**To:** Kaitlyn Gioia
**Subject:** [External] [OpenRecords] Request FOIL-2024-826-03671 Closed

The Department of Environmental Protection (DEP) has **closed** your FOIL request FOIL-2024-826-03671 for the following reasons:

- A diligent search for records responsive to your request did not locate any such records. Accordingly, your request is denied.

You may appeal the decision to deny access to material that was redacted in part or withheld in entirety by contacting the agency's FOIL Appeals Officer: foilappeals@dep.nyc.gov within 30 days.

## Kaitlyn Gioia

**From:** recordsaccess <recordsaccess@health.nyc.gov>
**Sent:** Thursday, August 8, 2024 2:32 PM
**To:** Philip Lynch
**Cc:** Kaitlyn Gioia
**Subject:** [External] Re: [EXTERNAL] 450 Hutchinson River Parkway, Block 5622, Lot 1, Bronx, NY

Dear Philip Lynch

The NYC Department of Health and Mental Hygiene is retuning your Freedom of Information Law request with the instructions for resubmitting it below. Please follow the instructions and we will be able to process the request. If you have any questions about these instructions, please contact the Records Access Officer at bodonnell1@health.nyc.gov

***Phase I Environmental Site Assessment (ESA) Records***
**All data related to indoor environmental complaints is here. Before submitting a FOIL request for Environmental Site Assessment records, you must check this database to see if the site you are investigating has any entries.**

1. If your site has no entries, then we have no indoor environmental complaint records and your ESA FOIL request should ***only*** concern well sites. Please see below for information on accessing other records that may be relevant to your ESA investigation.

2. If your site does have an entry or entries, you will need to provide the date(s) of the indoor environmental complaint(s) for us to locate the related records.

3. ***The Department will not process any ESA FOIL requests without the information required above.***

The following are some common environmental issues that are addressed by *other agencies* that may be relevant to your ESA investigation:

- Chemical spills that impact outdoor areas – NYS Department of Environmental Conservation (NYS DEC), NYS Department of Health, and NYC Department of Environmental Protection (NYC DEP)
- Underground storage tanks – NYS DEC and NYC DEP
- Community air impacts – NYC DEP
- Sewers – NYC DEP
- Environmental impacts to parkland – NYC Parks Department

Please contact these agencies for records. For other NYC agencies, you can submit FOIL requests here

Thank you,

FOIL Administration
Office of the General Counsel
NYC Department of Health and Mental Hygiene - City of New York
42-09 28th St.,CN30, Long Island City, NY 11101

**Telephone**:347-396-6116 **Fax:**347-396-6087
**Email:** recordsaccess@health.nyc.gov | nyc.gov/health

---

**From:** Philip Lynch <plynch@Langan.com>
**Sent:** Wednesday, August 7, 2024 4:56 PM
**To:** recordsaccess <recordsaccess@health.nyc.gov>
**Cc:** Kaitlyn Gioia <kgioia@langan.com>
**Subject:** [EXTERNAL] 450 Hutchinson River Parkway, Block 5622, Lot 1, Bronx, NY

**Re: Freedom of Information Request**
**450 Hutchinson River Parkway**
**Block 5622, Lot 1**
**Bronx, New York**
**Langan Project No. 170773001**

Dear Sir or Madam:

Pursuant to the Federal Freedom of Information Act (5 U.S.C 552 et seq.) dealing with the examination and duplication of documents maintained by public agencies, Langan is requesting any information or copies of files regarding environmental conditions on the above property, such as environmental permits, notices of violations, spill/discharge incidents, storage or disposal of hazardous substances, Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LTANKs), asbestos abatement, and any other environmental reports that your department may have. There are no listings in the database for this site. Therefore, we are looking for information on whether it is a well site.

The Subject Property is located at **450 Hutchinson River Parkway** in the **Bronx, New York** and is identified as Tax **Block 5622, Lot 1**. The site is located entirely within Ferry Point Park and is bisected by Hutchinson River Expressway.

Please contact me at 212-479-5531 with any questions or send your response to my attention at kgioia@langan.com or at the below address:

Langan Engineering and Environmental Services, P.C.
21 Penn Plaza
360 West 31st Street, 8th floor
New York, New York 10001-2727

Thank you in advance for your cooperation.

Sincerely,

**Langan Engineering, Environmental, Surveying**
**Landscape Architecture, and Geology, D.P.C.**



Kaitlyn Gioia
Senior Staff Scientist

**Philip Lynch**
**Administrative Assistant**

**LANGAN**

Direct: 212.479.5469

Mobile: 914.882.2582
File Sharing Link

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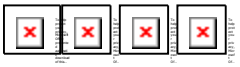
**OHIO  ILLINOIS  NORTH CAROLINA  TENNESSEE  FLORIDA  TEXAS  ARIZONA  COLORADO  UTAH  WASHINGTON  CALIFORNIA**
**ATHENS  CALGARY  DUBAI  LONDON  PANAMA**





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Sent from the New York City Department of Health & Mental Hygiene. This email and any files transmitted with it may contain confidential information and are intended solely for the use of the individual or entity to whom they are addressed. This footnote also confirms that this email message has been swept for the presence of computer viruses.

## Kaitlyn Gioia

**From:** recordsaccess <recordsaccess@health.nyc.gov>
**Sent:** Tuesday, August 13, 2024 1:44 PM
**To:** Kaitlyn Gioia; Philip Lynch
**Subject:** [External] FOIL Control #: 2024FR01115

**FOIL Control #:** 2024FR01115

Dear Kaitlyn Gioia

The NYC Department of Health and Mental Hygiene (DOHMH) acknowledges receipt of your Freedom of Information Law request. It has been assigned the above-noted control number and has been forwarded to the following bureau for processing:

Environmental Health Services
Sheba Taylor-Medina, e-mail: staylor2@health.nyc.gov

You should receive a response from the program/bureau within twenty(20) business days. Please note that as of January 1, 2019, the Department charges the statutorily allowable fee of 25¢ per page for FOIL responses of records maintained in hard copy format only. You will be advised by the program/bureau of the fee that is due and, upon receipt of your payment by check or money order, the copies will be forwarded to you.
All inquiries about the status of your request should be made with the program/bureau and control number noted above.

Thank you,

FOIL Administration
Office of the General Counsel
NYC Department of Health and Mental Hygiene - City of New York
42-09 28th St.,CN30, Long Island City, NY 11101
**Telephone**:347-396-6116 **Fax:**347-396-6087
**Email:** recordsaccess@health.nyc.gov | nyc.gov/health

---

**From:** Kaitlyn Gioia <kgioia@langan.com>
**Sent:** Monday, August 12, 2024 9:30 AM
**To:** recordsaccess <recordsaccess@health.nyc.gov>; Philip Lynch <plynch@Langan.com>
**Subject:** RE: [EXTERNAL] 450 Hutchinson River Parkway, Block 5622, Lot 1, Bronx, NY

Good morning FOIL Administration team,

To clarify our request below, there are no listings in the database for this site. Therefore, we are looking for information on whether it is a well site. Let me know if you need any additional information to process this request.

Thank you!

**Kaitlyn Gioia**
**Senior Staff Scientist**

**LANGAN**

Direct: 212.479.5531
Mobile: 516.913.3464
File Sharing Link
www.langan.com
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**OHIO ILLINOIS NORTH CAROLINA TENNESSEE FLORIDA TEXAS ARIZONA COLORADO UTAH WASHINGTON CALIFORNIA**
**ATHENS CALGARY DUBAI LONDON PANAMA**



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**Sent:** Thursday, August 8, 2024 2:32 PM
**To:** Philip Lynch <plynch@Langan.com>
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Dear Philip Lynch

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Thank you,

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42-09 28th St.,CN30, Long Island City, NY 11101
**Telephone**:347-396-6116 **Fax:**347-396-6087
**Email:** recordsaccess@health.nyc.gov | nyc.gov/health

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**From:** Philip Lynch <plynch@Langan.com>
**Sent:** Wednesday, August 7, 2024 4:56 PM
**To:** recordsaccess <recordsaccess@health.nyc.gov>
**Cc:** Kaitlyn Gioia <kgioia@langan.com>
**Subject:** [EXTERNAL] 450 Hutchinson River Parkway, Block 5622, Lot 1, Bronx, NY

**Re: Freedom of Information Request**
**450 Hutchinson River Parkway**
**Block 5622, Lot 1**
**Bronx, New York**
**Langan Project No. 170773001**

Dear Sir or Madam:

Pursuant to the Federal Freedom of Information Act (5 U.S.C 552 et seq.) dealing with the examination and duplication of documents maintained by public agencies, Langan is requesting any information or copies of files regarding environmental conditions on the above property, such as environmental permits, notices of violations, spill/discharge incidents, storage or disposal of hazardous substances, Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LTANKs), asbestos abatement, and any other environmental reports that your department may have. There are no listings in the database for this site. Therefore, we are looking for information on whether it is a well site.

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21 Penn Plaza
360 West 31st Street, 8th floor
New York, New York 10001-2727

Thank you in advance for your cooperation.

Sincerely,

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**Landscape Architecture, and Geology, D.P.C.**



Kaitlyn Gioia
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**Philip Lynch**
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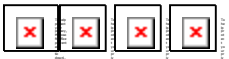
**ATHENS CALGARY DUBAI LONDON PANAMA**





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# Appendix C Site Reconnaissance Checklist and Photographs

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**PHASE I ESA SITE RECONNAISSANCE CHECKLIST**

**GENERAL INFORMATION**

Langan personnel: Kaitlyn Gioia
Date of site reconnaissance: August 9, 2024
Business name / subject property occupant: Ferry Point Park – Ring Road
Full subject property address: 450 Hutchinson River Parkway, Bronx, NY
Weather conditions: ~80°F - Rainy

| Features, Activities, Uses, and Conditions | Identified/Observed? | | Report Section(s) |
|---|---|---|---|
| **General Subject Property Setting** | **Yes** | **No** | |
| Current use(s) of the subject property | ☒ | ☐ | 2.0 |
| Past use(s) of the subject property | ☐ | ☒ | 3.1 |
| Current use(s) of adjoining properties | ☒ | ☐ | 4.1 |
| Past use(s) of adjoining properties | ☐ | ☒ | 4.2 |
| Current or past uses in the surrounding area | ☒ | ☐ | 4.1 and 4.2 |
| Geologic, hydrogeologic, hydrologic, and topographic conditions | ☒ | ☐ | 2.2 |
| Structures and other improvements at the subject property | ☒ | ☐ | 2.3 |
| Roads | ☒ | ☐ | 2.3 |
| Potable water supply/source for the subject property | ☒ | ☐ | 2.4 |
| Sewage disposal system for the subject property | ☐ | ☒ | 2.4 |

| **Interior/Exterior Features** | **At Interior?** | | **At Exterior?** | | **Report Section(s) (if yes)** |
|---|---|---|---|---|---|
| | **Yes** | **No** | **Yes** | **No** | |
| Hazardous substances and petroleum products in connection with identified uses | ☐ | ☒ | ☐ | ☒ | 2.5 |
| Storage tanks | ☐ | ☒ | ☐ | ☒ | 2.5.1 and 2.5.2 |
| Strong, pungent, or noxious odors and their sources | ☐ | ☒ | ☐ | ☒ | 2.6 |
| Standing surface water and pools or sumps containing liquids likely to be hazardous substances or petroleum products | ☐ | ☒ | ☐ | ☒ | 2.5 |
| Drums, totes, and intermediate bulk containers | ☐ | ☒ | ☐ | ☒ | 2.5.3 |
| Hazardous substance and petroleum product containers not in connection with identified uses | ☐ | ☒ | ☐ | ☒ | 2.5.4 |
| Unidentified substance containers | ☐ | ☒ | ☐ | ☒ | 2.5.4 |
| PCB-containing items | ☐ | ☒ | ☐ | ☒ | 2.5.4 |
| Heating/cooling | ☐ | ☒ | ☐ | ☒ | 2.4 |
| Stains or corrosion on floors, walls, or ceilings | ☐ | ☒ | ☐ | ☒ | 2.5 and 2.7 |
| Drains and sumps | ☐ | ☒ | ☒ | ☐ | 2.8 |
| Pits, ponds, or lagoons | ☐ | ☒ | ☐ | ☒ | 2.2.3 |
| Stained soil or pavement | ☐ | ☒ | ☐ | ☒ | 2.5 and 2.7 |
| Stressed vegetation | ☐ | ☒ | ☐ | ☒ | 2.9 |
| Solid waste | ☐ | ☒ | ☐ | ☒ | 2.7 |
| Water/wastewater | ☐ | ☒ | ☐ | ☒ | 2.8 and 2.9 |
| Wells | ☐ | ☒ | ☐ | ☒ | 2.2.3 |
| Septic systems or cesspools | ☐ | ☒ | ☐ | ☒ | 2.8 |

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# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 1 |

**Direction Photo Taken:**

South

**Description:**

Entrance to subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 2 |

**Direction Photo Taken:**

Northeast

**Description:**

Pedestrian walkways and guardrails throughout the subject property.



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 3 |

**Direction Photo Taken:**

Southeast

**Description:**

General view of the western leg of the subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 4 |

**Direction Photo Taken:**

East

**Description:**

Pedestrian walkway and adjoining parking field for Ferry Point Park.



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 5 |

**Direction Photo Taken:**

Northeast

**Description:**

Representative view of hydrants located throughout the subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 6 |

**Direction Photo Taken:**

Northeast

**Description:**

General view of the eastern leg of the subject property.



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# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 7 |

**Direction Photo Taken:**

South

**Description:**

Exit from the subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 8 |

**Direction Photo Taken:**

Northeast

**Description:**

Representative view of drainage structures and NYCDEP infrastructure throughout the subject property.



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 9 |

**Direction Photo Taken:**

Southeast, down

**Description:**

Representative view of 1-inch-diameter holes adjacent to the metal guardrail throughout the eastern leg of the subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 10 |

**Direction Photo Taken:**

East

**Description:**

Adjoining Bronx-Whitestone Bridge and parking field for Ferry Point Park.



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# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 11 |

**Direction Photo Taken:**

Northeast

**Description:**

Adjoining Con Edison structures.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 12 |

**Direction Photo Taken:**

Northwest

**Description:**

Adjoining Interstate 678.



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 13 |

**Direction Photo Taken:**

East

**Description:**

Adjoining parking field for Ferry Point Park.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 14 |

**Direction Photo Taken:**

West

**Description:**

Bronx-Whitestone Bridge MTA Building



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 15 |

**Direction Photo Taken:**

Southeast

**Description:**

Alternate view of Bronx-Whitestone Bridge MTA Building.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 16 |

**Direction Photo Taken:**

Northwest

**Description:**

Adjoining athletic field.



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# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 17 |

**Direction Photo Taken:**

West

**Description:**

Adjoining commercial warehouse and parking lot.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 18 |

**Direction Photo Taken:**

Northeast

**Description:**

Adjoining toll plaza for the Bronx-Whitestone Bridge.



LANGAN

# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 19 |

**Direction Photo Taken:**

East

**Description:**

Adjoining Bally's Golf Links at Ferry Point.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 20 |

**Direction Photo Taken:**

East

**Description:**

Adjoining Ferry Point Park.



# Appendix D User Provided Information

Docusign Envelope ID: 3CE5B05B-9955-4E49-BEED-0490AFAA772C

Clear Form

# ASTM E1527-21 User Questionnaire

*Please complete the below form and return to Langan.*

Providing the following information (if available) to the environmental professional (Langan) is one of the requirements to qualify for one of the Landowner Liability Protections (LLP) offered under CERCLA. Missing or incomplete information for questions 1 through 6 could result in a determination that "all appropriate inquiry" is not complete. Additional information should be provided for "Yes" answers where relevant.

## General Information

**User/Client Names:** Bally's Golf Links at Ferry Point

**Reason for the Phase I ESA:** New Gaming Resort Development

**Type of property:** Casino Hotel

**Type of property transaction (e.g. sale, purchase, exchange):** New Zoning

**Subject property address (provide documentation of subject property boundary):**
500 Hutchinson River Parkway Bronx, New York 10465

**Site Contact and Contact Information:** Brian Crowell General Manager

**Relying Party(ies):**

## Required Information

**(1.) Environmental liens that are filed or recorded against the subject property (40 CFR 312.25).**

Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the subject property under federal, tribal, state or local law?

Yes ○ No ◉

**(2.) Activity and use limitations that are in place on the subject property or that have been filed or recorded against the subject property (40 CFR 312.26(a)(1)(v) and (vi)).**

Did a search of recorded land title records (or judicial records where appropriate) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the subject property and/or have been filed or recorded against the subject property under federal, tribal, state or local law?

Yes ○ No ◉

**(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).**

Do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes ◉ No ○

**(4.) Relationship of the purchase price to the fair market value of the subject property if it were not contaminated (40 CFR 312.29).**

Does the purchase price being paid for this subject property reasonably reflect the fair market value of the subject property?

Yes ◉ No ○

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the subject property?

Yes ○ No ◉

Docusign Envelope ID: 3CE5B05B-9955-4E49-BEED-0490AFAA772C

**(5.) Commonly known or reasonably ascertainable information about the subject property (40 CFR 312.30).**

| | Yes | No |
|---|---|---|
| Are you aware of commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases? | ◉ | ○ |
| For example, | Yes | No |
| (a.) Do you know the past uses of the subject property? | ◉ | ○ |
| (b.) Do you know of specific chemicals that are present or once were present at the subject property? | ○ | ◉ |
| (c.) Do you know of spills or other chemical releases that have taken place at the subject property? | ○ | ◉ |
| (d.) Do you know of any environmental cleanups that have taken place at the subject property? | ○ | ◉ |

**(6.) The degree of obviousness of the presence or likely presence of contamination at the subject property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).**

| | Yes | No |
|---|---|---|
| Based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of releases at the subject property? | ○ | ◉ |
| Do you have knowledge or experience with the subject property that may be pertinent to the environmental professional (for example, copies of any available prior environmental site assessment reports, documents, correspondence, etc., concerning the property and its environmental condition)? | ◉ | ○ |

**(7.) Proceedings Involving the Subject Property Questions (Section 10.9 of ASTM E1527-21 and Section 10.10 of ASTM E2247-16)**

| Do you know of: | Yes | No |
|---|---|---|
| (a.) Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the subject property? | ○ | ◉ |
| (b.) Any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, at, or from the subject property? | ○ | ◉ |
| (c) Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? | ○ | ◉ |

**Signature**

It is understood that the information presented in this form is an integral part of the Phase I ESA process and that Langan will evaluate and rely on this information in the development of the final Phase I ESA report.

Completed By: Mark Schlang

DocuSigned by: Mark Schlang 50B69DB17FE048C...

Print/Type Name:

Title: Vice President of Architecture

Company: Bally's Corporation

Relationship to Client/User: Employee

Date: 8/16/24

LANGAN

## ASTM PRACTICE E 1527-13:
## OWNER/OPERATOR/SITE-MANAGER QUESTIONNAIRE

Please complete the below form and return to
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.

**Project Location/Address:** Ferry Point Golf Course
500 Hutchinson River Parkway, Bronx, NY 10465

### ASTM E-1527-13, Section 10.9

| | Yes | No |
|---|---|---|
| Do you know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property? | ☐ | ☒ |
| Do you know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property? | ☐ | ☒ |
| Do you know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? | ☐ | ☒ |

### ASTM E-1527-13, Section 10.8

Are you aware if any of the documents listed below exists and if so, whether copies can and will be provided to the Consultant performing the ESA?

| | Unaware | Document Exists | Copy will be provided |
|---|---|---|---|
| Environmental site assessment reports | ☐ | ☐ | ☒ |
| Environmental compliance audit reports | ☐ | ☐ | ☒ |
| Environmental permits (such as solid waste disposal permits, hazardous waste disposal permits, NPDES permits, wastewater permits, underground injection permits) | ☐ | ☐ | ☒ |
| Registrations for underground and aboveground storage tanks | ☐ | ☒ | ☐ |
| Material safety data sheets | ☐ | ☐ | ☒ |
| Community-right-to-know plan | ☒ | ☐ | ☐ |
| Safety plans; preparedness and prevention plans; spill prevention, countermeasure and control plans, facility response plans, etc. | ☐ | ☐ | ☒ |

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| | Unaware | Document Exists | Copy will be provided |
|---|---|---|---|
| Reports regarding hydrogeologic conditions on the property or surrounding area | ☐ | ☐ | ☒ |
| Notices or other correspondence from any governmental agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property | ☒ | ☐ | ☐ |
| Hazardous waste generator notices or reports | ☐ | ☒ | ☐ |
| Geotechnical studies | ☐ | ☐ | ☒ |
| Risk Assessments | ☒ | ☐ | ☐ |
| Recorded Activity and Use Limitations | ☐ | ☐ | ☒ |
| Environmental Cleanup Reports | ☐ | ☐ | ☒ |

Do you have contact information for the prior owner of the property? **Yes** ☐ **No** ☒
If yes, please provide information below:

Prior Owner's Name _____

Contact person _____

Address _____

_____

Telephone _____

Do you have contact information for the prior occupant of the property? **Yes** ☐ **No** ☒
If yes, please provide information below:

Prior Occupant's Name _____

Contact person _____

Address _____

_____

Telephone _____

Do you have information on the prior facility manager of the property? **Yes** ☐ **No** ☒
If yes, please provide information below:

LANGAN

Prior Facility Manager's Name _____

Contact person _____

Address _____

_____

Telephone _____

**This form was completed by:**

Property Owner ☒ Operator ☐ Key Site Manager ☐ User ☐ EP ☐

Name: Kay Zias, Director of ERU, NYC Department of Parks and Recreation

Address: 117-2 Roosevelt Avenue, Flushing, NY 11368

_____

Signature: Kay Zias Date: 8/29/2024

# Appendix E Environmental Database Report

**Proposed Ballys Casino - Ring Road**
450 Hutchinson River Parkway
Bronx, NY 10465

Inquiry Number: 7720624.2s
July 29, 2024

# The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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**GEOCHECK ADDENDUM**

| | |
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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

450 HUTCHINSON RIVER PARKWAY
BRONX, NY 10465

### COORDINATES

| | |
|---|---|
| Latitude (North): | 40.8136930 - 40° 48' 49.29'' |
| Longitude (West): | 73.8358030 - 73° 50' 8.89'' |
| Universal Tranverse Mercator: | Zone 18 |
| UTM X (Meters): | 598189.6 |
| UTM Y (Meters): | 4518516.0 |
| Elevation: | 16 ft. above sea level |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 14115946 FLUSHING, NY |
| Version Date: | 2019 |

### AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Portions of Photo from: | 20190809 |
| Source: | USDA |

# MAPPED SITES SUMMARY

Target Property Address:
450 HUTCHINSON RIVER PARKWAY
BRONX, NY 10465

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| 1 | | 450 HUTCHINSON RVR P | NY NYC LAND USE | | TP |
| A2 | FERRY POINT PARK REC | 500 HUTCHINSON RIVER | NY SPDES | Lower | 1 ft. |
| A3 | NYSDOT BIN 55211229 | 1 HUTCHINSON RIVER P | FINDS | Lower | 1 ft. |
| A4 | MANHOLE 15002 | 80 N HUTCHINSON RIVE | NY Spills | Higher | 1 ft. |
| A5 | MTA BRIDGES & TUNNEL | BRONX-WHITESTONE BRI | RCRA-SQG, E MANIFEST, NJ MANIFEST | Lower | 1 ft. |
| A6 | NYCP&R - FERRY POINT | 500 HUTCHINSON PARKW | FINDS, ECHO | Lower | 1 ft. |
| A7 | FERRY POINT PARK GOL | 500 HUTCHINSON RIVER | FINDS, ECHO | Lower | 1 ft. |
| A8 | NYCP&R - FERRY POINT | | PFAS ECHO | Lower | 1 ft. |
| A9 | BRONX WHITESTONE BRI | 1 HUTCHINSON RIVER P | NY Spills | Lower | 1 ft. |
| 10 | CON EDISON TRANSFORM | 530 HUTCHINSON RIVER | NY Spills | Higher | 1 ft. |
| A11 | NYC PARKS-FERRY POIN | 500 HUTCHINSON RIVER | FINDS, ECHO | Lower | 1 ft. |
| A12 | BRONX WHITESTONE BRI | 1 HUTCHINSON RIVER P | UST FINDER RELEASE | Lower | 1 ft. |
| A13 | FERRY POINT PARK GOL | 500 HUTCHINSON RIVER | NY Spills | Lower | 1 ft. |
| A14 | NYC PARKS-FERRY POIN | | PFAS ECHO | Lower | 1 ft. |
| B15 | WHITESTONE BRIDGE - | WHITESTONE BR | NY LTANKS | Lower | 109, 0.021, NNW |
| B16 | WHITESTONE BRIDGE | TOLL PLAZA | NY Spills | Lower | 109, 0.021, NNW |
| 17 | CABLEVISION | 500-510 BRUSH AVENUE | NY AST | Lower | 279, 0.053, NNW |
| C18 | CON EDISON | 555 HUTCHINSON RIVER | RCRA NonGen / NLR | Lower | 418, 0.079, NNW |
| C19 | VAULT #2232 | 555 HUTCHINSON RIVER | NY AST, NY Spills | Lower | 418, 0.079, NNW |
| D20 | BRONX WHITESTONE BRI | ONE HUTCHINSON RIVER | NY UST | Lower | 434, 0.082, NW |
| D21 | BRONX WHITESTONE BRI | ONE HUTCHINSON RIVER | NY AST | Lower | 434, 0.082, NW |
| E22 | MTA BRIDGES & TUNNEL | 1 HUTCHINSON RIVER P | NY LTANKS, NY Spills, NY MANIFEST | Higher | 597, 0.113, ESE |
| E23 | FARRY POINT PARK | WHITSTONE BRIDGE | NY Spills | Higher | 597, 0.113, ESE |
| F24 | LIBERTY MECHANICAL/C | 550 BRUSH AVENUE | NY TANKS, NY NYC LAND USE | Lower | 601, 0.114, NNW |
| 25 | FERRY POINT PARK GOL | 700 HUTCHINSON RIVER | NY AST | Lower | 639, 0.121, North |
| E26 | MTA BRIDGE BIN 55211 | 1 HUTCHINSON RIVER P | RCRA-LQG, E MANIFEST, PA MANIFEST, NJ MANIFEST | Higher | 679, 0.129, East |
| F27 | 545 BRUSH AVE/BX/U.P | 545 BRUSH AVENUE | NY LTANKS | Lower | 694, 0.131, NNW |
| 28 | FERRY POINT PARK | 10 HUTCHINSON ROVER | NY SWF/LF, NY ILI | Lower | 728, 0.138, SSW |
| F29 | UNITED PARCEL SERVIC | BRUSH AVE | RCRA-SQG, NY CBS AST, E MANIFEST, NY MANIFEST, NJ... | Lower | 779, 0.148, NNW |
| F30 | UPS-BRUSH AVENUE | 545 BRUSH AVE | NY TANKS, NY SPDES | Lower | 779, 0.148, NNW |
| F31 | UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NY UST | Lower | 779, 0.148, NNW |
| F32 | UPS | 545 BRUSH AVE | NY LTANKS, NY CBS, NY Spills | Lower | 779, 0.148, NNW |
| F33 | UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NY AST | Lower | 779, 0.148, NNW |
| F34 | UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NY AST | Lower | 779, 0.148, NNW |
| F35 | UNITED PARCEL SERVIC | 545 BRUSH AVENUE | UST FINDER | Lower | 779, 0.148, NNW |
| 36 | N Y BRUSH LLC | 650 BRUSH AVE | RCRA-LQG, NY MANIFEST | Lower | 1083, 0.205, NNW |
| 37 | H.O. PENN MACHINERY | 699 BRUSH AVE | NY LTANKS, NY TANKS, NY Spills, NY SPDES | Lower | 1664, 0.315, NNW |
| G38 | VERIZON NEW YORK INC | 500 ZEREGA AVENUE | NY LTANKS, NY TANKS, NY NYC LAND USE | Lower | 1672, 0.317, NW |
| G39 | 500 ZEREGA AVENUE | 500 ZEREGA AVENUE | UST FINDER RELEASE | Lower | 1672, 0.317, NW |

# MAPPED SITES SUMMARY

Target Property Address:
450 HUTCHINSON RIVER PARKWAY
BRONX, NY 10465

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| 40 | NYCDOS FERRY POINT P | 44 BEAVER ST - 6TH F | NY SWF/LF | Higher | 1757, 0.333, South |
| 41 | RAILROAD MAINTENANCE | 432 ZEREGA AVENUE | NY SWF/LF, NY NYC LAND USE | Lower | 1784, 0.338, WNW |
| 42 | BLOCK 3579, LOT 1 | BLOCK 3579, LOT 1 | NY VCP | Lower | 1906, 0.361, NNW |
| 43 | RANDALL AVE AND ZERE | HAVMEYER AVE, RANDEL | NY SWF/LF, NY ILI | Higher | 1982, 0.375, NW |
| 44 | EASTERN ECOLOGY COMP | 665-637 ZEREGA AVE | NY SWF/LF, NY ILI | Lower | 2063, 0.391, NNW |
| 45 | EARTH BANK COMPANY I | 748 BRUSH AVENUE | NY SWF/LF, NY NYC LAND USE | Higher | 2155, 0.408, North |
| 46 | AAA THROGGS NECK | | FUDS | Higher | 4255, 0.806, East |

# EXECUTIVE SUMMARY

**TARGET PROPERTY SEARCH RESULTS**

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

| Site | Database(s) | EPA ID |
|---|---|---|
| 450 HUTCHINSON RVR P<br>450 HUTCHINSON RVR P<br>BRONX, NY 10465 | NY NYC LAND USE | N/A |

**DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal NPL (Superfund) sites***

NPL ---- National Priority List
Proposed NPL ---- Proposed National Priority List Sites
NPL LIENS ---- Federal Superfund Liens

***Lists of Federal Delisted NPL sites***

Delisted NPL ---- National Priority List Deletions

***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY ---- Federal Facility Site Information listing
SEMS ---- Superfund Enterprise Management System

***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE ---- Superfund Enterprise Management System Archive

***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS ---- Corrective Action Report

***Lists of Federal RCRA TSD facilities***

RCRA-TSDF ---- RCRA - Treatment, Storage and Disposal

***Lists of Federal RCRA generators***

RCRA-VSQG ---- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

# EXECUTIVE SUMMARY

***Federal institutional controls / engineering controls registries***

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

***Federal ERNS list***

ERNS ---------- Emergency Response Notification System

***Lists of state- and tribal hazardous waste facilities***

NY SHWS ---------- Inactive Hazardous Waste Disposal Sites in New York State

***Lists of state and tribal leaking storage tanks***

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
NY HIST LTANKS ---------- Listing of Leaking Storage Tanks

***Lists of state and tribal registered storage tanks***

FEMA UST ---------- Underground Storage Tank Listing
NY CBS UST ---------- Chemical Bulk Storage Database
NY MOSF UST ---------- Major Oil Storage Facilities Database
NY MOSF ---------- Major Oil Storage Facility Site Listing
NY MOSF AST ---------- Major Oil Storage Facilities Database
INDIAN UST ---------- Underground Storage Tanks on Indian Land

***State and tribal institutional control / engineering control registries***

NY RES DECL ---------- Restrictive Declarations Listing
NY ENG CONTROLS ---------- Registry of Engineering Controls
NY INST CONTROL ---------- Registry of Institutional Controls

***Lists of state and tribal voluntary cleanup sites***

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

***Lists of state and tribal brownfield sites***

NY BROWNFIELDS ---------- Brownfields Site List
NY ERP ---------- Environmental Restoration Program Listing

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS ---------- A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

NY SWRCY ---------- Registered Recycling Facility List
NY SWTIRE ---------- Registered Waste Tire Storage & Facility List

INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
ODI ---- Open Dump Inventory
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---- Open Dumps on Indian Land

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL ---- Delisted National Clandestine Laboratory Register
NY DEL SHWS ---- Delisted Registry Sites
US CDL ---- National Clandestine Laboratory Register

***Local Lists of Registered Storage Tanks***

NY HIST UST ---- Historical Petroleum Bulk Storage Database
NY HIST AST ---- Historical Petroleum Bulk Storage Database

***Local Land Records***

NY LIENS ---- Spill Liens Information
LIENS 2 ---- CERCLA Lien Information

***Records of Emergency Release Reports***

HMIRS ---- Hazardous Materials Information Reporting System
NY Hist Spills ---- SPILLS Database
NY SPILLS 90 ---- SPILLS 90 data from FirstSearch
NY SPILLS 80 ---- SPILLS 80 data from FirstSearch

***Other Ascertainable Records***

DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations

FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
MINES MRDS ---- Mineral Resources Data System
UXO ---- Unexploded Ordnance Sites
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
PFAS NPL ---- Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ---- Federal Sites PFAS Information
PFAS TSCA ---- PFAS Manufacture and Imports Information
PFAS TRIS ---- List of PFAS Added to the TRI
PFAS RCRA MANIFEST ---- PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR ---- PFAS Contamination Site Location Listing
PFAS WQP ---- Ambient Environmental Sampling for PFAS
PFAS NPDES ---- Clean Water Act Discharge Monitoring Information
PFAS PROJECT ---- NORTHEASTERN UNIVERSITY PFAS PROJECT
PFAS ECHO FIRE TRAIN ---- Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT ---- All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC ---- Aqueous Foam Related Incidents Listing
BIOSOLIDS ---- ICIS-NPDES Biosolids Facility Data
NY PFAS ---- PFAS Contamination Site Location Listing
NY AIRS ---- Air Emissions Data
NY COAL ASH ---- Coal Ash Disposal Site Listing
NY DRYCLEANERS ---- Registered Drycleaners
NY E DESIGNATION ---- E DESIGNATION SITE LISTING
NY Financial Assurance ---- Financial Assurance Information Listing
NY HSWDS ---- Hazardous Substance Waste Disposal Site Inventory
NY LEAD ---- Lead-based Paint Testing Results
NY VAPOR REOPENED ---- Vapor Intrusion Legacy Site List
NY UIC ---- Underground Injection Control Wells
NY COOLING TOWERS ---- Registered Cooling Towers
NY MGP ---- Manufactured Gas Plants Listing
NY NYC OER ---- OER Cleanup Sites Listing

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP ---- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---- EDR Exclusive Historical Cleaners

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

NY RGA HWS ---- Recovered Government Archive State Hazardous Waste Facilities List
NY RGA LF ---- Recovered Government Archive Solid Waste Facilities List

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

# EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal RCRA generators***

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 06/03/2024 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGE BIN 55211***<br>EPA ID:: NYD982796377 | ***1 HUTCHINSON RIVER P*** | ***E 1/8 - 1/4 (0.129 mi.)*** | ***E26*** | ***96*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***N Y BRUSH LLC***<br>EPA ID:: NYR000140368 | ***650 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.205 mi.)*** | ***36*** | ***191*** |

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/03/2024 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL***<br>EPA ID:: NYR000154260 | ***BRONX-WHITESTONE BRI*** | ***0 - 1/8 (0.000 mi.)*** | ***A5*** | ***13*** |
| ***UNITED PARCEL SERVIC***<br>EPA ID:: NYD986900728 | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |

# EXECUTIVE SUMMARY

***Lists of state and tribal landfills and solid waste disposal facilities***

NY SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the  list.

A review of the NY SWF/LF list, as provided by EDR, and dated 03/25/2024 has revealed that there are 6 NY SWF/LF sites within approximately  0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| NYCDOS FERRY POINT P | 44 BEAVER ST - 6TH F | S 1/4 - 1/2 (0.333 mi.) | 40 | 211 |
| ***RANDALL AVE AND ZERE*** | ***HAVMEYER AVE, RANDEL*** | ***NW 1/4 - 1/2 (0.375 mi.)*** | ***43*** | ***215*** |
| ***EARTH BANK COMPANY I*** | ***748 BRUSH AVENUE*** | ***N 1/4 - 1/2 (0.408 mi.)*** | ***45*** | ***218*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***FERRY POINT PARK*** | ***10 HUTCHINSON ROVER*** | ***SSW 1/8 - 1/4 (0.138 mi.)*** | ***28*** | ***125*** |
| ***RAILROAD MAINTENANCE*** | ***432 ZEREGA AVENUE*** | ***WNW 1/4 - 1/2 (0.338 mi.)*** | ***41*** | ***212*** |
| ***EASTERN ECOLOGY COMP*** | ***665-637 ZEREGA AVE*** | ***NNW 1/4 - 1/2 (0.391 mi.)*** | ***44*** | ***216*** |

***Lists of state and tribal leaking storage tanks***

NY LTANKS: Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills

A review of the NY LTANKS list, as provided by EDR, and dated 05/06/2024 has revealed that there are 6 NY LTANKS sites within approximately  0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL*** | ***1 HUTCHINSON RIVER P*** | ***ESE 0 - 1/8 (0.113 mi.)*** | ***E22*** | ***56*** |
| Spill Date: 1994-09-19 | | | | |
| Spill Date: 1996-09-24 | | | | |
| Spill Number/Closed Date: 9408139 / 2003-11-06 | | | | |
| Spill Number/Closed Date: 9607895 / 2003-11-06 | | | | |
| Site ID: 249980 | | | | |
| Site ID: 249984 | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| WHITESTONE BRIDGE - | WHITESTONE BR | NNW 0 - 1/8 (0.021 mi.) | B15 | 34 |
| Spill Date: 1990-03-19 | | | | |
| Spill Number/Closed Date: 8912020 / 1990-03-19 | | | | |
| Site ID: 295754 | | | | |
| 545 BRUSH AVE/BX/U.P | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.131 mi.) | F27 | 124 |
| Spill Date: 1989-12-20 | | | | |
| Spill Number/Closed Date: 8909242 / 2003-02-27 | | | | |
| Site ID: 138397 | | | | |
| ***UPS*** | ***545 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F32*** | ***180*** |
| Spill Date: 1989-11-17 | | | | |
| Spill Number/Closed Date: 8908245 / 1992-09-30 | | | | |

Site ID: 212269

***H.O. PENN MACHINERY*** ***699 BRUSH AVE*** ***NNW 1/4 - 1/2 (0.315 mi.)*** ***37*** ***197***
Spill Date: 1992-04-20
Spill Date: 1997-01-08
Spill Number/Closed Date: 9200766 / 2003-03-07
Spill Number/Closed Date: 9612128 / 2006-12-13
Site ID: 186683
Site ID: 186684

***VERIZON NEW YORK INC*** ***500 ZEREGA AVENUE*** ***NW 1/4 - 1/2 (0.317 mi.)*** ***G38*** ***206***
Spill Date: 1987-08-11
Spill Number/Closed Date: 8703906 / 1996-08-06
Site ID: 270294

***Lists of state and tribal registered storage tanks***

NY UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the NY UST list, as provided by EDR, has revealed that there are 2 NY UST sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BRONX WHITESTONE BRI<br>Database: UST, Date of Government Version: 03/19/2024 | ONE HUTCHINSON RIVER | NW 0 - 1/8 (0.082 mi.) | D20 | 44 |
| UNITED PARCEL SERVIC<br>Database: UST, Date of Government Version: 03/19/2024 | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.148 mi.) | F31 | 175 |

NY CBS: These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

A review of the NY CBS list, as provided by EDR, and dated 03/19/2024 has revealed that there is 1 NY CBS site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***UPS***<br>Facility Status: Unregulated/Closed<br>CBS Number: 2-000341 | ***545 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F32*** | ***180*** |

NY AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database.

A review of the NY AST list, as provided by EDR, has revealed that there are 6 NY AST sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| CABLEVISION<br>Database: AST, Date of Government Version: 03/19/2024 | 500-510 BRUSH AVENUE | NNW 0 - 1/8 (0.053 mi.) | 17 | 36 |

Facility Id: 2-603460

| | | | | |
|---|---|---|---|---|
| ***VAULT #2232*** | ***555 HUTCHINSON RIVER*** | ***NNW 0 - 1/8 (0.079 mi.)*** | ***C19*** | ***41*** |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-062987 | | | | |
| BRONX WHITESTONE BRI | ONE HUTCHINSON RIVER | NW 0 - 1/8 (0.082 mi.) | D21 | 54 |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-481645 | | | | |
| FERRY POINT PARK GOL | 700 HUTCHINSON RIVER | N 0 - 1/8 (0.121 mi.) | 25 | 91 |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-611992 | | | | |
| UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.148 mi.) | F33 | 186 |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-000341 | | | | |
| UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.148 mi.) | F34 | 187 |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-601299 | | | | |

NY CBS AST: Chemical Bulk Storage Database. Registration data collected as required by 6 NYCRR Part 596. It includes facilities storing hazardous substances listed in 6 NYCRR Part 597, in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size. Includes facilities registered (and closed) since effective date of CBS regulations (July 15, 1988) through the date request is processed.

A review of the NY CBS AST list, as provided by EDR, and dated 01/01/2002 has revealed that there is 1 NY CBS AST site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***UNITED PARCEL SERVIC*** | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |
| Facility Status: 1<br>Facility Status: 1<br>CBS Number: 2-000341 | | | | |

NY TANKS: This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

A review of the NY TANKS list, as provided by EDR, has revealed that there are 2 NY TANKS sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***LIBERTY MECHANICAL/C*** | ***550 BRUSH AVENUE*** | ***NNW 0 - 1/8 (0.114 mi.)*** | ***F24*** | ***89*** |
| Database: TANKS, Date of Government Version: 03/19/2024<br>Facility Id: 2-080799<br>Site Status: Active | | | | |
| ***UPS-BRUSH AVENUE*** | ***545 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F30*** | ***173*** |
| Database: TANKS, Date of Government Version: 03/19/2024<br>Facility Id: 2-258180<br>Site Status: Inactive | | | | |

# EXECUTIVE SUMMARY

***Lists of state and tribal voluntary cleanup sites***

NY VCP: Voluntary Cleanup Agreements. The voluntary remedial program uses private monies to get contaminated sites remediated to levels allowing for the sites' productive use. The program covers virtually any kind of site and contamination.

A review of the NY VCP list, as provided by EDR, has revealed that there is 1 NY VCP site within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BLOCK 3579, LOT 1 | BLOCK 3579, LOT 1 | NNW 1/4 - 1/2 (0.361 mi.) | 42 | 214 |
| Database: VCP, Date of Government Version: 02/06/2024 | | | | |
| Site Code: 58877 | | | | |

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Records of Emergency Release Reports***

NY Spills: Data collected on spills reported to NYSDEC. is required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

A review of the NY Spills list, as provided by EDR, and dated 05/06/2024 has revealed that there are 8 NY Spills sites within approximately 0.125 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| MANHOLE 15002 | 80 N HUTCHINSON RIVE | 0 - 1/8 (0.000 mi.) | A4 | 12 |
| Spill Number/Closed Date: 0805329 / 2008-09-16 | | | | |
| Site ID: 402409 | | | | |
| Spill Date: 2008-08-07 | | | | |
| CON EDISON TRANSFORM | 530 HUTCHINSON RIVER | 0 - 1/8 (0.000 mi.) | 10 | 27 |
| Spill Number/Closed Date: 1000322 / 2010-04-22 | | | | |
| Site ID: 431484 | | | | |
| Spill Date: 2010-04-08 | | | | |
| ***MTA BRIDGES & TUNNEL*** | ***1 HUTCHINSON RIVER P*** | ***ESE 0 - 1/8 (0.113 mi.)*** | ***E22*** | ***56*** |
| Spill Number/Closed Date: 0100477 / 2014-03-18 | | | | |
| Spill Number/Closed Date: 9201985 / 2011-11-16 | | | | |
| Spill Number/Closed Date: 9601373 / 2011-11-16 | | | | |
| Spill Number/Closed Date: 9801266 / 2014-03-18 | | | | |
| Spill Number/Closed Date: 9303540 / 2003-11-06 | | | | |
| **Additional key fields are available in the Map Findings section* | | | | |
| Site ID: 214399 | | | | |
| Site ID: 249978 | | | | |
| Site ID: 249983 | | | | |
| Site ID: 249985 | | | | |
| Site ID: 249979 | | | | |
| **Additional key fields are available in the Map Findings section* | | | | |
| Spill Date: 2001-04-12 | | | | |
| Spill Date: 1991-06-11 | | | | |
| Spill Date: 1996-04-26 | | | | |

Spill Date: 1998-04-24
Spill Date: 1993-06-17
**Additional key fields are available in the Map Findings section*

| | | | | |
|---|---|---|---|---|
| FARRY POINT PARK | WHITSTONE BRIDGE | ESE 0 - 1/8 (0.113 mi.) | E23 | 88 |
| Spill Number/Closed Date: 0012477 / 2003-06-09 | | | | |
| Site ID: 207749 | | | | |
| Spill Date: 2001-02-21 | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BRONX WHITESTONE BRI | 1 HUTCHINSON RIVER P | 0 - 1/8 (0.000 mi.) | A9 | 26 |
| Spill Number/Closed Date: 1109651 / 2012-01-18 | | | | |
| Site ID: 457431 | | | | |
| Spill Date: 2011-11-02 | | | | |
| FERRY POINT PARK GOL | 500 HUTCHINSON RIVER | 0 - 1/8 (0.000 mi.) | A13 | 31 |
| Spill Number/Closed Date: 0913675 / 2010-03-25 | | | | |
| Site ID: 426631 | | | | |
| Spill Date: 2010-01-10 | | | | |
| WHITESTONE BRIDGE | TOLL PLAZA | NNW 0 - 1/8 (0.021 mi.) | B16 | 35 |
| Spill Number/Closed Date: 0011525 / 2001-06-01 | | | | |
| Site ID: 100434 | | | | |
| Spill Date: 2001-01-25 | | | | |
| ***VAULT #2232*** | ***555 HUTCHINSON RIVER*** | ***NNW 0 - 1/8 (0.079 mi.)*** | ***C19*** | ***41*** |
| Spill Number/Closed Date: 0813834 / 2009-06-08 | | | | |
| Site ID: 411543 | | | | |
| Spill Date: 2009-03-23 | | | | |

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/03/2024 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| CON EDISON | 555 HUTCHINSON RIVER | NNW 0 - 1/8 (0.079 mi.) | C18 | 39 |
| EPA ID:: NYP004164521 | | | | |

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/30/2024 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| AAA THROGGS NECK | | E 1/2 - 1 (0.806 mi.) | 46 | 220 |

# EXECUTIVE SUMMARY

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 02/09/2024 has revealed that there are 4 FINDS sites within approximately 0.001 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| NYSDOT BIN 55211229<br>Registry ID:: 110070754377 | 1 HUTCHINSON RIVER P | 0 - 1/8 (0.000 mi.) | A3 | 11 |
| ***NYCP&R - FERRY POINT***<br>Registry ID:: 110039573832 | ***500 HUTCHINSON PARKW*** | ***0 - 1/8 (0.000 mi.)*** | ***A6*** | ***23*** |
| ***FERRY POINT PARK GOL***<br>Registry ID:: 110019713684 | ***500 HUTCHINSON RIVER*** | ***0 - 1/8 (0.000 mi.)*** | ***A7*** | ***24*** |
| ***NYC PARKS-FERRY POIN***<br>Registry ID:: 110019835188 | ***500 HUTCHINSON RIVER*** | ***0 - 1/8 (0.000 mi.)*** | ***A11*** | ***28*** |

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 06/23/2024 has revealed that there are 3 ECHO sites within approximately 0.001 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***NYCP&R - FERRY POINT***<br>Registry ID: 110039573832 | ***500 HUTCHINSON PARKW*** | ***0 - 1/8 (0.000 mi.)*** | ***A6*** | ***23*** |
| ***FERRY POINT PARK GOL***<br>Registry ID: 110019713684 | ***500 HUTCHINSON RIVER*** | ***0 - 1/8 (0.000 mi.)*** | ***A7*** | ***24*** |
| ***NYC PARKS-FERRY POIN***<br>Registry ID: 110019835188 | ***500 HUTCHINSON RIVER*** | ***0 - 1/8 (0.000 mi.)*** | ***A11*** | ***28*** |

PFAS ECHO: Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

A review of the PFAS ECHO list, as provided by EDR, and dated 07/01/2024 has revealed that there are 2 PFAS ECHO sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| NYCP&R - FERRY POINT | | 0 - 1/8 (0.000 mi.) | A8 | 24 |
| NYC PARKS-FERRY POIN | | 0 - 1/8 (0.000 mi.) | A14 | 32 |

# EXECUTIVE SUMMARY

UST FINDER: EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

A review of the UST FINDER list, as provided by EDR, and dated 06/08/2023 has revealed that there is 1 UST FINDER site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.148 mi.) | F35 | 190 |

UST FINDER RELEASE: US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

A review of the UST FINDER RELEASE list, as provided by EDR, and dated 06/08/2023 has revealed that there are 2 UST FINDER RELEASE sites within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BRONX WHITESTONE BRI | 1 HUTCHINSON RIVER P | 0 - 1/8 (0.000 mi.) | A12 | 29 |
| 500 ZEREGA AVENUE | 500 ZEREGA AVENUE | NW 1/4 - 1/2 (0.317 mi.) | G39 | 210 |

E MANIFEST: EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

A review of the E MANIFEST list, as provided by EDR, and dated 07/24/2023 has revealed that there are 3 E MANIFEST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGE BIN 55211*** | ***1 HUTCHINSON RIVER P*** | ***E 1/8 - 1/4 (0.129 mi.)*** | ***E26*** | ***96*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL*** | ***BRONX-WHITESTONE BRI*** | ***0 - 1/8 (0.000 mi.)*** | ***A5*** | ***13*** |
| ***UNITED PARCEL SERVIC*** | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 12/31/2019 has revealed that there are 3 NY MANIFEST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL*** EPA ID: NYR000154260 | ***1 HUTCHINSON RIVER P*** | ***ESE 0 - 1/8 (0.113 mi.)*** | ***E22*** | ***56*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***UNITED PARCEL SERVIC*** | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |

EPA ID: NYD986900728

| | | | | |
|---|---|---|---|---|
| ***N Y BRUSH LLC*** | ***650 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.205 mi.)*** | ***36*** | ***191*** |
| EPA ID: NYR000140368 | | | | |

PA MANIFEST: Hazardous waste manifest information.

A review of the PA MANIFEST list, as provided by EDR, and dated 06/30/2018 has revealed that there is 1 PA MANIFEST site within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGE BIN 55211*** | ***1 HUTCHINSON RIVER P*** | ***E 1/8 - 1/4 (0.129 mi.)*** | ***E26*** | ***96*** |
| Generator EPA Id: NYD982796377 | | | | |

NJ MANIFEST: Hazardous waste manifest information.

A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2018 has revealed that there are 3 NJ MANIFEST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGE BIN 55211*** | ***1 HUTCHINSON RIVER P*** | ***E 1/8 - 1/4 (0.129 mi.)*** | ***E26*** | ***96*** |
| EPA Id: NYD982796377 | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL*** | ***BRONX-WHITESTONE BRI*** | ***0 - 1/8 (0.000 mi.)*** | ***A5*** | ***13*** |
| EPA Id: NYR000154260 | | | | |
| ***UNITED PARCEL SERVIC*** | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |
| EPA Id: NYD986900728 | | | | |

NY SPDES: New York State has a state program which has been approved by the United States Environmental Protection Agency for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. Under New York State law the program is known as the State Pollutant Discharge Elimination System (SPDES) and is broader in scope than that required by the Clean Water Act in that it controls point source discharges to groundwaters as well as surface waters.

A review of the NY SPDES list, as provided by EDR, and dated 01/12/2024 has revealed that there is 1 NY SPDES site within approximately 0.001 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| FERRY POINT PARK REC | 500 HUTCHINSON RIVER | 0 - 1/8 (0.000 mi.) | A2 | 10 |
| Permit Number: NYR10D547 | | | | |

# EXECUTIVE SUMMARY

NY ILI: A solid waste site priority list of mitigation and remedial activities to address sites causing, or substantially contributing to, impairments of drinking water quality. Inactive solid waste disposal sites, primarily landfills, and their potential impact on New York?s drinking water resources from site-related contaminants, with a focus on emerging contaminants.

A review of the NY ILI list, as provided by EDR, and dated 01/30/2024 has revealed that there are 3 NY ILI sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| *RANDALL AVE AND ZERE* | *HAVMEYER AVE, RANDEL* | *NW 1/4 - 1/2 (0.375 mi.)* | *43* | *215* |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| *FERRY POINT PARK* | *10 HUTCHINSON ROVER* | *SSW 1/8 - 1/4 (0.138 mi.)* | *28* | *125* |
| *EASTERN ECOLOGY COMP* | *665-637 ZEREGA AVE* | *NNW 1/4 - 1/2 (0.391 mi.)* | *44* | *216* |

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

| Site Name | Database(s) |
|---|---|
| CE - ZEREGA AVE. STATION | NY SHWS |
| FORT SCHUYLER PARK AREA | NY SWF/LF, NY ILI |
| LB NORTHEAST | NY SWF/LF, NY ILI |
| BLOCK 5541, LOT 225 (BRUSH AVENUE | NY VCP |
| CE - ZEREGA AVE. STATION | NY VCP, NY MGP |

# OVERVIEW MAP - 7720624.2S




Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

County Boundary

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Proposed Ballys Casino - Ring Road | CLIENT: | Langan Engineering, Inc. |
| ADDRESS: | 450 Hutchinson River Parkway<br>Bronx NY 10465 | CONTACT: | Kaitlyn Gioia |
| LAT/LONG: | 40.813693 / 73.835803 | INQUIRY #: | 7720624.2s |
| | | DATE: | July 29, 2024 4:56 pm |

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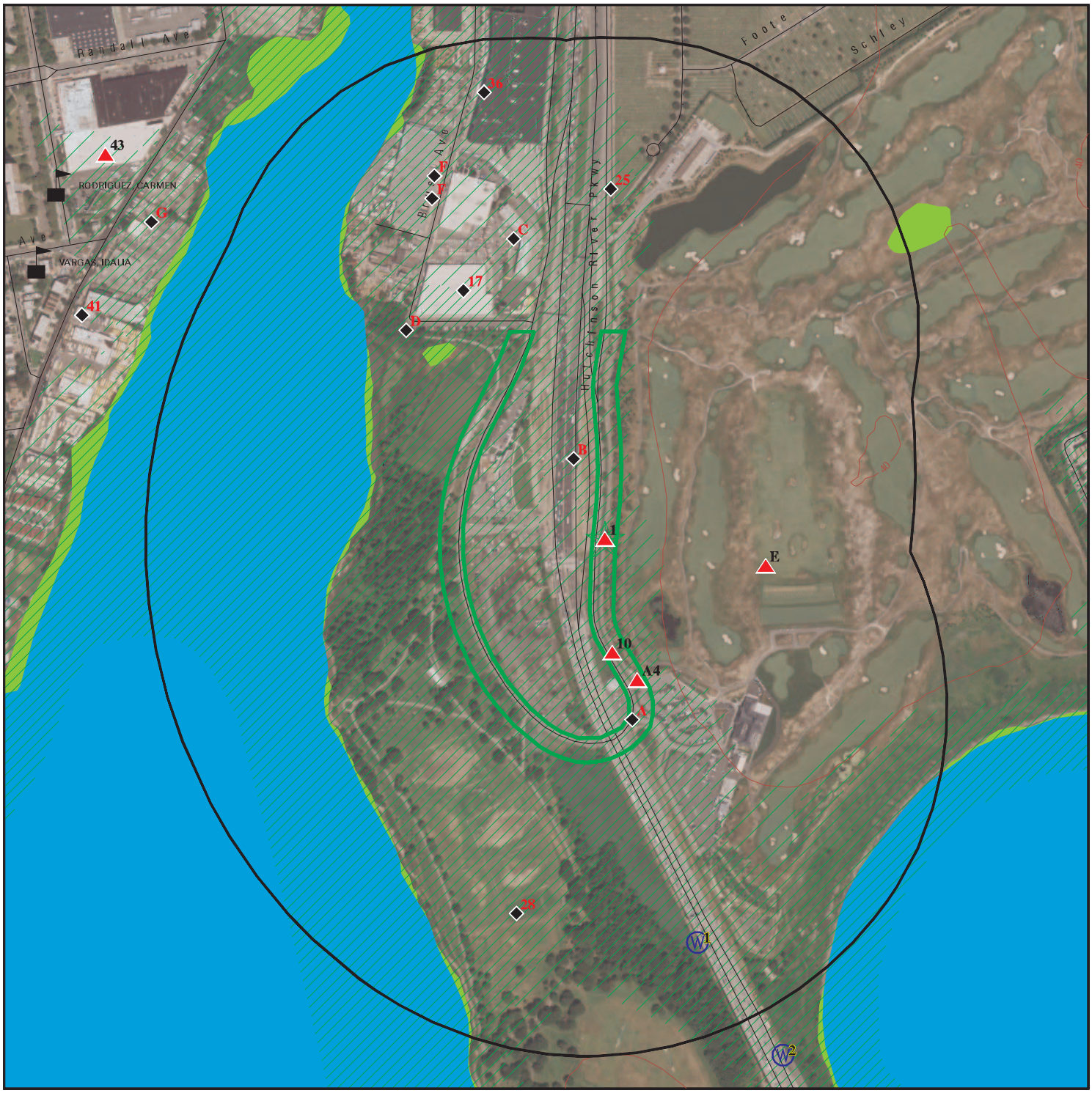
# DETAIL MAP - 7720624.2S




Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Proposed Ballys Casino - Ring Road | CLIENT: | Langan Engineering, Inc. |
| ADDRESS: | 450 Hutchinson River Parkway<br>Bronx NY 10465 | CONTACT: | Kaitlyn Gioia |
| LAT/LONG: | 40.813693 / 73.835803 | INQUIRY #: | 7720624.2s |
| | | DATE: | July 29, 2024 4:59 pm |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Lists of Federal NPL (Superfund) sites*** | | | | | | | | |
| NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal Delisted NPL sites*** | | | | | | | | |
| Delisted NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal sites subject to CERCLA removals and CERCLA orders*** | | | | | | | | |
| FEDERAL FACILITY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SEMS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal CERCLA sites with NFRAP*** | | | | | | | | |
| SEMS-ARCHIVE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA facilities undergoing Corrective Action*** | | | | | | | | |
| CORRACTS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal RCRA TSD facilities*** | | | | | | | | |
| RCRA-TSDF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA generators*** | | | | | | | | |
| RCRA-LQG | 0.250 | | 0 | 2 | NR | NR | NR | 2 |
| RCRA-SQG | 0.250 | | 1 | 1 | NR | NR | NR | 2 |
| RCRA-VSQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| LUCIS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Lists of state- and tribal hazardous waste facilities*** | | | | | | | | |
| NY SHWS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of state and tribal landfills and solid waste disposal facilities*** | | | | | | | | |
| NY SWF/LF | 0.500 | | 0 | 1 | 5 | NR | NR | 6 |
| ***Lists of state and tribal leaking storage tanks*** | | | | | | | | |
| INDIAN LUST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| NY LTANKS | 0.500 | | 2 | 2 | 2 | NR | NR | 6 |
| NY HIST LTANKS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal registered storage tanks*** | | | | | | | | |
| FEMA UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY UST | 0.250 | | 1 | 1 | NR | NR | NR | 2 |
| NY CBS UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY MOSF UST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY MOSF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY CBS | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| NY AST | 0.250 | | 4 | 2 | NR | NR | NR | 6 |
| NY CBS AST | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| NY MOSF AST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY TANKS | 0.250 | | 1 | 1 | NR | NR | NR | 2 |
| ***State and tribal institutional control / engineering control registries*** | | | | | | | | |
| NY RES DECL | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| NY ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY INST CONTROL | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal voluntary cleanup sites*** | | | | | | | | |
| NY VCP | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| INDIAN VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal brownfield sites*** | | | | | | | | |
| NY BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY ERP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| NY SWRCY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY SWTIRE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| IHS OPEN DUMPS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US HIST CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY DEL SHWS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| US CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Local Lists of Registered Storage Tanks*** | | | | | | | | |
| NY HIST UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| NY HIST AST | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| NY LIENS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| LIENS 2 | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY Spills | 0.125 | | 8 | NR | NR | NR | NR | 8 |
| NY Hist Spills | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| NY SPILLS 90 | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| NY SPILLS 80 | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA NonGen / NLR | 0.250 | | 1 | 0 | NR | NR | NR | 1 |
| FUDS | 1.000 | | 0 | 0 | 0 | 1 | NR | 1 |
| DOD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US FIN ASSUR | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| EPA WATCH LIST | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| 2020 COR ACTION | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| TSCA | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| TRIS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| SSTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ROD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| RMP | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RAATS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PRP | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PADS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ICIS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| FTTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MLTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| COAL ASH DOE | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| COAL ASH EPA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| PCB TRANSFORMER | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RADINFO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HIST FTTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| DOT OPS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| CONSENT | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN RESERV | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| FUSRAP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LEAD SMELTERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| US AIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| US MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ABANDONED MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| MINES MRDS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| FINDS | 0.001 | | 4 | NR | NR | NR | NR | 4 |
| ECHO | 0.001 | | 3 | NR | NR | NR | NR | 3 |
| UXO | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| DOCKET HWC | 0.001 | | 0 | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| FUELS PROGRAM | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPL | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS FEDERAL SITES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS TSCA | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS TRIS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS RCRA MANIFEST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ATSDR | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS WQP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPDES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS PROJECT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ECHO | 0.250 | | 2 | 0 | NR | NR | NR | 2 |
| PFAS ECHO FIRE TRAIN | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS PT 139 AIRPORT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AQUEOUS FOAM NRC | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| BIOSOLIDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| UST FINDER | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| UST FINDER RELEASE | 0.500 | | 1 | 0 | 1 | NR | NR | 2 |
| E MANIFEST | 0.250 | | 1 | 2 | NR | NR | NR | 3 |
| NY PFAS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY AIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY COAL ASH | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY DRYCLEANERS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY E DESIGNATION | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| NY Financial Assurance | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY HSWDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY LEAD | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY MANIFEST | 0.250 | | 1 | 2 | NR | NR | NR | 3 |
| PA MANIFEST | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| NJ MANIFEST | 0.250 | | 1 | 2 | NR | NR | NR | 3 |
| NY SPDES | 0.001 | | 1 | NR | NR | NR | NR | 1 |
| NY VAPOR REOPENED | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY UIC | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY COOLING TOWERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NY NYC LAND USE | TP | 1 | NR | NR | NR | NR | NR | 1 |
| NY ILI | 0.500 | | 0 | 1 | 2 | NR | NR | 3 |
| NY NYC OER | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| **EDR HIGH RISK HISTORICAL RECORDS** | | | | | | | | |
| ***EDR Exclusive Records*** | | | | | | | | |
| EDR MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| EDR Hist Auto | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| EDR Hist Cleaner | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| **EDR RECOVERED GOVERNMENT ARCHIVES** | | | | | | | | |
| ***Exclusive Recovered Govt. Archives*** | | | | | | | | |
| NY RGA HWS | 0.001 | | 0 | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| NY RGA LF | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| - Totals -- | | 1 | 32 | 21 | 11 | 1 | 0 | 66 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

**1** **NY NYC LAND USE** **S131152834**
**Target Property** **450 HUTCHINSON RVR PKWY**
**BRONX, NY 10465** **N/A**

**Actual: 16 ft.**

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 450 HUTCHINSON RVR PKWY |
| City,State,Zip: | BRONX, NY 10465 |
| Latitude: | 40.8112977 |
| Longitude: | -73.8344543 |
| Type Of Ownership Code: | C |
| Owner Name: | NYC DEPARTMENT OF PARKS AND RECREATION |
| Borough: | BX |
| Tax Block: | 5622 |
| Tax Lot: | 1 |
| Community District: | 210 |
| Census Tract 2020: | 2011000 |
| Census Block 2020: | 20110001004 |
| Census Tract 2010: | 110 |
| Census Block 2010: | 1012 |
| School District: | 08 |
| City Council District: | 13 |
| Fire Company: | E072 |
| Police Precinct: | 45 |
| Health Center District: | 26 |
| Health Area: | 3220 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 10 |
| Sanitation Subsection: | 3C |
| Zoning District 1: | PARK: Areas designated as PARK, BALL FIELD, PLAYGROUND and PUBLIC SPACE in NYC Zoning Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | Q5: OUTDOOR RECREATION FACILITIES - Golf Course |
| Land Use Category: | Open Space & Outdoor Recreation |
| Number Of Easements: | 0 |
| Lot Area: | 4225328 |
| Total Building Floor Area: | 14681 |
| Commercial Floor Area: | 14681 |
| Residential Floor Area: | 0 |
| Office Floor Area: | 2150 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 0 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 0 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 11 |
| Number Of Floors: | 1.0000000 |
| Residential Units: | 0 |
| Total Units: | 2 |

**(Continued)** **S131152834**

| | |
|---|---|
| Lot Frontage: | 97.0000000 |
| Lot Depth: | 3400.0000000 |
| Building Frontage: | 65.5000000 |
| Building Depth: | 35.5000000 |
| Extension Code: | N |
| Proximity Code: | 0 |
| Irregular Lot Code: | Y |
| Lot Type: | 5 |
| Basement Type/Grade: | 0 |
| Assessed Land Value: | 40660411.00000 |
| Assessed Total Value: | 49656361.00000 |
| Exempt Total Value: | 49656361.00000 |
| Year Built: | 2014 |
| Year Altered 1: | 2010 |
| Year Altered 2: | 2017 |
| Historic District Name: | Not reported |
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.00000000000 |
| Maximum Allowable Residential Far: | 0.00000000000 |
| Maximum Allowable Commercial Far: | 0.00000000000 |
| Maximum Allowable Community Facility Far: | 0.00000000000 |
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2056220001.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0110 |
| X Coordinate: | 1030076 |
| Y Coordinate: | 234898 |
| Zoning Map #: | 7a |
| Zoning Map Code: | Y |
| Sanborn Map #: | 221 081 |
| Tax Map #: | 21809 |
| E-designation Number: | Not reported |
| Apportionment BBL: | Not reported |
| Apportionment Date: | Not reported |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | 1 |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | 1 |
| Version Number: | 24v1.1 |
| Changed By DCP: | t |

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**A2** **FERRY POINT PARK RECREATIONAL FAC** **NY SPDES** **S123252664**
**500 HUTCHINSON RIVER PKWY** **N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 1 of 12 in cluster A**

**Relative:** SPDES:
**Lower**

**Actual:**
**13 ft.**

| | |
|---|---|
| Name: | Ferry Point Park Recreational Fac |
| Address: | 500 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY 10465 |
| Permit Number: | NYR10D547 |
| State-Region: | Not reported |
| Expiration Date: | Not reported |
| Current Major Minor Status: | Not reported |
| Primary Facility SIC Code: | Not reported |
| State Water Body Name: | Not reported |
| Limit Set Status Flag: | Not reported |

**FERRY POINT PARK RECREATIONAL FAC (Continued)** **S123252664**

| | |
|---|---|
| Total Actual Average Flow(MGD): | Not reported |
| Total App Design Flow(MGD): | Not reported |
| UDF1: | Not reported |
| Lat/Long: | 598455 / 4518240 |
| DMR Cognizant Official: | Not reported |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | Not reported |
| Non-Gov Permit Affiliation Type Desc: | Not reported |
| Non-Gov Permit Org Formal Name: | Not reported |
| Non-Gov Permit Street Address: | Not reported |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | Not reported |
| Non-Gov Permit State Code: | Not reported |
| Non-Gov Permit Zip Code: | Not reported |
| Non-Gov Facility Affiliation Type Desc: | Not reported |
| Non-Gov Facility Org Formal Name: | Not reported |
| Non-Gov Facility Street Address: | Not reported |
| Non-Gov Facility Supplemental Location: | Not reported |
| Non-Gov Facility City: | Not reported |
| Non-Gov Facility State Code: | Not reported |
| Non-Gov Facility Zip Code: | Not reported |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

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**A3** **NYSDOT BIN 55211229 - BRONX WHITESTONE BRIDGE** **FINDS** **1026425532**
**1 HUTCHINSON RIVER PKWY** **N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 2 of 12 in cluster A**

**Relative:** FINDS:
**Lower** Registry ID: 110070754377

**Actual:**
**12 ft.** Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

All generators and treatment, storage, and disposal (TSD) facilities who handle hazardous waste are required to report to the EPA Administrator at least once every two years. The data collected is used to create the National Biennial Resource Conservation and Recovery Act (RCRA) Hazardous Waste Report. This data is processed within the RCRA Information (RCRAInfo) database

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**A4** **MANHOLE 15002** **NY Spills** **S109206979**
**80 N HUTCHINSON RIVER PKW** **N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Site 3 of 12 in cluster A**

**Relative: Higher**
**Actual: 17 ft.**

SPILLS:

| | |
|---|---|
| Name: | MANHOLE 15002 |
| Address: | 80 N HUTCHINSON RIVER PKW |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0805329 / 2008-09-16 |
| Facility ID: | 0805329 |
| Facility Type: | ER |
| DER Facility ID: | 351615 |
| Site ID: | 402409 |
| DEC Region: | 2 |
| Spill Cause: | Unknown |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2008-08-07 |
| Investigator: | RWAUSTIN |
| Referred To: | Not reported |
| Reported to Dept: | 2008-08-08 |
| CID: | 404 |
| Water Affected: | Not reported |
| Spill Source: | Institutional, Educational, Gov., Other |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | Not reported |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2008-08-08 |
| Spill Record Last Update: | 2008-09-16 |
| Spiller Name: | ERTSDESK |
| Spiller Company: | MANHOLE 15002 |
| Spiller Address: | 80 N HUTCHINSON RIVER PKW |
| Spiller Company: | 001 |
| Contact Name: | ERTSDESK |
| DEC Memo: | 09/19/08 - See eDocs for Con Ed report detailing cleanup and closure.<br>9/16/08 - Austin - oil<br>cleaned up - closed |
| Remarks: | unknown oil on 4000g of water; contained to a manhole; con ed 213035 |

All Materials:

| | |
|---|---|
| Site ID: | 402409 |
| Operable Unit ID: | 1159168 |
| Operable Unit: | 01 |
| Material ID: | 2150279 |
| Material Code: | 0066A |
| Material Name: | unknown petroleum |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 25.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Surface Water |
| Oxygenate: | Not reported |

**A5** **MTA BRIDGES & TUNNELS (BWB)** **RCRA-SQG 1010566779**
**BRONX-WHITESTONE BRIDGE** **E MANIFEST NYR000154260**
**< 1/8** **BRONX, NY 10465** **NJ MANIFEST**
**1 ft.**

**Site 4 of 12 in cluster A**

**Relative:** **Lower**
**Actual:** **11 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20071210 |
| Handler Name: | Whitestone Bridge Facility |
| Handler Address: | Hutchinson River Pkwy |
| Handler City,State,Zip: | BRONX, NY 10465-1857 |
| EPA ID: | NYR000154260 |
| Contact Name: | GEORGE BASSIL |
| Contact Address: | MTA BRGS & TUNLS R MOSES BLDG |
| Contact City,State,Zip: | NEW YORK, NY 10035-5199 |
| Contact Telephone: | 212-360-4165 |
| Contact Fax: | Not reported |
| Contact Email: | GBASSIL@MTABT.ORG |
| Contact Title: | Not reported |
| EPA Region: | 02 |
| Land Type: | State |
| Federal Waste Generator Description: | Small Quantity Generator |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Handler Activities |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | MTA BRGS & TUNLS R MOSES BLDG |
| Mailing City,State,Zip: | NEW YORK, NY 10035-5199 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20150414 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Hazardous Waste Summary:

| | |
|---|---|
| Waste Code: | D001 |
| Waste Description: | Ignitable Waste |
| Waste Code: | D008 |
| Waste Description: | Lead |
| Waste Code: | D018 |
| Waste Description: | Benzene |

Handler - Owner Operator:

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: | TRIBOROUGH BRIDGE & TUNNEL AUTH (TBTA) |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

Historic Generators:

| | |
|---|---|
| Receive Date: | 20071210 |
| Handler Name: | WHITESTONE BRIDGE FACILITY |
| Federal Waste Generator Description: | Small Quantity Generator |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20071211
Handler Name: WHITESTONE BRIDGE FACILITY
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 48849
NAICS Description: OTHER SUPPORT ACTIVITIES FOR ROAD TRANSPORTATION

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

E MANIFEST:
Manifest Tracking Number: 022176541JJK
Last Updated Date: 20210519
Shipped Date: 20210427
Received Date: 20210427
Manifest Status: Signed
Submission Type: DataImage5Copy
Origin Type: Service
Generator EPA ID: NYR000154260
Generator Name: Mta Bridges & Tunnels (Bwb)
Generator Mail Street Number: Not reported
Generator Mail Street 1: BRONX-WHITESTONE BRIDGE
Generator Mail Street 2: Not reported
Generator Mail City: BRONX
Generator Mail State: NY
Generator Mail Zip: 10465
Generator Location Street Number: Not reported
Generator Location Street 1: BRONX-WHITESTONE BRIDGE
Generator Location Street 2: Not reported
Generator Location City: BRONX
Generator Location Zip: 10465

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD002200046 |
| Designated Facility Name: | Cycle Chem, Inc. |
| Designated Facility Mail Street Number: | Not reported |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | 217 SOUTH FIRST STREET |
| Designated Facility Mail City: | ELIZABETH |
| Designated Facility Mail Zip: | 07206 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | Not reported |
| Designated Facility Location Street 1: | 217 SOUTH FIRST STREET |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | ELIZABETH |
| Designated Facility Location Zip: | 07206 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | Not reported |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

Federal Waste:

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Waste Line Number: | 1 |
| Federal Waste Code: | D001 |
| Federal Waste: | IGNITABLE WASTE |

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Waste Line Number: | 1 |
| Federal Waste Code: | D018 |
| Federal Waste: | BENZENE |

State Waste:

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Waste Line Number: | 1 |
| State Waste Code Owner: | NY |
| State Waste Code: | B |
| State Waste: | Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only |

Transporter:

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Transporter Line Number: | 1 |
| Transporter EPA ID: | NJD003812047 |
| Transporter Name: | Acv Environmental Services, Inc |

Waste Line:

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Waste Line Number: | 1 |
| U.S. DOT Hazardous Indicator: | Y |
| U.S. DOT ID Number: | UN2583 |
| U.S. DOT Description: | Rq, Un1993, Waste Flammable Liquids, N.O.S. (Gasoline, Diesel Fuel), 3 , Ii |
| Non-Hazardous Waste Description: | Not reported |
| Number of Containers: | 1 |
| Container Type Code: | DF |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Container Type Description: | Fiberboard or plastic drums, barrels, kegs |
| Waste Quantity: | 417 |
| Quantity Unit of Measure Code: | P |
| Quantity Unit of Measure Description: | Pounds |
| Waste Quantity, in Tons: | 0.2085 |
| Acute Waste Quantity, in Tons: | 0 |
| Non-Acute Waste Quantity, in Tons: | 0.2085 |
| Waste Quantity, in Kilograms: | 189.11575 |
| Acute Waste Quantity, in Kilograms: | 0 |
| Non-Acute Waste Quantity, in Kilorgrams: | 189.11575 |
| Management Method Code: | H061 |
| Management Method Description: | FUEL BLENDING |
| Waste Residue Indicator: | N |
| Quantity Discrepancy Indicator: | N |
| Waste Type Discrepancy Indicator: | N |
| Waste Density: | Not reported |
| Waste Density Unit of Measure Code: | Not reported |
| Waste Density Unit of Measure Description: | Not reported |
| Form Code: | Not reported |
| Form Code Description: | Not reported |
| Source Code: | Not reported |
| Source Code Description: | Not reported |
| Waste Minimization Code: | Not reported |
| Waste Minimization Code Description: | Not reported |
| Consent Number: | Not reported |
| EPA Waste Indicator: | Y |

NJ MANIFEST:

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Name: | WHITESTONE BRIDGE FACILITY |
| Address: | 1 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY 10465-1857 |
| County: | Not reported |
| Mailing Address: | MTA BRGS & TUNLS R MOSES BLDG |
| Mailing City,State,Zip: | NEW YORK, NY 10035-5199 |
| Telephone: | Not reported |
| Emergency Telephone: | Not reported |
| Contact: | GEORGE BASSIL |
| Comments: | Not reported |
| SIC Code: | Not reported |
| County: | NY005 |
| Municipal: | Not reported |
| Previous EPAID: | Not reported |
| Generator Flag: | Not reported |
| Transporter Flag: | Not reported |
| TSDF Flag: | Not reported |
| Name Change: | Not reported |
| Date Change: | Not reported |

Manifest Data:

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 003534721JJK |
| Date Shipped: | 5/4/2011 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | H141 |
| Quantity: | 55.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 010913928JJK |
| Date Shipped: | 11/4/2013 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 600.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 300.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 010913928JJK |
| Date Shipped: | 11/4/2013 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 600.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 300.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 010913928JJK |
| Date Shipped: | 11/4/2013 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 600.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 300.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 015626081JJK |
| Date Shipped: | 3/30/2016 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 015626081JJK |
| Date Shipped: | 3/30/2016 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

---

**A6** **NYCP&R - FERRY POINT WATERFRONT PARK** **FINDS 1012241816**
**500 HUTCHINSON PARKWAY** **ECHO N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 5 of 12 in cluster A**

**Relative:** **Lower**

**Actual:** **14 ft.**

FINDS:
Registry ID: 110039573832

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
All generators and treatment, storage, and disposal (TSD) facilities who handle hazardous waste are required to report to the EPA Administrator at least once every two years. The data collected is used to create the National Biennial Resource Conservation and Recovery Act (RCRA) Hazardous Waste Report. This data is processed within the RCRA Information (RCRAInfo) database
The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1012241816 |
| Registry ID: | 110039573832 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110039573832 |
| Name: | NYCP&R - FERRY POINT WATERFRONT PARK |
| Address: | 500 HUTCHINSON PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |

**A7** **FERRY POINT PARK GOLF COURSE** **FINDS** **1007808831**
**500 HUTCHINSON RIVER PKWY** **ECHO** **N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 6 of 12 in cluster A**

**Relative:** **Lower**

**Actual:** **13 ft.**

FINDS:
Registry ID: 110019713684

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
The New York Department of Environmental Conservation Facility Information System (FIS) database houses all information about facilities that are regulated or of environmental interest to the state of New York.
The National Pollutant Discharge Elimination System (NPDES) module of the Integrated Compliance Information System (ICIS). Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1007808831 |
| Registry ID: | 110019713684 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110019713684 |
| Name: | FERRY POINT PARK GOLF COURSE |
| Address: | 500 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY 10465 |

---

**A8** **NYCP&R - FERRY POINT WATERFRONT PARK** **PFAS ECHO** **1027398622**
**N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Site 7 of 12 in cluster A**

**Relative:** **Lower**

**Actual:** **14 ft.**

PFAS ECHO:

| | |
|---|---|
| Name: | NYCP&R - FERRY POINT WATERFRONT PARK |
| Address: | Not reported |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.81146 |
| Longitude: | -73.83536 |
| Count: | 1 |
| County: | BRONX |
| Status: | Active |
| Region: | 02 |
| Industry: | Waste Management |
| ECHO Facility Report: | https://echo.epa.gov/detailed-facility-report?fid=110039573832 |
| Facility Percent Minority: | 77.092 |
| Facility Derived Tribes: | - |
| Facility Population: | 21838.56 |
| EPA Programs: | RCRA |
| Federal Facility: | No |
| Federal Agency: | - |
| Facility FIPS Code: | 36005 |
| Facility Indian Country Flag: | N |

**NYCP&R - FERRY POINT WATERFRONT PARK (Continued)** **1027398622**

| | |
|---|---|
| Facility Collection Method: | ADDRESS MATCHING-HOUSE NUMBER |
| Facility Derived HUC: | 02030102 |
| Facility Derived WBD: | 020301020105 |
| Facility Derived CD113: | 14 |
| Facility Derived CB2010: | 360050110001012 |
| Facility Major Flag: | - |
| Facility Active Flag: | Y |
| Facility Inspection Count: | 0 |
| Facility Date Last Inspection: | - |
| Facility Days Last Inspection: | - |
| Facility Informal Count: | 0 |
| Facility Date Last Informal Action: | - |
| Facility Formal Action Count: | 0 |
| Facility Date Last Formal Action: | - |
| Facility Total Penalties: | 0 |
| Facility Penalty Count: | - |
| Facility Date Last Penalty: | - |
| Facility Last Penalty AMT: | - |
| Facility QTRS With NC: | 0 |
| Facility Programs With SNC: | 0 |
| Facility Compliance Status: | No Violation Identified |
| Facility SNC Flag: | N |
| AIR Flag: | N |
| NPDES Flag: | N |
| SDWIS Flag: | N |
| RCRA Flag: | Y |
| TRI Flag: | N |
| GHG Flag: | N |
| AIR IDS: | - |
| CAA Permit Types: | - |
| CAA NAICS: | - |
| CAA SICS: | - |
| NPDES IDS: | - |
| CWA Permit Types: | - |
| CWA NAICS: | - |
| CWA SICS: | - |
| RCRA IDS: | NYR000168286 |
| RCRA Permit Types: | LQG |
| RCRA NAICS: | 562212 |
| SDWA IDS: | - |
| SDWA System Types: | - |
| SDWA Compliance Status: | - |
| SDWA SNC Flag: | N |
| TRI IDS: | - |
| TRI Releases Transfers: | - |
| TRI On Site Releases: | - |
| TRI Off Site Transfers: | - |
| TRI Reporter: | - |
| Facility IMP Water Flag: | - |
| EJSCREEN Flag US: | N |

EJSCREEN Report:

**A9** **BRONX WHITESTONE BRIDGE FACILITY** **NY Spills** **S111158225**
**1 HUTCHINSON RIVER PKWY** **N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Site 8 of 12 in cluster A**

**Relative:** SPILLS:
**Lower**

**Actual:**
**11 ft.**

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE FACILITY |
| Address: | 1 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 1109651 / 2012-01-18 |
| Facility ID: | 1109651 |
| Facility Type: | ER |
| DER Facility ID: | 411910 |
| Site ID: | 457431 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2011-11-02 |
| Investigator: | smsanges |
| Referred To: | Not reported |
| Reported to Dept: | 2011-11-02 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Institutional, Educational, Gov., Other |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2011-11-02 |
| Spill Record Last Update: | 2012-01-18 |
| Spiller Name: | PASHKO CAMAJ |
| Spiller Company: | MTA BRIDGES AND TUNNELS |
| Spiller Address: | 1 HUTCHINSON RIVER PKWY |
| Spiller Company: | 999 |
| Contact Name: | PASHKO CAMAJ |
| DEC Memo: | Sangesland spoke to Pashko from MTA. He said the site has a 1000 gal buried gasoline tank. Vapor recovery line was pitched the wrong way and gasoline condensed and eventually leaked out of the line into the pea gravel. Franklin Company has been hired to deal with the cleanup and repairs. 12/28/2011 Sangesland spoke to Martin Wozolowski at Liro Engineering. He said F & N did the work supervised by Liro Engineer. Vacuumed out the water from the tank/lines. Found staining in the pea gravel. Vac truck pulled out groundwater from the area around the tank. Removed 3 yards of contaminated pea gravel/stone. Then took 2 ground water samples. One sample was totally clean, the other had a single hit for Benzene. They will submit this report within the next couple of days and request closure. Report dated Jan 3, 2012 submitted by LiRo Engineers Inc. summarized all of this work. Minor Hit for Benzene. OK to close out. |

**BRONX WHITESTONE BRIDGE FACILITY (Continued)** **S111158225**

Remarks: from vapor recovery line from fill station - repairs and cleanup in progress

All Materials:

| | |
|---|---|
| Site ID: | 457431 |
| Operable Unit ID: | 1207557 |
| Operable Unit: | 01 |
| Material ID: | 2204834 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | Not reported |
| Units: | Not reported |
| Recovered: | Not reported |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

---

**10** **CON EDISON TRANSFORMER POLE 9572** **NY Spills** **S110307850**
**530 HUTCHINSON RIVER PARKWAY** **N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Relative:** **Higher**
**Actual:** **16 ft.**

SPILLS:

| | |
|---|---|
| Name: | CON EDISON TRANSFORMER POLE 9572 |
| Address: | 530 HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 1000322 / 2010-04-22 |
| Facility ID: | 1000322 |
| Facility Type: | ER |
| DER Facility ID: | 380458 |
| Site ID: | 431484 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2010-04-08 |
| Investigator: | RWAUSTIN |
| Referred To: | Not reported |
| Reported to Dept: | 2010-04-08 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2010-04-08 |
| Spill Record Last Update: | 2010-04-22 |
| Spiller Name: | Not reported |
| Spiller Company: | Not reported |
| Spiller Address: | Not reported |
| Spiller Company: | Not reported |
| Contact Name: | ERT |

**CON EDISON TRANSFORMER POLE 9572 (Continued)** **S110307850**

DEC Memo: 4/8/10-Vought-Duty desk officer. Called Con Ed ERT (212-580-8383) and spoke to Tony Delgado, 21 gallons on asphalt and 4 gallons on soil. No PCB concentrations on file and will be treated as 50-499. Transformer on public property. Endpoint samples will be collected upon determination of PCB concentrations or EPA Method 8100. Spill assigned to DEC Feroze as part of routine Con Ed portfolio review and possible closure. Vought received second call from and spoke to Con Ed Delagado and transformer installed in 1992 and had non-PCB dielectric fluid. Initial EMIS #220992 deleted from proxy and put into e-docs. 4/22/10 - Austin - Pole Transformer leak on soil and sidewalk, no other impacts- spill contained and cleaned up by Con Ed - see eDocs for more details - Spill closed - end

Remarks: unknown pcb's onto ashalt. Contained and clean up pending

All Materials:

| | |
|---|---|
| Site ID: | 431484 |
| Operable Unit ID: | 1182953 |
| Operable Unit: | 01 |
| Material ID: | 2177145 |
| Material Code: | 0541A |
| Material Name: | dielectric fluid |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 25.00 |
| Units: | G |
| Recovered: | Not reported |
| Resource Affected: | Soil, Impervious Surface |
| Oxygenate: | Not reported |

---

**A11** **NYC PARKS-FERRY POINT PARK** **FINDS 1016137063**
**500 HUTCHINSON RIVER PKWY** **ECHO N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 9 of 12 in cluster A**

**Relative: Lower**

FINDS:
Registry ID: 110019835188

**Actual: 13 ft.**

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
ICIS-Air (AIR) AIR is the modernization of the Air Facility System (AFS) into the Integrated Compliance Information System (ICIS). AIR contains enforcement, compliance, and permit data for stationary sources of air pollution regulated by the EPA, State, and Local air pollution agencies.
The New York Department of Environmental Conservation Facility Information System (FIS) database houses all information about facilities that are regulated or of environmental interest to the state of New York.
The Air Facility System (AFS) contains compliance and permit data for stationary sources of air pollution regulated by the EPA, state, and local air pollution agencies.

**NYC PARKS-FERRY POINT PARK (Continued)** **1016137063**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1016137063 |
| Registry ID: | 110019835188 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110019835188 |
| Name: | NYC PARKS-FERRY POINT PARK |
| Address: | 500 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY 10465 |

---

**A12** **BRONX WHITESTONE BRIDGE** **UST FINDER RELEASE** **1029062796**
**1 HUTCHINSON RIVER PKWY** **N/A**
**< 1/8** **BRONX, NY 0**
**1 ft.**

**Site 10 of 12 in cluster A**

**Relative:** **Lower**
**Actual:** **11 ft.**

UST FINDER RELEASE:

| | |
|---|---|
| Object ID: | 260443 |
| Facility ID: | NY177640 |
| Lust ID: | NY9408139 |
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY 0 |
| Address Match Type: | StreetAddress |
| Reported Date: | 1994/09/19 15:59:59+00 |
| Status: | No Further Action |
| Substance: | Not reported |
| Population within 1500ft: | 0 |
| Domestic Wells within 1500ft: | 0 |
| Land Use: | Developed, Medium Intensity |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |
| WHPA HUC12: | Not reported |
| Within 100yr Floodplain: | No |
| Tribe: | Not reported |
| EPA Region: | 2 |
| NFA Letter 1: | Not reported |
| NFA Letter 2: | Not reported |
| NFA Letter 3: | Not reported |
| NFA Letter 4: | Not reported |
| Closed With Residual Contaminate: | Not reported |
| Coordinate Source: | Geocode |
| X Coord: | -73.8356199999999 |
| Y Coord: | 40.8111200000001 |
| Latitude: | 40.81112 |
| Longitude: | -73.83562 |

| | |
|---|---|
| Object ID: | 260444 |
| Facility ID: | NY177640 |

**BRONX WHITESTONE BRIDGE (Continued)** **1029062796**

| | |
|---|---|
| Lust ID: | NY9607895 |
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY 0 |
| Address Match Type: | StreetAddress |
| Reported Date: | 1996/09/24 15:59:59+00 |
| Status: | No Further Action |
| Substance: | Not reported |
| Population within 1500ft: | 0 |
| Domestic Wells within 1500ft: | 0 |
| Land Use: | Developed, Medium Intensity |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |
| WHPA HUC12: | Not reported |
| Within 100yr Floodplain: | No |
| Tribe: | Not reported |
| EPA Region: | 2 |
| NFA Letter 1: | Not reported |
| NFA Letter 2: | Not reported |
| NFA Letter 3: | Not reported |
| NFA Letter 4: | Not reported |
| Closed With Residual Contaminate: | Not reported |
| Coordinate Source: | Geocode |
| X Coord: | -73.8356199999999 |
| Y Coord: | 40.8111200000001 |
| Latitude: | 40.81112 |
| Longitude: | -73.83562 |

| | |
|---|---|
| Object ID: | 260529 |
| Facility ID: | NY177640 |
| Lust ID: | NY100477 |
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY 0 |
| Address Match Type: | Not reported |
| Reported Date: | 2001/04/12 15:59:59+00 |
| Status: | No Further Action |
| Substance: | Not reported |
| Population within 1500ft: | 0 |
| Domestic Wells within 1500ft: | 0 |
| Land Use: | Non-Developed |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |

**BRONX WHITESTONE BRIDGE (Continued)** **1029062796**

| | |
|---|---|
| WHPA HUC12: | Not reported |
| Within 100yr Floodplain: | Yes |
| Tribe: | Not reported |
| EPA Region: | 2 |
| NFA Letter 1: | Not reported |
| NFA Letter 2: | Not reported |
| NFA Letter 3: | Not reported |
| NFA Letter 4: | Not reported |
| Closed With Residual Contaminate: | Not reported |
| Coordinate Source: | State |
| X Coord: | -73.8318 |
| Y Coord: | 40.8050000000001 |
| Latitude: | 40.805 |
| Longitude: | -73.8318 |

---

**A13** **FERRY POINT PARK GOLF COURSE** **NY Spills** **S110243664**
**500 HUTCHINSON RIVER PARKWAY** **N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Site 11 of 12 in cluster A**

**Relative:** SPILLS:
**Lower**

| | |
|---|---|
| **Actual:** Name: | FERRY POINT PARK GOLF COURSE |
| **13 ft.** Address: | 500 HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0913675 / 2010-03-25 |
| Facility ID: | 0913675 |
| Facility Type: | ER |
| DER Facility ID: | 375501 |
| Site ID: | 426631 |
| DEC Region: | 2 |
| Spill Cause: | Other |
| Spill Class: | Not reported |
| SWIS: | 0301 |
| Spill Date: | 2010-01-10 |
| Investigator: | RVKETANI |
| Referred To: | Not reported |
| Reported to Dept: | 2010-03-25 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2010-03-25 |
| Spill Record Last Update: | 2010-03-25 |
| Spiller Name: | Not reported |
| Spiller Company: | FUEL OIL COMPANY |
| Spiller Address: | Not reported |
| Spiller Company: | 999 |
| Contact Name: | ROBERT GANTZER |
| DEC Memo: | 3/25/10 - Raphael Ketani. The spill happened on 1/10/10, but wasn't called in until today.<br>According to Robert Gantzer (347) 386-5695 of the NYC Parks |

**FERRY POINT PARK GOLF COURSE (Continued)** **S110243664**

Department, a generator was being filled with diesel and it overflowed onto the bare ground (see pictures in E-docs and report). The affected area was 10' by 20'. He said that Marc Redis of the DEC Div. of Solid Waste told him to clean it up. Mr. Redis was at the site because it's a Part 360 site. The cleanup was undertaken during January, but it wasn't discovered until sometime later (Mr. Gantzer didn't specify how much later) that there was more contamination below ground. So more digging took place. He said that they dug down one and a half feet to remove all of the contamination, and all of the contaminated soil was put into drums. I told Mr. Gantzer that, in the future, a spill has to be reported to the Spills Hotline within 2 hours of the occurrence. He said that he will report quickly next time. I spoke to Mr. Redis. He said that the Parks Department did dig out the area. As the contaminated soil has been remediated, I am closing the case. 3/25/10-Vought-Matter referred to Solid Waste who will supervise cleanup as per DEC Austin.

Remarks: CLEANUP DONE - MATERIAL IN DRUMS

All Materials:

| | |
|---|---|
| Site ID: | 426631 |
| Operable Unit ID: | 1182307 |
| Operable Unit: | 01 |
| Material ID: | 2176470 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 5.00 |
| Units: | G |
| Recovered: | Not reported |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

---

**A14** **NYC PARKS-FERRY POINT PARK** **PFAS ECHO** **1027398613** **N/A**

**< 1/8** **BRONX, NY**
**1 ft.**

**Site 12 of 12 in cluster A**

**Relative:** **Lower**
**Actual:** **14 ft.**

PFAS ECHO:

| | |
|---|---|
| Name: | NYC PARKS-FERRY POINT PARK |
| Address: | Not reported |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.81146 |
| Longitude: | -73.83536 |
| Count: | 1 |
| County: | BRONX |
| Status: | Inactive |
| Region: | 02 |
| Industry: | Waste Management |
| ECHO Facility Report: | https://echo.epa.gov/detailed-facility-report?fid=110019835188 |

**NYC PARKS-FERRY POINT PARK (Continued)** **1027398613**

| | |
|---|---|
| Facility Percent Minority: | 77.092 |
| Facility Derived Tribes: | - |
| Facility Population: | 21838.56 |
| EPA Programs: | CAA |
| Federal Facility: | No |
| Federal Agency: | - |
| Facility FIPS Code: | 36005 |
| Facility Indian Country Flag: | N |
| Facility Collection Method: | ADDRESS MATCHING-HOUSE NUMBER |
| Facility Derived HUC: | 02030102 |
| Facility Derived WBD: | 020301020105 |
| Facility Derived CD113: | 14 |
| Facility Derived CB2010: | 360050110001012 |
| Facility Major Flag: | - |
| Facility Active Flag: | - |
| Facility Inspection Count: | 0 |
| Facility Date Last Inspection: | - |
| Facility Days Last Inspection: | - |
| Facility Informal Count: | 0 |
| Facility Date Last Informal Action: | - |
| Facility Formal Action Count: | 0 |
| Facility Date Last Formal Action: | - |
| Facility Total Penalties: | 0 |
| Facility Penalty Count: | - |
| Facility Date Last Penalty: | - |
| Facility Last Penalty AMT: | - |
| Facility QTRS With NC: | 0 |
| Facility Programs With SNC: | 0 |
| Facility Compliance Status: | No Violation Identified |
| Facility SNC Flag: | N |
| AIR Flag: | Y |
| NPDES Flag: | N |
| SDWIS Flag: | N |
| RCRA Flag: | N |
| TRI Flag: | N |
| GHG Flag: | N |
| AIR IDS: | NY0000002600600014 |
| CAA Permit Types: | Minor Emissions |
| CAA NAICS: | 999999 |
| CAA SICS: | 4953 |
| NPDES IDS: | - |
| CWA Permit Types: | - |
| CWA NAICS: | - |
| CWA SICS: | - |
| RCRA IDS: | - |
| RCRA Permit Types: | - |
| RCRA NAICS: | - |
| SDWA IDS: | - |
| SDWA System Types: | - |
| SDWA Compliance Status: | - |
| SDWA SNC Flag: | N |
| TRI IDS: | - |
| TRI Releases Transfers: | - |
| TRI On Site Releases: | - |
| TRI Off Site Transfers: | - |
| TRI Reporter: | - |
| Facility IMP Water Flag: | - |

**NYC PARKS-FERRY POINT PARK (Continued)** **1027398613**

EJSCREEN Flag US: N

EJSCREEN Report:

---

**B15** **WHITESTONE BRIDGE - BX** **NY LTANKS** **S102671512**
**NNW** **WHITESTONE BR** **N/A**
**< 1/8** **BRONX (County), NY**
**0.021 mi.**
**109 ft.** **Site 1 of 2 in cluster B**

**Relative:** **Lower**

**Actual:** **15 ft.**

LTANKS:

| | |
|---|---|
| Name: | WHITESTONE BRIDGE - BX |
| Address: | WHITESTONE BR |
| City,State,Zip: | NY |
| Spill Number/Closed Date: | 8912020 / 1990-03-19 |
| Facility ID: | 8912020 |
| Site ID: | 295754 |
| Spill Date: | 1990-03-19 |
| Spill Cause: | Tank Overfill |
| Spill Source: | Commercial Vehicle |
| Spill Class: | Not reported |
| Cleanup Ceased: | 1990-03-19 |
| SWIS: | 0301 |
| Investigator: | TAYLOR |
| Referred To: | Not reported |
| Reported to Dept: | 1990-03-19 |
| CID: | Not reported |
| Water Affected: | EAST RIVER |
| Spill Notifier: | Federal Government |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | True |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1990-03-19 |
| Spill Record Last Update: | 1990-05-09 |
| Spiller Name: | Not reported |
| Spiller Company: | Not reported |
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 239341 |
| DEC Memo: | Not reported |
| Remarks: | COMMERCIAL VEHICLE PULLED OFF ROAD SPILLING OIL FROM SADDLE TK INTO DRAIN - NYFD HOSED SPILLAGE INTO ROADWAY DRAIN - NO RESPONSE FROM DEC NECESSARY. |

All Materials:

| | |
|---|---|
| Site ID: | 295754 |
| Operable Unit ID: | 937785 |
| Operable Unit: | 01 |
| Material ID: | 441502 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |

**WHITESTONE BRIDGE - BX (Continued)** **S102671512**

| | |
|---|---|
| Material FA: | Petroleum |
| Quantity: | 65.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

---

**B16** **WHITESTONE BRIDGE** **NY Spills** **S104952344**
**NNW** **TOLL PLAZA** **N/A**
**< 1/8** **BRONX, NY**
**0.021 mi.**
**109 ft.** **Site 2 of 2 in cluster B**

**Relative:** **Lower**
**Actual:** **15 ft.**

SPILLS:

| | |
|---|---|
| Name: | WHITESTONE BRIDGE |
| Address: | TOLL PLAZA |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0011525 / 2001-06-01 |
| Facility ID: | 0011525 |
| Facility Type: | ER |
| DER Facility ID: | 89172 |
| Site ID: | 100434 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2001-01-25 |
| Investigator: | KMFOLEY |
| Referred To: | Not reported |
| Reported to Dept: | 2001-01-25 |
| CID: | 205 |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2001-01-25 |
| Spill Record Last Update: | 2001-08-13 |
| Spiller Name: | SAME |
| Spiller Company: | CON ED |
| Spiller Address: | 4 IRVING PLACE |
| Spiller Company: | 001 |
| Contact Name: | CALLER |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was FOLEY CON ED E2MIS REPORT 1-25-01 1pt. of dielectric fluid spilled from switch in customer owned vault #2635 onto floor of vault. No environmental impact. Samples will be taken and tag placed. 1-25-01 Job closed out because it was opened on the wrong site. It should have been opened on the BEDS. The new incident # is 135220 on BxEDS. |
| Remarks: | VAULT 2635, HAS LEAK ON SWITCH. CON ED # 135216. |

**WHITESTONE BRIDGE (Continued)** **S104952344**

All Materials:
- Site ID: 100434
- Operable Unit ID: 833575
- Operable Unit: 01
- Material ID: 541834
- Material Code: 0541A
- Material Name: dielectric fluid
- Case No.: Not reported
- Material FA: Petroleum
- Quantity: 1.00
- Units: G
- Recovered: .00
- Resource Affected: Soil
- Oxygenate: Not reported

---

**17**
**NNW**
**< 1/8**
**0.053 mi.**
**279 ft.**

**CABLEVISION** **NY AST** **U003397186**
**500-510 BRUSH AVENUE** **N/A**
**BRONX, NY 10465**

**Relative:**
**Lower**

**Actual:**
**8 ft.**

AST:
- Name: CABLEVISION
- Address: 500-510 BRUSH AVENUE
- City,State,Zip: BRONX, NY 10465
- Region: STATE
- DEC Region: 2
- Site Status: Active
- Facility Id: 2-603460
- Program Type: PBS
- UTM X: 597921.36616
- UTM Y: 4519027.86794
- Expiration Date: 05/05/2028
- Site Type: Apartment Building/Office Building

Affiliation Records:
- Site Id: 25376
- Affiliation Type: Mail Contact
- Company Name: DE-CON REALTY COMPANY
- Contact Type: Not reported
- Contact Name: MICHAEL P. CONTILLO
- Address1: 550 BRUSH AVENUE
- Address2: Not reported
- City: BRONX
- State: NY
- Zip Code: 10465
- Country Code: 001
- Phone: (718) 490-1444
- EMail: Not reported
- Fax Number: Not reported
- Modified By: MFLEONAR
- Date Last Modified: 2018-03-07

- Site Id: 25376
- Affiliation Type: Facility Operator
- Company Name: CABLEVISION
- Contact Type: Not reported

**CABLEVISION (Continued)** **U003397186**

| | |
|---|---|
| Contact Name: | CABLEVISION |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 991-6000 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | MFLEONAR |
| Date Last Modified: | 2018-03-07 |

| | |
|---|---|
| Site Id: | 25376 |
| Affiliation Type: | Emergency Contact |
| Company Name: | 500 BRUSH LLC |
| Contact Type: | Not reported |
| Contact Name: | MICHAEL P. CONTILLO |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (516) 626-2418 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | MFLEONAR |
| Date Last Modified: | 2018-03-07 |

| | |
|---|---|
| Site Id: | 25376 |
| Affiliation Type: | Facility Owner |
| Company Name: | 500 BRUSH LLC |
| Contact Type: | OWNER |
| Contact Name: | MICHAEL P. CONTILLO |
| Address1: | 550 BRUSH AVENUE |
| Address2: | Not reported |
| City: | BRONX |
| State: | NY |
| Zip Code: | 10465 |
| Country Code: | 001 |
| Phone: | (718) 409-1444 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | MFLEONAR |
| Date Last Modified: | 2018-03-07 |

Tank Info:

| | |
|---|---|
| Tank Number: | 001 |
| Tank Id: | 54442 |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |

Equipment Records:

E01 - Piping Secondary Containment - Diking (AG only)

**CABLEVISION (Continued)** **U003397186**

C01 - Pipe Location - Aboveground
I05 - Overfill - Vent Whistle
A01 - Tank Internal Protection - Epoxy Liner
G03 - Tank Secondary Containment - Vault (w/o access)
H00 - Tank Leak Detection - None
L09 - Piping Leak Detection - Exempt Suction Piping
F00 - Pipe External Protection - None
J02 - Dispenser - Suction Dispenser
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
K00 - Spill Prevention - None

| | |
|---|---|
| Tank Location: | Aboveground - contact with soil.... Tank bottom rests on soil, allowing no visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | In Service |
| Pipe Model: | Not reported |
| Install Date: | 03/01/1989 |
| Capacity Gallons: | 3000 |
| Tightness Test Method: | - |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #2 fuel oil (on-site consumption) |
| Tank Number: | 002 |
| Tank Id: | 54443 |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |

Equipment Records:

A01 - Tank Internal Protection - Epoxy Liner
G03 - Tank Secondary Containment - Vault (w/o access)
H00 - Tank Leak Detection - None
L09 - Piping Leak Detection - Exempt Suction Piping
E01 - Piping Secondary Containment - Diking (AG only)
I05 - Overfill - Vent Whistle
C01 - Pipe Location - Aboveground
F00 - Pipe External Protection - None
J02 - Dispenser - Suction Dispenser
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
K00 - Spill Prevention - None

| | |
|---|---|
| Tank Location: | Aboveground - contact with soil.... Tank bottom rests on soil, allowing no visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | In Service |
| Pipe Model: | Not reported |
| Install Date: | 03/01/1989 |
| Capacity Gallons: | 3000 |
| Tightness Test Method: | - |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |

**CABLEVISION (Continued)** **U003397186**

| | |
|---|---|
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #2 fuel oil (on-site consumption) |

---

**C18** **CON EDISON** **RCRA NonGen / NLR** **1012185619**
**NNW** **555 HUTCHINSON RIVER PKWY** **NYP004164521**
**< 1/8** **BRONX, NY 10451**
**0.079 mi.**
**418 ft.** **Site 1 of 2 in cluster C**

**Relative:** **Lower**
**Actual:** **8 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20160601 |
| Handler Name: | Con Edison |
| Handler Address: | Hutchinson River Pkwy |
| Handler City,State,Zip: | BRONX, NY 10451 |
| EPA ID: | NYP004164521 |
| Contact Name: | DAVID DUKE |
| Contact Address: | Not reported |
| Contact City,State,Zip: | Not reported |
| Contact Telephone: | 917-559-8971 |
| Contact Fax: | Not reported |
| Contact Email: | Not reported |
| Contact Title: | Not reported |
| EPA Region: | 02 |
| Land Type: | Private |
| Federal Waste Generator Description: | Not a generator, verified |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Not reported |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | 4 IRVING PL, RM 828 |
| Mailing City,State,Zip: | NEW YORK, NY 10003 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |

**CON EDISON (Continued)** **1012185619**

| | |
|---|---|
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20160602 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Historic Generators:

| | |
|---|---|
| Receive Date: | 20090324 |
| Handler Name: CON EDISON | |
| Federal Waste Generator Description: | Conditionally Exempt Small Quantity Generator |
| State District Owner: | Not reported |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20160601 |
| Handler Name: CON EDISON | |
| Federal Waste Generator Description: | Not a generator, verified |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | Yes |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

List of NAICS Codes and Descriptions:

| | |
|---|---|
| NAICS Codes: | No NAICS Codes Found |

Facility Has Received Notices of Violations:

| | |
|---|---|
| Violations: | No Violations Found |

**CON EDISON (Continued)** **1012185619**

Evaluation Action Summary:
Evaluations: No Evaluations Found

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**C19** **VAULT #2232** **NY AST** **U003383789**
**NNW** **555 HUTCHINSON RIVER PKWY** **NY Spills** **N/A**
**< 1/8** **BRONX, NY**
**0.079 mi.**
**418 ft.** **Site 2 of 2 in cluster C**

**Relative:**
**Lower**

**Actual:**
**8 ft.**

AST:

| | |
|---|---|
| Name: | CAPRI WHITESTONE LLC |
| Address: | 555 HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Facility Id: | 2-062987 |
| Program Type: | PBS |
| UTM X: | 598079.55693 |
| UTM Y: | 4519027.24774 |
| Expiration Date: | 11/13/2024 |
| Site Type: | Apartment Building/Office Building |

Affiliation Records:

| | |
|---|---|
| Site Id: | 1219 |
| Affiliation Type: | Mail Contact |
| Company Name: | CAPRI WHITESTONE LLC |
| Contact Type: | Not reported |
| Contact Name: | DAVID AZMAN |
| Address1: | 325 EAST 104TH STREET |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10029 |
| Country Code: | 001 |
| Phone: | (212) 220-2569 |
| EMail: | DAZMAN@LIBERTY1GROUP.COM |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2019-10-07 |

| | |
|---|---|
| Site Id: | 1219 |
| Affiliation Type: | Facility Operator |
| Company Name: | 555 HUTCHINSON RIVER PARKWAY |
| Contact Type: | Not reported |
| Contact Name: | CAPRI WHITESTONE LLC |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 597-0600 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | ACDANIEL |
| Date Last Modified: | 2018-07-11 |

**VAULT #2232 (Continued)** **U003383789**

| | |
|---|---|
| Site Id: | 1219 |
| Affiliation Type: | Emergency Contact |
| Company Name: | CAPRI WHITESTONE LLC |
| Contact Type: | Not reported |
| Contact Name: | DAVID AZMAN |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (212) 220-2569 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | ACDANIEL |
| Date Last Modified: | 2018-07-11 |

| | |
|---|---|
| Site Id: | 1219 |
| Affiliation Type: | Facility Owner |
| Company Name: | CAPRI WHITESTONE LLC |
| Contact Type: | CAPRI WHITESTONE LLC MEMBER |
| Contact Name: | DAVID AZMAN |
| Address1: | 325 EAST 104TH STREET |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10029 |
| Country Code: | 001 |
| Phone: | (212) 996-6456 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | ACDANIEL |
| Date Last Modified: | 2018-07-11 |

Tank Info:

| | |
|---|---|
| Tank Number: | 001 |
| Tank Id: | 2261 |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |

Equipment Records:

H99 - Tank Leak Detection - Other
J02 - Dispenser - Suction Dispenser
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
K00 - Spill Prevention - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
I04 - Overfill - Product Level Gauge (A/G)
E00 - Piping Secondary Containment - None
G03 - Tank Secondary Containment - Vault (w/o access)
L09 - Piping Leak Detection - Exempt Suction Piping

Tank Location: Aboveground - contact with soil.... Tank bottom rests on soil, allowing no visual inspection.

**VAULT #2232 (Continued)** **U003383789**

| | |
|---|---|
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | In Service |
| Pipe Model: | Not reported |
| Install Date: | 06/20/1975 |
| Capacity Gallons: | 6000 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #2 fuel oil (on-site consumption) |

SPILLS:

| | |
|---|---|
| Name: | VAULT #2232 |
| Address: | 555 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0813834 / 2009-06-08 |
| Facility ID: | 0813834 |
| Facility Type: | ER |
| DER Facility ID: | 360753 |
| Site ID: | 411543 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2009-03-23 |
| Investigator: | RWAUSTIN |
| Referred To: | Not reported |
| Reported to Dept: | 2009-03-23 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2009-03-23 |
| Spill Record Last Update: | 2009-06-08 |
| Spiller Name: | ERT |
| Spiller Company: | CON ED |
| Spiller Address: | 555 HUTCHINSON RIVER PKWY |
| Spiller Company: | 999 |
| Contact Name: | ERT |
| DEC Memo: | 5/11/09 - Austin - EMIS reports that vault was cleaned and washed, with proper disposal for fluids - all within vault - close - end |
| Remarks: | CALLER STATES THAT DUE TO A BROKEN FEEDER ABOUT 5 GALLONS OF PRODUCT IS SPILLING TO THE VAULT. UNK IF IT CONTAINES PCBS CLEAN UP AND REPAIR PENDING. |

All Materials:

| | |
|---|---|
| Site ID: | 411543 |

**VAULT #2232 (Continued)** **U003383789**

| | |
|---|---|
| Operable Unit ID: | 1168016 |
| Operable Unit: | 01 |
| Material ID: | 2159633 |
| Material Code: | 0020A |
| Material Name: | transformer oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 5.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Not reported |
| Oxygenate: | Not reported |

---

**D20** **BRONX WHITESTONE BRIDGE** **NY UST** **U004062136**
**NW** **ONE HUTCHINSON RIVER PARKWAY** **N/A**
**< 1/8** **BRONX, NY 10465**
**0.082 mi.**
**434 ft.** **Site 1 of 2 in cluster D**

**Relative:** UST:
**Lower**

**Actual:**
**6 ft.**

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | ONE HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |
| Id/Status: | 2-481645 / Active |
| Program Type: | PBS |
| Region: | STATE |
| DEC Region: | 2 |
| Expiration Date: | 09/06/2025 |
| UTM X: | 597911.06250 |
| UTM Y: | 4519009.50000 |
| Site Type: | Other |

Affiliation Records:

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Mail Contact |
| Company Name: | MTA BRIDGES & TUNNELS (TBTA) |
| Contact Type: | Not reported |
| Contact Name: | PASHKO R. CAMAJ MGR. S&H COMPLIANCE |
| Address1: | SAFETY & HEALTH DEPT. |
| Address2: | ROBERT MOSES BLDG, ROOM 115 |
| City: | RANDALLS ISLAND |
| State: | NY |
| Zip Code: | 10035 |
| Country Code: | 001 |
| Phone: | (212) 360-3073 |
| EMail: | PCAMAJ@MTABT.ORG |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2020-09-03 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Facility Owner |
| Company Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Contact Type: | MANAGER |
| Contact Name: | GEORGE BASSIL |
| Address1: | 2 BROADWAY |
| Address2: | Not reported |

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

| | |
|---|---|
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10004 |
| Country Code: | 001 |
| Phone: | (212) 360-3073 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2020-09-03 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Emergency Contact |
| Company Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Contact Type: | Not reported |
| Contact Name: | PASHKO R. CAMAJ |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (212) 360-3073 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | NTFREEMA |
| Date Last Modified: | 2015-09-01 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Facility Operator |
| Company Name: | BRONX WHITESTONE BRIDGE |
| Contact Type: | Not reported |
| Contact Name: | GEORGE BASSIL |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 904-4304 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | AYLAGATI |
| Date Last Modified: | 2017-06-07 |

Tank Info:

| | |
|---|---|
| Tank Number: | 1 |
| Tank ID: | 65746 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 550 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 04/01/2001 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0009 |

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

Common Name of Substance: Gasoline

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
B00 - Tank External Protection - None
F00 - Pipe External Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron

Tank Number: 10
Tank ID: 65755
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 2000
Install Date: 03/01/1995
Date Tank Closed: 04/06/2009
Registered: True
Tank Location: Underground
Tank Type: Equivalent technology
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
F04 - Pipe External Protection - Fiberglass
H05 - Tank Leak Detection - In-Tank System (ATG)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
G04 - Tank Secondary Containment - Double-Walled (Underground)

Tank Number: 11
Tank ID: 65756

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

| | |
|---|---|
| Tank Status: | In Service |
| Material Name: | In Service |
| Capacity Gallons: | 20000 |
| Install Date: | 12/17/1999 |
| Date Tank Closed: | Not reported |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 2711 |
| Common Name of Substance: | Biodiesel (Heating, On-Site Consumption) |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
F04 - Pipe External Protection - Fiberglass
J02 - Dispenser - Suction Dispenser
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
C02 - Pipe Location - Underground/On-ground
E04 - Piping Secondary Containment - Double walled UG
H05 - Tank Leak Detection - In-Tank System (ATG)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)

| | |
|---|---|
| Tank Number: | 12 |
| Tank ID: | 65757 |
| Tank Status: | In Service |
| Material Name: | In Service |
| Capacity Gallons: | 1000 |
| Install Date: | 12/17/1999 |
| Date Tank Closed: | Not reported |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 0009 |
| Common Name of Substance: | Gasoline |
| Tightness Test Method: | 21 |
| Date Test: | 01/20/2012 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

E04 - Piping Secondary Containment - Double walled UG
K01 - Spill Prevention - Catch Basin

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

L09 - Piping Leak Detection - Exempt Suction Piping
I02 - Overfill - High Level Alarm
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
F04 - Pipe External Protection - Fiberglass
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
H05 - Tank Leak Detection - In-Tank System (ATG)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)

| | |
|---|---|
| Tank Number: | 13 |
| Tank ID: | 65758 |
| Tank Status: | In Service |
| Material Name: | In Service |
| Capacity Gallons: | 2500 |
| Install Date: | 12/17/1999 |
| Date Tank Closed: | Not reported |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 2710 |
| Common Name of Substance: | Biodiesel |
| Tightness Test Method: | 21 |
| Date Test: | 01/20/2012 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

L09 - Piping Leak Detection - Exempt Suction Piping
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
J02 - Dispenser - Suction Dispenser
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
C02 - Pipe Location - Underground/On-ground
F04 - Pipe External Protection - Fiberglass
E04 - Piping Secondary Containment - Double walled UG
H05 - Tank Leak Detection - In-Tank System (ATG)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)

| | |
|---|---|
| Tank Number: | 14 |
| Tank ID: | 65759 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 2500 |
| Install Date: | 06/01/1996 |
| Date Tank Closed: | 05/08/2006 |

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

| | |
|---|---|
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 0008 |
| Common Name of Substance: | Diesel |
| Tightness Test Method: | 21 |
| Date Test: | 08/07/2003 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

E04 - Piping Secondary Containment - Double walled UG
K01 - Spill Prevention - Catch Basin
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
J02 - Dispenser - Suction Dispenser
F04 - Pipe External Protection - Fiberglass
C02 - Pipe Location - Underground/On-ground
I02 - Overfill - High Level Alarm
B04 - Tank External Protection - Fiberglass
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
G04 - Tank Secondary Containment - Double-Walled (Underground)

| | |
|---|---|
| Tank Number: | 2 |
| Tank ID: | 65747 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 550 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 04/01/2001 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0009 |
| Common Name of Substance: | Gasoline |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

| | |
|---|---|
| Tank Number: | 3 |
| Tank ID: | 65748 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 3000 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 05/01/1998 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

F00 - Pipe External Protection - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None

| | |
|---|---|
| Tank Number: | 4 |
| Tank ID: | 65749 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 3000 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 04/04/1994 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

G00 - Tank Secondary Containment - None
B00 - Tank External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None

Tank Number: 5
Tank ID: 65750
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 550
Install Date: 01/01/1950
Date Tank Closed: 12/16/1993
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron

Tank Number: 6
Tank ID: 65751
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 550
Install Date: 01/01/1950
Date Tank Closed: 12/16/1993
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

Equipment Records:

F00 - Pipe External Protection - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None

| | |
|---|---|
| Tank Number: | 7 |
| Tank ID: | 65752 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 4000 |
| Install Date: | 12/01/1987 |
| Date Tank Closed: | 05/01/1998 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

H00 - Tank Leak Detection - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
A00 - Tank Internal Protection - None
I04 - Overfill - Product Level Gauge (A/G)
D10 - Pipe Type - Copper

| | |
|---|---|
| Tank Number: | 8 |
| Tank ID: | 65753 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 550 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 05/01/1996 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0008 |
| Common Name of Substance: | Diesel |

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

H00 - Tank Leak Detection - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
B00 - Tank External Protection - None
F00 - Pipe External Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)

Tank Number: 9
Tank ID: 65754
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 550
Install Date: 12/01/1941
Date Tank Closed: 05/01/1996
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0008
Common Name of Substance: Diesel

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

B00 - Tank External Protection - None
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)

**D21**
**NW**
**< 1/8**
**0.082 mi.**
**434 ft.**

**BRONX WHITESTONE BRIDGE**
**ONE HUTCHINSON RIVER PARKWAY**
**BRONX, NY 10465**

**Site 2 of 2 in cluster D**

**NY AST** **A100293375**
**N/A**

**Relative:**
**Lower**

**Actual:**
**6 ft.**

AST:

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | ONE HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Facility Id: | 2-481645 |
| Program Type: | PBS |
| UTM X: | 597911.06250 |
| UTM Y: | 4519009.50000 |
| Expiration Date: | 09/06/2025 |
| Site Type: | Other |

Affiliation Records:

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Mail Contact |
| Company Name: | MTA BRIDGES & TUNNELS (TBTA) |
| Contact Type: | Not reported |
| Contact Name: | PASHKO R. CAMAJ MGR. S&H COMPLIANCE |
| Address1: | SAFETY & HEALTH DEPT. |
| Address2: | ROBERT MOSES BLDG, ROOM 115 |
| City: | RANDALLS ISLAND |
| State: | NY |
| Zip Code: | 10035 |
| Country Code: | 001 |
| Phone: | (212) 360-3073 |
| EMail: | PCAMAJ@MTABT.ORG |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2020-09-03 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Facility Owner |
| Company Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Contact Type: | MANAGER |
| Contact Name: | GEORGE BASSIL |
| Address1: | 2 BROADWAY |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10004 |
| Country Code: | 001 |
| Phone: | (212) 360-3073 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2020-09-03 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Emergency Contact |
| Company Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Contact Type: | Not reported |
| Contact Name: | PASHKO R. CAMAJ |

**BRONX WHITESTONE BRIDGE (Continued)** **A100293375**

| | |
|---|---|
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (212) 360-3073 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | NTFREEMA |
| Date Last Modified: | 2015-09-01 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Facility Operator |
| Company Name: | BRONX WHITESTONE BRIDGE |
| Contact Type: | Not reported |
| Contact Name: | GEORGE BASSIL |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 904-4304 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | AYLAGATI |
| Date Last Modified: | 2017-06-07 |

Tank Info:

| | |
|---|---|
| Tank Number: | 15 |
| Tank Id: | 209252 |
| Material Code: | 2711 |
| Common Name of Substance: | Biodiesel (Heating, On-Site Consumption) |

Equipment Records:

F00 - Pipe External Protection - None
K99 - Spill Prevention - Other
E01 - Piping Secondary Containment - Diking (AG only)
L00 - Piping Leak Detection - None
G01 - Tank Secondary Containment - Diking (Aboveground)
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)
J00 - Dispenser - None
C01 - Pipe Location - Aboveground

| | |
|---|---|
| Tank Location: | Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | In Service |
| Pipe Model: | Not reported |
| Install Date: | 12/17/1999 |
| Capacity Gallons: | 900 |

**BRONX WHITESTONE BRIDGE (Continued)** **A100293375**

| | |
|---|---|
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | diesel |

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**E22** **MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY** **NY LTANKS** **S102150368**
**ESE** **1 HUTCHINSON RIVER PKWY** **NY Spills** **N/A**
**< 1/8** **BRONX, NY 10465** **NY MANIFEST**
**0.113 mi.**
**597 ft.** **Site 1 of 3 in cluster E**

**Relative:**
**Higher**

**Actual:**
**32 ft.**

LTANKS:

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9408139 / 2003-11-06 |
| Facility ID: | 9408139 |
| Site ID: | 249980 |
| Spill Date: | 1994-09-19 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Class: | C3 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | JMROMMEL |
| Referred To: | Not reported |
| Reported to Dept: | 1994-09-19 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | True |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1994-10-28 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | TRIBOROUGH AUTHORITY |
| Spiller Address: | RANDALL'S ISLAND |
| Spiller County: | 001 |
| Spiller Contact: | ROBERT TOZZI |
| Spiller Phone: | (718) 904-4304 |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 177640 |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was ROMMEL This site was reassigned from Sigona to Rommel on 1/7/2004. This spill site investigation has been consolidated under Spill No. 9801266. |
| Remarks: | TTF WILL UNDERCOVER & ISOLATE, RETEST |

All TTF:

| | |
|---|---|
| Facility ID: | 9408139 |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Spill Number: | 9408139 |
| Spill Tank Test: | 1543152 |
| Site ID: | 249980 |
| Tank Number: | 001 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 01 |
| Test Method 2: | Petro-Tite/Petro Comp |
| Leak Rate: | -.11 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

| | |
|---|---|
| Facility ID: | 9408139 |
| Spill Number: | 9408139 |
| Spill Tank Test: | 1543153 |
| Site ID: | 249980 |
| Tank Number: | 002 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 01 |
| Test Method 2: | Petro-Tite/Petro Comp |
| Leak Rate: | -.11 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 249980 |
| Operable Unit ID: | 1005783 |
| Operable Unit: | 01 |
| Material ID: | 377581 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9607895 / 2003-11-06 |
| Facility ID: | 9607895 |
| Site ID: | 249984 |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Spill Date: | 1996-09-24 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Class: | B3 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | SIGONA |
| Referred To: | Not reported |
| Reported to Dept: | 1996-09-24 |
| CID: | 322 |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | True |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1996-09-24 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | BOBBIE ATHEY |
| Spiller Company: | MTA BRIDGES & TUNNLE |
| Spiller Address: | RANDALLS ISLAND |
| Spiller County: | 001 |
| Spiller Contact: | PAUL STEFANESCU |
| Spiller Phone: | (212) 360-2924 |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 177640 |
| DEC Memo: | Not reported |
| Remarks: | Tank Test Failure Tank No. 2 also tested - Leak rate -.106 they will uncover, isolate and retest |

All TTF:

| | |
|---|---|
| Facility ID: | 9607895 |
| Spill Number: | 9607895 |
| Spill Tank Test: | 1544776 |
| Site ID: | 249984 |
| Tank Number: | Not reported |
| Tank Size: | 0 |
| Material: | 0008 |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 01 |
| Test Method 2: | Petro-Tite/Petro Comp |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 249984 |
| Operable Unit ID: | 1038996 |
| Operable Unit: | 01 |
| Material ID: | 347151 |
| Material Code: | 0008 |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

SPILLS:

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0100477 / 2014-03-18 |
| Facility ID: | 0100477 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 214399 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 2001-04-12 |
| Investigator: | RVKETANI |
| Referred To: | 031814 CASE APPROVED FOR CLOSURE |
| Reported to Dept: | 2001-04-12 |
| CID: | 397 |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | True |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2001-04-12 |
| Spill Record Last Update: | 2014-03-18 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNELS |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | GEORGE BASIL |
| DEC Memo: | 10/18/05: This spill was originally closed by Anthony Sigona as part of a consolidation effort. The spill was reassigned to Tibbe. The investigation (approved by Sigona)that was performed was inadequate to identify the existance of contamination. The spill has been re-opened and further investigation is necessary. 11/12/10 - spill re-assigned from Tibbe to Joe O'Connell 11/16/11 - Raphael Ketani. I tried to contact Colleen Channer of the Triborough Bridge and Tunnel Authority (TBTA) (212) 878-1035, but I could only leave a message with her secretary. Her mailing address is: MTA Legal Department, 347 Madison Avenue, 9th Floor, NY, 10017. The |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

TBTA is part of the MTA.
11/17/11 - Raphael Ketani. I spoke to Ms. Channer. I told her that the DEC still had two open spill
cases, #0100477 and #9801266, and that we were seeking documentation for these cases. I told her
that the spills may involve tanks 1 to 4 on the west side of the northern approach to the bridge.
She said that she will look for the documentation and get back to me. 1/13/12 - Raphael Ketani. Ms.
Channer (212) 878-1035 called me. She said that she had found some documentation for cases #0100477
and #9801266. We went over the documents that she had and that the DEC had. Some were the same. I
told her that #0100477 was open because the consultant used the TCLP method to process the samples,
rather than methods 8260 and 8270, and because not enough samples were taken and no groundwater
samples were taken in the vicinity of tanks 1 and 2. I added that #9801266 was open because the
source of the free floating product that had entered a utility vault was never found. Tanks 3, 4,
and 7 had been removed in the nineteen nineties. However a full soil and groundwater investigation,
and transmission lines investigation for product had never been done. Ms. Channer asked that I send
the MTA a letter indicating the work that needs to be done and which documents the DEC still needs.
Her address is: Senior Environmental Counsel, MTA,347 Madison Avenue, 9th Floor, NY, 10017. 1/17/12
- Raphael Ketani. I sent a letter to Ms. Channer requesting that the MTA submit a work plan to
conduct a soil and groundwater investigation in the vicinity of the former locations of USTs #1 and
#2. I also put in the letter a request for a work plan to conduct an investigation of the former
vicinity of USTs #3, #4 and #7 (spill #9801266). 1/19/12 - Raphael Ketani. I was notified that
Peter Bass, Director of the Environmental Policy and Compliance group at the MTA, should also
receive a copy of the letter to Ms. Channer. So I sent the letter to him. His address is also 347
Madison Avenue. 1/30/12 - Raphael Ketani. Ms. Channer and the MTA environmental engineer, George
Bassil, called me today to request an extension for submitting the work plan as their consultant
was heavily involved with another MTA project and could not devote much attention to the Whitestone
Bridge projects. I granted the MTA a two month extension of the deadline for submitting the work
plan. This set a deadline of April 16. Mr. Bassil's contact information is: MTA, 2 Broadway, 23rd
Floor, NY, 10004, (646) 252-7020. 4/25/12 - Raphael Ketani. Today I received 4/16/12 Environmental
Site Investigation Work Plan from LiRo Engineers. I began my review. 5/15/12 - Raphael Ketani. I
finished my review of the ESIWP. LiRo proposed to perform 6 soil borings. Three in the vicinity of

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

the grave for the former tank #3 and its general spill area, and three in the vicinity of the grave
for the former tank #2 and its general spill area. Soil and groundwater samples will be collected.
The soil sample with the highest PID reading will be submitted for analysis and one groundwater
sample from each boring. Samples will be analyzed for STARS list VOCs by method 8260 and for STARS
list SVOCs by method 8270. The results will be compared to CP-51 standards. I disapproved the
ESIWP. First, the list of analytes to be tested should be the expanded lists for VOCs and SVOCs.
Secondly, there were not enough borings planned to properly cover each spill area. Lastly, the
areas affected by the spills need to be delineated. I drafted a disapproval letter for the review
of Hassan Hussein, EE III and head of the Hazardous Materials Unit. I set a deadline of June 22 for
the submission of a revised SIWP. Mr. Hussein approved the letter and it was sent out today.
5/18/12 - Raphael Ketani. Mr. Wesolowski of LiRo Engineering (718) 321-3136, ext 242 called me
today regarding my 5/15/12 response letter for the ESIWP. He said that the area of tanks 4 and 7
has a building over it. The building was constructed in 1998 after the tanks were removed. The
building is an office for their security group and there are many utilities under the floor.
Therefore, it would be very difficult to do any borings there. I told him that LiRo and the MTA
should go ahead and do the work for tanks 1 to 3 anyway. He said that this will be done, but he was
concerned about the request to do borings around tanks 4 and 7. I told him that horizontal borings
may be the only way to sample around the tank graves for these former tanks. I added that we need
some information in order to tell us whether elevated levels of contaminants are still at these
locations. I told him to go ahead with the work around the other tanks and to talk to the MTA and
see what can be done. He said that he will do this. With that, the conversation ended. 6/27/12 -
Raphael Ketani. Mr. Wesolowski sent me a response letter to the DEC ESIWP review letter dated
5/15/12. Attached to the LiRo Engineering response letter was a revised ESIWP dated 6/22/12. I
reviewed both documents. LiRo proposes to do many more borings around tanks #1, #2 and #3.
Additional borings around tanks #4 and #7 will be performed only if contamination appears to be
emanating from them. However, as these two tanks are under the building, the tone of the letter
suggested that the idea of boring around these tanks will be open for discussion. Mr. Wesolowski
also wrote that all environmental samples will be tested for the expanded lists of VOCs and SVOCs.
Also, drilling will proceed deeper than the 20 feet down that was

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

originally planned if
contamination is found at that level. Work will start within 60 days of the approval of the revised
ESIWP. I drafted a response letter approving the revised ESIWP and stating that indoor air PID
surveying should be done in the areas of the building which are above tanks #4 and #7. The letter
was submitted to Mr. Hussein for his approval. Mr. Hussein approved the letter and it was sent out.
8/3/12 - Raphael Ketani. Mr. Wesolowski sent me a letter dated 7/18/12. This letter was LiRo's
response to the DEC 6/7/12 letter approving the June 22 ESIWP. In the letter, Mr. Wesolowski
described the methodology for doing the indoor air sampling with the PID meter. Specifically, if
elevated readings are detected that are not attributed to materials stored in the building, then
air sampling will take place for 1 hour at each location of concern. If there are no elevated
detections, then air sampling will take place at a minimum of 8 sampling stations for a period of
30 minutes each using the PID meter. These 8 or more stations will be over the former locations of
USTs #4 and #7. I found the letter plan to be acceptable and submitted a draft letter to Mr.
Hussein for his review. The letter approved the methodology and also requested that the sampling
take place during a period when air exchange (due to people opening doors to rooms or ventilation)
is not taking place. I stated that this is in order to have stable conditions for the air sampling.
I also added that if the indoor air detections are above 500 ppb or 0.5 ppm, then the NYC DEP
Hotline should be contacted and a work plan must be submitted for a more extensive air
investigation. 8/7/12 - Raphael Ketani. Mr. Hussein approved the letter and it was sent out today.
11/17/12 - Raphael Ketani. I received the 11/13/12 Site Investigation Summary Report from Li Ro.
Soil borings, groundwater sampling and indoor air sampling were conducted on September 12, 13 and
17. Fourteen borings were performed down to 20 feet bgs. Temporary 1 inch monitoring wells were
installed. After the sampling was completed, the borings were filled in and the wells were
abandoned. Soil samples were recovered from LSB-01, 03, 04, 06 to 09, 13, and 15 to 17. Borings
could not be performed at LSB-02, 05, 10 to 12 and 14 due to refusal - it was believed that the
foundations were encountered at these locations. If no visual evidence or PID detections were
encountered in a boring, then soil samples were collected at the water table interface and at 20
feet bgs. The water table was encountered at 3 to 9 feet bgs. Flow was expected to be to the
southwest to the East River. The indoor air results were obtained by sampling at each station for

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

30 minutes, except for the entrance area which was sampled for 15 minutes. There were no
detections. Soil samples were collected from 5.5 feet to 20 feet below grade. The VOC results were
either non-detect or well below the CP-51 standards. The SVOC results were either non-detect, well
below the standards or just above the standards. For total results, the most contaminated soil
horizon at LSB-01 was at 7 feet bgs and LSB-03 was worst at 20 feet bgs. The groundwater samples
from LSB-01, LSB-03 and LSB-17 had 280 ppb, 260 ppb and 210 ppb of naphthalene, respectively. The
rest of the VOC results and the SVOC results were either non-detect or slightly above the GW
standards to two digits. From the data in the report, it appears that there is a source of
groundwater contamination. I drafted a letter to Mr. Bassil and to Mr. Wesolowski approving the
SISR and requesting that groundwater contamination delineation take place. The draft letter was
submitted to Mr. Hussein for his approval. 12/4/12 - Raphael Ketani. The letter was approved by Mr.
Hussein and was sent out with a deadline of January 4, 2013 for submission of a work plan for
delineating the groundwater contamination. 1/9/2013 - Raphael Ketani. I reviewed the LiRo 1/4/13
Supplemental Environmental Site Investigation Work Plan. LiRo plans to install 3 wells. One well
will be upgradient of LSB-17, one well will be downgradient of LSB-17 and one well will be
downgradient of locations LSB-1 and LSB-3. A maximum of 2 soil samples and 1 groundwater sample
will be taken from each proposed well location (MW-1 to MW-3). If no contamination is found at a
location, then one soil sample will be taken from just above the water table. The water table is
believed to be at about 8 feet bgs. I found the work plan to be acceptable and drafted a letter for
the review of Mr. Hussein approving the work plan and requesting that each well be surveyed and a
groundwater flow map be constructed. 1/11/13 - Raphael Ketani. Mr. Hussein approved the letter and
it was sent out today. 12/23/13 - Raphael Ketani. As there has been no correspondence from Martin
Wesolowski of LiRo Engineering (718) 321-3136, ext 242 regarding conducting the work that was
described in the 1/4/13 SESIWP, I sent an e-mail to Colleen Channer (legal division Triborough
Bridge and Tunnel Authority (TBTA) (212) 878-1035), Peter Bass (Director of Environmental Policy
and Compliance) and George Bassil (MTA environmental engineer (646) 252-7020) requesting that the
work start by February 3, 2014, or else the spill cases will be referred to the Office of General
Counsel for legal action. Later, Mr. Wesolowski responded by e-mail and stated that the TBTA was
obtaining the funding to do the approved work. The work is scheduled

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

to take place during early
January 2014. 1/7/14 - Raphael Ketani. Mr. Wesolowski sent me an e-mail stating that the agreed
upon work will take place on 1/21/14. 1/21/14 - Raphael Ketani. Mr. Wesolowski sent me an e-mail
stating that they had completed locating the utilities and doing the markouts for the 3 planned
wells. Due to the snowy weather, the actual work will not start until 1/23/14. 1/23/14 - Raphael
Ketani. Mr. Wesolowski sent me an e-mail stating that the wells were installed today and that
groundwater sampling will take place in two weeks. A report will be sent to the DEC in February
2014. 3/7/14 - Raphael Ketani. I reviewed the 3/6/14 LiRo Engineers, Inc. Supplemental
Environmental Site Investigation Report. The supplemental investigation took place in order to
further delineate the extent of the groundwater contamination at 3 specific locations. Borings SB-1
to SB-3 were installed on 1/23/14. None of the samples had odors or PID hits. These borings were
turned into wells MW-1 to MW-3 and developed on 1/29/14. The wells were sampled on 2/12/14. All of
the soil and groundwater samples were analyzed via methods 8260B and 8270C. The soil samples were
almost entirely non-detect for VOCs. The SVOC hits were also almost entirely non-detect with hits
that were well below the CP-51 unrestricted soil standards. The groundwater results for all of the
samples were almost entirely non-detect for the VOCs and the SVOCs. I sent an e-mail to Mr. Bassil
and Mr. Wesolowski stating that the Supplemental Environmental SIR had been approved, but the
Department was a little concerned about some past naphthalene results which had been from samples
taken from wells LSB-1, LSB-3 and LSB-17. Later, Mr. Wesolowski responded by e-mail that after the
September 2012 sampling event, these temporary wells had been removed. So no additional groundwater
samples could be taken. 3/18/14 - Raphael Ketani. The spill case was presented to Mr. Hussein for
closure. Mr. Hussein reviewed the data and determined that the spill case could be closed. Based
upon the documentation and the data in the case file, it has been determined that the oil spill has
been remediated and that any residual contamination is not a threat to the public or the
environment. Additionally, from the PID screening data, it has been determined that there are no
threats from the vapors of volatile chemicals in the MTA owned and maintained building. Therefore,
the spill case has been closed effective today.

Remarks: Petroleum Contaminated Soils reported as Gasoline was found during Tank Excataion work at the Site.

All Materials:
Site ID: 214399
Operable Unit ID: 839193

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Operable Unit: | 01 |
| Material ID: | 536184 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9201985 / 2011-11-16 |
| Facility ID: | 9201985 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249978 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1991-06-11 |
| Investigator: | RVKETANI |
| Referred To: | NEED FURTHER DOCUMENTATION |
| Reported to Dept: | 1992-01-13 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1992-05-20 |
| Spill Record Last Update: | 2011-11-17 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNEL |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | GEORGE BASIL |
| DEC Memo: | 09/04/07: Transferred from Sigona to Tibbe. Spill reopened due to lack of documentation of proper remediation of contamination identified around tanks 5&6, as well as 3, 4 and 7. 11/12/10 - spill re-assigned from Tibbe to Joe O'Connell 11/10/11 - Raphael Ketani. Kevin O'Connor of Action Remediation (516) 781-3000/cell (516) 236-7468 called regarding this spill case and cases #9601373, #9801266 and #0100477. He mentioned that an attempt was made to combine the 4 cases into one by the DEC, but this added to the confusion. The areas of concern are to the |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

west and to the east of the
north end approach to the Whitestone Bridge. He said that many years back, the tanks were taken
out, but the contaminated soil wasn't. I told him that there were almost no documents in the e-docs
and no case notes. He said that he would like to give the DEC all of the documents pertaining to
this site. I asked him to put them on disk. He said that he will. Mr. O'Connor said that he would
like to meet in person to discuss the site. I told him that would be fine. The PBS is #2-481645.
There are at least 6 tanks, according to some notes I saw. 11/16/11 - Raphael Ketani. A meeting
took place with Mr. O'Connor of Action Remediation and Tom O'Brien of Active Environmental
Techologies Inc. (609) 702-1500. Mr. O'Connor did most of the talking for the two consultants. He
explained that Action and Active were originally
sub-sub-sub-contractors for a very large
construction project to widen the northern approach to to the Whitestone Bridge. They were involved
in removing tanks and excavating contaminated soil. The work was done in two weeks. He said that
PBS case #2-481645 lists only four tanks that are still active. These are tank #11 (20,000 gal. UST
with biodiesel), tank #12 (1,000 gal. UST with gasoline), tank #13 (2,500 gal. UST with biodiesel)
and tank #15 (900 gal. UST with biodiesel). Mr. O'Connor added that their companies removed tanks
#10 (north part west side) and #5 and #6 (south part west side). However, tanks #8 and #9 on the
east side had already been removed. So all they did there was soil removal. Mr. O'Brien stated that
when they started digging, they discovered that the upper layer was made of cobbles and the rest
was native marsh clay. Lots of water came out of the layer of cobbles and this proved costly to
handle. The Triborough Bridge and Tunnel Authority refused to pay them for the cost of handling all
of the water from the cobble zone. So the remediation reports were never sent to the TBTA. Steel
sheet pilings were used to keep the holes open at all of the tank excavation locations. Soil end
point samples were taken by boring holes through the sheet piling. Mr. O'Brien showed me some
pictures of the work at the various locatoins. Mr. O'Connor had sent me e-mail pdf files containing
the soil analytical results, groundwater analytical results and some diagrams showing where the
samples had been taken. He also gave me copies of the manifests for the soil that was removed from
all of the locations. However, he said that the manifests were not in any particular order and were
for all of the excavation locations. Mr. O'Connor showed me PBS printouts for tanks #5 and #6. The
closure dates were 12/16/1993. He added that tank #10 was pulled by his company and it was a steel

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

tank with a fiberglass wrapping. It was in very good condition. After the meeting, I reviewed the
Long Island Analytical Labs 4/7/09 and 4/14/09 soil and groundwater analytical results reports.
They were almost entirely non-detect. The few hits that were present were almost entirely below
TAGM limits. I also reviewed the Action Remediation 5/6/09 Closeout Package for tank #10 (2,000
gal. UST in the northern part of the area on the west side) and the Action Remediation 6/1/09 soil
profile and sampling letter for all of the sampling locations. I also reviewed the manifests, other
documents and pictures concerning tanks #5, #6 and #10. Based upon my data in the documents in the
case file, I determined that the great majority of the contamination had been removed and that the
residual contamination was not a threat to the public or the environment. Also, as the groundwater
that had entered the site is part of the groundwater table that is under the landfill which is
Ferry Point Park, I determined that any impacts are not due conditions at the former tank removal
areas. So I closed the spill case. 11/17/11 - Raphael Ketani. I sent Mr. O'Connor and Mr. O'Brien a
spill closure letter for this spill case and case number 9601373.

Remarks: TWO 550'S (# 5 & 6) TAKEN OUT OF SERVICE & EMPTIED.

All Materials:

| | |
|---|---|
| Site ID: | 249978 |
| Operable Unit ID: | 969335 |
| Operable Unit: | 01 |
| Material ID: | 413265 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9601373 / 2011-11-16 |
| Facility ID: | 9601373 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249983 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1996-04-26 |
| Investigator: | RVKETANI |
| Referred To: | NEED FUIRTHER DOCUMENTATION. |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Reported to Dept: | 1996-04-26 |
| CID: | 257 |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1996-04-26 |
| Spill Record Last Update: | 2011-11-17 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNEL |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | GEORGE BASIL |
| DEC Memo: | 09-04-07: Transferred from Sigona to Tibbe. Spill reopened becuase of lack of documentation concerning proper remediation. 11/12/10 - spill re-assigned from Tibbe to Joe O'Connell 11/10/11 - Raphael Ketani. Kevin O'Connor of Action Remediation (516) 781-3000/cell (516) 236-7468 called regarding this spill case and cases #9201985, #9801266 and #0100477. He mentioned that an attempt was made to combine the 4 cases into one by the DEC, but this added to the confusion. The areas of concern are to the west and to the east of the north end approach to the Whitestone Bridge. He said that many years back, the tanks were taken out, but the contaminated soil wasn't. I told him that there were almost no documents in the e-docs and no case notes. He said that he would like to give the DEC all of the documents pertaining to this site. I asked him to put them on disk. He said that he will. Mr. O'Connor said that he would like to meet in person to discuss the site. I told him that would be fine. The PBS is #2-481645. There are at least 6 tanks, according to some notes I saw. 11/16/11 - Raphael Ketani. A meeting took place with Mr. O'Connor of Action Remediation and Tom O'Brien of Active Environmental Techologies Inc. (609) 702-1500. Mr. O'Connor did most of the talking for the two consultants. He explained that Action and Active were originally sub-sub-sub-contractors for a very large construction project to widen the northern approach to to the Whitestone Bridge. They were involved in removing tanks and excavating contaminated soil. The work was done in two weeks. He said that PBS case #2-481645 lists only four tanks that are still active. These are tank #11 (20,000 gal. UST with biodiesel), tank #12 (1,000 gal. UST with gasoline), tank #13 (2,500 gal. UST with biodiesel) and tank #15 (900 gal. UST with biodiesel). Mr. O'Connor added that their companies removed tanks #10 (north part west |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

side) and #5 and #6 (south
part west side). However, tanks #8 and #9 on the east side had already been removed. So all they
did there was soil removal. Mr. O'Brien stated that when they started digging, they discovered that
the upper layer was made of cobbles and the rest was native marsh clay. Lots of water came out of
the layer of cobbles and this proved costly to handle. The Triborough Bridge and Tunnel Authority
refused to pay them for the cost of handling all of the water from the cobble zone. So the
remediation reports were never sent to the TBTA. Steel sheet pilings were used to keep the holes
open at all of the tank excavation locations. Soil end point samples were taken by boring holes
through the sheet piling. Mr. O'Brien showed me some pictures of the work at the various locatoins.
Mr. O'Connor had sent me e-mail pdf files containing the soil analytical results, groundwater
analytical results and some diagrams showing where the samples had been taken. He also gave me
copies of the manifests for the soil that was removed from all of the locations. However, he said
that the manifests were not in any particular order and were for all of the excavation locations.
Mr. O'Connor showed me PBS printouts for tanks #8 and #9. The closure dates were 5/1/96. After the
meeting, I reviewed the Long Island Analytical Labs 4/16/09 and 4/17/09 soil analytical results
reports. They were almost entirely non-detect. The few hits that were present were almost entirely
below TAGM limits. I also reviewed the Action Remediation 6/1/09 soil profile and sampling letter
for all of the sampling locations. I also reviewed the manifests, other documents and pictures
concerning tanks #8 and #9. Based upon my data in the documents in the case file, I determined that
the great majority of the contamination had been removed and that the residual contamination was
not a threat to the public or the environment. Also, as the groundwater that had entered the site
is part of the groundwater table that is under the landfill which is Ferry Point Park, I determined
that any impacts are not due conditions at the former tank removal areas. So I closed the spill
case. 11/17/11 - Raphael Ketani. I sent Mr. O'Connor and Mr. O'Brien a spill closure letter for
this spill case and case number 9201985.

Remarks: Contaminated groundwater was discovered in the Tank Excavationcontaminated in a hole.

All Materials:

Site ID: 249983
Operable Unit ID: 1029026
Operable Unit: 01
Material ID: 351180
Material Code: 0008
Material Name: diesel

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9801266 / 2014-03-18 |
| Facility ID: | 9801266 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249985 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1998-04-24 |
| Investigator: | RVKETANI |
| Referred To: | 031814 SPILL CASE APPRVD FOR CLOSURE |
| Reported to Dept: | 1998-04-29 |
| CID: | 257 |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1998-04-29 |
| Spill Record Last Update: | 2014-03-18 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNEL |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | RAYMOND LO |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was ROMMEL This spill site investigation has been consolidated under Spill No. 9801266. A site investigation work plan was submitted to DEC for review and approval on November 7, 2003. Investigation was approved on 6/21/2004. The remaining spill case is under 9801266. DEC's comments regarding a proposed Work Plan for Site Investigation by BEM Systems, Inc., dated November 5, 2003. Based on the results of our site visit and PBS inspection on June 25, 2003, and evaluation of the proposal by BEM, the DEC accepts MTA Bridges and Tunnel's Work Plan to perform further investigatory actions to address any of the DEC's concerns related to the prior spill investigations for |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

this spill number referenced at
this site. MTA Bridges & Tunnels must now complete the implementation of the BEM's Work Plan
according to the proposed schedule 7/19/04 - AUSTIN - TRANSFERRED FROM SIGONA TO ROMMEL DUE TO THE
OTHER TBTA SITES BEING UNDER HER JURISDICTION - END 03/29/05: Transfer from Rommel to Tibbe.
11/12/10 - spill re-assigned from Tibbe to Joe O'Connell 11/16/11 - Raphael Ketani. I tried to
contact Colleen Channer of the Triborough Bridge and Tunnel Authority (TBTA) (212) 878-1035, but I
could only leave a message with her secretary. Her mailing address is: MTA Legal Department, 347
Madison Avenue, 9th Floor, NY, 10017. The TBTA is part of the MTA. 11/17/11 - Raphael Ketani. I
spoke to Ms. Channer. I told her that the DEC still had two open spill cases, #0100477 and
#9801266, and that we were seeking documentation for these cases. I told her that the spills may
involve tanks 1 to 4 on the west side of the northern approach to the bridge. She said that she
will look for the documentation and get back to me. 1/13/12 - Raphael Ketani. Ms. Channer (212)
878-1035 called me. She said that she had found some documentation for cases #0100477 and #9801266.
We went over the documents that she had and that the DEC had. Some were the same. I told her that
#0100477 was open because the consultant used the TCLP method to process the samples, rather than
methods 8260 and 8270, and because not enough samples were taken and no groundwater samples were
taken in the vicinity of tanks 1 and 2. I added that #9801266 was open because the source of the
free floating product that had entered a utility vault was never found. Tanks 3, 4, and 7 had been
removed in the nineteen nineties. However a full soil and groundwater investigation, and
transmission lines investigation for product had never been done. Ms. Channer asked that I send the
MTA a letter indicating the work that needs to be done and which documents the DEC still needs. Her
address is: Senior Environmental Counsel, MTA,347 Madison Avenue, 9th Floor, NY, 10017. 1/17/12 -
Raphael Ketani. I sent a letter to Ms. Channer requesting that the MTA submit a work plan to
conduct a soil and groundwater investigation in the vicinity of the former locations of USTs #3, #4
and #7. I also put in the letter a request for a work plan to conduct an investigation of the
former vicinity of USTs #1 and #2 (spill #0100477). 1/19/12 - Raphael Ketani. I was notified that
Peter Bass, Director of the Environmental Policy and Compliance group at the MTA, should also
receive a copy of the letter to Ms. Channer. So I sent the letter to him. His address is also 347
Madison Avenue. 1/30/12 - Raphael Ketani. Ms. Channer and the MTA environmental engineer, George

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

Bassil, called me today to request an extension for submitting the work plan as their consultant
was heavily involved with another MTA project and could not devote much attention to the Whitestone
Bridge projects. I granted the MTA a two month extension of the deadline for submitting the work
plan. This set the deadline at April 16. Mr. Bassil's contact information is: MTA, 2 Broadway, 23rd
Floor, NY, 10004, (646) 252-7020. 4/25/12 - Raphael Ketani. Today I received 4/16/12 Environmental
Site Investigation Work Plan from LiRo Engineers. I began my review. 5/15/12 - Raphael Ketani. I
finished my review of the ESIWP. LiRo proposed to perform 6 soil borings. Three in the vicinity of
the grave for the former tank #3 and its general spill area, and three in the vicinity of the grave
for the former tank #2 and its general spill area. Soil and groundwater samples will be collected.
The soil sample with the highest PID reading will be submitted for analysis and one groundwater
sample from each boring. Samples will be analyzed for STARS list VOCs by method 8260 and for STARS
list SVOCs by method 8270. The results will be compared to CP-51 standards. I disapproved the
ESIWP. First, the list of analytes to be tested should be the expanded lists for VOCs and SVOCs.
Secondly, there were not enough borings planned to properly cover each spill area. Lastly, the
areas affected by the spills need to be delineated. I drafted a disapproval letter for the review
of Hassan Hussein, EE III and head of the Hazardous Materials Unit. I set a deadline of June 22 for
the submission of a revised SIWP. Mr. Hussein approved the letter and it was sent out today.
5/18/12 - Raphael Ketani. Mr. Wesolowski of LiRo Engineering (718) 321-3136, ext 242 called me
today regarding my 5/15/12 response letter for the ESIWP. He said that the area of tanks 4 and 7
has a building over it. The building was constructed in 1998 after the tanks were removed. The
building is an office for their security group and there are many utilities under the floor.
Therefore, it would be very difficult to do any borings there. I told him that LiRo and the MTA
should go ahead and do the work for tanks 1 to 3 anyway. He said that this will be done, but he was
concerned about the request to do borings around tanks 4 and 7. I told him that horizontal borings
may be the only way to sample around the tank graves for these former tanks. I added that we need
some information in order to tell us whether elevated levels of contaminants are still at these
locations. I told him to go ahead with the work around the other tanks and to talk to the MTA and
see what can be done. He said that he will do this. With that, the conversation ended. 6/27/12 -
Raphael Ketani. Mr. Wesolowski sent me a response letter to the DEC

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

ESIWP review letter dated
5/15/12. Attached to the LiRo Engineering response letter was a revised ESIWP dated 6/22/12. I
reviewed both documents. LiRo proposes to do many more borings around tanks #1, #2 and #3.
Additional borings around tanks #4 and #7 will be performed only if contamination appears to be
emanating from them. However, as these two tanks are under the building, the tone of the letter
suggested that the idea of boring around these tanks will be open for discussion. Mr. Wesolowski
also wrote that all environmental samples will be tested for the expanded lists of VOCs and SVOCs.
Also, drilling will proceed deeper than the 20 feet down that was originally planned if
contamination is found at that level. Work will start within 60 days of the approval of the revised
ESIWP. I drafted a response letter approving the revised ESIWP and stating that indoor air PID
surveying should be done in the areas of the building which are above tanks #4 and #7. The letter
was submitted to Mr. Hussein for his approval. Mr. Hussein approved the letter and it was sent out.
8/3/12 - Raphael Ketani. Mr. Wesolowski sent me a letter dated 7/18/12. This letter was LiRo's
response to the DEC 6/7/12 letter approving the June 22 ESIWP. In the letter, Mr. Wesolowski
described the methodology for doing the indoor air sampling with the PID meter. Specifically, if
elevated readings are detected that are not attributed to materials stored in the building, then
air sampling will take place for 1 hour at each location of concern. If there are no elevated
detections, then air sampling will take place at a minimum of 8 sampling stations for a period of
30 minutes each using the PID meter. These 8 or more stations will be over the former locations of
USTs #4 and #7. I found the letter plan to be acceptable and submitted a draft letter to Mr.
Hussein for his review. The letter approved the methodology and also requested that the sampling
take place during a period when air exchange (due to people opening doors to rooms or ventilation)
is not taking place. I stated that this is in order to have stable conditions for the air sampling.
I also added that if the indoor air detections are above 500 ppb or 0.5 ppm, then the NYC DEP
Hotline should be contacted and a work plan must be submitted for a more extensive air
investigation. 8/7/12 - Raphael Ketani. Mr. Hussein approved the letter and it was sent out today.
11/17/12 - Raphael Ketani. I received the 11/13/12 Site Investigation Summary Report from Li Ro.
Soil borings, groundwater sampling and indoor air sampling were conducted on September 12, 13 and
17. Fourteen borings were performed down to 20 feet bgs. Temporary 1 inch monitoring wells were

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

installed. After the sampling was completed, the borings were filled in and the wells were abandoned. Soil samples were recovered from LSB-01, 03, 04, 06 to 09, 13, and 15 to 17. Borings could not be performed at LSB-02, 05, 10 to 12 and 14 due to refusal - it was believed that the foundations were encountered at these locations. When no visual evidence or PID detections were encountered in a boring, then soil samples were collected at the water table interface and at 20 feet bgs. The water table was encountered at 3 to 9 feet bgs. Flow was expected to be to the southwest to the East River. The indoor air results were obtained by sampling at each station for 30 minutes, except for the entrance area which was sampled for 15 minutes. There were no detections. Soil samples were collected from 5.5 feet to 20 feet below grade. The VOC results were either non-detect or well below the CP-51 standards. The SVOC results were either non-detect, well below the standards or just above the standards. For total results, the most contaminated soil horizon at LSB-01 was at 7 feet bgs and LSB-03 was worst at 20 feet bgs. The groundwater samples from LSB-01, LSB-03 and LSB-17 had 280 ppb, 260 ppb and 210 ppb of naphthalene, respectively. The rest of the VOC results and the SVOC results were either non-detect or slightly above the GW standards to two digits. From the data in the report, it appears that there is a source of groundwater contamination. I drafted a letter to Mr. Bassil and to Mr. Wesolowski approving the SISR and requesting that groundwater contamination delineation take place. The draft letter was submitted to Mr. Hussein for his approval. 12/4/12 - Raphael Ketani. The letter was approved by Mr. Hussein and was sent out with a deadline of January 4, 2013 for submission of a work plan for delineating the groundwater contamination. 1/9/2013 - Raphael Ketani. I reviewed the LiRo 1/4/13 Supplemental Environmental Site Investigation Work Plan. LiRo plans to install 3 wells. One well will be upgradient of LSB-17, one well will be downgradient of LSB-17 and one well will be downgradient of locations LSB-1 and LSB-3. A maximum of 2 soil samples and 1 groundwater sample will be taken from each proposed well location (MW-1 to MW-3). If no contamination is found at a location, then one soil sample will be taken from just above the water table. The water table is believed to be at about 8 feet bgs. I found the work plan to be acceptable and drafted a letter for the review of Mr. Hussein approving the work plan and requesting that each well be surveyed and a groundwater flow map be constructed. 1/11/13 - Raphael Ketani. Mr. Hussein found the letter to be acceptable and it was sent out today. 12/23/13 - Raphael Ketani. As

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

there has been no
correspondence from Martin Wesolowski of LiRo Engineering (718) 321-3136, ext 242 regarding
conducting the work that was described in the 1/4/13 SESIWP, I sent an e-mail to Colleen Channer
(legal division Triborough Bridge and Tunnel Authority (TBTA) (212) 878-1035), Peter Bass (Director
of Environmental Policy and Compliance) and George Bassil (MTA environmental engineer (646)
252-7020) requesting that the work start by February 3, 2014, or else the spill cases will be
referred to the Office of General Counsel for legal action. Later, Mr. Wesolowski responded by
e-mail and stated that the TBTA was obtaining the funding to do the approved work. The work is
scheduled to take place during early January 2014. 1/7/14 - Raphael Ketani. Mr. Wesolowski sent me
an e-mail stating that the agreed upon work will take place on 1/21/14. 1/21/14 - Raphael Ketani.
Mr. Wesolowski sent me an e-mail stating that they had completed locating the utilities and doing
the markouts for the 3 planned wells. Due to the snowy weather, the actual work will not start
until 1/23/14. 1/23/14 - Raphael Ketani. Mr. Wesolowski sent me an e-mail stating that the wells
were installed today and that groundwater sampling will take place in two weeks. A report will be
sent to the DEC in February 2014. 3/7/14 - Raphael Ketani. I reviewed the 3/6/14 LiRo Engineers,
Inc. Supplemental Environmental Site Investigation Report. The supplemental investigation took
place in order to further delineate the extent of the groundwater contamination at 3 specific
locations. Borings SB-1 to SB-3 were installed on 1/23/14. None of the samples had odors or PID
hits. These borings were turned into wells MW-1 to MW-3 and developed on 1/29/14. The wells were
sampled on 2/12/14. All of the soil and groundwater samples were analyzed via methods 8260B and
8270C. The soil samples were almost entirely non-detect for VOCs. The SVOC hits were also almost
entirely non-detect with hits that were well below the CP-51 unrestricted soil standards. The
groundwater results for all of the samples were almost entirely non-detect for the VOCs and the
SVOCs. I sent an e-mail to Mr. Bassil and Mr. Wesolowski stating that the Supplemental
Environmental SIR had been approved, but the Department was a little concerned about some past
naphthalene results which had been from samples taken from wells LSB-1, LSB-3 and LSB-17. Later,
Mr. Wesolowski responded by e-mail that after the September 2012 sampling event, these temporary
wells had been removed. So no additional groundwater samples could be taken. 3/18/14 - Raphael
Ketani. The spill case was presented to Mr. Hussein for closure. Mr. Hussein reviewed the data and

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

determined that the spill case could be closed. Based upon the documentation and the data in the
case file, it has been determined that the oil spill has been remediated and that any residual
contamination is not a threat to the public or the environment. Additionally, from the PID
screening data, it has been determined that there are no threats from the vapors of volatile
chemicals in the MTA owned and maintained building. Therefore, the spill case has been closed
effective today.

Remarks: DEC Sigona was performing a site inspection and contamination was found.

All Materials:

Site ID: 249985
Operable Unit ID: 1061927
Operable Unit: 01
Material ID: 323195
Material Code: 0001A
Material Name: #2 fuel oil
Case No.: Not reported
Material FA: Petroleum
Quantity: .00
Units: G
Recovered: .00
Resource Affected: Soil
Oxygenate: Not reported

Name: BRONX WHITESTONE BRIDGE
Address: 1 HUTCHINSON RIVER PKWAY
City,State,Zip: BRONX, NY
Spill Number/Closed Date: 9303540 / 2003-11-06
Facility ID: 9303540
Facility Type: ER
DER Facility ID: 177640
Site ID: 249979
DEC Region: 2
Spill Cause: Equipment Failure
Spill Class: B3
SWIS: 0301
Spill Date: 1993-06-17
Investigator: SIGONA
Referred To: Not reported
Reported to Dept: 1993-06-17
CID: Not reported
Water Affected: Not reported
Spill Source: Non Major Facility > 1,100 gal
Spill Notifier: Responsible Party
Cleanup Ceased: Not reported
Cleanup Meets Std: False
Last Inspection: Not reported
Recommended Penalty: False
UST Trust: False
Remediation Phase: 0
Date Entered In Computer: 1993-06-24
Spill Record Last Update: 2004-06-21

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | TRIBOROUGH AUTHORITY |
| Spiller Address: | RANDALL'S ISLAND |
| Spiller Company: | 001 |
| Contact Name: | GEORGE BASIL |
| DEC Memo: | Not reported |
| Remarks: | WHILE THE TBTA WAS PERFORMING AN EXCAVATION FOR A NEW SEWER PIPE THEY FOUND PETROLEUM CONTAMINATED SOILS. |

All Materials:

| | |
|---|---|
| Site ID: | 249979 |
| Operable Unit ID: | 981958 |
| Operable Unit: | 01 |
| Material ID: | 397102 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9501417 / 2003-11-24 |
| Facility ID: | 9501417 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249981 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1995-05-03 |
| Investigator: | SIGONA |
| Referred To: | Not reported |
| Reported to Dept: | 1995-05-03 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1995-05-18 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNELS |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | Not reported |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

DEC Memo: Not reported
Remarks: LEAKING PIPE IN ABOVE GROUND TANK - SMALL AMOUNT WENT INTO SEWER - CONTAINED, CLEANUP CREW ON WAY.

All Materials:
Site ID: 249981
Operable Unit ID: 1012154
Operable Unit: 01
Material ID: 370025
Material Code: 0001A
Material Name: #2 fuel oil
Case No.: Not reported
Material FA: Petroleum
Quantity: 150.00
Units: G
Recovered: .00
Resource Affected: Sewer
Oxygenate: Not reported

Name: BRONX WHITESTONE BRIDGE
Address: 1 HUTCHINSON RIVER PKWAY
City,State,Zip: BRONX, NY
Spill Number/Closed Date: 9503672 / 1995-06-26
Facility ID: 9503672
Facility Type: ER
DER Facility ID: 177640
Site ID: 249982
DEC Region: 2
Spill Cause: Equipment Failure
Spill Class: B3
SWIS: 0301
Spill Date: 1995-06-26
Investigator: SIGONA
Referred To: Not reported
Reported to Dept: 1995-06-26
CID: Not reported
Water Affected: Not reported
Spill Source: Non Major Facility > 1,100 gal
Spill Notifier: Responsible Party
Cleanup Ceased: 1995-06-26
Cleanup Meets Std: False
Last Inspection: Not reported
Recommended Penalty: False
UST Trust: False
Remediation Phase: 0
Date Entered In Computer: 1995-07-18
Spill Record Last Update: 2004-06-21
Spiller Name: GEORGE BASIL
Spiller Company: MTA BRIDGES & TUNNELS
Spiller Address: RANDALLS ISLAND
Spiller Company: 001
Contact Name: Not reported
DEC Memo: Not reported
Remarks: DRIVER WAS FILLING A TANK & THE TANK GAUGE WAS BROKE - TANK OVERFLOWED SPILL TEAM WAS CALLED & RESPONDING

All Materials:

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Site ID: | 249982 |
| Operable Unit ID: | 1014900 |
| Operable Unit: | 01 |
| Material ID: | 365176 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 10.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9906022 / 1999-08-30 |
| Facility ID: | 9906022 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249986 |
| DEC Region: | 2 |
| Spill Cause: | Traffic Accident |
| Spill Class: | C3 |
| SWIS: | 0301 |
| Spill Date: | 1999-08-19 |
| Investigator: | SIGONA |
| Referred To: | Not reported |
| Reported to Dept: | 1999-08-19 |
| CID: | 389 |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | True |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1999-08-19 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | Not reported |
| Spiller Company: | WEBSTER TRUCKING |
| Spiller Address: | 1800 CORPORATE BLVD |
| Spiller Company: | 001 |
| Contact Name: | Not reported |
| DEC Memo: | Not reported |
| Remarks: | SPILL OCCURRED APPROX 2 HOURS AGO ON THE WHITESTONE BRIDGE IN QUEENS. CLEAN UP BY PENSKE AND TOWED TO ROCKAWAY QUEENS TERMINAL. |

All Materials:

| | |
|---|---|
| Site ID: | 249986 |
| Operable Unit ID: | 1080469 |
| Operable Unit: | 01 |
| Material ID: | 302297 |
| Material Code: | 0001A |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 8807410 / 1992-12-04 |
| Facility ID: | 8807410 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249977 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | A3 |
| SWIS: | 0301 |
| Spill Date: | 1988-12-07 |
| Investigator: | SIGONA |
| Referred To: | Not reported |
| Reported to Dept: | 1988-12-07 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | 1992-12-04 |
| Cleanup Meets Std: | True |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1988-12-21 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNELS |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | Not reported |
| DEC Memo: | Not reported |
| Remarks: | TEMPCO - HEATING UNIT - LEAKS INTO BOOTHS CAUSING IRRITATION, VOMITING20 PEOPLE AFFECTED, WORKERS WON'T ASK FOR UNION DELEGATE. NOTIFIED NYSDOH, DOL, NYCDOH. |

All Materials:

| | |
|---|---|
| Site ID: | 249977 |
| Operable Unit ID: | 924079 |
| Operable Unit: | 01 |
| Material ID: | 455753 |
| Material Code: | 0028A |
| Material Name: | ethylene glycol |
| Case No.: | 00107211 |
| Material FA: | Hazardous Material |
| Quantity: | .00 |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

Units: G
Recovered: .00
Resource Affected: Air
Oxygenate: Not reported

NY MANIFEST:
EPA ID: NYR000154260
Country: USA
Name: MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY
Address: 1 HUTCHINSON RIVER PKWY
Address 2: Not reported
City,State,Zip: BRONX, NY 10465-1857
Zip 4: Not reported
Location Address 1: 1 HUTCHINSON RIVER PKWY
Location Address 2: Not reported
Location City,State,Zip: BRONX, NY 10465
Location Zip 4: Not reported
Facility Status: Not reported
Total Tanks: Not reported
Code: BP

Mailing:
Mailing Name: MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY
Mailing Contact: TBTA/MTA BRIDGES & TUNNELS
Mailing Address 1: 1 HUTCHINSON RIVER PKWY
Mailing Address 2: Not reported
Mailing City,State,Zip: BRONX, NY 10465
Mailing Zip 4: Not reported
Mailing Country: USA
Mailing Phone: 2124688454

Manifest Data:
Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NJ0000027193
Year: 2018
Trans2 State ID: Not reported
Generator Ship Date: 03/03/2014
Trans1 Recv Date: 03/03/2014
Trans2 Recv Date: Not reported
TSD Site Recv Date: 03/03/2014
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000154260
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID 1: NJD002200046
TSDF ID 2: Not reported
Manifest Tracking Number: 001053507GBF
Import Indicator: N
Export Indicator: N
Discr Quantity Indicator: N
Discr Type Indicator: N
Discr Residue Indicator: N
Discr Partial Reject Indicator: N
Discr Full Reject Indicator: N

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | BENZENE |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 55 |
| Units: | Gallons (liquids only) |
| Number of Containers: | 1 |
| Container Type: | Fiberboard or plastic drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJ0000027193 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 05/24/2011 |
| Trans1 Recv Date: | 05/24/2011 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 05/24/2011 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 003534721JJK |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | BENZENE |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 55 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NYR000134957 |
| Year: | 2018 |
| Trans2 State ID: | PAD982661381 |
| Generator Ship Date: | 07/31/2013 |
| Trans1 Recv Date: | 07/31/2013 |
| Trans2 Recv Date: | 08/09/2013 |
| TSD Site Recv Date: | 08/19/2013 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | PAD085690592 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 002835527FLE |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | LEAD |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 500 |
| Units: | Pounds |
| Number of Containers: | 2 |
| Container Type: | Metal drums, barrels, kegs |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

Handling Method: Treat
Specific Gravity: 1

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NJ0000027103
Year: 2018
Trans2 State ID: Not reported
Generator Ship Date: 03/30/2016
Trans1 Recv Date: 03/30/2016
Trans2 Recv Date: Not reported
TSD Site Recv Date: 03/30/2016
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000154260
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID 1: NJD002200046
TSDF ID 2: Not reported
Manifest Tracking Number: 015626081JJK
Import Indicator: N
Export Indicator: N
Discr Quantity Indicator: N
Discr Type Indicator: N
Discr Residue Indicator: N
Discr Partial Reject Indicator: N
Discr Full Reject Indicator: N
Manifest Ref Number: Not reported
Alt Facility RCRA ID: Not reported
Alt Facility Sign Date: Not reported
MGMT Method Type Code: H110
Waste Code a: LEAD
Waste Code b: Not reported
Waste Code c: Not reported
Waste Code e: Not reported
Waste Code f: Not reported
Waste Code g: Not reported
Waste Code 1: Not reported
Waste Code 2: Not reported
Waste Code 3: Not reported
Waste Code 4: Not reported
Waste Code 5: Not reported
Waste Code 6: Not reported
Quantity: 40
Units: Pounds
Number of Containers: 1
Container Type: Metal drums, barrels, kegs
Handling Method: Treat
Specific Gravity: 1

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NJ0000027103
Year: 2018
Trans2 State ID: Not reported
Generator Ship Date: 03/30/2016
Trans1 Recv Date: 03/30/2016

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 03/30/2016 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 015626081JJK |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | MERCURY |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 4500 |
| Units: | Pounds |
| Number of Containers: | 9 |
| Container Type: | Wooden boxes, cartons, cases |
| Handling Method: | Treat |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJ0000027193 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/04/2013 |
| Trans1 Recv Date: | 11/04/2013 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/04/2013 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 010913928JJK |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H110 |
| Waste Code a: | LEAD |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 300 |
| Units: | Pounds |
| Number of Containers: | 3 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJ0000027193 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/04/2013 |
| Trans1 Recv Date: | 11/04/2013 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/04/2013 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 010913928JJK |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| MGMT Method Type Code: | H110 |
| Waste Code a: | LEAD |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 60 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Fiberboard or plastic drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJ0000027193 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/04/2013 |
| Trans1 Recv Date: | 11/04/2013 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/04/2013 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 010913928JJK |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | LEAD |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 600 |
| Units: | Pounds |
| Number of Containers: | 6 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |

---

**E23** **FARRY POINT PARK** **NY Spills** **S104952961**
**ESE** **WHITSTONE BRIDGE** **N/A**
**< 1/8** **BRONX, NY**
**0.113 mi.**
**597 ft.** **Site 2 of 3 in cluster E**

**Relative:** **Higher**
**Actual:** **32 ft.**

SPILLS:

| | |
|---|---|
| Name: | FARRY POINT PARK |
| Address: | WHITSTONE BRIDGE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0012477 / 2003-06-09 |
| Facility ID: | 0012477 |
| Facility Type: | ER |
| DER Facility ID: | 172388 |
| Site ID: | 207749 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C3 |
| SWIS: | 0301 |
| Spill Date: | 2001-02-21 |
| Investigator: | SMSANGES |
| Referred To: | Not reported |
| Reported to Dept: | 2001-02-21 |
| CID: | 270 |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Affected Persons |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2001-02-21 |
| Spill Record Last Update: | 2003-06-09 |
| Spiller Name: | CAKLLER |
| Spiller Company: | FAIRWAYS INC |
| Spiller Address: | 115 STEVENS AV |
| Spiller Company: | 001 |
| Contact Name: | CALLER |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was SANGESLAND |
| Remarks: | line broke on vehicle. clean up in progress |

All Materials:

| | |
|---|---|
| Site ID: | 207749 |
| Operable Unit ID: | 834003 |

**FARRY POINT PARK (Continued)** **S104952961**

| | |
|---|---|
| Operable Unit: | 01 |
| Material ID: | 542742 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 4.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

---

**F24** **LIBERTY MECHANICAL/CABLEVISION** **NY TANKS** **U001831844**
**NNW** **550 BRUSH AVENUE** **NY NYC LAND USE** **N/A**
**< 1/8** **BRONX, NY 10465**
**0.114 mi.**
**601 ft.** **Site 1 of 9 in cluster F**

**Relative:** **Lower**

**Actual:** **8 ft.**

TANKS:

| | |
|---|---|
| Name: | LIBERTY MECHANICAL/CABLEVISION |
| Address: | 550 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Facility Id: | 2-080799 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Program Type: | PBS |
| Expiration Date: | 03/26/2028 |
| UTM X: | 597964.87894 |
| UTM Y: | 4519189.11855 |

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 550 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Latitude: | 40.8176678 |
| Longitude: | -73.8380585 |
| Type Of Ownership Code: | Not reported |
| Owner Name: | 550 BRUSH LLC |
| Borough: | BX |
| Tax Block: | 5610 |
| Tax Lot: | 16 |
| Community District: | 210 |
| Census Tract 2020: | 2009000 |
| Census Block 2020: | 20090002019 |
| Census Tract 2010: | 90 |
| Census Block 2010: | 2014 |
| School District: | 08 |
| City Council District: | 13 |
| Fire Company: | E072 |
| Police Precinct: | 45 |
| Health Center District: | 26 |
| Health Area: | 3100 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 10 |
| Sanitation Subsection: | 3D |

**LIBERTY MECHANICAL/CABLEVISION (Continued)** **U001831844**

| | |
|---|---|
| Zoning District 1: | M1-1: Manufacturing Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | F1: FACTORY AND INDUSTRIAL BUILDINGS - Heavy Manufacturing - Fireproof |
| Land Use Category: | Industrial & Manufacturing |
| Number Of Easements: | 0 |
| Lot Area: | 106300 |
| Total Building Floor Area: | 47800 |
| Commercial Floor Area: | 47800 |
| Residential Floor Area: | 0 |
| Office Floor Area: | 1800 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 0 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 46000 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 2 |
| Number Of Floors: | 1.0000000 |
| Residential Units: | 0 |
| Total Units: | 2 |
| Lot Frontage: | 530.0000000 |
| Lot Depth: | 275.3300000 |
| Building Frontage: | 200.3300000 |
| Building Depth: | 200.0000000 |
| Extension Code: | N |
| Proximity Code: | 0 |
| Irregular Lot Code: | Y |
| Lot Type: | 3 |
| Basement Type/Grade: | 0 |
| Assessed Land Value: | 675000.00000 |
| Assessed Total Value: | 3496950.00000 |
| Exempt Total Value: | 0.00000 |
| Year Built: | 1962 |
| Year Altered 1: | 2015 |
| Year Altered 2: | 0 |
| Historic District Name: | Not reported |
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.45000000000 |
| Maximum Allowable Residential Far: | 0.00000000000 |
| Maximum Allowable Commercial Far: | 1.00000000000 |
| Maximum Allowable Community Facility Far: | 2.40000000000 |
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2056100016.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0090 |
| X Coordinate: | 1029074 |
| Y Coordinate: | 237217 |
| Zoning Map #: | 7a |

**LIBERTY MECHANICAL/CABLEVISION (Continued)** **U001831844**

| | |
|---|---|
| Zoning Map Code: | Not reported |
| Sanborn Map #: | 221 040 |
| Tax Map #: | 21809 |
| E-designation Number: | Not reported |
| Apportionment BBL: | Not reported |
| Apportionment Date: | Not reported |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | 1 |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | 1 |
| Version Number: | 24v1.1 |
| Changed By DCP: | Not reported |

---

**25**
**North**
**< 1/8**
**0.121 mi.**
**639 ft.**

**FERRY POINT PARK GOLF COURSE** **NY AST** **A100366170**
**700 HUTCHINSON RIVER PARKWAY** **N/A**
**BRONX, NY 10465**

**Relative:**
**Lower**

**Actual:**
**14 ft.**

AST:

| | |
|---|---|
| Name: | FERRY POINT PARK GOLF COURSE |
| Address: | 700 HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Facility Id: | 2-611992 |
| Program Type: | PBS |
| UTM X: | 598188.19739 |
| UTM Y: | 4519209.71831 |
| Expiration Date: | 02/15/2023 |
| Site Type: | Other |

Affiliation Records:

| | |
|---|---|
| Site Id: | 480083 |
| Affiliation Type: | Facility Owner |
| Company Name: | CITY OF NEW YORK, PARKS AND RECREATION |
| Contact Type: | GENERAL MANAGER |
| Contact Name: | BRIAN A. CROWEK |
| Address1: | 830 FIFTH AVENUE |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10021 |
| Country Code: | 001 |
| Phone: | (212) 410-8916 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-01-17 |

| | |
|---|---|
| Site Id: | 480083 |
| Affiliation Type: | Mail Contact |
| Company Name: | CITY OF NEW YORK, PARKS & RECREATION |
| Contact Type: | Not reported |
| Contact Name: | CYNTHIA LOPEZ |
| Address1: | CITYWIDE SERVICES COMPLEX |
| Address2: | 20 BRONX SHORE ROAD - RANDALLS ISLAND |
| City: | NEW YORK |

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

State: NY
Zip Code: 10035
Country Code: 001
Phone: (212) 410-8935
EMail: CYNTHIA.LOPEZ@PARKS.NYC.GOV
Fax Number: Not reported
Modified By: JSMACRI
Date Last Modified: 2023-01-17

Site Id: 480083
Affiliation Type: Emergency Contact
Company Name: CITY OF NEW YORK, PARKS AND RECREATION
Contact Type: Not reported
Contact Name: CYNTHIA LOPEZ
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (212) 410-8935
EMail: Not reported
Fax Number: Not reported
Modified By: ACDANIEL
Date Last Modified: 2023-01-13

Site Id: 480083
Affiliation Type: Facility Operator
Company Name: FERRY POINT GOLF COURSE
Contact Type: GENERAL MANAGER
Contact Name: BRIAN CROWELL
Address1: Not reported
Address2: Not reported
City: Not reported
State: NY
Zip Code: Not reported
Country Code: 001
Phone: (718) 414-1560
EMail: Not reported
Fax Number: Not reported
Modified By: ACDANIEL
Date Last Modified: 2023-01-13

Tank Info:

Tank Number: 001
Tank Id: 247593
Material Code: 2712
Common Name of Substance: Gasoline/Ethanol

Equipment Records:

G01 - Tank Secondary Containment - Diking (Aboveground)
J06 - Dispenser - Tank Mounted Dispenser
F00 - Pipe External Protection - None
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

L09 - Piping Leak Detection - Exempt Suction Piping
E00 - Piping Secondary Containment - None
C01 - Pipe Location - Aboveground
G12 - Tank Secondary Containment - Double-Walled (AG only)
I03 - Overfill - Automatic Shut-Off
D01 - Pipe Type - Steel/Carbon Steel/Iron
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating

Tank Location: Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection.
Tank Type: Steel Tank in Concrete
Tank Status: In Service
Pipe Model: Not reported
Install Date: 02/15/2013
Capacity Gallons: 1000
Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: JSMACRI
Last Modified: 01/17/2023
Material Name: gasoline/ethanol

Tank Number: 002
Tank Id: 247594
Material Code: 0008
Common Name of Substance: Diesel

Equipment Records:

F00 - Pipe External Protection - None
J06 - Dispenser - Tank Mounted Dispenser
E00 - Piping Secondary Containment - None
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
G12 - Tank Secondary Containment - Double-Walled (AG only)
C01 - Pipe Location - Aboveground
G01 - Tank Secondary Containment - Diking (Aboveground)
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
I01 - Overfill - Float Vent Valve
I03 - Overfill - Automatic Shut-Off

Tank Location: Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection.
Tank Type: Steel Tank in Concrete
Tank Status: In Service
Pipe Model: Not reported
Install Date: 02/15/2013
Capacity Gallons: 1000
Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

| | |
|---|---|
| Register: | True |
| Modified By: | JSMACRI |
| Last Modified: | 01/17/2023 |
| Material Name: | diesel |
| Tank Number: | 003 |
| Tank Id: | 248286 |
| Equipment Records: | |
| | J06 - Dispenser - Tank Mounted Dispenser |
| | F00 - Pipe External Protection - None |
| | B00 - Tank External Protection - None |
| | C00 - Pipe Location - No Piping |
| | K01 - Spill Prevention - Catch Basin |
| | E00 - Piping Secondary Containment - None |
| | L00 - Piping Leak Detection - None |
| | D00 - Pipe Type - No Piping |
| | H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G) |
| | I04 - Overfill - Product Level Gauge (A/G) |
| | G10 - Tank Secondary Containment - Impervious Underlayment |
| | A00 - Tank Internal Protection - None |
| Tank Location: | Aboveground - contact with impervious barrier... Tank bottom rests on impervious barrier, allowing visual indication of leaks. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - Removed |
| Pipe Model: | Not reported |
| Install Date: | 07/31/2012 |
| Capacity Gallons: | 500 |
| Tightness Test Method: | - |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 02/15/2013 |
| Register: | True |
| Modified By: | JSMACRI |
| Last Modified: | 01/17/2023 |
| Material Name: | diesel |
| Tank Number: | 004 |
| Tank Id: | 248287 |
| Equipment Records: | |
| | D00 - Pipe Type - No Piping |
| | H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G) |
| | L00 - Piping Leak Detection - None |
| | I04 - Overfill - Product Level Gauge (A/G) |
| | B00 - Tank External Protection - None |
| | C00 - Pipe Location - No Piping |
| | F00 - Pipe External Protection - None |
| | J06 - Dispenser - Tank Mounted Dispenser |
| | A00 - Tank Internal Protection - None |
| | G10 - Tank Secondary Containment - Impervious Underlayment |
| | E00 - Piping Secondary Containment - None |
| | K01 - Spill Prevention - Catch Basin |
| Tank Location: | Aboveground - contact with impervious barrier... Tank bottom rests on impervious barrier, allowing visual indication of leaks. |
| Tank Type: | Steel/Carbon Steel/Iron |

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

| | |
|---|---|
| Tank Status: | Closed - Removed |
| Pipe Model: | Not reported |
| Install Date: | Not reported |
| Capacity Gallons: | 500 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 04/11/2013 |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #4 fuel oil (resale/redistribute) |

| | |
|---|---|
| Tank Number: | 005 |
| Tank Id: | 248288 |

Equipment Records:

I04 - Overfill - Product Level Gauge (A/G)
D00 - Pipe Type - No Piping
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
L00 - Piping Leak Detection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
J06 - Dispenser - Tank Mounted Dispenser
E00 - Piping Secondary Containment - None
K01 - Spill Prevention - Catch Basin
A00 - Tank Internal Protection - None
G10 - Tank Secondary Containment - Impervious Underlayment

| | |
|---|---|
| Tank Location: | Aboveground - contact with impervious barrier... Tank bottom rests on impervious barrier, allowing visual indication of leaks. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - Removed |
| Pipe Model: | Not reported |
| Install Date: | Not reported |
| Capacity Gallons: | 500 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 04/11/2013 |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #2 fuel oil (resale/redistribute) |

| | |
|---|---|
| Tank Number: | 006 |
| Tank Id: | 248289 |

Equipment Records:

K01 - Spill Prevention - Catch Basin
E00 - Piping Secondary Containment - None
I04 - Overfill - Product Level Gauge (A/G)
J06 - Dispenser - Tank Mounted Dispenser
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
L00 - Piping Leak Detection - None
D00 - Pipe Type - No Piping
G10 - Tank Secondary Containment - Impervious Underlayment
A00 - Tank Internal Protection - None

| | |
|---|---|
| Tank Location: | Aboveground - contact with impervious barrier... Tank bottom rests on impervious barrier, allowing visual indication of leaks. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - Removed |
| Pipe Model: | Not reported |
| Install Date: | Not reported |
| Capacity Gallons: | 500 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 04/11/2013 |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | gasoline |

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**E26** **MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE** **RCRA-LQG** **1000141522**
**East** **1 HUTCHINSON RIVER PKWY** **E MANIFEST** **NYD982796377**
**1/8-1/4** **BRONX, NY 10465** **PA MANIFEST**
**0.129 mi.** **NJ MANIFEST**
**679 ft.** **Site 3 of 3 in cluster E**

**Relative:** **Higher**
**Actual:** **36 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20180219 |
| Handler Name: | Mta Bridge Bin 55211229 - Bronx Whitestone Bridge |
| Handler Address: | Hutchinson River Pkwy |
| Handler City,State,Zip: | BRONX, NY 10465-1857 |
| EPA ID: | NYD982796377 |
| Contact Name: | PASHKO R CAMAJ |
| Contact Address: | ROBERT MOSES BLDG RM 115D |
| Contact City,State,Zip: | NEW YORK, NY 10035 |
| Contact Telephone: | 212-360-3073 |
| Contact Fax: | 315-454-4467 |
| Contact Email: | PCAMAJ@MTABT.ORG |
| Contact Title: | SR. DIRECTOR, S&H |
| EPA Region: | 02 |
| Land Type: | State |
| Federal Waste Generator Description: | Large Quantity Generator |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Handler Activities |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | ROBERT MOSES BLDG RM 115D |
| Mailing City,State,Zip: | NEW YORK, NY 10035 |
| Owner Name: | Mta-Bridges And Tunnels |
| Owner Type: | State |
| Operator Name: | Mta Bridges And Tunnels |
| Operator Type: | State |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20220406 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Biennial: List of Years
Year: 2017

Click Here for Biennial Reporting System Data:
Year: 2011

Click Here for Biennial Reporting System Data:
Year: 2009

Click Here for Biennial Reporting System Data:
Year: 2005

Click Here for Biennial Reporting System Data:
Year: 2003

Click Here for Biennial Reporting System Data:
Year: 2001

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:

| | |
|---|---|
| Waste Code: | D000 |
| Waste Description: | Not Defined |
| Waste Code: | D001 |
| Waste Description: | Ignitable Waste |
| Waste Code: | D002 |
| Waste Description: | Corrosive Waste |
| Waste Code: | D008 |
| Waste Description: | Lead |
| Waste Code: | D018 |
| Waste Description: | Benzene |
| Waste Code: | X001 |
| Waste Description: | Not Defined |

Handler - Owner Operator:

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: MTA BRIDGES & TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19390429 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | ROBERT MOSES BUILDING |
| Owner/Operator City,State,Zip: | NEW YORK, NY 10035-5199 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: MTA BRIDGES & TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 2 BROADWAY-23RD FLOOR |
| Owner/Operator City,State,Zip: | NEW YORK, NY 10004 |
| Owner/Operator Telephone: | 646-252-7046 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: TRIBOROUGH BRIDGE & TUNNEL AUTH (TBTA) | |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MTA BRIDGES & TUNNELS
Legal Status: State
Date Became Current: 19390429
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: MTA-BRDIGES AND TUNNELS
Legal Status: State
Date Became Current: 19510101
Date Ended Current: Not reported
Owner/Operator Address: ROBERT MOSES BLDG, ROOM 115 D
Owner/Operator City,State,Zip: NEW YORK, NY 10035
Owner/Operator Telephone: 212-360-3073
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MTA BRIDGES & TUNNELS (TBTA)
Legal Status: State
Date Became Current: 19500525
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MTA BRIDGES & TUNNELS
Legal Status: State
Date Became Current: 19390429
Date Ended Current: Not reported
Owner/Operator Address: R MOSES BLG
Owner/Operator City,State,Zip: NEW YORK, NY 10035-5199
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: MTA BRIDGES & TUNNELS
Legal Status: State
Date Became Current: 19390429
Date Ended Current: Not reported
Owner/Operator Address: R MOSES BLG

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Owner/Operator City,State,Zip: | NEW YORK, NY 10035-5199 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: MTA BRIDGES & TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19390429 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | R. MOSES BLG., RANDALL'S ISLAN |
| Owner/Operator City,State,Zip: | NEW YORK, NY 10035-5199 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: MTA BRIDGES & TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: TRIBORO BRG & TUN AUTH | |
| Legal Status: | State |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | NOT REQUIRED |
| Owner/Operator City,State,Zip: | NOT REQUIRED, WY 99999 |
| Owner/Operator Telephone: | 212-555-1212 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: MTA BRIDGES AND TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19510101 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | ROBERT MOSES BUILDING, ROOM 11 |
| Owner/Operator City,State,Zip: | NEW YORK, NY 10035 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: MTA BRIDGES AND TUNNELS | |
| Legal Status: | State |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Date Became Current: 19510101
Date Ended Current: Not reported
Owner/Operator Address: ROBERT MOSES BLDG RM 11
Owner/Operator City,State,Zip: NEW YORK, NY 10035
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MTA BRIDGES & TUNNELS
Legal Status: State
Date Became Current: 19390429
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: MTA-BRIDGES AND TUNNELS
Legal Status: State
Date Became Current: 19510101
Date Ended Current: Not reported
Owner/Operator Address: ROBERT MOSES BLDG RM 115 D
Owner/Operator City,State,Zip: NEW YORK, NY 10035
Owner/Operator Telephone: 212-360-3073
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20100309
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20120305
Handler Name: NYSDOT BRONX WHITESTONE BRIDGE BIN # 55211229
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20180213
Handler Name: NYSDOT BIN 55211229 - BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 20060226
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20071210
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20180219
Handler Name: MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 19891004
Handler Name: TBTA - BRONX WHITESTONE BRIDGE

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20071211
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19920220
Handler Name: BX-WHISTONE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19940328
Handler Name: BRONX-WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19950327
Handler Name: BRONX-WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19980302
Handler Name: TBTA/BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20010101
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20020314
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20040226
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Receive Date: 20060227
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 485999
NAICS Description: ALL OTHER TRANSIT AND GROUND PASSENGER TRANSPORTATION

NAICS Code: 48849
NAICS Description: OTHER SUPPORT ACTIVITIES FOR ROAD TRANSPORTATION

Has the Facility Received Notices of Violations:
Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19970721
Actual Return to Compliance Date: 19970828
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19970821
Enforcement Identifier: 000
Date of Enforcement Action: 19970721
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: NY
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NYADS
Enforcement Responsible Sub-Organization: R2
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Final Count: | Not reported |
| Final Amount: | Not reported |
| | |
| Found Violation: | Yes |
| Agency Which Determined Violation: | EPA |
| Violation Short Description: | Generators - General |
| Date Violation was Determined: | 19960916 |
| Actual Return to Compliance Date: | 19971030 |
| Return to Compliance Qualifier: | Observed |
| Violation Responsible Agency: | EPA |
| Scheduled Compliance Date: | 19970219 |
| Enforcement Identifier: | 000 |
| Date of Enforcement Action: | 19970121 |
| Enforcement Responsible Agency: | EPA |
| Enforcement Docket Number: | Not reported |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |
| Disposition Status: | Not reported |
| Disposition Status Description: | Not reported |
| Consent/Final Order Sequence Number: | Not reported |
| Consent/Final Order Respondent Name: | Not reported |
| Consent/Final Order Lead Agency: | Not reported |
| Enforcement Type: | WRITTEN INFORMAL |
| Enforcement Responsible Person: | R2MH |
| Enforcement Responsible Sub-Organization: | RCB |
| SEP Sequence Number: | Not reported |
| SEP Expenditure Amount: | Not reported |
| SEP Scheduled Completion Date: | Not reported |
| SEP Actual Date: | Not reported |
| SEP Defaulted Date: | Not reported |
| SEP Type: | Not reported |
| SEP Type Description: | Not reported |
| Proposed Amount: | Not reported |
| Final Monetary Amount: | Not reported |
| Paid Amount: | Not reported |
| Final Count: | Not reported |
| Final Amount: | Not reported |
| | |
| Found Violation: | No |
| Agency Which Determined Violation: | Not reported |
| Violation Short Description: | Not reported |
| Date Violation was Determined: | Not reported |
| Actual Return to Compliance Date: | Not reported |
| Return to Compliance Qualifier: | Not reported |
| Violation Responsible Agency: | Not reported |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | Not reported |
| Date of Enforcement Action: | Not reported |
| Enforcement Responsible Agency: | Not reported |
| Enforcement Docket Number: | Not reported |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | Not reported |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 20090311
Actual Return to Compliance Date: 20090428
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 001
Date of Enforcement Action: 20090402
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NYACY
Enforcement Responsible Sub-Organization: R2
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 19970709
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: NYADS
Evaluation Responsible Sub-Organization: R2
Actual Return to Compliance Date: 19970828
Scheduled Compliance Date: 19970821
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19960916
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: R2MH
Evaluation Responsible Sub-Organization: RCB
Actual Return to Compliance Date: 19971030
Scheduled Compliance Date: 19970219
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20190702
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: NYSR
Evaluation Responsible Sub-Organization: R2
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20090311
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: NYACY
Evaluation Responsible Sub-Organization: R2
Actual Return to Compliance Date: 20090428
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

E MANIFEST:

| | |
|---|---|
| Manifest Tracking Number: | 015548666FLE |
| Last Updated Date: | 20210813 |
| Shipped Date: | 20210709 |
| Received Date: | 20210709 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD982796377 |
| Generator Name: | Triborough Br & Tunnel Auth Cont# Wbm-376 |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | WBM-376 BRONX WHITESTONE BR |
| Generator Mail Street 2: | Not reported |
| Generator Mail City: | QUEENS |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1857 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | 1 HUTCHINSON RIVER PKWY |
| Generator Location Street 2: | Not reported |
| Generator Location City: | BRONX |
| Generator Location Zip: | 10465 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD991291105 |
| Designated Facility Name: | Clean Earth Of North Jersey |
| Designated Facility Mail Street Number: | 105 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | JACOBUS AVE |
| Designated Facility Mail City: | KEARNY |
| Designated Facility Mail Zip: | 07032 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 105 |
| Designated Facility Location Street 1: | JACOBUS AVE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | KEARNY |
| Designated Facility Location Zip: | 07032 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | Not reported |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 017582348FLE |
| Last Updated Date: | 20220923 |
| Shipped Date: | 20220915 |
| Received Date: | 20220916 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD982796377 |
| Generator Name: | Mta Bridge Bin 55211229 - Bronx Whitestone Bridge |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRONX WHITESTONE BR |
| Generator Mail Street 2: | Not reported |
| Generator Mail City: | QUEENS |
| Generator Mail State: | NY |
| Generator Mail Zip: | 11357 |
| Generator Location Street Number: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Generator Location Street 1: | R1 HUTCHINSON RIVER PKWY |
| Generator Location Street 2: | Not reported |
| Generator Location City: | BRONX |
| Generator Location Zip: | 10465 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD991291105 |
| Designated Facility Name: | Clean Earth Of North Jersey |
| Designated Facility Mail Street Number: | 105 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | JACOBUS AVE |
| Designated Facility Mail City: | KEARNY |
| Designated Facility Mail Zip: | 07032 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 105 |
| Designated Facility Location Street 1: | JACOBUS AVE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | KEARNY |
| Designated Facility Location Zip: | 07032 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | Not reported |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

Federal Waste:

| | |
|---|---|
| Manifest Tracking Number: | 017582348FLE |
| Waste Line Number: | 1 |
| Federal Waste Code: | D008 |
| Federal Waste: | LEAD |

Transporter:

| | |
|---|---|
| Manifest Tracking Number: | 017582348FLE |
| Transporter Line Number: | 1 |
| Transporter EPA ID: | NJR986628162 |
| Transporter Name: | Iwt Transport, Inc. |

Waste Line:

| | |
|---|---|
| Manifest Tracking Number: | 017582348FLE |
| Waste Line Number: | 1 |
| U.S. DOT Hazardous Indicator: | Y |
| U.S. DOT ID Number: | NA3077 |
| U.S. DOT Description: | Na3077, Hazardous Waste, Solid N.O.S., 9, Pg Iii, Rq |
| Non-Hazardous Waste Description: | Not reported |
| Number of Containers: | 1 |
| Container Type Code: | DM |
| Container Type Description: | Metal drums, barrels, kegs |
| Waste Quantity: | 25 |
| Quantity Unit of Measure Code: | P |
| Quantity Unit of Measure Description: | Pounds |
| Waste Quantity, in Tons: | 0.0125 |
| Acute Waste Quantity, in Tons: | 0 |
| Non-Acute Waste Quantity, in Tons: | 0.0125 |
| Waste Quantity, in Kilograms: | 11.337875 |
| Acute Waste Quantity, in Kilograms: | 0 |
| Non-Acute Waste Quantity, in Kilorgrams: | 11.337875 |
| Management Method Code: | H110 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Management Method Description: | STABILIZATION |
| Waste Residue Indicator: | N |
| Quantity Discrepancy Indicator: | N |
| Waste Type Discrepancy Indicator: | N |
| Waste Density: | Not reported |
| Waste Density Unit of Measure Code: | Not reported |
| Waste Density Unit of Measure Description: | Not reported |
| Form Code: | Not reported |
| Form Code Description: | Not reported |
| Source Code: | Not reported |
| Source Code Description: | Not reported |
| Waste Minimization Code: | Not reported |
| Waste Minimization Code Description: | Not reported |
| Consent Number: | Not reported |
| EPA Waste Indicator: | Y |

PA MANIFEST:

| | |
|---|---|
| Name: | TBTA BRONX WHITESTONE BRIDGE |
| Address: | FERRY POINT PK |
| City,State,Zip: | BRONX, NY 10465 |
| Year: | 2005 |
| Manifest Number: | PAH190052 |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 05/02/2005 |
| Mailing Address: | RANDALLS ISLAND |
| Contact Name: | MIKE LEOTE |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | 05/06/2005 |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS |
| TSD Facility Address: | 2869 SANDSTONE DR |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 9 |
| Container Type: | DM |
| Waste Quantity: | 6300 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | PAD982661381 |
| Date TSP Sig: | 05/02/2005 |

| | |
|---|---|
| Year: | 2012 |
| Manifest Number: | 008770999JJK |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 03/01/2012 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | Not reported |
| TSD Date: | Not reported |
| TSD Facility Name: | Envirite of Pennsylvania Inc |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| TSD Facility Address: | 730 Vogelsong Rd |
| TSD Facility City: | York |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 2 |
| Container Type: | DM |
| Waste Quantity: | 325 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | PAD010154045 |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2010 |
| Manifest Number: | 000390295JJK |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 12/06/2010 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD010154045 |
| TSD Date: | Not reported |
| TSD Facility Name: | ENVIRITE OF PENNSYLVANIA INC |
| TSD Facility Address: | 730 VOGELSONG ROAD |
| TSD Facility City: | YORK |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 1 |
| Container Type: | CM |
| Waste Quantity: | 15 |
| Unit: | Y |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2010 |
| Manifest Number: | 003196917FLE |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 03/08/2010 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | Not reported |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS OF PA INC |
| TSD Facility Address: | 2869 SANDSTONE DRIVE |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 1 |
| Container Type: | DM |
| Waste Quantity: | 20 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2011 |
| Manifest Number: | 007637374JJK |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 03/09/2011 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD010154045 |
| TSD Date: | Not reported |
| TSD Facility Name: | ENVIRITE OF PENNSYLVANIA INC |
| TSD Facility Address: | 730 VOGELSONG ROAD |
| TSD Facility City: | YORK |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 5 |
| Container Type: | DM |
| Waste Quantity: | 1600 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2007 |
| Manifest Number: | 002131872JJK |
| Manifest Type: | Not reported |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 01/11/2007 |
| Mailing Address: | Not reported |
| Contact Name: | MIKE LEOTE |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | Not reported |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS OF PA INC |
| TSD Facility Address: | 2869 SANDSTONE DRIVE |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 1 |
| Container Type: | DM |
| Waste Quantity: | 100 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2006 |
| Manifest Number: | 002124737JJK |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 11/20/2006 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | Not reported |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | Not reported |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS OF PA INC |
| TSD Facility Address: | 2869 SANDSTONE DRIVE |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | 212-360-2853 |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 20 |
| Container Type: | DM |
| Waste Quantity: | 16000 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2006 |
| Manifest Number: | PAH290693 |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 07/26/2006 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | Not reported |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | Not reported |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS OF PA INC |
| TSD Facility Address: | 2869 SANDSTONE DRIVE |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | 212-360-2853 |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 14 |
| Container Type: | DM |
| Waste Quantity: | 11200 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

NJ MANIFEST:

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Name: | TBTA-BRONX-WHITESTONE BRIDGE |
| Address: | FERRY POINT PARK |
| City,State,Zip: | BRONX, NY 10465 |
| County: | Not reported |
| Mailing Address: | 10 COLUMBUX CIR |
| Mailing City,State,Zip: | NEW YORK 10019 |
| Telephone: | 2124688454 |
| Emergency Telephone: | Not reported |
| Contact: | Not reported |
| Comments: | Not reported |
| SIC Code: | Not reported |
| County: | 00 |
| Municipal: | 00 |
| Previous EPAID: | Not reported |
| Generator Flag: | X |
| Transporter Flag: | Not reported |
| TSDF Flag: | Not reported |
| Name Change: | Not reported |
| Date Change: | 000000 |

Manifest Data:

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000457153WAS |
| Date Shipped: | 12/23/2011 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | H111 |
| Quantity: | 200.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000201007WAS |
| Date Shipped: | 11/11/2008 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 11/11/2008 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 11/12/2008 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Waste Code: | D008 |
| Hand Code: | H111 |
| Quantity: | 23100 |
| Unit: | P |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000892223JJK |
| Date Shipped: | 02/13/2009 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 02/13/2009 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 02/13/2009 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | H141 |
| Quantity: | 15 |
| Unit: | G |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | NJA5006929 |
| Date Shipped: | 03/03/2004 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 03/03/2004 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 03/03/2004 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | 03300425 |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000198563WAS |
| Date Shipped: | 07/31/2009 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 07/31/2009 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 07/31/2009 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | F003 |
| Hand Code: | H061 |
| Quantity: | 385 |
| Unit: | G |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000201195WAS |
| Date Shipped: | 03/04/2009 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 03/04/2009 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 03/04/2009 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | H111 |
| Quantity: | 2700 |
| Unit: | P |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 003536100JJK |
| Date Shipped: | 06/05/2009 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 06/05/2009 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 06/05/2009 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | H061 |
| Quantity: | 55 |
| Unit: | G |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000196516WAS |
| Date Shipped: | 10/02/2008 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 10/02/2008 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 10/03/2008 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | F003 |
| Hand Code: | H061 |
| Quantity: | 275 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Unit: G

EPA ID: NYD982796377
Manifest Number: 009406226FLE
Date Shipped: 1/13/2017
TSDF EPA ID: NJD991291105
Transporter EPA ID: NJR986628162
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: Not reported
Date Trans2 Transported Waste: Not reported
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: Not reported
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: Not reported
Reason Load Was Rejected: Not reported

EPA ID: NYD982796377
Manifest Number: 009406257FLE
Date Shipped: 1/27/2017
TSDF EPA ID: NJD991291105
Transporter EPA ID: NJR986628162
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000422445WAS |
| Date Shipped: | 8/23/2011 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | H111 |
| Quantity: | 200.00 |
| Unit: | Pounds |

Click this hyperlink while viewing on your computer to access
23 additional NJ MANIFEST: record(s) in the EDR Site Report.

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**F27** **545 BRUSH AVE/BX/U.P.S** **NY LTANKS** **S100145768**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **NEW YORK CITY, NY**
**0.131 mi.**
**694 ft.** **Site 2 of 9 in cluster F**

**Relative:**
**Lower**

**Actual:**
**5 ft.**

LTANKS:

| | |
|---|---|
| Name: | 545 BRUSH AVE/BX/U.P.S |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | NEW YORK CITY, NY |
| Spill Number/Closed Date: | 8909242 / 2003-02-27 |
| Facility ID: | 8909242 |
| Site ID: | 138397 |
| Spill Date: | 1989-12-20 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | C4 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | TOMASELLO |
| Referred To: | Not reported |
| Reported to Dept: | 1989-12-20 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1990-01-24 |
| Spill Record Last Update: | 2004-02-09 |
| Spiller Name: | Not reported |
| Spiller Company: | Not reported |

**545 BRUSH AVE/BX/U.P.S (Continued)** **S100145768**

| | |
|---|---|
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 118343 |
| DEC Memo: | Not reported |
| Remarks: | 1K TANK FAILED TANK AUDITOR WITH LEAK RATE OF -0.971GPH, OWNER WILL ACCESS SITUATION, TANK MAY HAVE TO BE PULLED. |

All TTF:

| | |
|---|---|
| Facility ID: | 8909242 |
| Spill Number: | 8909242 |
| Spill Tank Test: | 1536600 |
| Site ID: | 138397 |
| Tank Number: | Not reported |
| Tank Size: | 0 |
| Material: | 0001 |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 00 |
| Test Method 2: | Unknown |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 138397 |
| Operable Unit ID: | 936424 |
| Operable Unit: | 01 |
| Material ID: | 442414 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | -1.00 |
| Units: | L |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

---

**28**
**SSW**
**1/8-1/4**
**0.138 mi.**
**728 ft.**

**FERRY POINT PARK** **NY SWF/LF** **S126022942**
**10 HUTCHINSON ROVER PKWY, PENINSULA PROJECTING INTO THE EAST** **NY ILI** **N/A**
**BRONX, NY**

**Relative:**
**Lower**

**Actual:**
**12 ft.**

SWF/LF:

| | |
|---|---|
| Name: | FERRY POINT PARK |
| Address: | 10 HUTCHINSON ROVER PKWY, PENINSULA PROJECTING INTO THE EAST RIVER ROUGHLY OPPOSITE TH |
| City,State,Zip: | BRONX, NY |
| Flag: | INACTIVE |
| Region Code: | 2 |

**FERRY POINT PARK (Continued)** **S126022942**

| | |
|---|---|
| Phone Number: | Not reported |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | MSW |
| Activity Number: | Not reported |
| Active: | Not reported |
| East Coordinate: | Not reported |
| North Coordinate: | Not reported |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | Not reported |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

ILI:

| | |
|---|---|
| Name: | FERRY POINT PARK |
| Address: | 10 HUTCHINSON ROVER PKWY, PENINSULA PROJECTING INTO THE EAST RIVER ROUGHLY OPPOSITE THE COLLEGE POINT AND MALBA NEIGHBORHOODS OF QUEEN |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.809072 |
| Longitude: | -73.837238 |
| Region: | 2 |
| SWID: | 03S01 |
| NY Inactive List: | Not reported |
| Inactive Reg Number: | Not reported |
| Alternative Facility Names: | Not reported |
| Removed: | Not reported |
| Why Removed: | Not reported |
| Location Accuracy: | Not reported |
| Date Of Last Inspection: | 15-Aug-18 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Authorization: | Not reported |
| Number: | Not reported |
| Issue Date: | Not reported |

**FERRY POINT PARK (Continued)** **S126022942**

| | |
|---|---|
| Expiration Date: | Not reported |
| Start Date: | 1945 |
| Stop Date: | 1965 |
| Landfill Type: | MSW |

---

**F29** **UNITED PARCEL SERVICE** **RCRA-SQG** **1000398442**
**NNW** **BRUSH AVE** **NY CBS AST** **NYD986900728**
**1/8-1/4** **BRONX, NY 10465** **E MANIFEST**
**0.148 mi.** **NY MANIFEST**
**779 ft.** **Site 3 of 9 in cluster F** **NJ MANIFEST**

**Relative:** **Lower**
**Actual:** **5 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20221221 |
| Handler Name: | United Parcel Service - Brush Avenue (Nybru) |
| Handler Address: | Brush Ave |
| Handler City,State,Zip: | BRONX, NY 10465 |
| EPA ID: | NYD986900728 |
| Contact Name: | MILLER PONTON |
| Contact Address: | OAK ST |
| Contact City,State,Zip: | UNIONDALE, NY 11553 |
| Contact Telephone: | 631-316-3854 |
| Contact Fax: | Not reported |
| Contact Email: | MPONTON@UPS.COM |
| Contact Title: | CORPORATE ENVIRONMENTAL COORDINATOR |
| EPA Region: | 02 |
| Land Type: | Private |
| Federal Waste Generator Description: | Small Quantity Generator |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Handler Activities |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | OAK ST |
| Mailing City,State,Zip: | UNIONDALE, NY 11553 |
| Owner Name: | 535 Brush Avenue Llc |
| Owner Type: | Private |
| Operator Name: | United Parcel Service |
| Operator Type: | Private |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20221223 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Hazardous Waste Summary:

| | |
|---|---|
| Waste Code: | D001 |
| Waste Description: | Ignitable Waste |
| Waste Code: | D002 |
| Waste Description: | Corrosive Waste |
| Waste Code: | D003 |
| Waste Description: | Reactive Waste |
| Waste Code: | D007 |
| Waste Description: | Chromium |
| Waste Code: | D011 |
| Waste Description: | Silver |
| Waste Code: | D018 |
| Waste Description: | Benzene |
| Waste Code: | D019 |
| Waste Description: | Carbon Tetrachloride |
| Waste Code: | D021 |
| Waste Description: | Chlorobenzene |
| Waste Code: | D026 |
| Waste Description: | Cresol |
| Waste Code: | D028 |
| Waste Description: | 1,2-Dichloroethane |
| Waste Code: | D035 |
| Waste Description: | Methyl Ethyl Ketone |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Waste Code: D039
Waste Description: Tetrachloroethylene

Waste Code: NONE
Waste Description: Not Defined

Waste Code: P075
Waste Description: Nicotine, & Salts (Or) Pyridine, 3-(1-Methyl-2-Pyrrolidinyl)-,(S)-, & Salts

Waste Code: U080
Waste Description: Methane, Dichloro- (Or) Methylene Chloride

Waste Code: U112
Waste Description: Acetic Acid, Ethyl Ester (I) (Or) Ethyl Acetate (I)

Waste Code: U122
Waste Description: Formaldehyde

Waste Code: U134
Waste Description: Hydrofluoric Acid (C,T) (Or) Hydrogen Fluoride (C,T)

Waste Code: U154
Waste Description: Methanol (I) (Or) Methyl Alcohol (I)

Waste Code: U162
Waste Description: 2-Propenoic Acid, 2-Methyl-, Methyl Ester (I,T) (Or) Methyl Methacrylate (I,T)

Waste Code: U213
Waste Description: Furan, Tetrahydro-(I) (Or) Tetrahydrofuran (I)

Waste Code: U220
Waste Description: Benzene, Methyl- (Or) Toluene

Waste Code: U239
Waste Description: Benzene, Dimethyl- (I,T) (Or) Xylene (I)

Waste Code: U240
Waste Description: 2,4-D, Salts & Esters (Or) Acetic Acid, (2,4-Dichlorophenoxy)-, Salts & Esters (Or) Dichlorophenoxyacetic Acid 2,4-D

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: EMANUL CIMINELLO JR
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: NOT REQUIRED
Owner/Operator City,State,Zip: NOT REQUIRED, WY 99999
Owner/Operator Telephone: 212-555-1212
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: EMANUL CIMINELLO JR

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | NOT REQUIRED |
| Owner/Operator City,State,Zip: | NOT REQUIRED, WY 99999 |
| Owner/Operator Telephone: | 212-555-1212 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: UNITED PARCEL SERVICE | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 55 GLENLAKE PKWY NE |
| Owner/Operator City,State,Zip: | ATLANTA, GA 30328 |
| Owner/Operator Telephone: | 551-255-6818 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | CEGOMEZ@UPS.COM |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: UNITED PARCEL SERVICE | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 55 GLENLAKE PKWY NE |
| Owner/Operator City,State,Zip: | ATLANTA, GA 30328 |
| Owner/Operator Telephone: | 631-316-3854 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | MPONTON@UPS.COM |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: EMANUL CIMINELLO JR | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | NOT REQUIRED |
| Owner/Operator City,State,Zip: | NOT REQUIRED, WY 99999 |
| Owner/Operator Telephone: | 212-555-1212 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: 535 BRUSH AVENUE LLC | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 1208 WYATT STREET |
| Owner/Operator City,State,Zip: | BRONX, NY 10460 |
| Owner/Operator Telephone: | 718-828-7272 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: 535 BRUSH AVENUE LLC | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 1208 WYATT ST |
| Owner/Operator City,State,Zip: | BRONX, NY 10460 |
| Owner/Operator Telephone: | 718-828-7272 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

Historic Generators:

| | |
|---|---|
| Receive Date: | 19950418 |
| Handler Name: UNITED PARCEL SERVICE | |
| Federal Waste Generator Description: | Conditionally Exempt Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20060101 |
| Handler Name: UNITED PARCEL SERVICE | |
| Federal Waste Generator Description: | Conditionally Exempt Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20070101 |
| Handler Name: UNITED PARCEL SERVICE | |
| Federal Waste Generator Description: | Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 19900517 |
| Handler Name: UNITED PARCEL SERVICE | |
| Federal Waste Generator Description: | Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20220324 |
| Handler Name: | UNITED PARCEL SERVICE - BRUSH AVENUE (NYBRU) |
| Federal Waste Generator Description: | Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | No |
| Electronic Manifest Broker: | No |

| | |
|---|---|
| Receive Date: | 20221221 |
| Handler Name: | UNITED PARCEL SERVICE - BRUSH AVENUE (NYBRU) |
| Federal Waste Generator Description: | Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | Yes |
| Non Storage Recycler Activity: | No |
| Electronic Manifest Broker: | No |

List of NAICS Codes and Descriptions:

| | |
|---|---|
| NAICS Code: | 492110 |
| NAICS Description: | COURIERS AND EXPRESS DELIVERY SERVICES |

Has the Facility Received Notices of Violations:

| | |
|---|---|
| Found Violation: | Yes |
| Agency Which Determined Violation: | EPA |
| Violation Short Description: | Generators - Pre-transport |
| Date Violation was Determined: | 20220215 |
| Actual Return to Compliance Date: | 20221019 |
| Return to Compliance Qualifier: | Documented |
| Violation Responsible Agency: | EPA |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | 999 |
| Date of Enforcement Action: | 20220928 |
| Enforcement Responsible Agency: | EPA |
| Enforcement Docket Number: | 06-2022-0942 |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:67
Consent/Final Order Respondent Name: Ups
Consent/Final Order Lead Agency: 0
Enforcement Type: MULTI SITE CA/FO
Enforcement Responsible Person: CAFO
Enforcement Responsible Sub-Organization: R06
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: EPA
Violation Short Description: LDR - General
Date Violation was Determined: 20220215
Actual Return to Compliance Date: 20221019
Return to Compliance Qualifier: Documented
Violation Responsible Agency: EPA
Scheduled Compliance Date: Not reported
Enforcement Identifier: 999
Date of Enforcement Action: 20220928
Enforcement Responsible Agency: EPA
Enforcement Docket Number: 06-2022-0942
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:67
Consent/Final Order Respondent Name: Ups
Consent/Final Order Lead Agency: 0
Enforcement Type: MULTI SITE CA/FO
Enforcement Responsible Person: CAFO
Enforcement Responsible Sub-Organization: R06
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Final Amount: | Not reported |
| | |
| Found Violation: | Yes |
| Agency Which Determined Violation: | EPA |
| Violation Short Description: | Generators - General |
| Date Violation was Determined: | 20220215 |
| Actual Return to Compliance Date: | 20221019 |
| Return to Compliance Qualifier: | Documented |
| Violation Responsible Agency: | EPA |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | 999 |
| Date of Enforcement Action: | 20220928 |
| Enforcement Responsible Agency: | EPA |
| Enforcement Docket Number: | 06-2022-0942 |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |
| Disposition Status: | Not reported |
| Disposition Status Description: | Not reported |
| Consent/Final Order Sequence Number: | 67 |
| Consent/Final Order Respondent Name: | Ups |
| Consent/Final Order Lead Agency: | 0 |
| Enforcement Type: | MULTI SITE CA/FO |
| Enforcement Responsible Person: | CAFO |
| Enforcement Responsible Sub-Organization: | R06 |
| SEP Sequence Number: | Not reported |
| SEP Expenditure Amount: | Not reported |
| SEP Scheduled Completion Date: | Not reported |
| SEP Actual Date: | Not reported |
| SEP Defaulted Date: | Not reported |
| SEP Type: | Not reported |
| SEP Type Description: | Not reported |
| Proposed Amount: | Not reported |
| Final Monetary Amount: | Not reported |
| Paid Amount: | Not reported |
| Final Count: | Not reported |
| Final Amount: | Not reported |
| | |
| Found Violation: | Yes |
| Agency Which Determined Violation: | EPA |
| Violation Short Description: | Generators - Manifest |
| Date Violation was Determined: | 20220215 |
| Actual Return to Compliance Date: | 20221019 |
| Return to Compliance Qualifier: | Documented |
| Violation Responsible Agency: | EPA |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | 999 |
| Date of Enforcement Action: | 20220928 |
| Enforcement Responsible Agency: | EPA |
| Enforcement Docket Number: | 06-2022-0942 |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:67
Consent/Final Order Respondent Name: Ups
Consent/Final Order Lead Agency: 0
Enforcement Type: MULTI SITE CA/FO
Enforcement Responsible Person: CAFO
Enforcement Responsible Sub-Organization: R06
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19930302
Actual Return to Compliance Date: 19930524
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19930526
Enforcement Identifier: 000
Date of Enforcement Action: 19930511
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: NY
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NYADS
Enforcement Responsible Sub-Organization: R2
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Final Amount: | Not reported |
| | |
| Found Violation: | Yes |
| Agency Which Determined Violation: | State |
| Violation Short Description: | Generators - General |
| Date Violation was Determined: | 19930302 |
| Actual Return to Compliance Date: | 19930524 |
| Return to Compliance Qualifier: | Observed |
| Violation Responsible Agency: | State |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | 000 |
| Date of Enforcement Action: | 19930302 |
| Enforcement Responsible Agency: | State |
| Enforcement Docket Number: | Not reported |
| Enforcement Attorney: | NY |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |
| Disposition Status: | Not reported |
| Disposition Status Description: | Not reported |
| Consent/Final Order Sequence Number: | Not reported |
| Consent/Final Order Respondent Name: | Not reported |
| Consent/Final Order Lead Agency: | Not reported |
| Enforcement Type: | WRITTEN INFORMAL |
| Enforcement Responsible Person: | NYADS |
| Enforcement Responsible Sub-Organization: | R2 |
| SEP Sequence Number: | Not reported |
| SEP Expenditure Amount: | Not reported |
| SEP Scheduled Completion Date: | Not reported |
| SEP Actual Date: | Not reported |
| SEP Defaulted Date: | Not reported |
| SEP Type: | Not reported |
| SEP Type Description: | Not reported |
| Proposed Amount: | Not reported |
| Final Monetary Amount: | Not reported |
| Paid Amount: | Not reported |
| Final Count: | Not reported |
| Final Amount: | Not reported |
| | |
| Found Violation: | No |
| Agency Which Determined Violation: | Not reported |
| Violation Short Description: | Not reported |
| Date Violation was Determined: | Not reported |
| Actual Return to Compliance Date: | Not reported |
| Return to Compliance Qualifier: | Not reported |
| Violation Responsible Agency: | Not reported |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | Not reported |
| Date of Enforcement Action: | Not reported |
| Enforcement Responsible Agency: | Not reported |
| Enforcement Docket Number: | Not reported |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | Not reported |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: EPA
Violation Short Description: Generators - Records/Reporting
Date Violation was Determined: 20220215
Actual Return to Compliance Date: 20221019
Return to Compliance Qualifier: Documented
Violation Responsible Agency: EPA
Scheduled Compliance Date: Not reported
Enforcement Identifier: 999
Date of Enforcement Action: 20220928
Enforcement Responsible Agency: EPA
Enforcement Docket Number: 06-2022-0942
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: 67
Consent/Final Order Respondent Name: Ups
Consent/Final Order Lead Agency: 0
Enforcement Type: MULTI SITE CA/FO
Enforcement Responsible Person: CAFO
Enforcement Responsible Sub-Organization: R06
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Final Amount: Not reported

Evaluation Action Summary:

Evaluation Date: 20220115
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: CAFO
Evaluation Responsible Sub-Organization: R06
Actual Return to Compliance Date: 20221019
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20220115
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: CAFO
Evaluation Responsible Sub-Organization: R06
Actual Return to Compliance Date: 20221019
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20220115
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: CAFO
Evaluation Responsible Sub-Organization: R06
Actual Return to Compliance Date: 20221019
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20220115
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: CAFO
Evaluation Responsible Sub-Organization: R06
Actual Return to Compliance Date: 20221019
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19930105
Evaluation Responsible Agency: State

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Found Violation: | Yes |
| Evaluation Type Description: | COMPLIANCE EVALUATION INSPECTION |
| Evaluation Responsible Person Identifier: | NYADS |
| Evaluation Responsible Sub-Organization: | R2 |
| Actual Return to Compliance Date: | 19930524 |
| Scheduled Compliance Date: | 19930526 |
| Date of Request: | Not reported |
| Date Response Received: | Not reported |
| Request Agency: | Not reported |
| Former Citation: | Not reported |

| | |
|---|---|
| Evaluation Date: | 19930105 |
| Evaluation Responsible Agency: | State |
| Found Violation: | Yes |
| Evaluation Type Description: | COMPLIANCE EVALUATION INSPECTION |
| Evaluation Responsible Person Identifier: | NYADS |
| Evaluation Responsible Sub-Organization: | R2 |
| Actual Return to Compliance Date: | 19930524 |
| Scheduled Compliance Date: | Not reported |
| Date of Request: | Not reported |
| Date Response Received: | Not reported |
| Request Agency: | Not reported |
| Former Citation: | Not reported |

| | |
|---|---|
| Evaluation Date: | 20100615 |
| Evaluation Responsible Agency: | State |
| Found Violation: | No |
| Evaluation Type Description: | COMPLIANCE EVALUATION INSPECTION |
| Evaluation Responsible Person Identifier: | NYACY |
| Evaluation Responsible Sub-Organization: | R2 |
| Actual Return to Compliance Date: | Not reported |
| Scheduled Compliance Date: | Not reported |
| Date of Request: | Not reported |
| Date Response Received: | Not reported |
| Request Agency: | Not reported |
| Former Citation: | Not reported |

| | |
|---|---|
| Evaluation Date: | 20220115 |
| Evaluation Responsible Agency: | EPA |
| Found Violation: | Yes |
| Evaluation Type Description: | NON-FINANCIAL RECORD REVIEW |
| Evaluation Responsible Person Identifier: | CAFO |
| Evaluation Responsible Sub-Organization: | R06 |
| Actual Return to Compliance Date: | 20221019 |
| Scheduled Compliance Date: | Not reported |
| Date of Request: | Not reported |
| Date Response Received: | Not reported |
| Request Agency: | Not reported |
| Former Citation: | Not reported |

CBS AST:

| | |
|---|---|
| CBS Number: | 2-000341 |
| ICS Number: | Not reported |
| PBS Number: | 2-601299 |
| MOSF Number: | Not reported |
| SPDES Number: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Facility Status: | IN SERVICE |
| Facility Type: | I |
| Telephone: | (718) 828-8014 |
| Facility Town: | NEW YORK CITY |
| Region: | STATE |
| Expiration Date: | 03/11/2004 |
| Total Capacity of All Active Tanks(gal): | 400 |
| Operator: | MARK MERCHANT |
| Emergency Contact: | PAUL VETRANO |
| Emergency Phone: | (718) 706-3121 |
| Owner Name: | UNITED PARCEL SERVICE |
| Owner Address: | 46-05 56 ROAD |
| Owner City,St,Zip: | MASPETH, NY 11378 |
| Owner Telephone: | (718) 706-3105 |
| Owner Type: | Corporate/Commercial |
| Owner Sub Type: | Not reported |
| Mail Name: | UNITED PARCEL SERVICE |
| Mail Contact Addr: | 46-05 56 ROAD |
| Mail Contact Addr2: | Not reported |
| Mail Contact Contact: | PLANT ENGINEERING |
| Mail Contact City,St,Zip: | MASPETH, NY 11378 |
| Mail Phone: | (718) 706-3105 |

| | |
|---|---|
| Tank Id: | 005D |
| CAS Number: | 107211 |
| Federal ID: | Not reported |
| Tank Status: | In Service |
| Install Date: | 09/95 |
| Tank Closed: | Not reported |
| Capacity (Gal): | 200 |
| Chemical: | Ethylene glycol |
| Tank Location: | Indoors, Belowground |
| Tank Type: | Steel/carbon steel |
| Total Tanks: | 2 |
| Tank Secret: | False |
| Tank Secondary Containment: | None |
| Tank Error Status: | No Missing Data |
| Date Entered: | 03/10/1998 |
| Certified Date: | 12/20/2001 |
| Substance: | Single Hazardous Substance on DEC List |
| Internal Protection: | None |
| External Protection: | None,Painted/Asphalt Coating |
| Pipe Location: | Aboveground |
| Pipe Type: | Steel/Iron |
| Pipe Internal: | None |
| Pipe External: | 00 |
| Pipe Flag: | 00 |
| Leak Detection: | 00 |
| Overfill Protection: | 04 |
| Haz Percent: | 50 |
| Last Test: | Not reported |
| Due Date: | Not reported |
| SWIS Code: | 6001 |
| Lat/Long: | Not reported |
| Is Updated: | False |
| Renew Date: | Not reported |
| Is It There: | False |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Delinquent: | False |
| Date Expired: | Not reported |
| Owner Mark: | 1 |
| Certificate Needs to be Printed: | False |
| Fiscal Amt for Registration Fee Correct: | True |
| Renewal Has Been Printed for Facility: | True |
| Pre-Printed Renewal App Last Printed: | 11/27/2001 |

| | |
|---|---|
| Tank Id: | 005C |
| CAS Number: | 107211 |
| Federal ID: | Not reported |
| Tank Status: | In Service |
| Install Date: | 09/95 |
| Tank Closed: | Not reported |
| Capacity (Gal): | 200 |
| Chemical: | Ethylene glycol |
| Tank Location: | Indoors, Belowground |
| Tank Type: | Steel/carbon steel |
| Total Tanks: | 2 |
| Tank Secret: | False |
| Tank Secondary Containment: | None |
| Tank Error Status: | No Missing Data |
| Date Entered: | 03/10/1998 |
| Certified Date: | 12/20/2001 |
| Substance: | Single Hazardous Substance on DEC List |
| Internal Protection: | None |
| External Protection: | None,Painted/Asphalt Coating |
| Pipe Location: | Aboveground |
| Pipe Type: | Steel/Iron |
| Pipe Internal: | None |
| Pipe External: | 00 |
| Pipe Flag: | 00 |
| Leak Detection: | 00 |
| Overfill Protection: | 04 |
| Haz Percent: | 50 |
| Last Test: | Not reported |
| Due Date: | Not reported |
| SWIS Code: | 6001 |
| Lat/Long: | Not reported |
| Is Updated: | False |
| Renew Date: | Not reported |
| Is It There: | False |
| Delinquent: | False |
| Date Expired: | Not reported |
| Owner Mark: | 1 |
| Certificate Needs to be Printed: | False |
| Fiscal Amt for Registration Fee Correct: | True |
| Renewal Has Been Printed for Facility: | True |
| Pre-Printed Renewal App Last Printed: | 11/27/2001 |

E MANIFEST:

| | |
|---|---|
| Manifest Tracking Number: | 001211496VES |
| Last Updated Date: | 20190228 |
| Shipped Date: | 20190219 |
| Received Date: | 20190220 |
| Manifest Status: | Signed |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | 1 EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | 1 EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |
| | |
| Manifest Tracking Number: | 001892719VES |
| Last Updated Date: | 20230103 |
| Shipped Date: | 20221213 |
| Received Date: | 20221216 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 002070694VES |
| Last Updated Date: | 20220103 |
| Shipped Date: | 20211208 |
| Received Date: | 20211210 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Manifest Tracking Number: | 001301805VES |
| Last Updated Date: | 20190627 |
| Shipped Date: | 20190617 |
| Received Date: | 20190619 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | 1 EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | 1 EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001307667VES |
| Last Updated Date: | 20210623 |
| Shipped Date: | 20210617 |
| Received Date: | 20210617 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001670332VES |
| Last Updated Date: | 20200316 |
| Shipped Date: | 20200303 |
| Received Date: | 20200304 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001670443VES |
| Last Updated Date: | 20200613 |
| Shipped Date: | 20200601 |
| Received Date: | 20200605 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001672071VES |
| Last Updated Date: | 20210106 |
| Shipped Date: | 20201210 |
| Received Date: | 20201214 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001672227VES |
| Last Updated Date: | 20210409 |
| Shipped Date: | 20210325 |
| Received Date: | 20210331 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001676379VES |
| Last Updated Date: | 20200925 |
| Shipped Date: | 20200921 |
| Received Date: | 20200923 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001982310VES |
| Last Updated Date: | 20220624 |
| Shipped Date: | 20220620 |
| Received Date: | 20220620 |
| Manifest Status: | Signed |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

Federal Waste:

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 1 |
| Federal Waste Code: | D001 |
| Federal Waste: | IGNITABLE WASTE |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 1 |
| Federal Waste Code: | D018 |
| Federal Waste: | BENZENE |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 1 |
| Federal Waste Code: | D019 |
| Federal Waste: | CARBON TETRACHLORIDE |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 1 |
| Federal Waste Code: | D021 |
| Federal Waste: | CHLOROBENZENE |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Waste Line Number: 1
Federal Waste Code: D028
Federal Waste: 1,2-DICHLOROETHANE

Manifest Tracking Number: 001219427VES
Waste Line Number: 1
Federal Waste Code: D029
Federal Waste: 1,1-DICHLOROETHYLENE

Manifest Tracking Number: 001219427VES
Waste Line Number: 1
Federal Waste Code: D035
Federal Waste: METHYL ETHYL KETONE

Manifest Tracking Number: 001219427VES
Waste Line Number: 1
Federal Waste Code: D039
Federal Waste: TETRACHLOROETHYLENE

Manifest Tracking Number: 001219427VES
Waste Line Number: 1
Federal Waste Code: D040
Federal Waste: TRICHLORETHYLENE

Manifest Tracking Number: 001219427VES
Waste Line Number: 2
Federal Waste Code: D001
Federal Waste: IGNITABLE WASTE

Manifest Tracking Number: 001219427VES
Waste Line Number: 2
Federal Waste Code: U154
Federal Waste: METHANOL (I) (OR) METHYL ALCOHOL (I)

Manifest Tracking Number: 001219427VES
Waste Line Number: 3
Federal Waste Code: D001
Federal Waste: IGNITABLE WASTE

Manifest Tracking Number: 001219427VES
Waste Line Number: 3
Federal Waste Code: D018
Federal Waste: BENZENE

Manifest Tracking Number: 001219427VES
Waste Line Number: 4
Federal Waste Code: D001
Federal Waste: IGNITABLE WASTE

State Waste:
Manifest Tracking Number: 001219427VES
Waste Line Number: 1
State Waste Code Owner: NY
State Waste Code: B
State Waste: Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Manifest Tracking Number: 001219427VES
Waste Line Number: 2
State Waste Code Owner: NY
State Waste Code: B
State Waste: Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only

Manifest Tracking Number: 001219427VES
Waste Line Number: 3
State Waste Code Owner: NY
State Waste Code: B
State Waste: Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only

Manifest Tracking Number: 001219427VES
Waste Line Number: 4
State Waste Code Owner: NY
State Waste Code: B
State Waste: Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only

Transporter:
Manifest Tracking Number: 001219427VES
Transporter Line Number: 1
Transporter EPA ID: NJD080631369
Transporter Name: Veolia Es Technical Solutions

Waste Line:
Manifest Tracking Number: 001219427VES
Waste Line Number: 1
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1950
U.S. DOT Description: Un1950, Waste Aerosols, Flammable,(Each Not Exceeding 1l Capacity), 2.1, Rq (D001), Limited Quantity
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 140
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.07
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.07
Waste Quantity, in Kilograms: 63.492104
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 63.492104
Management Method Code: H141
Management Method Description: STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y

Manifest Tracking Number: 001219427VES
Waste Line Number: 2
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1993
U.S. DOT Description: Un1993, Waste Flammable Liquids, N.O.S., (Methanol), 3, Ii
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 120
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.06
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.06
Waste Quantity, in Kilograms: 54.4218
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 54.4218
Management Method Code: H141
Management Method Description: STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y

Manifest Tracking Number: 001219427VES
Waste Line Number: 3
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1203
U.S. DOT Description: Un1203, Waste Gasoline Mixture, 3, Ii, Rq (D001, D018)
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 290
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.145
Acute Waste Quantity, in Tons: 0

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Non-Acute Waste Quantity, in Tons: | 0.145 |
| Waste Quantity, in Kilograms: | 131.51935 |
| Acute Waste Quantity, in Kilograms: | 0 |
| Non-Acute Waste Quantity, in Kilorgrams: | 131.51935 |
| Management Method Code: | H141 |
| Management Method Description: | STORAGE, BULKING AND/OR TRANSFER OFF SITE |
| Waste Residue Indicator: | N |
| Quantity Discrepancy Indicator: | N |
| Waste Type Discrepancy Indicator: | N |
| Waste Density: | Not reported |
| Waste Density Unit of Measure Code: | Not reported |
| Waste Density Unit of Measure Description: | Not reported |
| Form Code: | Not reported |
| Form Code Description: | Not reported |
| Source Code: | Not reported |
| Source Code Description: | Not reported |
| Waste Minimization Code: | Not reported |
| Waste Minimization Code Description: | Not reported |
| Consent Number: | Not reported |
| EPA Waste Indicator: | Y |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 4 |
| U.S. DOT Hazardous Indicator: | Y |
| U.S. DOT ID Number: | UN1479 |
| U.S. DOT Description: | Un1479, Waste Oxidizing Solid, N.O.S., (Hydrogen Peroxide, Water), 5.1, Ii |
| Non-Hazardous Waste Description: | Not reported |
| Number of Containers: | 1 |
| Container Type Code: | DM |
| Container Type Description: | Metal drums, barrels, kegs |
| Waste Quantity: | 57 |
| Quantity Unit of Measure Code: | P |
| Quantity Unit of Measure Description: | Pounds |
| Waste Quantity, in Tons: | 0.0285 |
| Acute Waste Quantity, in Tons: | 0 |
| Non-Acute Waste Quantity, in Tons: | 0.0285 |
| Waste Quantity, in Kilograms: | 25.850355 |
| Acute Waste Quantity, in Kilograms: | 0 |
| Non-Acute Waste Quantity, in Kilorgrams: | 25.850355 |
| Management Method Code: | H141 |
| Management Method Description: | STORAGE, BULKING AND/OR TRANSFER OFF SITE |
| Waste Residue Indicator: | N |
| Quantity Discrepancy Indicator: | N |
| Waste Type Discrepancy Indicator: | N |
| Waste Density: | Not reported |
| Waste Density Unit of Measure Code: | Not reported |
| Waste Density Unit of Measure Description: | Not reported |
| Form Code: | Not reported |
| Form Code Description: | Not reported |
| Source Code: | Not reported |
| Source Code Description: | Not reported |
| Waste Minimization Code: | Not reported |
| Waste Minimization Code Description: | Not reported |
| Consent Number: | Not reported |
| EPA Waste Indicator: | Y |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Click this hyperlink while viewing on your computer to access
2 additional US EManifest: record(s) in the EDR Site Report.

NY MANIFEST:

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Country: | USA |
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVE |
| Address 2: | Not reported |
| City,State,Zip: | BRONX, NY 10465 |
| Zip 4: | Not reported |
| Location Address 1: | 545 BRUSH AVE |
| Location Address 2: | Not reported |
| Location City,State,Zip: | BRONX, NY 10465 |
| Location Zip 4: | Not reported |
| Facility Status: | Not reported |
| Total Tanks: | Not reported |
| Code: | BP |

Mailing:

| | |
|---|---|
| Mailing Name: | UNITED PARCEL SERVICE |
| Mailing Contact: | LEO EWERS |
| Mailing Address 1: | 545 BRUSH AVE |
| Mailing Address 2: | Not reported |
| Mailing City,State,Zip: | BRONX, NY 10465 |
| Mailing Zip 4: | Not reported |
| Mailing Country: | USA |
| Mailing Phone: | 2126316444 |

Manifest Data:

| | |
|---|---|
| Document ID: | NYC3363805 |
| Manifest Status: | Not reported |
| Trans1 State ID: | JU4819 |
| Year: | 1994 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 12/08/1994 |
| Trans1 Recv Date: | 12/08/1994 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 12/08/1994 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | ILD984908202 |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NYD980785760 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | Not reported |
| Import Indicator: | Not reported |
| Export Indicator: | Not reported |
| Discr Quantity Indicator: | Not reported |
| Discr Type Indicator: | Not reported |
| Discr Residue Indicator: | Not reported |
| Discr Partial Reject Indicator: | Not reported |
| Discr Full Reject Indicator: | Not reported |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| MGMT Method Type Code: | Not reported |
| Waste Code 1: | TETRACHLOROETHYLENE |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 00015 |
| Units: | Gallons (liquids only) |
| Number of Containers: | 001 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Recycle |
| Specific Gravity: | 01.00 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJD080631369 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/28/2017 |
| Trans1 Recv Date: | 11/28/2017 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/28/2017 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD980536593 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000063951VES |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | BENZENE |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 880 |
| Units: | Pounds |
| Number of Containers: | 2 |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJD080631369 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/28/2017 |
| Trans1 Recv Date: | 11/28/2017 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/28/2017 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD980536593 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000063951VES |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | BENZENE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 85 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJD080631369 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/15/2011 |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Trans1 Recv Date: | 11/15/2011 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/16/2011 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD980536593 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000348544VES |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | MERCURY |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 150 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Recycle |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJD080631369 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/15/2011 |
| Trans1 Recv Date: | 11/15/2011 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/16/2011 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD980536593 |
| TSDF ID 2: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Manifest Tracking Number: | 000348544VES |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 16 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 07/23/2010 |
| Trans1 Recv Date: | 07/23/2010 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 08/19/2010 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000340595WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 138 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 07/23/2010 |
| Trans1 Recv Date: | 07/23/2010 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 08/19/2010 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000340595WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | METHYL ETHYL KETONE |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 152 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |
| | |
| Document ID: | NYC3498783 |
| Manifest Status: | Not reported |
| Trans1 State ID: | JU4819 |
| Year: | 1995 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 03/07/1995 |
| Trans1 Recv Date: | 03/07/1995 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 03/07/1995 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | ILD984908202 |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NYD980785760 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | Not reported |
| Import Indicator: | Not reported |
| Export Indicator: | Not reported |
| Discr Quantity Indicator: | Not reported |
| Discr Type Indicator: | Not reported |
| Discr Residue Indicator: | Not reported |
| Discr Partial Reject Indicator: | Not reported |
| Discr Full Reject Indicator: | Not reported |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | Not reported |
| Waste Code 1: | TETRACHLOROETHYLENE |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 00014 |
| Units: | Gallons (liquids only) |
| Number of Containers: | 001 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Recycle |
| Specific Gravity: | 01.00 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Generator Ship Date: | 06/17/2009 |
| Trans1 Recv Date: | 06/17/2009 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 06/30/2009 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000245179WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | METHYL ETHYL KETONE |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 146 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 05/01/2007 |
| Trans1 Recv Date: | 05/01/2007 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 05/21/2007 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000112414WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | METHANE, DICHLORO- (OR) METHYLENE CHLORIDE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 89 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 05/28/2010 |
| Trans1 Recv Date: | 05/28/2010 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 06/22/2010 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000337239WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | METHANE, DICHLORO- (OR) METHYLENE CHLORIDE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 71 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

Click this hyperlink while viewing on your computer to access
255 additional NY MANIFEST: record(s) in the EDR Site Report.

NJ MANIFEST:

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| County: | Not reported |
| Mailing Address: | EXECUTIVE BLVD |
| Mailing City,State,Zip: | ELMSFORD, NY 10523 |
| Telephone: | Not reported |
| Emergency Telephone: | Not reported |
| Contact: | Not reported |
| Comments: | Not reported |
| SIC Code: | Not reported |
| County: | NY005 |
| Municipal: | Not reported |
| Previous EPAID: | Not reported |
| Generator Flag: | Not reported |
| Transporter Flag: | Not reported |
| TSDF Flag: | Not reported |
| Name Change: | Not reported |
| Date Change: | Not reported |

Manifest Data:

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000348544VES |
| Date Shipped: | 11/15/2011 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | H141 |
| Quantity: | 10.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D009 |
| Hand Code: | H141 |
| Quantity: | 150.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000806607VES |
| Date Shipped: | 2/20/2013 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 93.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 45.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000806607VES |
| Date Shipped: | 2/20/2013 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 93.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 45.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000517494VES |
| Date Shipped: | 2/16/2012 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 D018 |
| Hand Code: | Not reported |
| Quantity: | 390.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000517494VES |
| Date Shipped: | 2/16/2012 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 D018 |
| Hand Code: | Not reported |
| Quantity: | 390.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000517494VES |
| Date Shipped: | 2/16/2012 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 D018 |
| Hand Code: | Not reported |
| Quantity: | 390.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000792415VES |
| Date Shipped: | 4/24/2015 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000792415VES |
| Date Shipped: | 4/24/2015 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000792415VES |
| Date Shipped: | 4/24/2015 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000790847VES |
| Date Shipped: | 3/4/2016 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000790847VES |
| Date Shipped: | 3/4/2016 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Click this hyperlink while viewing on your computer to access
19 additional NJ MANIFEST: record(s) in the EDR Site Report.

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**F30** **UPS-BRUSH AVENUE** **NY TANKS** **U003067748**
**NNW** **545 BRUSH AVE** **NY SPDES** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 4 of 9 in cluster F**

**Relative:** **Lower**
**Actual:** **5 ft.**

TANKS:

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | NEW YORK, NY 10465 |
| Facility Id: | 2-258180 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Inactive |
| Program Type: | PBS |
| Expiration Date: | N/A |
| UTM X: | 597950.90678 |
| UTM Y: | 4519097.57721 |

SPDES:

| | |
|---|---|
| Name: | Ups-Brush Avenue |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Permit Number: | NYR00D296 |
| State-Region: | 02 |
| Expiration Date: | 09/30/2017 |
| Current Major Minor Status: | Minor |

**UPS-BRUSH AVENUE (Continued)** **U003067748**

| | |
|---|---|
| Primary Facility SIC Code: | Not reported |
| State Water Body Name: | WESTCHESTER CREEK |
| Limit Set Status Flag: | Active |
| Total Actual Average Flow(MGD): | Not reported |
| Total App Design Flow(MGD): | Not reported |
| UDF1: | Not reported |
| Lat/Long: | +40.818 / -73.839 |
| DMR Cognizant Official: | Not reported |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |
| | |
| Non-Gov Permit Affiliation Type Desc: | DMR Mailing Address |
| Non-Gov Permit Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Permit Street Address: | UPS-BRUSH AVE |
| Non-Gov Permit Supplemental Location: | 643 W 43RD ST |
| Non-Gov Permit City: | NEW YORK |
| Non-Gov Permit State Code: | NY |
| Non-Gov Permit Zip Code: | 10036 |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Facility Street Address: | UPS-BRUSH AVENUE |
| Non-Gov Facility Supplemental Location: | 643 W 43RD ST |
| Non-Gov Facility City: | NEW YORK |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 10036 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |
| | |
| Name: | Ups-Brush Avenue |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |
| | |
| Non-Gov Permit Affiliation Type Desc: | Permittee |
| Non-Gov Permit Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Permit Street Address: | 643 W 43RD ST |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | NEW YORK |
| Non-Gov Permit State Code: | NY |
| Non-Gov Permit Zip Code: | 10036 |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Facility Street Address: | UPS-BRUSH AVENUE |
| Non-Gov Facility Supplemental Location: | 643 W 43RD ST |
| Non-Gov Facility City: | NEW YORK |
| Non-Gov Facility State Code: | NY |

**UPS-BRUSH AVENUE (Continued)** **U003067748**

| | |
|---|---|
| Non-Gov Facility Zip Code: | 10036 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |
| | |
| Name: | Ups-Brush Avenue |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |
| | |
| Non-Gov Permit Affiliation Type Desc: | Not reported |
| Non-Gov Permit Org Formal Name: | Not reported |
| Non-Gov Permit Street Address: | Not reported |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | Not reported |
| Non-Gov Permit State Code: | Not reported |
| Non-Gov Permit Zip Code: | Not reported |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Facility Street Address: | UPS-BRUSH AVENUE |
| Non-Gov Facility Supplemental Location: | 643 W 43RD ST |
| Non-Gov Facility City: | NEW YORK |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 10036 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

---

**F31** **UNITED PARCEL SERVICE** **NY UST** **U004064869**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 5 of 9 in cluster F**

**Relative:** UST:
**Lower**

**Actual:**
**5 ft.**

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Id/Status: | 2-601299 / Active |
| Program Type: | PBS |
| Region: | STATE |
| DEC Region: | 2 |
| Expiration Date: | 01/27/2028 |

**UNITED PARCEL SERVICE (Continued)** **U004064869**

UTM X: 597958.40241
UTM Y: 4519250.94552
Site Type: Trucking/Transportation/Fleet Operation

Affiliation Records:

Site Id: 23266
Affiliation Type: Emergency Contact
Company Name: UNITED PARCEL SERVICE
Contact Type: Not reported
Contact Name: SHAKEERA JOHNSON
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (201) 341-0390
EMail: Not reported
Fax Number: Not reported
Modified By: MFLEONAR
Date Last Modified: 2018-02-15

Site Id: 23266
Affiliation Type: Facility Operator
Company Name: UNITED PARCEL SERVICE
Contact Type: Not reported
Contact Name: MILLER PONTON
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (718) 678-8113
EMail: Not reported
Fax Number: Not reported
Modified By: JSMACRI
Date Last Modified: 2023-10-13

Site Id: 23266
Affiliation Type: Facility Owner
Company Name: UNITED PARCEL SERVICE
Contact Type: CORPORATE ENVIRONMENTAL COORDINATOR
Contact Name: MILLER PONTON
Address1: 643 WEST 43RD STREET
Address2: Not reported
City: NEW YORK
State: NY
Zip Code: 10036
Country Code: 001
Phone: (212) 316-3854
EMail: Not reported
Fax Number: Not reported
Modified By: JSMACRI
Date Last Modified: 2023-10-13

Site Id: 23266
Affiliation Type: Mail Contact

**UNITED PARCEL SERVICE (Continued)** **U004064869**

| | |
|---|---|
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | Not reported |
| Contact Name: | MILLER PONTON |
| Address1: | 300 OAK STREET |
| Address2: | BUILDINGS & SYSTEMS ENGINEERING |
| City: | UNIONDALE |
| State: | NY |
| Zip Code: | 11553 |
| Country Code: | 001 |
| Phone: | (631) 316-3854 |
| EMail: | MPONTON@UPS.COM |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-10-13 |

Tank Info:

| | |
|---|---|
| Tank Number: | 001 |
| Tank ID: | 10247 |
| Tank Status: | In Service |
| Material Name: | In Service |
| Capacity Gallons: | 10000 |
| Install Date: | 12/01/1985 |
| Date Tank Closed: | Not reported |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Fiberglass coated steel |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |
| Tightness Test Method: | 14 |
| Date Test: | 11/07/2013 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | JSMACRI |
| Last Modified: | 10/13/2023 |

Equipment Records:

C01 - Pipe Location - Aboveground
H05 - Tank Leak Detection - In-Tank System (ATG)
F04 - Pipe External Protection - Fiberglass
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
L09 - Piping Leak Detection - Exempt Suction Piping
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin
B00 - Tank External Protection - None
E04 - Piping Secondary Containment - Double walled UG

| | |
|---|---|
| Tank Number: | 001-A |
| Tank ID: | 167541 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |

**UNITED PARCEL SERVICE (Continued)** **U004064869**

| | |
|---|---|
| Capacity Gallons: | 4000 |
| Install Date: | 10/01/1986 |
| Date Tank Closed: | 08/01/1995 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0009 |
| Common Name of Substance: | Gasoline |
| Tightness Test Method: | 99 |
| Date Test: | 12/01/1992 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
I00 - Overfill - None
H04 - Tank Leak Detection - Groundwater Well
B02 - Tank External Protection - Original Sacrificial Anode
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None

| | |
|---|---|
| Tank Number: | 002 |
| Tank ID: | 45358 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 500 |
| Install Date: | 10/01/1986 |
| Date Tank Closed: | 08/01/1995 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 9999 |
| Common Name of Substance: | Other |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
B01 - Tank External Protection - Painted/Asphalt Coating
A00 - Tank Internal Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
B02 - Tank External Protection - Original Sacrificial Anode

**UNITED PARCEL SERVICE (Continued)** **U004064869**

D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None

Tank Number: 003
Tank ID: 45359
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 500
Install Date: 10/01/1986
Date Tank Closed: 08/01/1995
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 9999
Common Name of Substance: Other

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
H00 - Tank Leak Detection - None
I00 - Overfill - None
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
B02 - Tank External Protection - Original Sacrificial Anode

Tank Number: 004
Tank ID: 52167
Tank Status: In Service
Material Name: In Service
Capacity Gallons: 4000
Install Date: 09/01/1995
Date Tank Closed: Not reported
Registered: True
Tank Location: Underground
Tank Type: Equivalent technology
Material Code: 0009
Common Name of Substance: Gasoline

Tightness Test Method: 14
Date Test: 04/09/2004
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: JSMACRI
Last Modified: 10/13/2023

Equipment Records:

**UNITED PARCEL SERVICE (Continued)** **U004064869**

C01 - Pipe Location - Aboveground
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
F04 - Pipe External Protection - Fiberglass
L07 - Piping Leak Detection - Pressurized Piping Leak Detector
G04 - Tank Secondary Containment - Double-Walled (Underground)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
K01 - Spill Prevention - Catch Basin
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
I02 - Overfill - High Level Alarm
B04 - Tank External Protection - Fiberglass
J01 - Dispenser - Pressurized Dispenser
E04 - Piping Secondary Containment - Double walled UG

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**F32** **UPS** **NY LTANKS** **S102180041**
**NNW** **545 BRUSH AVE** **NY CBS** **N/A**
**1/8-1/4** **BRONX, NY 10465** **NY Spills**
**0.148 mi.**
**779 ft.** **Site 6 of 9 in cluster F**

**Relative:** **Lower**
**Actual:** **5 ft.**

LTANKS:

| | |
|---|---|
| Name: | 545 BRUSH AVENUE |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 8908245 / 1992-09-30 |
| Facility ID: | 8908245 |
| Site ID: | 212269 |
| Spill Date: | 1989-11-17 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | B4 |
| Cleanup Ceased: | 1992-09-30 |
| SWIS: | 0301 |
| Investigator: | BATTISTA |
| Referred To: | Not reported |
| Reported to Dept: | 1989-11-17 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1989-11-29 |
| Spill Record Last Update: | 1994-05-12 |
| Spiller Name: | Not reported |
| Spiller Company: | SAME |
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 175908 |
| DEC Memo: | Not reported |
| Remarks: | 4K TANK TANK AUDITOR INCONCLUSIVE LEAK RATE.E.I AND R. |

**UPS (Continued)** **S102180041**

All TTF:

| | |
|---|---|
| Facility ID: | 8908245 |
| Spill Number: | 8908245 |
| Spill Tank Test: | 1536438 |
| Site ID: | 212269 |
| Tank Number: | Not reported |
| Tank Size: | 0 |
| Material: | 0001 |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 00 |
| Test Method 2: | Unknown |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 212269 |
| Operable Unit ID: | 935699 |
| Operable Unit: | 01 |
| Material ID: | 444995 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | -1.00 |
| Units: | Not reported |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

CBS:

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| CBS Number: | 2-000341 |
| Program Type: | CBS |
| Facility Status: | Unregulated/Closed |
| Expiration Date: | Not reported |
| Dec Region: | 2 |
| UTMX: | 597936.71079 |
| UTMY: | 4519223.33254 |

SPILLS:

| | |
|---|---|
| Name: | 545 BRUSH AVENUE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9307821 / 1993-09-27 |
| Facility ID: | 9307821 |
| Facility Type: | ER |
| DER Facility ID: | 284956 |

**UPS (Continued)** **S102180041**

| | |
|---|---|
| Site ID: | 138398 |
| DEC Region: | 2 |
| Spill Cause: | Unknown |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 1993-09-27 |
| Investigator: | CAMMISA |
| Referred To: | Not reported |
| Reported to Dept: | 1993-09-27 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Unknown |
| Spill Notifier: | Affected Persons |
| Cleanup Ceased: | 1993-09-27 |
| Cleanup Meets Std: | True |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1993-09-28 |
| Spill Record Last Update: | 2004-09-30 |
| Spiller Name: | Not reported |
| Spiller Company: | UNK - VEHICLE |
| Spiller Address: | Not reported |
| Spiller Company: | 001 |
| Contact Name: | Not reported |
| DEC Memo: | Not reported |
| Remarks: | SORBENT WAS APPLIED BUT MARX OF MATERIAL WASHED TO STORM DRAIN - TRUCK ON FRIDAY CAME BY FOR ABSORBENT - NOTIFIED IWCS. |

All Materials:

| | |
|---|---|
| Site ID: | 138398 |
| Operable Unit ID: | 986334 |
| Operable Unit: | 01 |
| Material ID: | 394073 |
| Material Code: | 0066A |
| Material Name: | unknown petroleum |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | Not reported |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | UPS |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Spill Number/Closed Date: | 2207848 / Not Reported |
| Facility ID: | 2207848 |
| Facility Type: | ER |
| DER Facility ID: | 593338 |
| Site ID: | 647133 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |

**UPS (Continued)** **S102180041**

| | |
|---|---|
| Spill Date: | 2022-12-21 |
| Investigator: | DXYE |
| Referred To: | Not reported |
| Reported to Dept: | 2022-12-21 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 1 |
| Date Entered In Computer: | 2022-12-21 |
| Spill Record Last Update: | 2022-12-21 |
| Spiller Name: | Not reported |
| Spiller Company: | UPS |
| Spiller Address: | Not reported |
| Spiller Company: | 999 |
| Contact Name: | BRIDGET |
| DEC Memo: | 12/21/22 - Ye - DDO - Spoke with the caller, who is from Haz-Mat One. UPS, one of their clients, reported a punctured saddle tank that spilled 20 gallons of diesel. Miller Environmental is currently performing clean-up. Miller PM: Michael (631) 603-2564. Spoke with Michael. The spill is halfway cleaned up. They are first focusing the cleanup on the main part of the road, where there's a lot of traffic. They arrived in time to put sausage booms to prevent oil entering the soil and are using speedy dry and citrus cleaner. There are no drain impacts. They will send photos and the fully executed manifest. |
| Remarks: | punctured saddle tank, MILLER Env for clean up |

All Materials:

| | |
|---|---|
| Site ID: | 647133 |
| Operable Unit ID: | 1394103 |
| Operable Unit: | 01 |
| Material ID: | 2409594 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 20.00 |
| Units: | G |
| Recovered: | Not reported |
| Resource Affected: | Not reported |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | UPS |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 1807344 / 2022-07-06 |
| Facility ID: | 1807344 |
| Facility Type: | ER |

**UPS (Continued)** **S102180041**

| | |
|---|---|
| DER Facility ID: | 175908 |
| Site ID: | 578105 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | Not reported |
| SWIS: | 0301 |
| Spill Date: | 2018-10-09 |
| Investigator: | RHLIN |
| Referred To: | Not reported |
| Reported to Dept: | 2018-10-09 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2018-10-09 |
| Spill Record Last Update: | 2022-07-06 |
| Spiller Name: | LAWRENCE ANDERSON |
| Spiller Company: | UPS |
| Spiller Address: | 545 BRUSH AVE |
| Spiller Company: | 999 |
| Contact Name: | LAWRENCE ANDERSON |
| DEC Memo: | 1010/18-Zhune spoke to Lawrence Anderson. Lawrence said equipment failure. There is no spill only<br>equipment failure. Hydrostat test in the sump failed the test. Equipment need to be repair.<br>7/6/22-Lin-No release to the environmental. Case closed. UPS environmental coordinator: Miller<br>Ponton 631-316-3854 |
| Remarks: | test fail dispenser pan for #2 |

All Materials:

| | |
|---|---|
| Site ID: | 578105 |
| Operable Unit ID: | 1325857 |
| Operable Unit: | 01 |
| Material ID: | 2334518 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | Not reported |
| Units: | Not reported |
| Recovered: | Not reported |
| Resource Affected: | Not reported |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | UPS |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9507165 / 2005-07-15 |
| Facility ID: | 9507165 |
| Facility Type: | ER |

**UPS (Continued)** **S102180041**

| | |
|---|---|
| DER Facility ID: | 175908 |
| Site ID: | 212270 |
| DEC Region: | 2 |
| Spill Cause: | Unknown |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1995-09-12 |
| Investigator: | MJHAGGER |
| Referred To: | Not reported |
| Reported to Dept: | 1995-09-12 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1948-12-27 |
| Spill Record Last Update: | 2005-07-15 |
| Spiller Name: | Not reported |
| Spiller Company: | SAME |
| Spiller Address: | Not reported |
| Spiller Company: | 999 |
| Contact Name: | PAUL HAMMEL |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was M TIBBE TRANSFERED FROM SIGONA TO TIBBE. 7/15/2005 JAA (Jack Aversa) file review. Reviewed UST closure report (Jan 1996) - requested by Mike Haggerty and faxed by LBG on 6/17/2005, Report Appendix- faxed by LBG on 6/27/2005, and Disposal receipts (faxed by LBG on 7/15/2005). Leggette, Brashears, and Graham, Inc (LBG) retained by UPS to observe and document the removal of tanks and piping. Two 550 gallon used oil USTs (1 steel, 1 fiberglass) and one 4,000 gallon (double wall steel, fiberglass coated) UST were removed from 2 separate excavations on Sept 5,12 and 13, 1995. Approx 20 feet of 1 inch diameter steel piping connected to a 10k gallon heating oil UST were replaced. UST remvoal and piping replacement conducted by Gas Installations Inc (GI), of Inwood NY. Steel tanks transported by GI to Broxn Iron and Metal works for recycling (receipt provided). FRP tank crushed and disposed by GI at a sanitary landfill. PID readings showed non-detect for used oil ust soil samples. 4 excavation samples were sent to the lab and were non-detect for BTEX. amd VOCs, non-detect for RCRA metals. UG piping confirmatory samples - 2 PAH’s slightly exceeded STARS. Gasoline UST removal - soil screened with PID and separated into 2 piles(clean and gasoline impacted). Approx 100 yards stockpiled and later shipped off site for disposal/recycling (receipt included - soil remediation |

**UPS (Continued)** **S102180041**

of Philadelphia). 6 post excavation samples indicated minor exceedances for total BTEX and MTBE.
Receipts provided for tank bottoms. PBS # 2-601299 - tanks shown as closed. No further action
required. File closed.

Remarks: FOUND CONTAMINATED SOIL AND SOME SHEEN ON GROUND WATER

All Materials:

| | |
|---|---|
| Site ID: | 212270 |
| Operable Unit ID: | 1018029 |
| Operable Unit: | 01 |
| Material ID: | 361593 |
| Material Code: | 0064A |
| Material Name: | unknown material |
| Case No.: | Not reported |
| Material FA: | Other |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

---

**F33** **UNITED PARCEL SERVICE** **NY AST** **A100520422**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 7 of 9 in cluster F**

**Relative:** **Lower**

**Actual:** **5 ft.**

AST:

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Unregulated/Closed |
| Facility Id: | 2-000341 |
| Program Type: | CBS |
| UTM X: | 597936.71079 |
| UTM Y: | 4519223.33254 |
| Expiration Date: | N/A |
| Site Type: | Trucking/Transportation/Fleet Operation |

Tank Info:

| | |
|---|---|
| Tank Number: | 005C |
| Tank Id: | 192772 |
| Tank Location: | Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - In Place |
| Pipe Model: | Not reported |
| Install Date: | 09/01/1995 |
| Capacity Gallons: | 200 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 06/08/2012 |
| Register: | True |

**UNITED PARCEL SERVICE (Continued)** **A100520422**

| | |
|---|---|
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | Not reported |
| Tank Number: | 005D |
| Tank Id: | 192773 |
| Tank Location: | Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - In Place |
| Pipe Model: | Not reported |
| Install Date: | 09/01/1995 |
| Capacity Gallons: | 200 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 06/08/2012 |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | Not reported |

---

**F34** **UNITED PARCEL SERVICE** **NY AST** **A100521063**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 8 of 9 in cluster F**

**Relative:** **Lower**
**Actual:** **5 ft.**

AST:

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Facility Id: | 2-601299 |
| Program Type: | PBS |
| UTM X: | 597958.40241 |
| UTM Y: | 4519250.94552 |
| Expiration Date: | 01/27/2028 |
| Site Type: | Trucking/Transportation/Fleet Operation |

Affiliation Records:

| | |
|---|---|
| Site Id: | 23266 |
| Affiliation Type: | Emergency Contact |
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | Not reported |
| Contact Name: | SHAKEERA JOHNSON |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (201) 341-0390 |
| EMail: | Not reported |
| Fax Number: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **A100521063**

| | |
|---|---|
| Modified By: | MFLEONAR |
| Date Last Modified: | 2018-02-15 |
| | |
| Site Id: | 23266 |
| Affiliation Type: | Facility Operator |
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | Not reported |
| Contact Name: | MILLER PONTON |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 678-8113 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-10-13 |
| | |
| Site Id: | 23266 |
| Affiliation Type: | Facility Owner |
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | CORPORATE ENVIRONMENTAL COORDINATOR |
| Contact Name: | MILLER PONTON |
| Address1: | 643 WEST 43RD STREET |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10036 |
| Country Code: | 001 |
| Phone: | (212) 316-3854 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-10-13 |
| | |
| Site Id: | 23266 |
| Affiliation Type: | Mail Contact |
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | Not reported |
| Contact Name: | MILLER PONTON |
| Address1: | 300 OAK STREET |
| Address2: | BUILDINGS & SYSTEMS ENGINEERING |
| City: | UNIONDALE |
| State: | NY |
| Zip Code: | 11553 |
| Country Code: | 001 |
| Phone: | (631) 316-3854 |
| EMail: | MPONTON@UPS.COM |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-10-13 |

Tank Info:

| | |
|---|---|
| Tank Number: | 005A |

**UNITED PARCEL SERVICE (Continued)** **A100521063**

Tank Id: 54021
Material Code: 0015
Common Name of Substance: Motor Oil

Equipment Records:

I04 - Overfill - Product Level Gauge (A/G)
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
G01 - Tank Secondary Containment - Diking (Aboveground)
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
L09 - Piping Leak Detection - Exempt Suction Piping
K01 - Spill Prevention - Catch Basin
E00 - Piping Secondary Containment - None
F00 - Pipe External Protection - None
D02 - Pipe Type - Galvanized Steel

Tank Location: Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection.
Tank Type: Steel/Carbon Steel/Iron
Tank Status: In Service
Pipe Model: Not reported
Install Date: 09/01/1995
Capacity Gallons: 200
Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: JSMACRI
Last Modified: 10/13/2023
Material Name: motor oil

Tank Number: 005B
Tank Id: 54022
Material Code: 0022
Common Name of Substance: Waste Oil/Used Oil

Equipment Records:

J00 - Dispenser - None
I04 - Overfill - Product Level Gauge (A/G)
C02 - Pipe Location - Underground/On-ground
G01 - Tank Secondary Containment - Diking (Aboveground)
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
E00 - Piping Secondary Containment - None
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
F00 - Pipe External Protection - None

Tank Location: Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection.
Tank Type: Steel/Carbon Steel/Iron
Tank Status: In Service

**UNITED PARCEL SERVICE (Continued)** **A100521063**

| | |
|---|---|
| Pipe Model: | Not reported |
| Install Date: | 09/01/1995 |
| Capacity Gallons: | 200 |
| Tightness Test Method: | - |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |
| Register: | True |
| Modified By: | JSMACRI |
| Last Modified: | 10/13/2023 |
| Material Name: | waste oil/used oil |

---

**F35** **UNITED PARCEL SERVICE** **UST FINDER** **1028572234**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 9 of 9 in cluster F**

**Relative:** **Lower**

**Actual:** **5 ft.**

UST FINDER:

| | |
|---|---|
| Object ID: | 302595 |
| Facility ID: | NY23266 |
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Address Match Type: | Not reported |
| Open USTs: | 2 |
| Closed USTs: | 3 |
| TOS USTs: | 0 |
| Population 1500ft: | 56 |
| Private Wells 1500ft: | 0 |
| Within 100yr Floodplain: | No |
| Land Use: | Developed, High Intensity |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |
| WHPA HUC12: | Not reported |
| Facility Status: | Open UST(s) |
| Date of Last Inspection: | Not reported |
| EPA Region: | 2 |
| Tribe: | Not reported |
| Coordinate Source: | State |
| X Coord: | -73.838543 |
| Y Coord: | 40.817054 |
| Latitude: | 40.817054 |
| Longitude: | -73.838543 |

UST FINDER:

| | |
|---|---|
| Object ID: | 1219826 |
| Facility ID: | NY23266 |
| Tank ID: | NY26950 |
| Tank Status: | Closed |
| Installation Date: | 1986/10/01 16:00:00+00 |

**UNITED PARCEL SERVICE (Continued)** **1028572234**

| | |
|---|---|
| Removal Date: | Not reported |
| Tank Capacity: | 500 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |
| Object ID: | 1219827 |
| Facility ID: | NY23266 |
| Tank ID: | NY29421 |
| Tank Status: | Closed |
| Installation Date: | 1986/10/01 16:00:00+00 |
| Removal Date: | Not reported |
| Tank Capacity: | 500 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |
| Object ID: | 1219828 |
| Facility ID: | NY23266 |
| Tank ID: | NY31893 |
| Tank Status: | Closed |
| Installation Date: | 1986/10/01 16:00:00+00 |
| Removal Date: | Not reported |
| Tank Capacity: | 4000 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |
| Object ID: | 1219829 |
| Facility ID: | NY23266 |
| Tank ID: | NY28196 |
| Tank Status: | Open |
| Installation Date: | 1985/12/01 16:00:00+00 |
| Removal Date: | Not reported |
| Tank Capacity: | 10000 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |
| Object ID: | 1219830 |
| Facility ID: | NY23266 |
| Tank ID: | NY28621 |
| Tank Status: | Open |
| Installation Date: | 1995/09/01 15:59:59+00 |
| Removal Date: | Not reported |
| Tank Capacity: | 4000 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |

---

**36**
**NNW**
**1/8-1/4**
**0.205 mi.**
**1083 ft.**

**N Y BRUSH LLC**
**650 BRUSH AVE**
**BRONX, NY 10465**

**RCRA-LQG** **1010327866**
**NY MANIFEST** **NYR000140368**

**Relative:**
**Lower**

**Actual:**
**9 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20070101 |
| Handler Name: | N Y Brush Llc |
| Handler Address: | Brush Ave |
| Handler City,State,Zip: | BRONX, NY 10465-1804 |
| EPA ID: | NYR000140368 |

**N Y BRUSH LLC (Continued)** **1010327866**

| | |
|---|---|
| Contact Name: | CHENG LU |
| Contact Address: | 15TH AVE |
| Contact City,State,Zip: | COLLEGE POINT, NY 11356 |
| Contact Telephone: | 718-358-2000 x2535 |
| Contact Fax: | Not reported |
| Contact Email: | LUC@PEPSI-NY.COM |
| Contact Title: | Not reported |
| EPA Region: | 02 |
| Land Type: | Private |
| Federal Waste Generator Description: | Large Quantity Generator |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Handler Activities |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | 15TH AVE |
| Mailing City,State,Zip: | COLLEGE POINT, NY 11356 |
| Owner Name: | Ny Brush Llc C/O Pepsi-Cola Bottling Co |
| Owner Type: | Private |
| Operator Name: | N Y Brush Llc |
| Operator Type: | Private |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20150414 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |

**N Y BRUSH LLC (Continued)** **1010327866**

| | |
|---|---|
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Handler - Owner Operator:

| | |
|---|---|
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: N Y BRUSH LLC | |
| Legal Status: | Private |
| Date Became Current: | 20060314 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: NY BRUSH LLC C/O PEPSI-COLA BOTTLING CO | |
| Legal Status: | Private |
| Date Became Current: | 20060314 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 50-35 56TH RD |
| Owner/Operator City,State,Zip: | MASPETH, NY 11378 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

| | |
|---|---|
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: N Y BRUSH LLC | |
| Legal Status: | Private |
| Date Became Current: | 20060314 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: NY BRUSH LLC C/O PEPSI-COLA BOTTLING CO | |
| Legal Status: | Private |
| Date Became Current: | 20060314 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 50-35 56TH RD |
| Owner/Operator City,State,Zip: | MASPETH, NY 11378 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

**N Y BRUSH LLC (Continued)** **1010327866**

Historic Generators:

| | |
|---|---|
| Receive Date: | 20060628 |
| Handler Name: N Y BRUSH LLC | |
| Federal Waste Generator Description: | Large Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20070101 |
| Handler Name: N Y BRUSH LLC | |
| Federal Waste Generator Description: | Large Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | Yes |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20060629 |
| Handler Name: N Y BRUSH LLC | |
| Federal Waste Generator Description: | Large Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

List of NAICS Codes and Descriptions:

| | |
|---|---|
| NAICS Codes: | No NAICS Codes Found |

Has the Facility Received Notices of Violations:

| | |
|---|---|
| Found Violation: | No |
| Agency Which Determined Violation: | Not reported |
| Violation Short Description: | Not reported |
| Date Violation was Determined: | Not reported |
| Actual Return to Compliance Date: | Not reported |
| Return to Compliance Qualifier: | Not reported |
| Violation Responsible Agency: | Not reported |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | Not reported |
| Date of Enforcement Action: | Not reported |
| Enforcement Responsible Agency: | Not reported |
| Enforcement Docket Number: | Not reported |

**N Y BRUSH LLC (Continued)** **1010327866**

Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 20130924
Evaluation Responsible Agency: EPA
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: R2STP
Evaluation Responsible Sub-Organization: RCB
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

NY MANIFEST:
EPA ID: NYR000140368
Country: USA
Name: NY BRUSH LLC C/O PEPSI BOTTLING CO OF NY
Address: 650 BRUSH AVE
Address 2: Not reported
City,State,Zip: BRONX, NY 10465-1804
Zip 4: Not reported
Location Address 1: 650 BRUSH AVENUE
Location Address 2: Not reported
Location City,State,Zip: BORNX, NY
Location Zip 4: Not reported
Facility Status: Not reported
Total Tanks: Not reported
Code: BP

**N Y BRUSH LLC (Continued)** **1010327866**

Mailing:
- Mailing Name: NY BRUSH LLC C/O PEPSI BOTTLING CO OF NY
- Mailing Contact: ALEXANDER VALLI
- Mailing Address 1: 50 34 56TH ROAD
- Mailing Address 2: Not reported
- Mailing City,State,Zip: MASPETH, NY 11378
- Mailing Zip 4: Not reported
- Mailing Country: USA
- Mailing Phone: 9086687777

Manifest Data:
- Document ID: Not reported
- Manifest Status: Not reported
- Trans1 State ID: NYR000097972
- Year: 2018
- Trans2 State ID: Not reported
- Generator Ship Date: 07/13/2006
- Trans1 Recv Date: 07/13/2006
- Trans2 Recv Date: Not reported
- TSD Site Recv Date: 07/14/2006
- Part A Recv Date: Not reported
- Part B Recv Date: Not reported
- Generator EPA ID: NYR000140368
- Trans1 EPA ID: Not reported
- Trans2 EPA ID: Not reported
- TSDF ID 1: NYD049836679
- TSDF ID 2: Not reported
- Manifest Tracking Number: NYG3468771
- Import Indicator: N
- Export Indicator: N
- Discr Quantity Indicator: N
- Discr Type Indicator: N
- Discr Residue Indicator: N
- Discr Partial Reject Indicator: N
- Discr Full Reject Indicator: N
- Manifest Ref Number: Not reported
- Alt Facility RCRA ID: Not reported
- Alt Facility Sign Date: Not reported
- MGMT Method Type Code: Not reported
- Waste Code a: B007
- Waste Code b: Not reported
- Waste Code c: Not reported
- Waste Code e: Not reported
- Waste Code f: Not reported
- Waste Code g: Not reported
- Waste Code 1: Not reported
- Waste Code 2: Not reported
- Waste Code 3: Not reported
- Waste Code 4: Not reported
- Waste Code 5: Not reported
- Waste Code 6: Not reported
- Quantity: 21383
- Units: Kilograms
- Number of Containers: 1
- Container Type: Dump truck
- Handling Method: Landfill

**N Y BRUSH LLC (Continued)** **1010327866**

Specific Gravity: 1

---

**37**
**NNW**
**1/4-1/2**
**0.315 mi.**
**1664 ft.**

**H.O. PENN MACHINERY COMPANY INC**
**699 BRUSH AVE**
**BRONX, NY 10465**

**NY LTANKS** **U003644410**
**NY TANKS** **N/A**
**NY Spills**
**NY SPDES**

**Relative:**
**Lower**

**Actual:**
**10 ft.**

LTANKS:

| | |
|---|---|
| Name: | CLOSED-LACKOF RECENT INFO |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9200766 / 2003-03-07 |
| Facility ID: | 9200766 |
| Site ID: | 186683 |
| Spill Date: | 1992-04-20 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | C4 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | ADMIN. CLOSED |
| Referred To: | Not reported |
| Reported to Dept: | 1992-04-20 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1992-04-24 |
| Spill Record Last Update: | 2003-03-07 |
| Spiller Name: | Not reported |
| Spiller Company: | Not reported |
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 156030 |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was ADMIN.CLOSED 03/07/2003 Closed Due To The Nature / Extent Of The Spill Report |
| Remarks: | 3K. CLOSED DUE TO LACK OF ANY RECENT INFO-DOES NOT MEET ANY CLEANUP REQUIREMENTS. |

All TTF:

| | |
|---|---|
| Facility ID: | 9200766 |
| Spill Number: | 9200766 |
| Spill Tank Test: | 1539893 |
| Site ID: | 186683 |
| Tank Number: | Not reported |
| Tank Size: | 0 |
| Material: | 0022 |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 00 |
| Test Method 2: | Unknown |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 186683 |
| Operable Unit ID: | 964580 |
| Operable Unit: | 01 |
| Material ID: | 415541 |
| Material Code: | 0022 |
| Material Name: | waste oil/used oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | -1.00 |
| Units: | L |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | H O PENN MACHINERY CO |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Spill Number/Closed Date: | 9612128 / 2006-12-13 |
| Facility ID: | 9612128 |
| Site ID: | 186684 |
| Spill Date: | 1997-01-08 |
| Spill Cause: | Tank Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | C3 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | rvketani |
| Referred To: | Not reported |
| Reported to Dept: | 1997-01-08 |
| CID: | 270 |
| Water Affected: | Not reported |
| Spill Notifier: | Affected Persons |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1997-01-08 |
| Spill Record Last Update: | 2006-12-18 |
| Spiller Name: | FRED SCILIANO |
| Spiller Company: | H O PENN |
| Spiller Address: | 699 BRUSH AVE |
| Spiller County: | 001 |
| Spiller Contact: | FRED SCILIANO |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Spiller Phone: | (718) 409-8500 |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 324195 |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was MULQUEEN 11/8/04 - Austin - received Site assessment/tank closure report from Ira Conklin and sons for H.O. Penn on 8/5/04 - report dated 5/12/97 - end This was NOT transferred to CO 11/16/06 - Austin - Reassigned from Austin to Ketani for followup/review - end 12/6/06 - Raphael Ketani. The site is owned and occupied by H O Penn Machinery Co., Inc., 699 Brush Avenue, Bronx, 10465. The NYC Property Tax database and Property Shark do not list 699 Brush Avenue. The parent company is H O Penn Machinery Co., Inc., 122 Noxon Road, Poughkeepsie, NY, 12603, (845) 452-1200. The site in the Bronx is (718) 863-3800. The PBS case is #2-064084 and there are 2 tanks that were closed 1/1/97 and 6 active tanks. The active tanks are: 2-2000 gal. with lube oil and 1-2000 gal. with waste oil; 1-500 gal. with lube oil; 1-3000 gal. with diesel; 1-6000 gal. with #2 oil. These 6 tanks were installed 2/1/97. There was a tank test failure on 1/8/97 and the finding of contaminated soil around the tank. The caller was Stacey Pettine of Ira D. Conklin & Sons (914) 561-1512. I called H O Penn Machinery Co at (718) 863-3800, but could only leave a voice mail for Jeff Baumann of the Service Department. I sent a CSL. 12/8/06 - Raphael Ketani. Donna Eagan of H O Penn's Poughkeepsie office (845) 437-4069 left a voice mail yesterday stating that she will be working with DEC as Mr. Baumann is out. She asked me to call her to discuss what DEC needs in the way of documentation. I tried calling her, but could only leave a message. 12/11/06 - Raphael Ketani. Ms. Eagan called me. She said that she had a copy of the cleanup closure report for the Bronx site. I asked her to send me a copy. She said she would. 12/13/06 - Raphael Ketani. I received the closure report from Donna Egan. The report contained a short narative section, tables of PID readings for each excavation area - there was only a detection of 149.7 ppm for only the floor of excavation #1, a tank location diagram, a set of end-point soil analytical results for each excavation site - there were no detections, a tank cleaning certificat, a soil manifest, bills of lading for the tank bottoms, and soil tracking forms. Based on the documentation in the closure report, I am closing the case. |
| Remarks: | contaminated soil around tank |

All Materials:

| | |
|---|---|
| Site ID: | 186684 |
| Operable Unit ID: | 1043629 |
| Operable Unit: | 01 |
| Material ID: | 556396 |
| Material Code: | 0015 |
| Material Name: | motor oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Site ID: | 186684 |
| Operable Unit ID: | 1043629 |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Operable Unit: | 01 |
| Material ID: | 556397 |
| Material Code: | 0022 |
| Material Name: | waste oil/used oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Site ID: | 186684 |
| Operable Unit ID: | 1043629 |
| Operable Unit: | 01 |
| Material ID: | 556395 |
| Material Code: | 0010 |
| Material Name: | hydraulic oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

TANKS:

| | |
|---|---|
| Name: | H O PENN MACHINERY CO |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Facility Id: | 2-242586 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Inactive |
| Program Type: | PBS |
| Expiration Date: | N/A |
| UTM X: | 597994.29622 |
| UTM Y: | 4519272.64068 |

SPILLS:

| | |
|---|---|
| Name: | BUSINESS |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 1702321 / 2017-06-15 |
| Facility ID: | 1702321 |
| Facility Type: | ER |
| DER Facility ID: | 156030 |
| Site ID: | 551454 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2017-06-08 |
| Investigator: | PXLAKHAN |
| Referred To: | Not reported |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Reported to Dept: | 2017-06-08 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2017-06-08 |
| Spill Record Last Update: | 2017-06-15 |
| Spiller Name: | Not reported |
| Spiller Company: | HAMPAN |
| Spiller Address: | Not reported |
| Spiller Company: | 999 |
| Contact Name: | MARCUS WESAW |
| DEC Memo: | 06/08/17 - Lakhani The property is a Caterpillar dealership. The dealership has one Caterpillar in operation in the shop bay. During a normal procedure at the dealership, the Caterpillar's fuel line ruptured releasing 25 gallons of diesel onto the concrete. No drains or catch basins were affected. Miller Environmental was hired to complete the cleanup and provide DEC with a report. Contact for H.O. Penn Machinery Company, the dealership, is Markus Wesaw (Cell: 845-416-7173, Ph: 845-437-4069) 06/15/17 File Review: Spill Report (Miller Environmental, 06/14/17) - Miller was contacted by H.O. Penn Machinery Company, Inc. on 06/08/17 with a report of a hydraulic oil leak at the location. Upon inspection of the impacted area, it appeared that while working on payloader a hydraulic oil line was cut and hydraulic oil was released onto the concrete pavement. HO Penn personnel applied absorbents. Miller applied additional speedy dry to all impacted areas to contain and recover the discharged product. The speedy dry was swept up and containerized prior to offsite disposal. Miller reports that all impacted material has been recovered and disposed of an it appears that no further action is warranted regarding the spill. Spill is closed. |
| Remarks: | spill on pavement. clean up crew in route |

All Materials:

| | |
|---|---|
| Site ID: | 551454 |
| Operable Unit ID: | 1299543 |
| Operable Unit: | 01 |
| Material ID: | 2305761 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 25.00 |
| Units: | G |
| Recovered: | Not reported |
| Resource Affected: | Not reported |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Oxygenate: | Not reported |
| Name: | H.O. PENN MACHINERY |
| Address: | 699 BRUSH AVE. |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0803910 / 2008-07-07 |
| Facility ID: | 0803910 |
| Facility Type: | ER |
| DER Facility ID: | 350003 |
| Site ID: | 400723 |
| DEC Region: | 2 |
| Spill Cause: | Human Error |
| Spill Class: | Not reported |
| SWIS: | 0301 |
| Spill Date: | 2008-07-03 |
| Investigator: | hrpatel |
| Referred To: | Not reported |
| Reported to Dept: | 2008-07-03 |
| CID: | 406 |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | Not reported |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2008-07-03 |
| Spill Record Last Update: | 2008-07-07 |
| Spiller Name: | JIM STANCO |
| Spiller Company: | CENTRAL PETROLIUM |
| Spiller Address: | 147 GAZZA BLVD. |
| Spiller Company: | 001 |
| Contact Name: | DONNA EGAN |
| DEC Memo: | 07/07/08-Hiralkumar Patel. spoke with Jim at Central petorleum. oil spilled due to loose fittings on fill box. spilled on concrete pavement. no soil/sewer/drain affected. all cleaned up. case closed. |
| Remarks: | During a delivery....Mechanical / operator error. Old fitting on the fill pipe of the UST and fill nozzle was not in secure enough. Spill cause was a combo of both. Pavement impacted. No sewers or waterways etc. Used a machine for clean up. Material was put into a drum. |

All TTF:

| | |
|---|---|
| Facility ID: | 0803910 |
| Spill Number: | 0803910 |
| Spill Tank Test: | 2486426 |
| Site ID: | 400723 |
| Tank Number: | Not reported |
| Tank Size: | 3000 |
| Material: | 0008 |
| EPA UST: | Not reported |
| UST: | True |
| Cause: | 04 |
| Source: | 02 |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Test Method: | 00 |
| Test Method 2: | Unknown |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Watchdog |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 400723 |
| Operable Unit ID: | 1157537 |
| Operable Unit: | 01 |
| Material ID: | 2148561 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 16.00 |
| Units: | G |
| Recovered: | 16.00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | H.P.O. PENN TRUCK |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0606856 / 2006-09-14 |
| Facility ID: | 0606856 |
| Facility Type: | ER |
| DER Facility ID: | 156030 |
| Site ID: | 370272 |
| DEC Region: | 2 |
| Spill Cause: | Other |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2006-09-14 |
| Investigator: | SMSANGES |
| Referred To: | Not reported |
| Reported to Dept: | 2006-09-14 |
| CID: | 444 |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2006-09-14 |
| Spill Record Last Update: | 2006-09-14 |
| Spiller Name: | DONNA EGAN |
| Spiller Company: | H.P.O. PENN TRUCK |
| Spiller Address: | 699 BRUSH AVE |
| Spiller Company: | 001 |
| Contact Name: | DONNA EGAN |
| DEC Memo: | Not reported |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

Remarks: AN ENGINE IN THE BACK OF A TRUCK FELL OVER AND KNOCKED A DRUM HOLDING OIL OVER: SOME MAY HAVE SPILLED OUT ON ROADWAY ALONG LONG ISLAND EXPRESSWAY AND BRONX: MOST WAS IN BACK OF TRUCK: ITY HAPPENED IN MIDDLE OF NIGHT WITH NIGHT DRIVER AND WHEN CALLER CAN GET A HOLD OF DRIVER SHE WILL HAVE MORE INFO: STILL INVESTIGATING:

All Materials:

| | |
|---|---|
| Site ID: | 370272 |
| Operable Unit ID: | 1128088 |
| Operable Unit: | 01 |
| Material ID: | 2117738 |
| Material Code: | 0015 |
| Material Name: | motor oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 25.00 |
| Units: | G |
| Recovered: | 25.00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Site ID: | 370272 |
| Operable Unit ID: | 1128088 |
| Operable Unit: | 01 |
| Material ID: | 2117698 |
| Material Code: | 0066A |
| Material Name: | unknown petroleum |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | Not reported |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

SPDES:

| | |
|---|---|
| Name: | H.O. Penn Machinery Company Inc |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Permit Number: | NYR00D814 |
| State-Region: | 02 |
| Expiration Date: | 09/30/2017 |
| Current Major Minor Status: | Minor |
| Primary Facility SIC Code: | Not reported |
| State Water Body Name: | WESTCHESTER CREEK |
| Limit Set Status Flag: | Active |
| Total Actual Average Flow(MGD): | Not reported |
| Total App Design Flow(MGD): | Not reported |
| UDF1: | Not reported |
| Lat/Long: | +40.819 / -73.837 |
| DMR Cognizant Official: | Not reported |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Non-Gov Permit Affiliation Type Desc: | DMR Mailing Address |
| Non-Gov Permit Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Permit Street Address: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Permit Supplemental Location: | 122 NOXON RD |
| Non-Gov Permit City: | POUGHKEEPSIE |
| Non-Gov Permit State Code: | NY |
| Non-Gov Permit Zip Code: | 12603 |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Street Address: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Supplemental Location: | 122 NOXON ROAD |
| Non-Gov Facility City: | POUGHKEEPSIE |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 12603 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

| | |
|---|---|
| Name: | H.O. Penn Machinery Company Inc |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |

| | |
|---|---|
| Non-Gov Permit Affiliation Type Desc: | Permittee |
| Non-Gov Permit Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Permit Street Address: | 122 NOXON RD |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | POUGHKEEPSIE |
| Non-Gov Permit State Code: | NY |
| Non-Gov Permit Zip Code: | 12603 |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Street Address: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Supplemental Location: | 122 NOXON ROAD |
| Non-Gov Facility City: | POUGHKEEPSIE |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 12603 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Name: | H.O. Penn Machinery Company Inc |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |
| Non-Gov Permit Affiliation Type Desc: | Not reported |
| Non-Gov Permit Org Formal Name: | Not reported |
| Non-Gov Permit Street Address: | Not reported |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | Not reported |
| Non-Gov Permit State Code: | Not reported |
| Non-Gov Permit Zip Code: | Not reported |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Street Address: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Supplemental Location: | 122 NOXON ROAD |
| Non-Gov Facility City: | POUGHKEEPSIE |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 12603 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

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**G38** **VERIZON NEW YORK INC (NY90549)** **NY LTANKS S100144737**
**NW** **500 ZEREGA AVENUE** **NY TANKS N/A**
**1/4-1/2** **BRONX, NY 10473** **NY NYC LAND USE**
**0.317 mi.**
**1672 ft.** **Site 1 of 2 in cluster G**

**Relative:** **Lower**

**Actual:** **4 ft.**

LTANKS:

| | |
|---|---|
| Name: | 500 ZEREGA AVENUE |
| Address: | 500 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 8703906 / 1996-08-06 |
| Facility ID: | 8703906 |
| Site ID: | 270294 |
| Spill Date: | 1987-08-11 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | A3 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | MCTIBBE |
| Referred To: | Not reported |
| Reported to Dept: | 1987-08-11 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |

**VERIZON NEW YORK INC (NY90549) (Continued)** **S100144737**

| | |
|---|---|
| Meets Standard: | False |
| UST Involvement: | True |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1987-08-20 |
| Spill Record Last Update: | 1997-04-17 |
| Spiller Name: | Not reported |
| Spiller Company: | NEW YORK TELEPHONE/NYNEX |
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 220114 |
| DEC Memo: | Not reported |
| Remarks: | EXCAVATE - ISOLATE - RETEST TANKS. |

All TTF:

| | |
|---|---|
| Facility ID: | 8703906 |
| Spill Number: | 8703906 |
| Spill Tank Test: | 1531345 |
| Site ID: | 270294 |
| Tank Number: | 001 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 03 |
| Test Method 2: | Horner EZ Check I or II |
| Leak Rate: | 1.27 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

| | |
|---|---|
| Facility ID: | 8703906 |
| Spill Number: | 8703906 |
| Spill Tank Test: | 1531346 |
| Site ID: | 270294 |
| Tank Number: | 002 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 03 |
| Test Method 2: | Horner EZ Check I or II |
| Leak Rate: | 1.27 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

| | |
|---|---|
| Facility ID: | 8703906 |
| Spill Number: | 8703906 |
| Spill Tank Test: | 1531347 |
| Site ID: | 270294 |

**VERIZON NEW YORK INC (NY90549) (Continued)** **S100144737**

| | |
|---|---|
| Tank Number: | 003 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 03 |
| Test Method 2: | Horner EZ Check I or II |
| Leak Rate: | 1.27 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 270294 |
| Operable Unit ID: | 910529 |
| Operable Unit: | 01 |
| Material ID: | 470116 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

TANKS:

| | |
|---|---|
| Name: | VERIZON NEW YORK INC (NY90549) |
| Address: | 500 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 10473 |
| Facility Id: | 2-343587 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Program Type: | PBS |
| Expiration Date: | 12/14/2027 |
| UTM X: | 597533.55556 |
| UTM Y: | 4519149.05928 |

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 500 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 10473 |
| Latitude: | 40.8176118 |
| Longitude: | -73.8432033 |
| Type Of Ownership Code: | Not reported |
| Owner Name: | VERIZON NEW YORK INC. |
| Borough: | BX |
| Tax Block: | 3542 |
| Tax Lot: | 13 |
| Community District: | 209 |
| Census Tract 2020: | 2009000 |

**VERIZON NEW YORK INC (NY90549) (Continued)** **S100144737**

| | |
|---|---|
| Census Block 2020: | 20090001004 |
| Census Tract 2010: | 90 |
| Census Block 2010: | 1004 |
| School District: | 08 |
| City Council District: | 18 |
| Fire Company: | L047 |
| Police Precinct: | 43 |
| Health Center District: | 26 |
| Health Area: | 3100 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 09 |
| Sanitation Subsection: | 4D |
| Zoning District 1: | M2-1: Manufacturing Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | G1: GARAGES AND GASOLINE STATIONS - All Parking Garages |
| Land Use Category: | Parking Facilities |
| Number Of Easements: | 0 |
| Lot Area: | 32785 |
| Total Building Floor Area: | 4200 |
| Commercial Floor Area: | 4200 |
| Residential Floor Area: | 0 |
| Office Floor Area: | 0 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 4200 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 0 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 1 |
| Number Of Floors: | 1.0000000 |
| Residential Units: | 0 |
| Total Units: | 1 |
| Lot Frontage: | 195.0000000 |
| Lot Depth: | 166.0000000 |
| Building Frontage: | 60.0000000 |
| Building Depth: | 61.5800000 |
| Extension Code: | N |
| Proximity Code: | 1 |
| Irregular Lot Code: | Y |
| Lot Type: | 3 |
| Basement Type/Grade: | 0 |
| Assessed Land Value: | 619200.00000 |
| Assessed Total Value: | 987300.00000 |
| Exempt Total Value: | 0.00000 |
| Year Built: | 1931 |
| Year Altered 1: | 1994 |
| Year Altered 2: | 2004 |
| Historic District Name: | Not reported |

**VERIZON NEW YORK INC (NY90549) (Continued)** **S100144737**

| | |
|---|---|
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.13000000000 |
| Maximum Allowable Residential Far: | 0.00000000000 |
| Maximum Allowable Commercial Far: | 2.00000000000 |
| Maximum Allowable Community Facility Far: | 0.00000000000 |
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2035420013.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0090 |
| X Coordinate: | 1027650 |
| Y Coordinate: | 237194 |
| Zoning Map #: | 7a |
| Zoning Map Code: | Not reported |
| Sanborn Map #: | 219 066 |
| Tax Map #: | 21404 |
| E-designation Number: | Not reported |
| Apportionment BBL: | Not reported |
| Apportionment Date: | Not reported |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | 1 |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | 1 |
| Version Number: | 24v1.1 |
| Changed By DCP: | Not reported |

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**G39** **500 ZEREGA AVENUE** **UST FINDER RELEASE** **1029066249**
**NW** **500 ZEREGA AVENUE** **N/A**
**1/4-1/2** **BRONX, NY 0**
**0.317 mi.**
**1672 ft.** **Site 2 of 2 in cluster G**

**Relative:** **Lower**
**Actual:** **4 ft.**

UST FINDER RELEASE:

| | |
|---|---|
| Object ID: | 260230 |
| Facility ID: | NY220114 |
| Lust ID: | NY8703906 |
| Name: | 500 ZEREGA AVENUE |
| Address: | 500 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 0 |
| Address Match Type: | Not reported |
| Reported Date: | 1987/08/11 16:00:00+00 |
| Status: | No Further Action |
| Substance: | Not reported |
| Population within 1500ft: | 5364 |
| Domestic Wells within 1500ft: | 0 |
| Land Use: | Developed, High Intensity |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |
| WHPA HUC12: | Not reported |
| Within 100yr Floodplain: | No |
| Tribe: | Not reported |
| EPA Region: | 2 |
| NFA Letter 1: | Not reported |

**500 ZEREGA AVENUE (Continued)** **1029066249**

| | |
|---|---|
| NFA Letter 2: | Not reported |
| NFA Letter 3: | Not reported |
| NFA Letter 4: | Not reported |
| Closed With Residual Contaminate: | Not reported |
| Coordinate Source: | State |
| X Coord: | -73.84433 |
| Y Coord: | 40.8166800000001 |
| Latitude: | 40.8166799999999 |
| Longitude: | -73.8443299999999 |

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**40** **NYCDOS FERRY POINT PARK** **NY SWF/LF** **S105912812**
**South** **44 BEAVER ST - 6TH FLOOR** **N/A**
**1/4-1/2** **BRONX, NY 10465**
**0.333 mi.**
**1757 ft.**

**Relative:**
**Higher**

**Actual:**
**32 ft.**

SWF/LF:

| | |
|---|---|
| Name: | NYCDOS FERRY POINT PARK |
| Address: | 44 BEAVER ST - 6TH FLOOR |
| City,State,Zip: | BRONX, NY 10465 |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | 2128378183 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Robert Lange |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | Composting - yard waste - permit |
| Activity Number: | [03Y25] |
| Active: | No |
| East Coordinate: | 598300 |
| North Coordinate: | 4517900 |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | Not reported |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

**41**
**WNW**
**1/4-1/2**
**0.338 mi.**
**1784 ft.**

**RAILROAD MAINTENANCE CORP.**
**432 ZEREGA AVENUE**
**BRONX, NY 10473**

**NY SWF/LF** **S105912814**
**NY NYC LAND USE** **N/A**

**Relative:**
**Lower**

**Actual:**
**10 ft.**

SWF/LF:

| | |
|---|---|
| Name: | RAILROAD MAINTENANCE CORP. |
| Address: | 432 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 10473 |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | 2128922000 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | M.GRASSO |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | Other |
| Activity Number: | [03Z19] |
| Active: | No |
| East Coordinate: | Not reported |
| North Coordinate: | Not reported |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | 2-6007-00096 |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 432 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 10473 |
| Latitude: | 40.8163143 |
| Longitude: | -73.8438024 |
| Type Of Ownership Code: | Not reported |
| Owner Name: | TWO GIRLS & A BOY, . |
| Borough: | BX |
| Tax Block: | 3513 |
| Tax Lot: | 22 |
| Community District: | 209 |
| Census Tract 2020: | 2009000 |
| Census Block 2020: | 20090001004 |
| Census Tract 2010: | 90 |
| Census Block 2010: | 1004 |
| School District: | 08 |
| City Council District: | 18 |

**RAILROAD MAINTENANCE CORP. (Continued)** **S105912814**

| | |
|---|---|
| Fire Company: | L047 |
| Police Precinct: | 43 |
| Health Center District: | 26 |
| Health Area: | 3100 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 09 |
| Sanitation Subsection: | 4C |
| Zoning District 1: | M1-1: Manufacturing Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | S9: RESIDENCE - MULTIPLE USE - Single or Multiple Dwelling with Stores or Offices |
| Land Use Category: | Mixed Residential & Commercial Buildings |
| Number Of Easements: | 0 |
| Lot Area: | 31050 |
| Total Building Floor Area: | 6680 |
| Commercial Floor Area: | 2934 |
| Residential Floor Area: | 3746 |
| Office Floor Area: | 2934 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 0 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 0 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 1 |
| Number Of Floors: | 3.0000000 |
| Residential Units: | 2 |
| Total Units: | 4 |
| Lot Frontage: | 75.3300000 |
| Lot Depth: | 354.0800000 |
| Building Frontage: | 50.0000000 |
| Building Depth: | 36.0000000 |
| Extension Code: | Not reported |
| Proximity Code: | 1 |
| Irregular Lot Code: | Y |
| Lot Type: | 5 |
| Basement Type/Grade: | 0 |
| Assessed Land Value: | 245700.00000 |
| Assessed Total Value: | 362250.00000 |
| Exempt Total Value: | 0.00000 |
| Year Built: | 1931 |
| Year Altered 1: | 0 |
| Year Altered 2: | 0 |
| Historic District Name: | Not reported |
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.22000000000 |
| Maximum Allowable Residential Far: | 0.00000000000 |
| Maximum Allowable Commercial Far: | 1.00000000000 |

**RAILROAD MAINTENANCE CORP. (Continued)** **S105912814**

| | |
|---|---|
| Maximum Allowable Community Facility Far: | 2.40000000000 |
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2035130022.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0090 |
| X Coordinate: | 1027485 |
| Y Coordinate: | 236721 |
| Zoning Map #: | 7a |
| Zoning Map Code: | Not reported |
| Sanborn Map #: | 219 066 |
| Tax Map #: | 21403 |
| E-designation Number: | Not reported |
| Apportionment BBL: | Not reported |
| Apportionment Date: | Not reported |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | 1 |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | 1 |
| Version Number: | 24v1.1 |
| Changed By DCP: | Not reported |

---

**42**
**NNW**
**1/4-1/2**
**0.361 mi.**
**1906 ft.**

**BLOCK 3579, LOT 1**
**BLOCK 3579, LOT 1**
**BRONX, NY 10473**

**NY VCP** **S113922170**
**N/A**

**Relative:**
**Lower**

**Actual:**
**7 ft.**

VCP:

| | |
|---|---|
| Name: | BLOCK 3579, LOT 1 |
| Address: | BLOCK 3579, LOT 1 |
| City,State,Zip: | BRONX, NY 10473 |
| Program Type: | VCP |
| Site Code: | 58877 |
| HW Code: | V00321 |
| Site Class: | N |
| SWIS: | 301 |
| Region: | 2 |
| Town: | New York City |
| Acres: | Not reported |
| Date Record Added: | 11/30/2000 |
| Date Record Updated: | 07/14/2004 |
| Updated By: | VCPTRANS |
| Site Description: | Site was denied entry to VCP due to lack of contamination. |
| Env Problem: | Not reported |
| Health Problem: | Not reported |
| Dump: | Not reported |
| Structure: | Not reported |
| Lagoon: | Not reported |
| Landfill: | Not reported |
| Pond: | Not reported |
| Disp Start: | Not reported |
| Disp Term: | Not reported |
| Lat/Long: | Not reported |
| Dell: | Not reported |
| Record Add: | Not reported |
| Record Upd: | Not reported |
| Updated By: | Not reported |
| Own Op: | 6 |
| Sub Type: | ZZZ |

**BLOCK 3579, LOT 1 (Continued)** **S113922170**

| | |
|---|---|
| Owner Name: | Not reported |
| Owner Company: | Ice Cream Partners, USA, LLC |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | ZZ |
| Owner Country: | United States of America |
| HW Code: | Not reported |
| Waste Type: | Not reported |
| Waste Quantity: | Not reported |
| Waste Code: | Not reported |
| Crossref ID: | Not reported |
| Cross Ref Type Code: | Not reported |
| Cross Ref Type: | Not reported |
| Record Added Date: | Not reported |
| Record Updated: | Not reported |
| Updated By: | Not reported |

---

**43**
**NW**
**1/4-1/2**
**0.375 mi.**
**1982 ft.**

**RANDALL AVE AND ZEREGA AVE/WESTCHESTER CREEK** **NY SWF/LF** **S126023660**
**HAVMEYER AVE, RANDELL AVE, ZEREGA AVE, CAESAR PLACE** **NY ILI** **N/A**
**BRONX, NY**

**Relative:**
**Higher**

**Actual:**
**19 ft.**

SWF/LF:

| | |
|---|---|
| Name: | RANDALL AVE AND ZEREGA AVE/WESTCHESTER CREEK |
| Address: | HAVMEYER AVE, RANDELL AVE, ZEREGA AVE, CAESAR PLACE |
| City,State,Zip: | BRONX, NY |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | Not reported |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | Not reported |
| Activity Number: | Not reported |
| Active: | Not reported |
| East Coordinate: | Not reported |
| North Coordinate: | Not reported |
| Accuracy Code: | 2: Fair; Perimeter unclear |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | Not reported |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

**RANDALL AVE AND ZEREGA AVE/WESTCHESTER CREEK (Continued)** **S126023660**

ILI:

| | |
|---|---|
| Name: | RANDALL AVE AND ZEREGA AVE/WESTCHESTER CREEK |
| Address: | HAVMEYER AVE, RANDELL AVE, ZEREGA AVE, CAESAR PLACE |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.818432 |
| Longitude: | -73.843908 |
| Region: | 2 |
| SWID: | Not reported |
| NY Inactive List: | Not reported |
| Inactive Reg Number: | Not reported |
| Alternative Facility Names: | Not reported |
| Removed: | Not reported |
| Why Removed: | Not reported |
| Location Accuracy: | 2: Fair; Perimeter unclear |
| Date Of Last Inspection: | 19-Jul-18 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Authorization: | Not reported |
| Number: | Not reported |
| Issue Date: | Not reported |
| Expiration Date: | Not reported |
| Start Date: | Not reported |
| Stop Date: | Not reported |
| Landfill Type: | Not reported |

---

**44** **EASTERN ECOLOGY COMPOSTING SITE WESTCHESTER CREEK** **NY SWF/LF** **S126022885**
**NNW** **665-637 ZEREGA AVE** **NY ILI** **N/A**
**1/4-1/2** **BRONX, NY**
**0.391 mi.**
**2063 ft.**

**Relative:**
**Lower**

**Actual:**
**13 ft.**

SWF/LF:

| | |
|---|---|
| Name: | EASTERN ECOLOGY COMPOSTING SITE WESTCHESTER CREEK BETWEEN SEWARD AVE & RANDALL AVE |
| Address: | 665-637 ZEREGA AVE |
| City,State,Zip: | BRONX, NY |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | Not reported |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |

**EASTERN ECOLOGY COMPOSTING SITE WESTCHESTER CREEK BETWEEN SE (Continued)** **S126022885**

| | |
|---|---|
| Contact Phone: | Not reported |
| Activity Desc: | Not reported |
| Activity Number: | Not reported |
| Active: | Not reported |
| East Coordinate: | Not reported |
| North Coordinate: | Not reported |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | Not reported |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

ILI:

| | |
|---|---|
| Name: | EASTERN ECOLOGY COMPOSTING SITE WESTCHESTER CREEK BETWEEN SEWARD A RANDALL AVE |
| Address: | 665-637 ZEREGA AVE |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.820539 |
| Longitude: | -73.840808 |
| Region: | 2 |
| SWID: | Not reported |
| NY Inactive List: | Not reported |
| Inactive Reg Number: | Not reported |
| Alternative Facility Names: | Not reported |
| Removed: | Not reported |
| Why Removed: | Not reported |
| Location Accuracy: | Not reported |
| Date Of Last Inspection: | 19-Jul-18 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Authorization: | Not reported |
| Number: | Not reported |
| Issue Date: | Not reported |
| Expiration Date: | Not reported |
| Start Date: | Not reported |
| Stop Date: | Not reported |
| Landfill Type: | Not reported |

**45**
**North**
**1/4-1/2**
**0.408 mi.**
**2155 ft.**

**EARTH BANK COMPANY INC.**
**748 BRUSH AVENUE**
**BRONX, NY 10465**

**NY SWF/LF** **S105841684**
**NY NYC LAND USE** **N/A**

**Relative:**
**Higher**

**Actual:**
**16 ft.**

SWF/LF:

| | |
|---|---|
| Name: | EARTH BANK COMPANY INC. |
| Address: | 748 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | Not reported |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | RALPH DIDONATO |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | Transfer station - permit |
| Activity Number: | [03T16] |
| Active: | No |
| East Coordinate: | 598005 |
| North Coordinate: | 4519723 |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | - 1- |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 748 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Latitude: | 40.8221437 |
| Longitude: | -73.8375092 |
| Type Of Ownership Code: | Not reported |
| Owner Name: | VALAD, JAVAD |
| Borough: | BX |
| Tax Block: | 5559 |
| Tax Lot: | 83 |
| Community District: | 210 |
| Census Tract 2020: | 2009000 |
| Census Block 2020: | 20090002017 |
| Census Tract 2010: | 90 |
| Census Block 2010: | 2012 |
| School District: | 08 |
| City Council District: | 13 |

**EARTH BANK COMPANY INC. (Continued)** **S105841684**

| | |
|---|---|
| Fire Company: | E072 |
| Police Precinct: | 45 |
| Health Center District: | 26 |
| Health Area: | 3100 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 10 |
| Sanitation Subsection: | 3D |
| Zoning District 1: | R4A: Residential Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | B1: TWO FAMILY DWELLINGS - Brick |
| Land Use Category: | One & Two Family Buildings |
| Number Of Easements: | 0 |
| Lot Area: | 2692 |
| Total Building Floor Area: | 2300 |
| Commercial Floor Area: | 0 |
| Residential Floor Area: | 2300 |
| Office Floor Area: | 0 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 0 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 0 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 1 |
| Number Of Floors: | 2.0000000 |
| Residential Units: | 2 |
| Total Units: | 2 |
| Lot Frontage: | 25.0000000 |
| Lot Depth: | 108.6300000 |
| Building Frontage: | 25.0000000 |
| Building Depth: | 46.0000000 |
| Extension Code: | G |
| Proximity Code: | 3 |
| Irregular Lot Code: | Y |
| Lot Type: | 5 |
| Basement Type/Grade: | 2 |
| Assessed Land Value: | 8340.00000 |
| Assessed Total Value: | 55560.00000 |
| Exempt Total Value: | 0.00000 |
| Year Built: | 2005 |
| Year Altered 1: | 0 |
| Year Altered 2: | 0 |
| Historic District Name: | Not reported |
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.85000000000 |
| Maximum Allowable Residential Far: | 0.75000000000 |
| Maximum Allowable Commercial Far: | 0.00000000000 |
| Maximum Allowable Community Facility Far: | 2.00000000000 |

**EARTH BANK COMPANY INC. (Continued)** **S105841684**

| | |
|---|---|
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2055590083.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0090 |
| X Coordinate: | 1029223 |
| Y Coordinate: | 238848 |
| Zoning Map #: | 7a |
| Zoning Map Code: | Not reported |
| Sanborn Map #: | 221 039 |
| Tax Map #: | 21807 |
| E-designation Number: | Not reported |
| Apportionment BBL: | 2055590081.00000000 |
| Apportionment Date: | 02/26/2007 |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | Not reported |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | Not reported |
| Version Number: | 24v1.1 |
| Changed By DCP: | Not reported |

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**46** **AAA THROGGS NECK** **FUDS** **1024899209**
**East** **N/A**
**1/2-1** **NEW YORK, NY**
**0.806 mi.**
**4255 ft.**

**Relative:**
**Higher**

**Actual:**
**17 ft.**

FUDS:

| | |
|---|---|
| EPA Region: | 02 |
| Installation ID: | NY29799F111000 |
| Congressional District Number: | 14 |
| Name: | AAA THROGGS NECK |
| FUDS Number: | C02NY0568 |
| City: | NEW YORK |
| State: | NY |
| County: | BRONX |
| Object ID: | 5630 |
| USACE Division: | NAD |
| USACE District: | New England District (NAE) |
| Status: | Properties without projects |
| Current Owner: | PRIV: PRIVATE PRIVATE RESIDENCES |
| EMS Map Link: | https://fudsportal.usace.army.mil/ems/inventory/map?id=56674 |
| Eligibility: | Eligible |
| Has Projects: | No |
| NPL Status: | Not reported |
| Project Required: | No |
| Feature Description: | The site containing 4.07 acres lease and permit was obtained by US Government in early 1952 for an AAA location. Between August 1952 and February 1954 all the leases and permits ware cancelled and the properties reverted back to the original owners. Currently the ownership of the site is subdivided between 24 owners of one and two family housing units. |
| Latitude: | 40.81416667 |
| Longitude: | -73.82 |

Count: 5 records. ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| BRONX | S113922040 | BLOCK 5541, LOT 225 (BRUSH AVENUE | BRUSH AVENUE | 10465 | NY VCP |
| BRONX | S126022979 | FORT SCHUYLER PARK AREA | LONG ISLAND SOUND, PENNYFIELD | | NY SWF/LF, NY ILI |
| BRONX | S126023254 | LB NORTHEAST | ZEREGA AVENUE | | NY SWF/LF, NY ILI |
| BRONX | S105684653 | CE - ZEREGA AVE. STATION | ZEREGA AVE. BETWEEN BLACKROCK | 10462 | NY VCP, NY MGP |
| BRONX | S121933888 | CE - ZEREGA AVE. STATION | ZEREGA AVE. BETWEEN BLACKROCK | 10462 | NY SHWS |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal NPL (Superfund) sites***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

***Lists of Federal Delisted NPL sites***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/25/2024
Date Data Arrived at EDR: 03/26/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/25/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Quarterly

***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA TSD facilities***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA generators***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***Federal institutional controls / engineering controls registries***

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/16/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/13/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/17/2024
Number of Days to Update: 90

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***Lists of state- and tribal hazardous waste facilities***

SHWS: Inactive Hazardous Waste Disposal Sites in New York State

Referred to as the State Superfund Program, the Inactive Hazardous Waste Disposal Site Remedial Program is the cleanup program for inactive hazardous waste sites and now includes hazardous substance sites

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Annually

***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF: Facility Register

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/25/2024
Date Data Arrived at EDR: 03/27/2024
Date Made Active in Reports: 06/18/2024
Number of Days to Update: 83

Source: Department of Environmental Conservation
Telephone: 518-402-8678
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

***Lists of state and tribal leaking storage tanks***

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/04/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

LTANKS: Spills Information Database
Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills.

Date of Government Version: 05/06/2024
Date Data Arrived at EDR: 05/06/2024
Date Made Active in Reports: 05/09/2024
Number of Days to Update: 3

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 05/06/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

HIST LTANKS: Listing of Leaking Storage Tanks

A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Lists of state and tribal registered storage tanks***

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/15/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/17/2024
Number of Days to Update: 90

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

UST: Petroleum Bulk Storage (PBS) Database

Facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: No Update Planned

CBS UST: Chemical Bulk Storage Database

Facilities that store regulated hazardous substances in underground tanks of any size

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 10/24/2005
Next Scheduled EDR Contact: 01/23/2006
Data Release Frequency: No Update Planned

MOSF UST: Major Oil Storage Facilities Database

Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF: Major Oil Storage Facility Site Listing

These facilities may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CBS: Chemical Bulk Storage Site Listing

These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

AST: Petroleum Bulk Storage

Registered Aboveground Storage Tanks.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: No Update Planned

CBS AST: Chemical Bulk Storage Database

Facilities that store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF AST: Major Oil Storage Facilities Database

Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/17/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

TANKS: Storage Tank Faciliy Listing
This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84
Source: Department of Environmental Conservation
Telephone: 518-402-9543
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***State and tribal institutional control / engineering control registries***

ENV RES DECL: Environmental Restrictive Declarations
The Environmental Restrictive Declarations (ERD) listed were recorded in connection with a zoning action against the noted Tax Blocks and Tax Lots, or portion thereof, and are available in the property records on file at the Office of the City Register for Bronx, Kings, New York and Queens counties or at the Richmond County Clerk's office. They contain environmental requirements with respect to hazardous materials, air quality and/or noise in accordance with Section 11-15 of this Resolution.

Date of Government Version: 03/11/2024
Date Data Arrived at EDR: 03/14/2024
Date Made Active in Reports: 06/05/2024
Number of Days to Update: 83
Source: New York City Department of City Planning
Telephone: 212-720-3300
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Varies

RES DECL: Restrictive Declarations Listing
A restrictive declaration is a covenant running with the land which binds the present and future owners of the property. As a condition of certain special permits, the City Planning Commission may require an applicant to sign and record a restrictive declaration that places specified conditions on the future use and development of the property. Certain restrictive declarations are indicated by a D on zoning maps.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/07/2024
Date Made Active in Reports: 03/11/2024
Number of Days to Update: 4
Source: NYC Department of City Planning
Telephone: 212-720-3401
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Varies

ENG CONTROLS: Registry of Engineering Controls
Environmental Remediation sites that have engineering controls in place.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82
Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

INST CONTROL: Registry of Institutional Controls
Environmental Remediation sites that have institutional controls in place.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82
Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

***Lists of state and tribal voluntary cleanup sites***

VCP: Voluntary Cleanup Agreements
New York established its Voluntary Cleanup Program (VCP) to address the environmental, legal and financial barriers that often hinder the redevelopment and reuse of contaminated properties. The Voluntary Cleanup Program was developed to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfield" sites.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9711
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/14/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Varies

VCP NYC: Voluntary Cleanup Program Listing NYC
New York City voluntary cleanup program sites.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/06/2024
Date Made Active in Reports: 05/30/2024
Number of Days to Update: 85

Source: New York City Office of Environmental Protection
Telephone: 212-788-8841
Last EDR Contact: 06/05/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

***Lists of state and tribal brownfield sites***

BROWNFIELDS: Brownfields Site List
A Brownfield is any real property where redevelopment or re-use may be complicated by the presence or potential presence of a hazardous waste, petroleum, pollutant, or contaminant.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9764
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

ERP: Environmental Restoration Program Listing
In an effort to spur the cleanup and redevelopment of brownfields, New Yorkers approved a $200 million Environmental Restoration or Brownfields Fund as part of the $1.75 billion Clean Water/Clean Air Bond Act of 1996 (1996 Bond Act). Enhancements to the program were enacted on October 7, 2003. Under the Environmental Restoration Program, the State provides grants to municipalities to reimburse up to 90 percent of on-site eligible costs and 100% of off-site eligible costs for site investigation and remediation activities. Once remediated, the property may then be reused for commercial, industrial, residential or public use.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/11/2024
Date Data Arrived at EDR: 03/12/2024
Date Made Active in Reports: 05/10/2024
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/11/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Semi-Annually

***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY: Registered Recycling Facility List

A listing of recycling facilities.

Date of Government Version: 03/25/2024
Date Data Arrived at EDR: 03/27/2024
Date Made Active in Reports: 06/18/2024
Number of Days to Update: 83

Source: Department of Environmental Conservation
Telephone: 518-402-8678
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

SWTIRE: Registered Waste Tire Storage & Facility List

A listing of facilities registered to accept waste tires.

Date of Government Version: 02/27/2018
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 63

Source: Department of Environmental Conservation
Telephone: 518-402-8694
Last EDR Contact: 05/31/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/22/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: No Update Planned

DEL SHWS: Delisted Registry Sites

A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

***Local Lists of Registered Storage Tanks***

HIST UST: Historical Petroleum Bulk Storage Database

These facilities have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. It is no longer updated due to the sensitive nature of the information involved. See UST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: Varies

HIST AST: Historical Petroleum Bulk Storage Database

These facilities have petroleum storage capabilities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. No longer updated due to the sensitive nature of the information involved. See AST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: No Update Planned

***Local Land Records***

LIENS: Spill Liens Information

Lien information from the Oil Spill Fund.

Date of Government Version: 04/19/2024
Date Data Arrived at EDR: 04/19/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 68

Source: Office of the State Comptroller
Telephone: 518-474-9034
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Semi-Annually

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/14/2024
Date Data Arrived at EDR: 06/17/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 7

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

SPILLS: Spills Information Database

Data collected on spills reported to NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

Date of Government Version: 05/06/2024
Date Data Arrived at EDR: 05/06/2024
Date Made Active in Reports: 05/09/2024
Number of Days to Update: 3

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 05/06/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

HIST SPILLS: SPILLS Database

This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/14/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/12/2013
Number of Days to Update: 40

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 11/02/2010
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/07/2013
Number of Days to Update: 63

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/30/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/18/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/13/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 86

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/11/2024
Date Data Arrived at EDR: 07/11/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 1

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/01/2024
Date Data Arrived at EDR: 04/17/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 86
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 57
Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/27/2023
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 87
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/23/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2024
Date Data Arrived at EDR: 04/19/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 68

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data
Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 04/01/2024
Date Data Arrived at EDR: 04/04/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 99

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing
This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/23/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines
An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/18/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 79

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/09/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 87

Source: EPA
Telephone: (212) 637-3000
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/08/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/23/2024
Date Data Arrived at EDR: 06/28/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/28/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/19/2023
Date Data Arrived at EDR: 04/05/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 62

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/27/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: No Update Planned

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/27/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data
The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 04/14/2024
Date Data Arrived at EDR: 04/16/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 07/16/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

UST FINDER: UST Finder Database
EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database
US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

E MANIFEST: Hazardous Waste Electronic Manifest System
EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 04/18/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 49

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Varies

PFAS 3: PFAS Environmental Site Remediation List
A list of records included in the Environmental Remediation database whose material is listed as Perfluorooctanoic Acid or Perfluorooctane Sulfonic Acid.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9759
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

PFAS 2: New York State Inactive Landfill Initiative

A list of landfills that were investigated and the analytical results for PFOA and PFOS for those landfills. These data represent the landfills from the ILI database that were investigated.

Date of Government Version: 12/12/2022
Date Data Arrived at EDR: 08/10/2023
Date Made Active in Reports: 10/25/2023
Number of Days to Update: 76

Source: Department of Environmental Conservation
Telephone: 518-402-9662
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

DEC surveyed select businesses, fire departments, fire training centers, bulk storage facilities, airports, and Department of Defense (DoD) facilities. The responses to the survey have helped to determine if these entities used or stored materials containing PFOA/PFOS including AFFF and dispersants used in Teflon coating operations. The results of this survey will be updated periodically as additional responses are received..

Date of Government Version: 01/16/2019
Date Data Arrived at EDR: 05/08/2019
Date Made Active in Reports: 06/24/2019
Number of Days to Update: 47

Source: Department of Environmental Conservation
Telephone: 518-402-9020
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

AIRS: Air Emissions Data

Point source emissions inventory data.

Date of Government Version: 01/12/2024
Date Data Arrived at EDR: 01/24/2024
Date Made Active in Reports: 04/11/2024
Number of Days to Update: 78

Source: Department of Environmental Conservation
Telephone: 518-402-8452
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Annually

COAL ASH: Coal Ash Disposal Site Listing

A listing of coal ash disposal site locations.

Date of Government Version: 03/26/2024
Date Data Arrived at EDR: 03/27/2024
Date Made Active in Reports: 06/21/2024
Number of Days to Update: 86

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

DRYCLEANERS: Registered Drycleaners

A listing of all registered drycleaning facilities.

Date of Government Version: 03/06/2024
Date Data Arrived at EDR: 03/08/2024
Date Made Active in Reports: 05/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8403
Last EDR Contact: 05/31/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Annually

E DESIGNATION: E DESIGNATION SITE LISTING

The (E (Environmental)) designation would ensure that sampling and remediation take place on the subject properties, and would avoid any significant impacts related to hazardous materials at these locations. The (E) designations would require that the fee owner of the sites conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The (E) designations also include a mandatory construction-related health and safety plan which must be approved by NYCDEP.

Date of Government Version: 03/05/2024
Date Data Arrived at EDR: 03/13/2024
Date Made Active in Reports: 06/05/2024
Number of Days to Update: 84

Source: New York City Department of City Planning
Telephone: 718-595-6658
Last EDR Contact: 06/12/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Semi-Annually

FIN ASSURANCE 1: Financial Assurance Information Listing

Financial assurance information.

Date of Government Version: 03/27/2024
Date Data Arrived at EDR: 03/28/2024
Date Made Active in Reports: 06/18/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

FIN ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 03/07/2024
Date Data Arrived at EDR: 03/14/2024
Date Made Active in Reports: 03/20/2024
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-8712
Last EDR Contact: 05/31/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

HSWDS: Hazardous Substance Waste Disposal Site Inventory

The list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-Registry sites that U.S. EPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared. Hazardous Substance Waste Disposal Sites are eligible to be Superfund sites now that the New York State Superfund has been refinanced and changed. This means that the study inventory has served its purpose and will no longer be maintained as a separate entity. The last version of the study inventory is frozen in time. The sites on the study will not automatically be made Superfund sites, rather each site will be further evaluated for listing on the Registry. So overtime they will be added to the registry or not.

Date of Government Version: 01/01/2003
Date Data Arrived at EDR: 10/20/2006
Date Made Active in Reports: 11/30/2006
Number of Days to Update: 41

Source: Department of Environmental Conservation
Telephone: 518-402-9564
Last EDR Contact: 05/26/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: No Update Planned

NYC LEAD: Lead-based Paint Testing Results

The results of the inspections for all classrooms serving students under six in applicable buildings. Identifies all classrooms, whether there was observation of peeling paint, and if there was, standard response protocol was followed.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/31/2024
Date Made Active in Reports: 04/22/2024
Number of Days to Update: 82

Source: New York City Department of Education
Telephone: 212-374-5141
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

NYC LEAD 2: Recent Lead Paint Violations

Pursuant to New York City?s Housing Maintenance Code, the Department of Housing Preservation and Development (HPD) issues violations against conditions in rental dwelling units that have been verified to violate the New York City Housing Maintenance Code (HMC) or the New York State Multiple Dwelling Law (MDL). Violations are issued when an inspection verifies that a violation of the HMC or MDL exists. It is closed when the violation is corrected, as observed/verified by HPD or as certified by the landlord.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85

Source: New York City Department of Housing Preservation & Development
Telephone: 212-863-8200
Last EDR Contact: 05/01/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

SPDES: State Pollutant Discharge Elimination System

New York State has a state program which has been approved by the United States Environmental Protection Agency for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. Under New York State law the program is known as the State Pollutant Discharge Elimination System (SPDES) and is broader in scope than that required by the Clean Water Act in that it controls point source discharges to groundwaters as well as surface waters.

Date of Government Version: 01/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 05/02/2024
Number of Days to Update: 79

Source: Department of Environmental Conservation
Telephone: 518-402-8233
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: No Update Planned

VAPOR REOPENED: Vapor Intrusion Legacy Site List

New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 02/08/2022
Date Made Active in Reports: 05/06/2022
Number of Days to Update: 87

Source: Department of Environmenal Conservation
Telephone: 518-402-9814
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

UIC: Underground Injection Control Wells

A listing of enhanced oil recovery underground injection wells.

Date of Government Version: 02/26/2024
Date Data Arrived at EDR: 02/28/2024
Date Made Active in Reports: 05/21/2024
Number of Days to Update: 83

Source: Department of Environmental Conservation
Telephone: 518-402-8056
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

COOLING TOWERS: Registered Cooling Towers

This data includes the location of cooling towers registered with New York State. The data is self-reported by owners/property managers of cooling towers in service in New York State. In August 2015, the New York State Department of Health released emergency regulations requiring the owners of cooling towers to register them with New York State.

Date of Government Version: 04/02/2024
Date Data Arrived at EDR: 04/10/2024
Date Made Active in Reports: 07/09/2024
Number of Days to Update: 90

Source: Department of Health
Telephone: 518-402-7650
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

ILI: New York State Inactive Landfill Initiative

A solid waste site priority list of mitigation and remedial activities to address sites causing, or substantially contributing to, impairments of drinking water quality. Inactive solid waste disposal sites, primarily landfills, and their potential impact on New York?s drinking water resources from site-related contaminants, with a focus on emerging contaminants.

Date of Government Version: 01/30/2024
Date Data Arrived at EDR: 02/02/2024
Date Made Active in Reports: 04/19/2024
Number of Days to Update: 77

Source: Department of Environmental Conservation
Telephone: 518-402-8671
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

NYC LAND USE: New York City Land Use Information

Land use colors

Date of Government Version: 05/03/2024
Date Data Arrived at EDR: 06/12/2024
Date Made Active in Reports: 06/28/2024
Number of Days to Update: 16

Source: New York City Department of City Planning
Telephone: 212-720-3300
Last EDR Contact: 06/12/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Varies

MGP: Manufactured Gas Plants Listing

From the late 1800's to the mid 1900's, hundreds of manufactured gas plants across New York State supplied homes and industry with fuel for heating, cooking, and lighting. Today, the New York State DEC is overseeing the investigation and cleanup of contamination left behind from these plants.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: Department of Environmental Conservation
Telephone: 518-402-9662
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

NYC OER: OER Cleanup Sites Listing

Properties remediated under OER's oversight, both in the E-Designation program and the NYC Voluntary Cleanup Program. Includes sites completed and in progress.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/06/2024
Date Made Active in Reports: 05/29/2024
Number of Days to Update: 84

Source: Office of Environmental Remediation
Telephone: 212-788-8841
Last EDR Contact: 06/05/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Conservation in New York.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: Department of Environmental Conservation
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Conservation in New York.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Environmental Conservation
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**COUNTY RECORDS**

CORTLAND COUNTY:

AST - CORTLAND: Cortland County Storage Tank Listing
A listing of aboveground storage tank sites located in Cortland County.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/16/2019
Number of Days to Update: 57

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

UST - CORTLAND: Cortland County Storage Tank Listing
A listing of underground storage tank sites located in Cortland County.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/16/2019
Number of Days to Update: 57

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

NASSAU COUNTY:

AST - NASSAU: Registered Tank Database
A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 11/27/2023
Date Data Arrived at EDR: 11/28/2023
Date Made Active in Reports: 02/06/2024
Number of Days to Update: 70

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

AST NCFM: Storage Tank Database
A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

TANKS NASSAU: Registered Tank Database in Nassau County
A listing of facilities in Nassau County with storage tanks.

Date of Government Version: 11/27/2023
Date Data Arrived at EDR: 11/28/2023
Date Made Active in Reports: 02/06/2024
Number of Days to Update: 70

Source: Nassau County Department of Health
Telephone: 516-227-9691
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

UST - NASSAU: Registered Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 11/27/2023
Date Data Arrived at EDR: 11/28/2023
Date Made Active in Reports: 02/06/2024
Number of Days to Update: 70

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

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Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

ROCKLAND COUNTY:

AST - ROCKLAND: Petroleum Bulk Storage Database
A listing of aboveground storage tank sites located in Rockland County. Rockland County?s Petroleum Bulk Storage (PBS) program is no longer in service. All related operations/duties are now wholly overseen by the New York State Dept. of Environmental Conservation (NYSDEC).

Date of Government Version: 02/02/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 09/22/2017
Number of Days to Update: 189

Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: No Update Planned

UST - ROCKLAND: Petroleum Bulk Storage Database
A listing of underground storage tank sites located in Rockland County. Rockland County?s Petroleum Bulk Storage (PBS) program is no longer in service. All related operations/duties are now wholly overseen by the New York State Dept. of Environmental Conservation (NYSDEC).

Date of Government Version: 02/02/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 09/22/2017
Number of Days to Update: 189

Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: No Update Planned

SUFFOLK COUNTY:

AST - SUFFOLK: Storage Tank Database
A listing of aboveground storage tank sites located in Suffolk County.

Date of Government Version: 06/28/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 02/07/2019
Number of Days to Update: 63

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

TANKS SUFFOLK: Storage Tank Database
This county is not included in the state?s database. These are facilities that have no tank information in the storage tank database.

Date of Government Version: 06/28/2018
Date Data Arrived at EDR: 02/05/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 31

Source: Department of Health Services
Telephone: 631-854-2516
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

UST - SUFFOLK: Storage Tank Database
A listing of underground storage tank sites located in Suffolk County.

Date of Government Version: 06/28/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 02/07/2019
Number of Days to Update: 63

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

WESTCHESTER COUNTY:

AST - WESTCHESTER: Listing of Storage Tanks
A listing of aboveground storage tank sites located in Westchester County.

Date of Government Version: 01/29/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 03/06/2024
Number of Days to Update: 27

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 07/23/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Semi-Annually

UST - WESTCHESTER: Listing of Storage Tanks
A listing of underground storage tank sites located in Westchester County.

Date of Government Version: 01/29/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 03/06/2024
Number of Days to Update: 27

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 07/23/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Semi-Annually

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/06/2024
Date Made Active in Reports: 04/25/2024
Number of Days to Update: 79

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/13/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Day Care Providers
Source: Department of Health
Telephone: 212-676-2444

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

**STREET AND ADDRESS INFORMATION**

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# GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

PROPOSED BALLYS CASINO - RING ROAD
450 HUTCHINSON RIVER PARKWAY
BRONX, NY 10465

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 40.813693 - 40° 48' 49.29'' |
| Longitude (West): | 73.835803 - 73° 50' 8.89'' |
| Universal Tranverse Mercator: | Zone 18 |
| UTM X (Meters): | 598189.6 |
| UTM Y (Meters): | 4518516.0 |
| Elevation: | 16 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 14115946 FLUSHING, NY |
| Version Date: | 2019 |

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

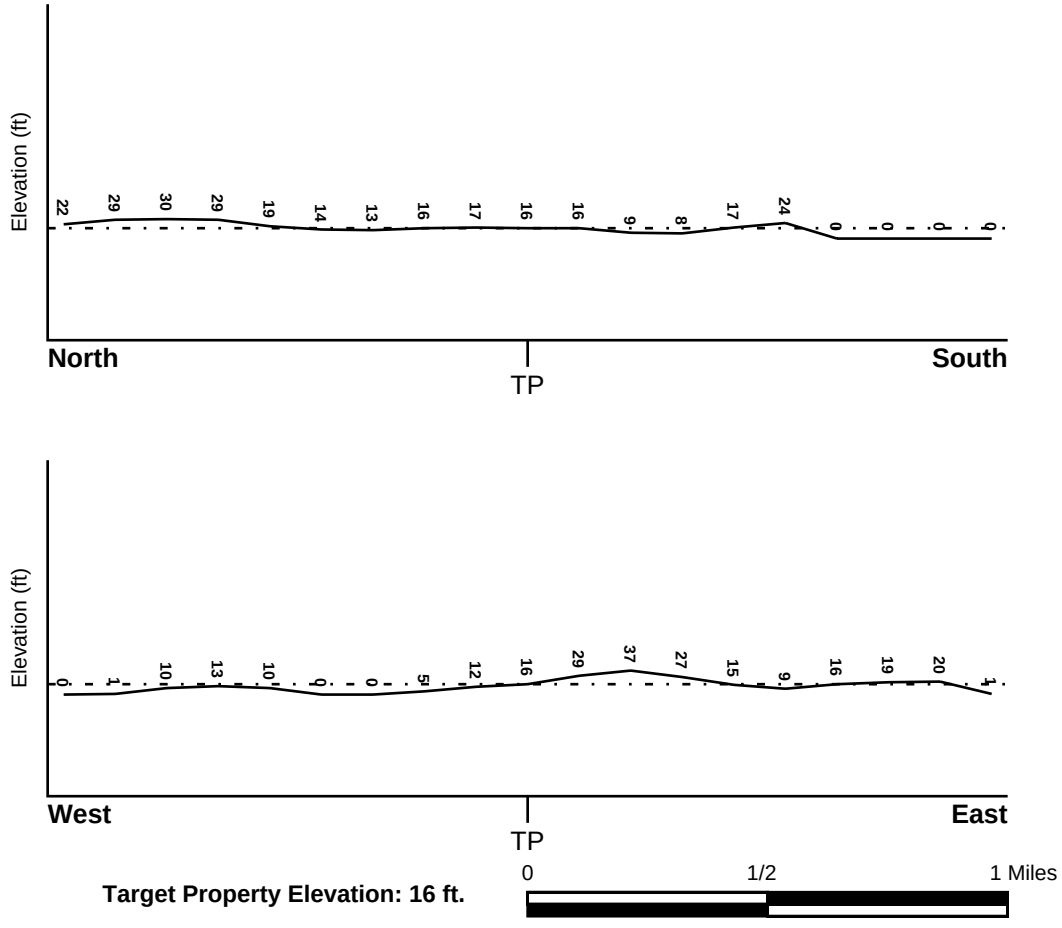
**TOPOGRAPHIC INFORMATION**

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General West

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




**Target Property Elevation: 16 ft.**

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

### FEMA FLOOD ZONE

| Flood Plain Panel at Target Property | FEMA Source Type |
|---|---|
| 3604970104F | FEMA FIRM Flood data |

| Additional Panels in search area: | FEMA Source Type |
|---|---|
| 3604970103F | FEMA FIRM Flood data |
| 3604970111F | FEMA FIRM Flood data |
| 3604970112F | FEMA FIRM Flood data |

### NATIONAL WETLAND INVENTORY

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| FLUSHING | YES - refer to the Overview Map and Detail Map |

## HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

***Site-Specific Hydrogeological Data*:***

| | |
|---|---|
| Search Radius: | 1.25 miles |
| Status: | Not found |

## AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| Not Reported | | |

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

**GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT** **GEOLOGIC AGE IDENTIFICATION**

| | | | |
|---|---|---|---|
| Era: | Paleozoic | Category: | Stratified Sequence |
| System: | Ordovician | | |
| Series: | Middle Ordovician (Mohawkian) | | |
| Code: | O2 *(decoded above as Era, System & Series)* | | |

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

**DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY**

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | | |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | Permeability Rate (in/hr) | Soil Reaction (pH) |
| 1 | 0 inches | 6 inches | variable | Not reported | Not reported | Max: 0.00<br>Min: 0.00 | Max: 0.00<br>Min: 0.00 |

**OTHER SOIL TYPES IN AREA**

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sandy loam

Surficial Soil Types: fine sandy loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: unweathered bedrock
gravelly - fine sandy loam
stratified
fine sandy loam

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

**WELL SEARCH DISTANCE INFORMATION**

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 1 mile |
| State Database | 1.000 |

**FEDERAL USGS WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 1 | USGS40000833436 | 1/4 - 1/2 Mile SSE |
| 2 | USGS40000833386 | 1/4 - 1/2 Mile SSE |
| 3 | USGS40000833327 | 1/2 - 1 Mile SSE |
| 4 | USGS40000833595 | 1/2 - 1 Mile East |
| 5 | USGS40000833850 | 1/2 - 1 Mile NNW |

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|

No PWS System Found

Note: PWS System location is not always the same as well location.

**STATE DATABASE WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|

No Wells Found

# PHYSICAL SETTING SOURCE MAP - 7720624.2s




County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

| | | | |
|---|---|---|---|
| SITE NAME: | Proposed Ballys Casino - Ring Road | CLIENT: | Langan Engineering, Inc. |
| ADDRESS: | 450 Hutchinson River Parkway<br>Bronx NY 10465 | CONTACT: | Kaitlyn Gioia |
| LAT/LONG: | 40.813693 / 73.835803 | INQUIRY #: | 7720624.2s |
| | | DATE: | July 29, 2024 5:00 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

**1**
**SSE** **FED USGS** **USGS40000833436**
**1/4 - 1/2 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 39. 1 | | |
| Type: | Well: Test hole not completed as a well | | |
| Description: | Not Reported | HUC: | 02030102 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | Not Reported | Well Depth Units: | Not Reported |
| Well Hole Depth: | 92 | Well Hole Depth Units: | ft |

---

**2**
**SSE** **FED USGS** **USGS40000833386**
**1/4 - 1/2 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 1. 1 | Type: | Well |
| Description: | Not Reported | HUC: | 02030102 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | Not Reported | Well Depth Units: | Not Reported |
| Well Hole Depth: | Not Reported | Well Hole Depth Units: | Not Reported |

---

**3**
**SSE** **FED USGS** **USGS40000833327**
**1/2 - 1 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 2. 1 | Type: | Well |
| Description: | Not Reported | HUC: | 02030102 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | Not Reported | Well Depth Units: | Not Reported |
| Well Hole Depth: | Not Reported | Well Hole Depth Units: | Not Reported |

---

**4**
**East** **FED USGS** **USGS40000833595**
**1/2 - 1 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 3. 1 | Type: | Well |
| Description: | Not Reported | HUC: | 02030102 |

| | | | |
|---|---|---|---|
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | Not Reported | Well Depth Units: | Not Reported |
| Well Hole Depth: | Not Reported | Well Hole Depth Units: | Not Reported |

---

**5**
**NNW**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000833850**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 9 | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | 140 | Well Depth Units: | ft |
| Well Hole Depth: | Not Reported | Well Hole Depth Units: | Not Reported |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

Federal EPA Radon Zone for BRONX County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

---

Federal Area Radon Information for BRONX COUNTY, NY

Number of sites tested: 31

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area | 0.670 pCi/L | 96% | 4% | 0% |
| Basement | 1.110 pCi/L | 42% | 58% | 0% |

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

## HYDROGEOLOGIC INFORMATION

AQUIFLOW$^{R}$ Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

New York Public Water Wells
Source: New York Department of Health
Telephone: 518-458-6731

## OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database
Source: Department of Environmental Conservation
Telephone: 518-402-8072
These files contain records, in the database, of wells that have been drilled.

RADON

State Database: NY Radon
Source: Department of Health
Telephone: 518-402-7556
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

**STREET AND ADDRESS INFORMATION**

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# Appendix F Historical Resources

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.3

July 31, 2024

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

07/31/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.3

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Langan Engineering, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## *Certified Sanborn Results:*

**Certification #** F7D1-4C79-AF79

**PO #** 170773001

**Project** Prpsd Bally s Casino - Ring Rd

**Maps Provided:**

| | | | |
|---|---|---|---|
| 2007 | 1996 | 1981 | 1898 |
| 2006 | 1995 | 1978 | |
| 2005 | 1993 | 1977 | |
| 2004 | 1992 | 1967 | |
| 2003 | 1991 | 1950 | |
| 2002 | 1988 | 1930 | |
| 2001 | 1986 | 1919 | |
| 1998 | 1983 | 1908 | |

Sanborn® Library search results

Certification #: F7D1-4C79-AF79

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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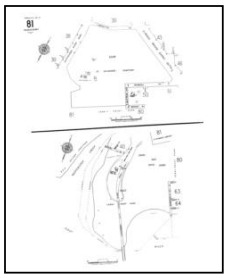
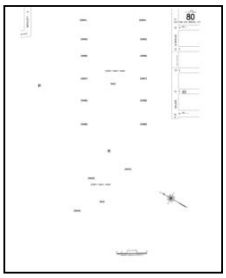
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 2007 Source Sheets

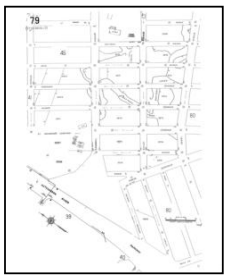


Volume 21, Sheet 81
2007

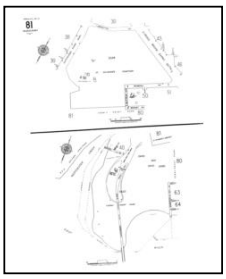


Volume 21, Sheet 80
2007

### 2006 Source Sheets



Volume 21, Sheet 79
2006



Volume 21, Sheet 81
2006

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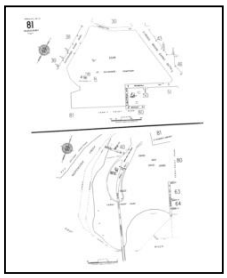
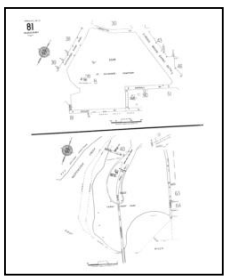


Volume 21, Sheet 81
2005

### 2004 Source Sheets



Volume 21, Sheet 81
2004

## *Sanborn Sheet Key*

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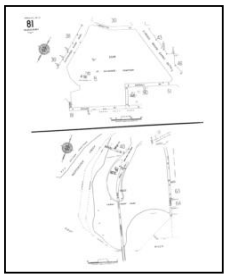
### 2003 Source Sheets



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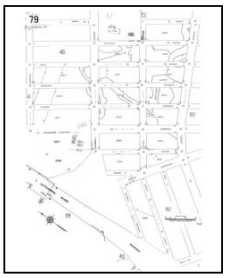
2003



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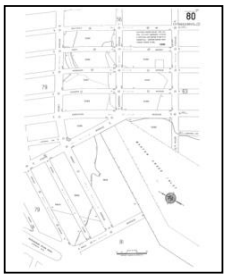
2003



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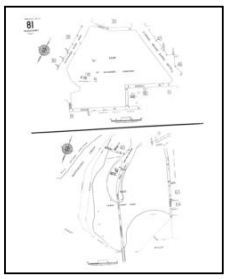
2003

### 2002 Source Sheets



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2002

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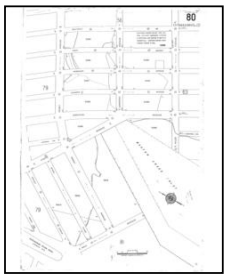

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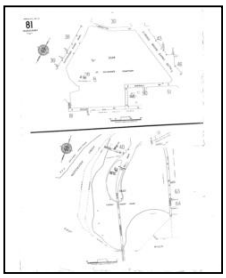
2001



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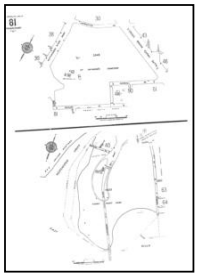
2001

### 1998 Source Sheets



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1998

## *Sanborn Sheet Key*

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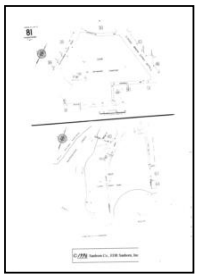
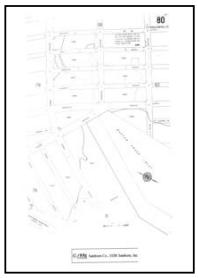


Volume 21, Sheet 81
1996



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1996



Volume 21, Sheet 79
1996

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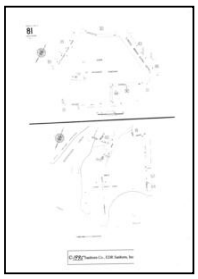

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1995

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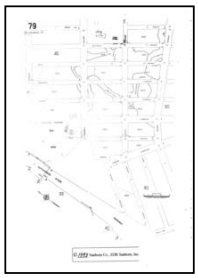
1993



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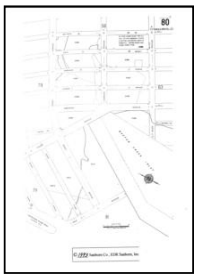
1993



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1993

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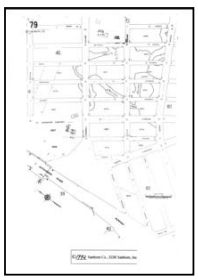
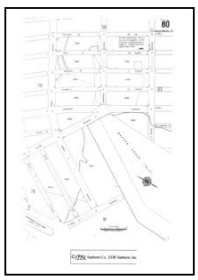


Volume 21, Sheet 79
1992



Volume 21, Sheet 80
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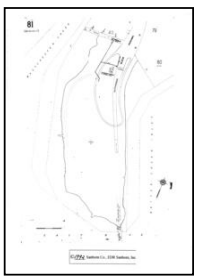

Volume 21, Sheet 81
1992

## *Sanborn Sheet Key*

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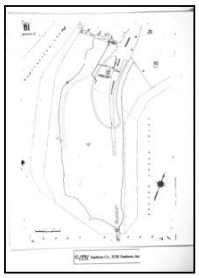
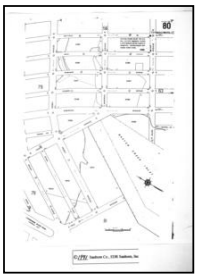


Volume 21, Sheet 81
1991



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1991

### 1988 Source Sheets



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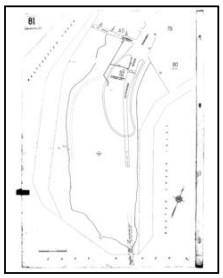
1988

### 1986 Source Sheets



Volume 21, Sheet 81
1986

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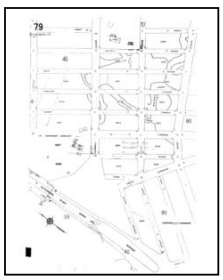
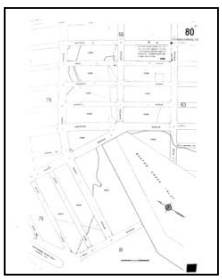
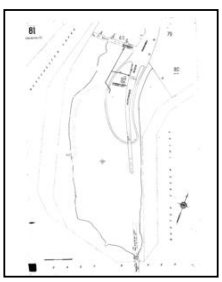


Volume 21, Sheet 79
1983



Volume 21, Sheet 80
1983



Volume 21, Sheet 81
1983

## *Sanborn Sheet Key*

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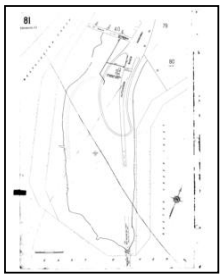
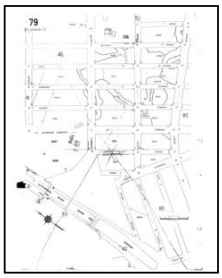
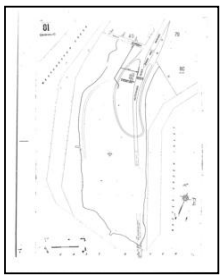


Volume 21, Sheet 81
1981



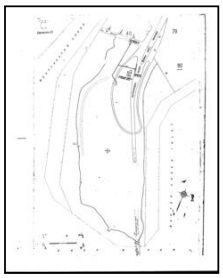
Volume 21, Sheet 79
1981

### 1978 Source Sheets



Volume 21, Sheet 81
1978

### 1977 Source Sheets

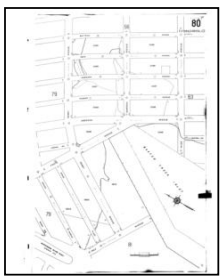


Volume 21, Sheet 81
1977

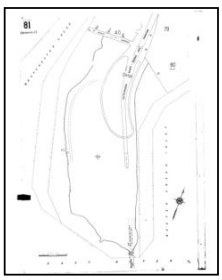


Volume 21, Sheet 80
1977

### 1967 Source Sheets



Volume 21, Sheet 80
1967

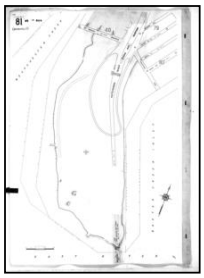


Volume 21, Sheet 81
1967

## *Sanborn Sheet Key*

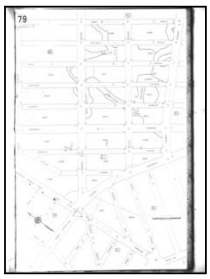
This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1950 Source Sheets



Volume 21, Sheet 81
1950

### 1930 Source Sheets

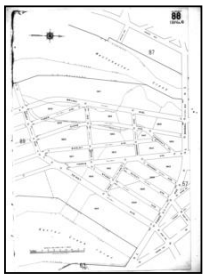


Volume 21, Sheet 79
1930

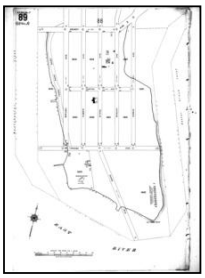


Volume 21, Sheet 81
1930

### 1919 Source Sheets

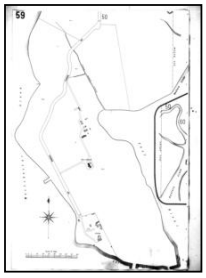


Volume 17, Sheet 88
1919



Volume 17, Sheet 89
1919

### 1908 Source Sheets

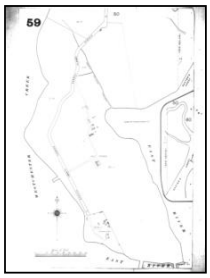


Volume A, Sheet 59
1908

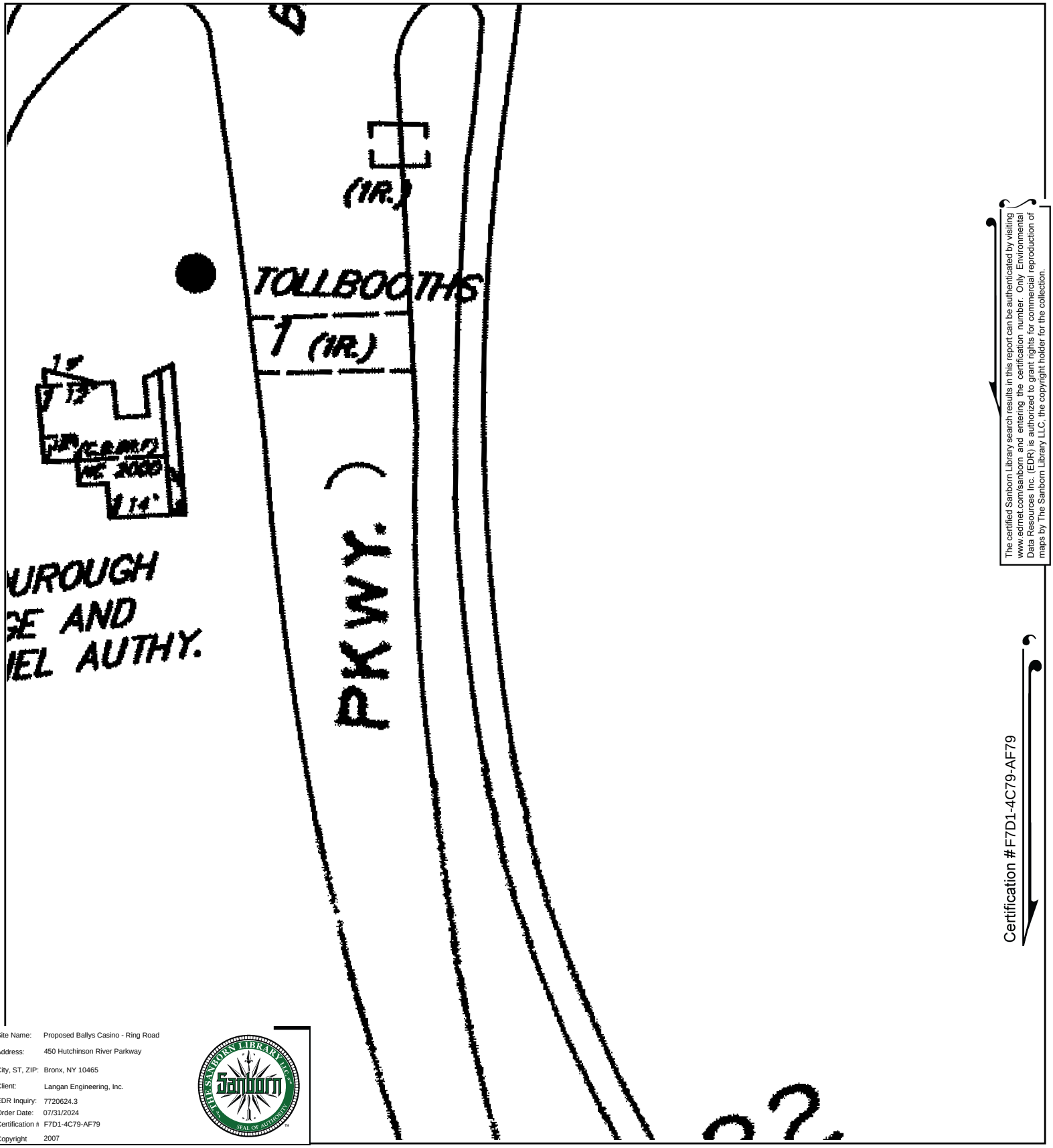
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1898 Source Sheets




Volume A, Sheet 59
1898

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| Client: | Langan Engineering, Inc. |
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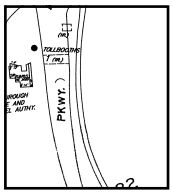

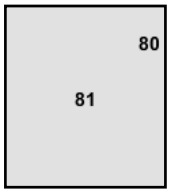


Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

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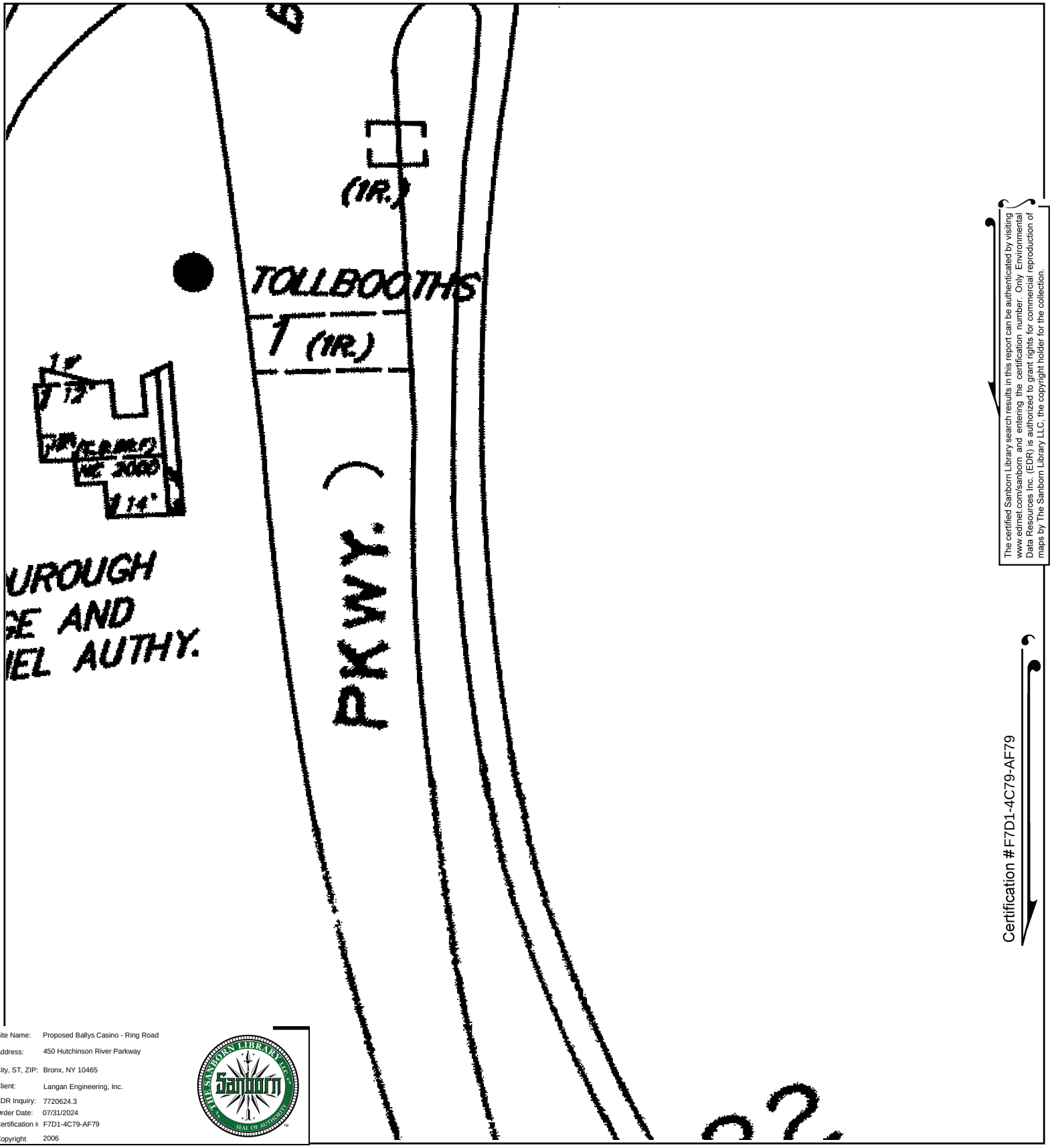


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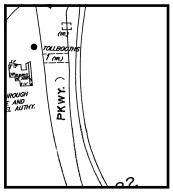

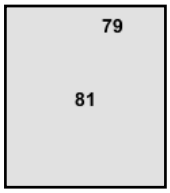


Volume 21, Sheet 81
Volume 21, Sheet 79

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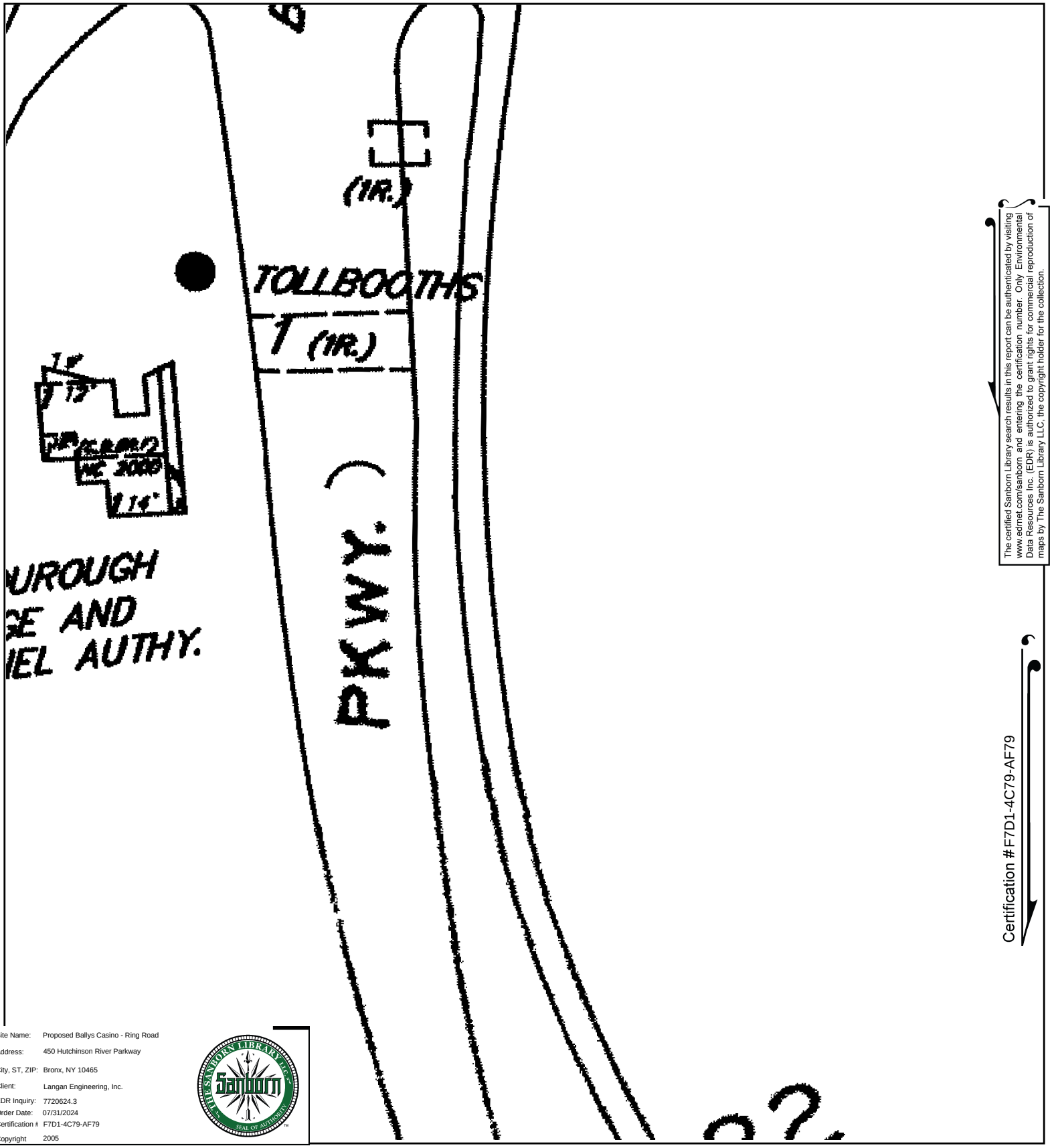


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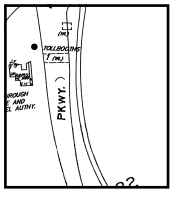

81

Volume 21, Sheet 81

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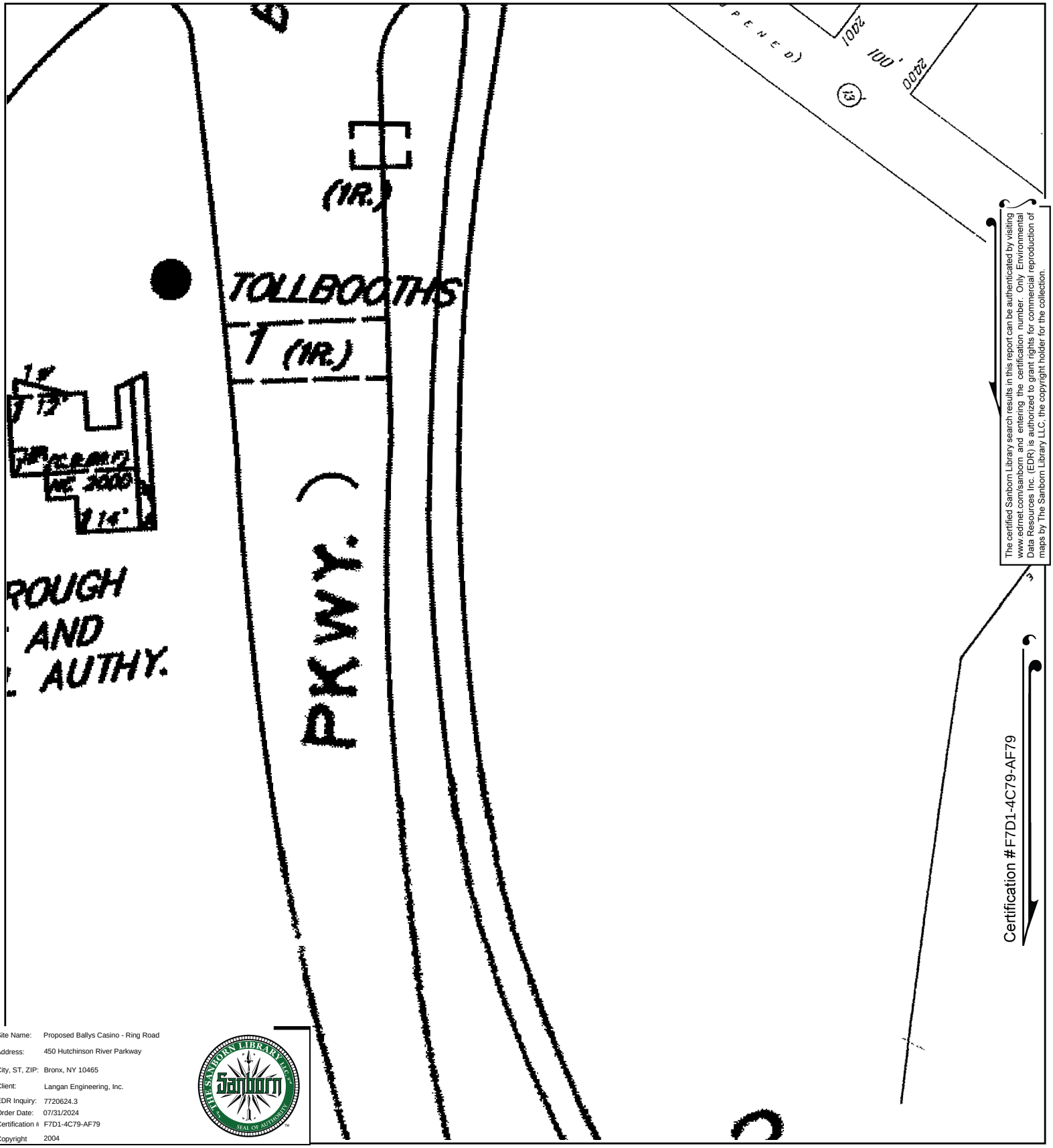


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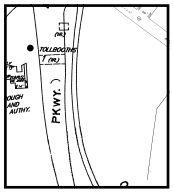

Volume 21, Sheet 81

81

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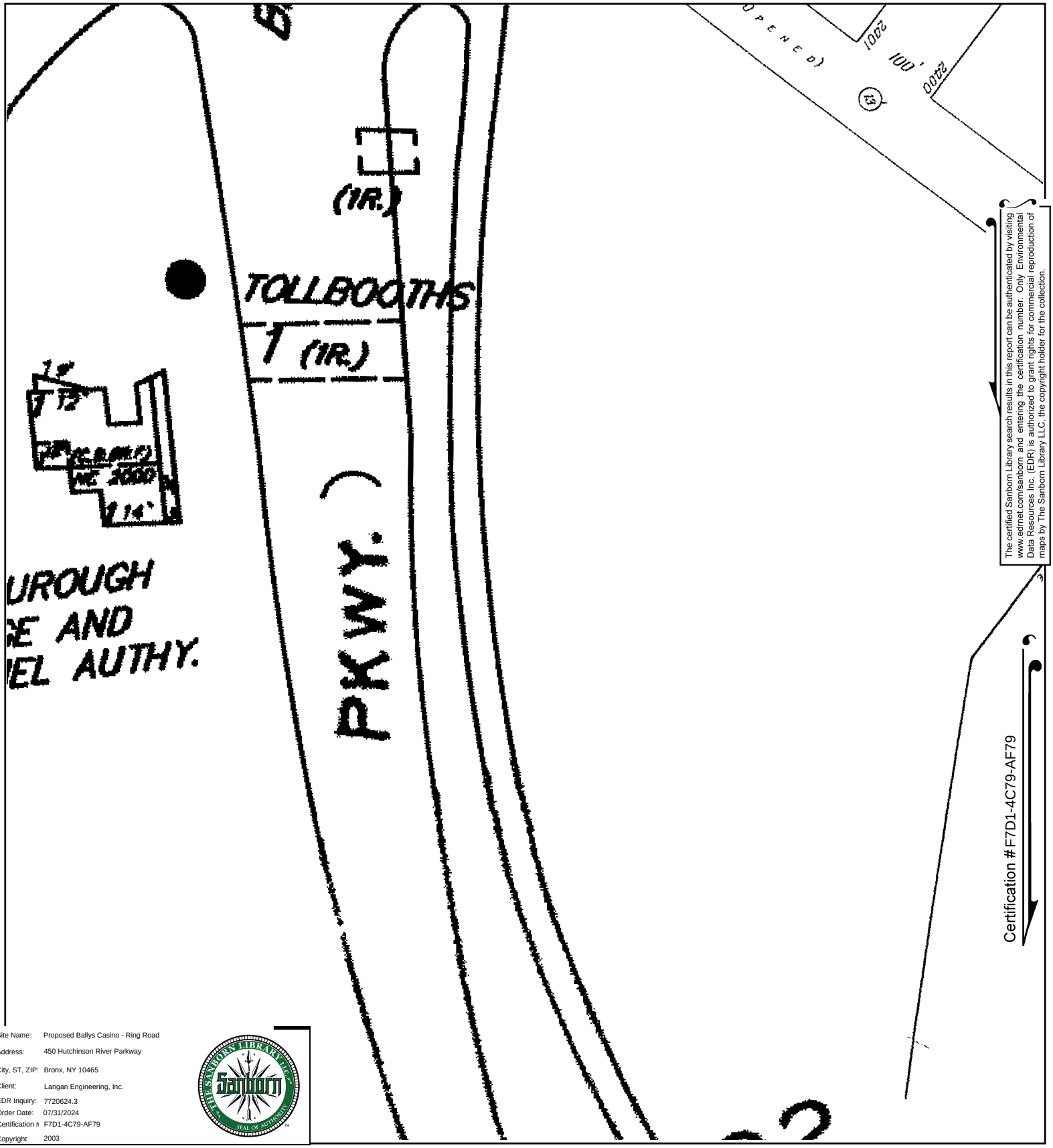


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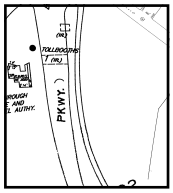

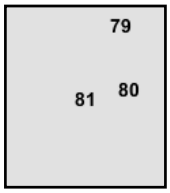


Volume 21, Sheet 80
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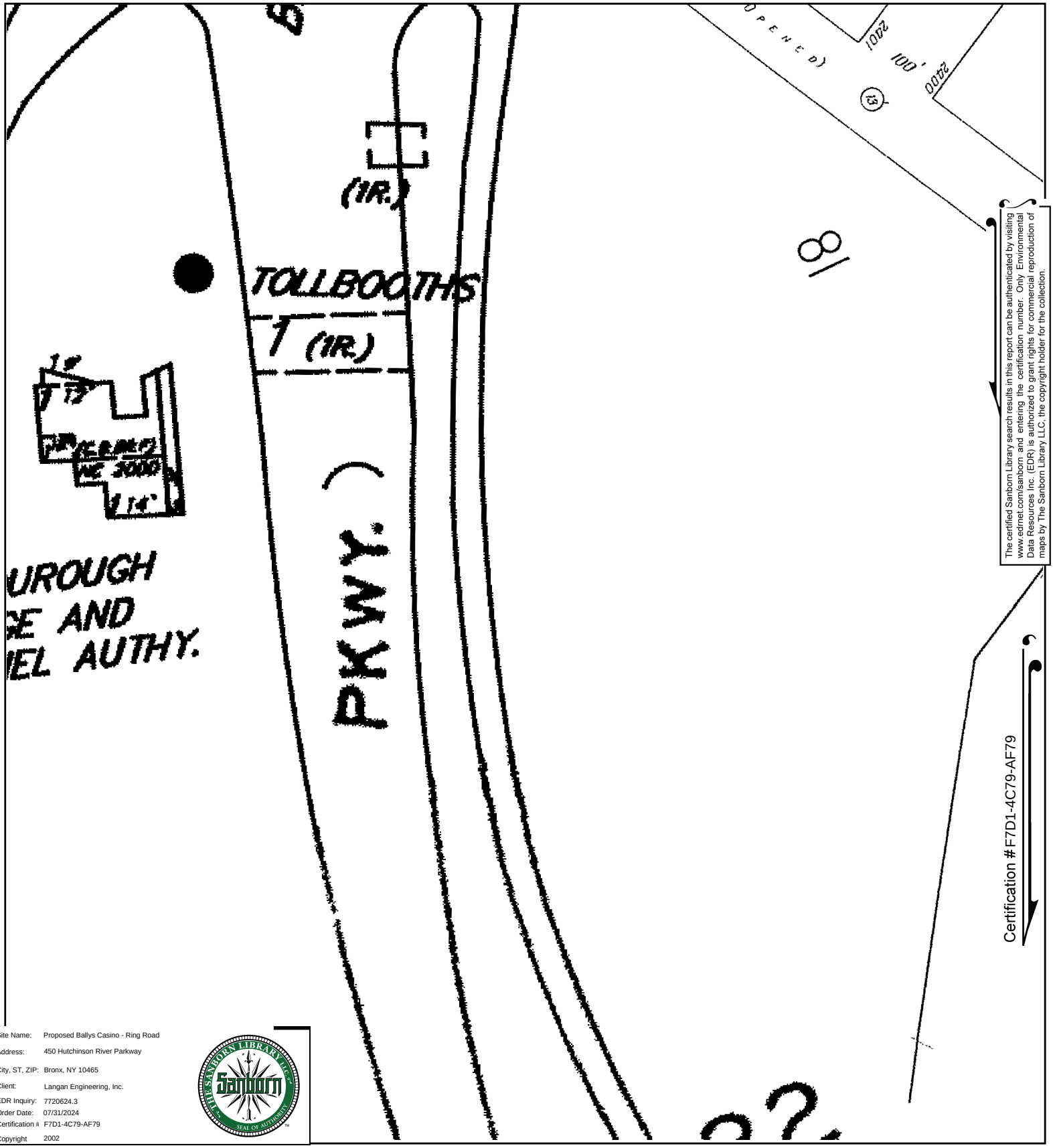
Volume 21, Sheet 81

N

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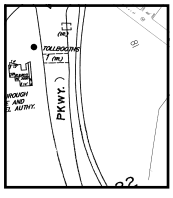

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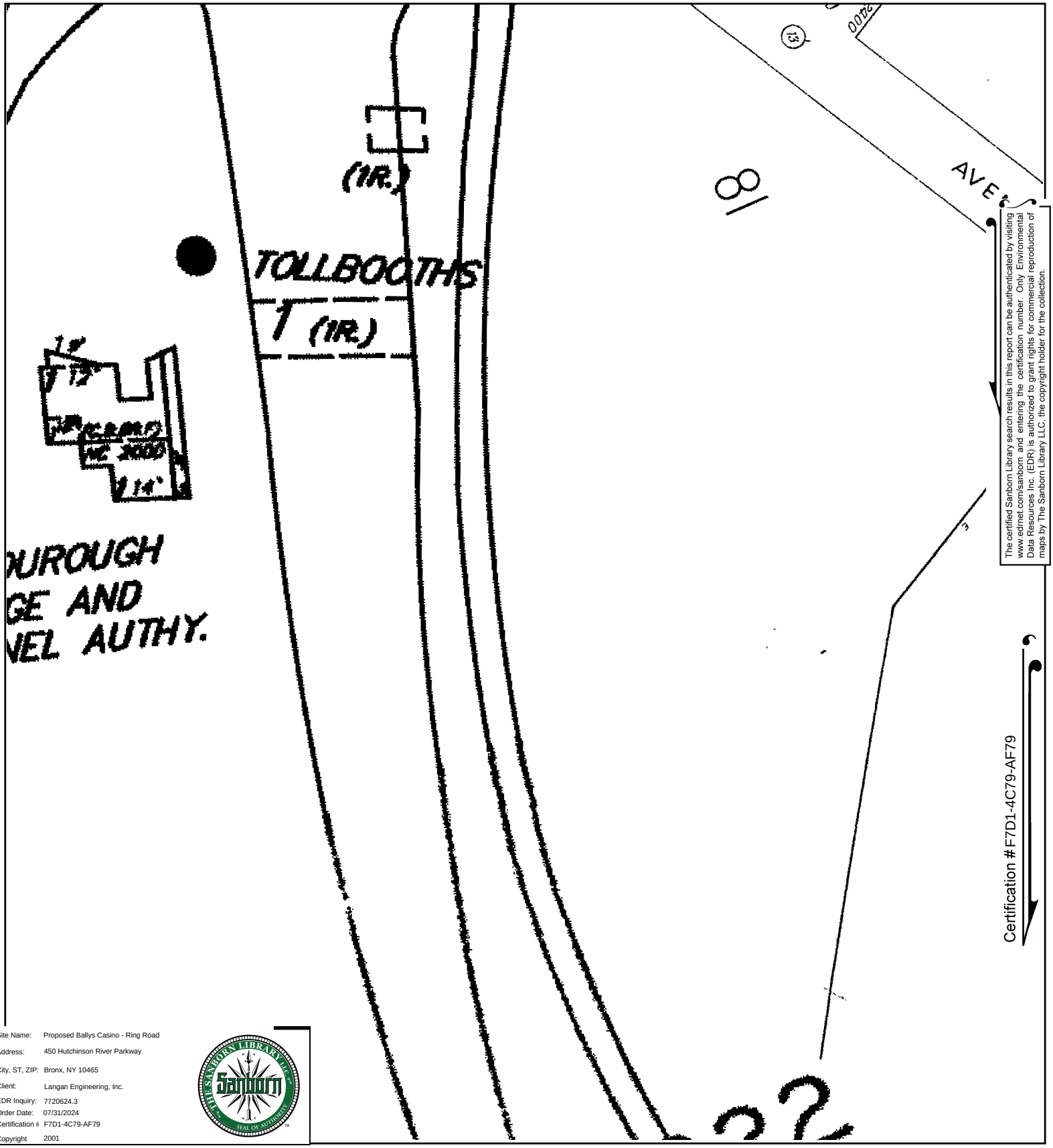


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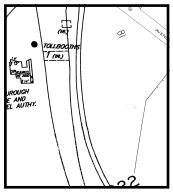

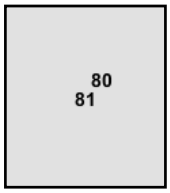


Volume 21, Sheet 81
Volume 21, Sheet 80

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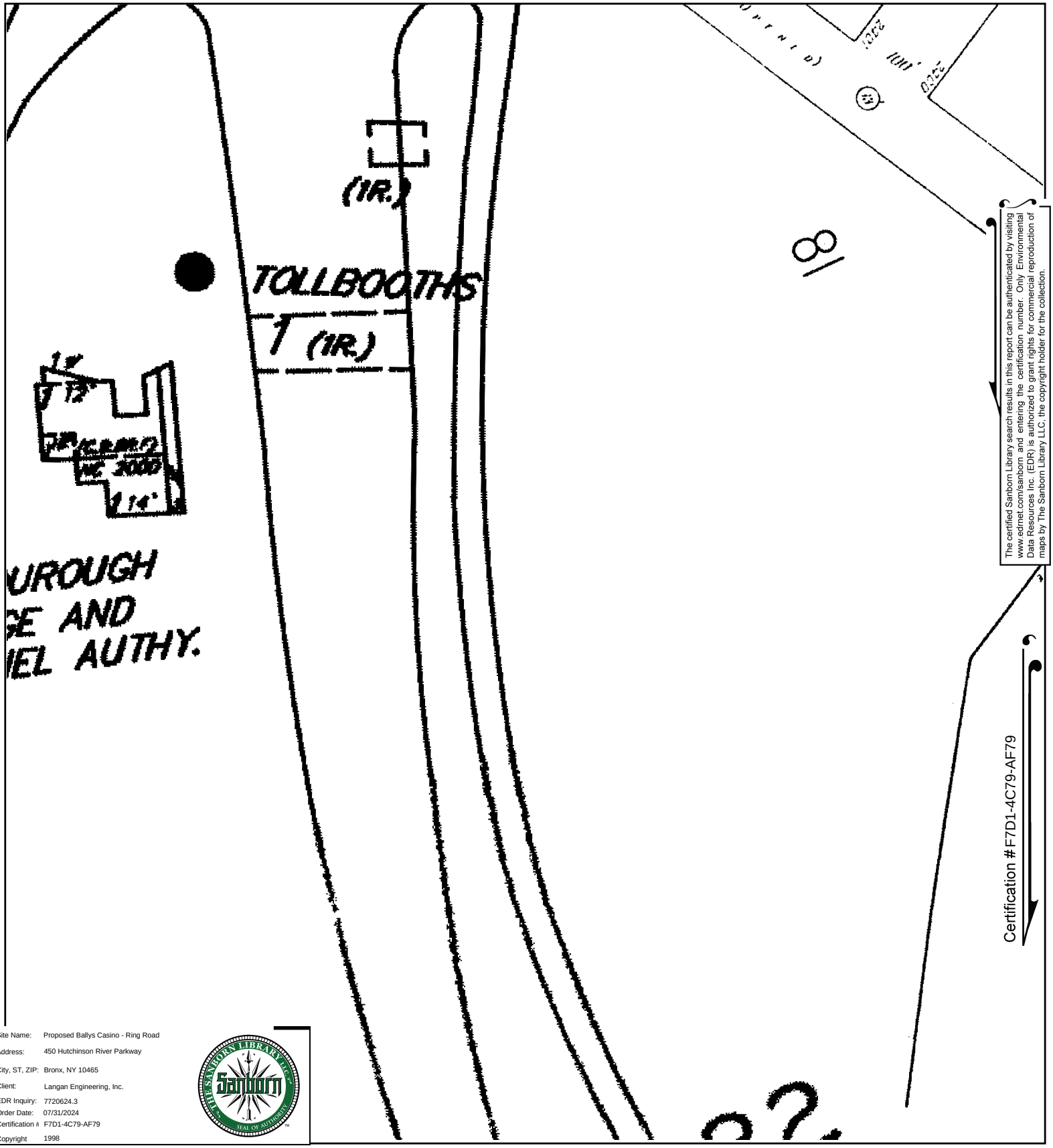


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Volume 21, Sheet 81

81

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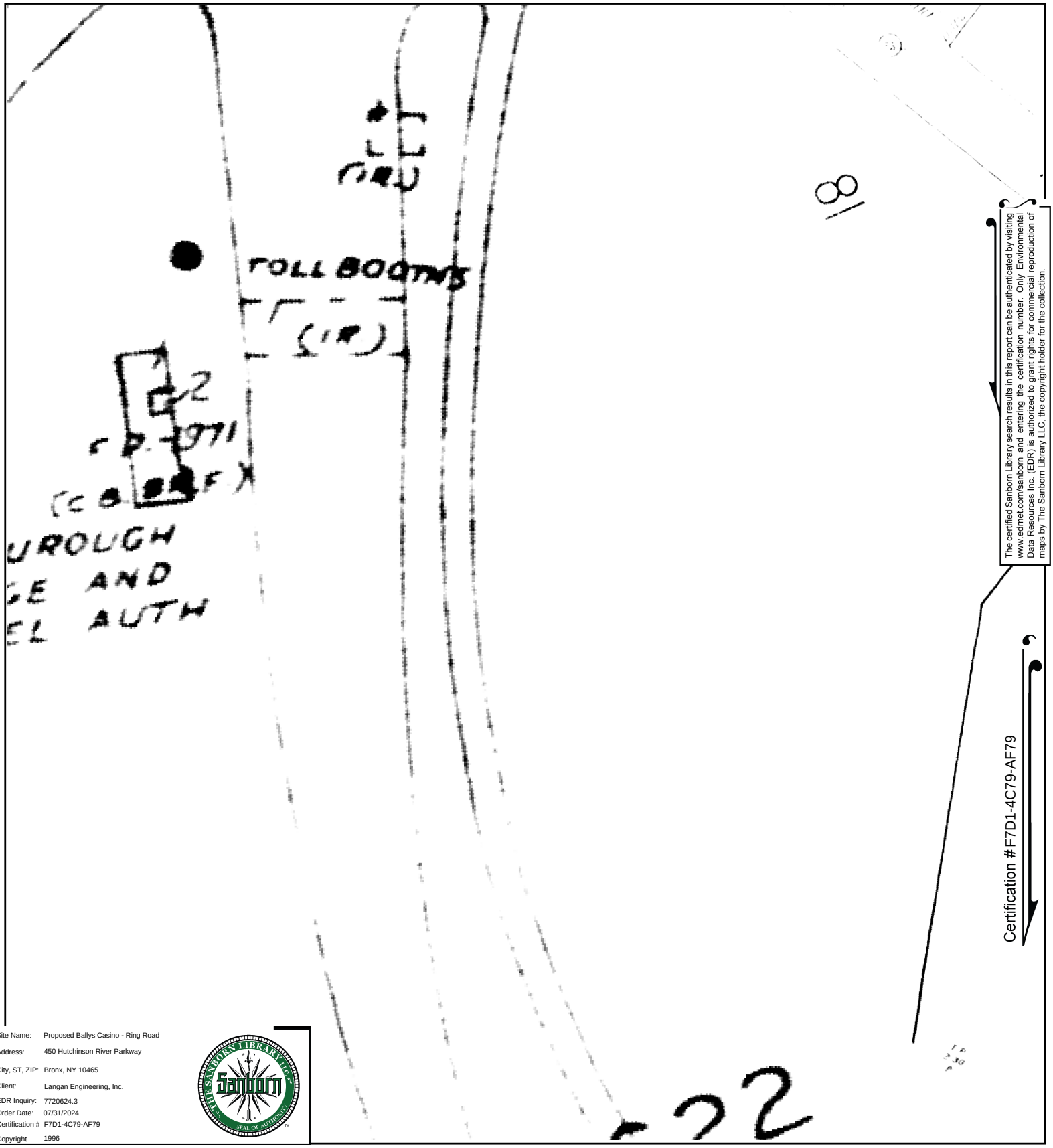


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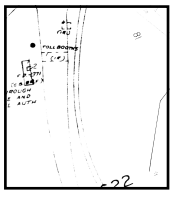

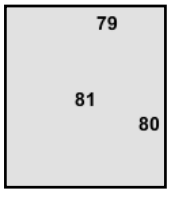


Volume 21, Sheet 79
Volume 21, Sheet 80
Volume 21, Sheet 81

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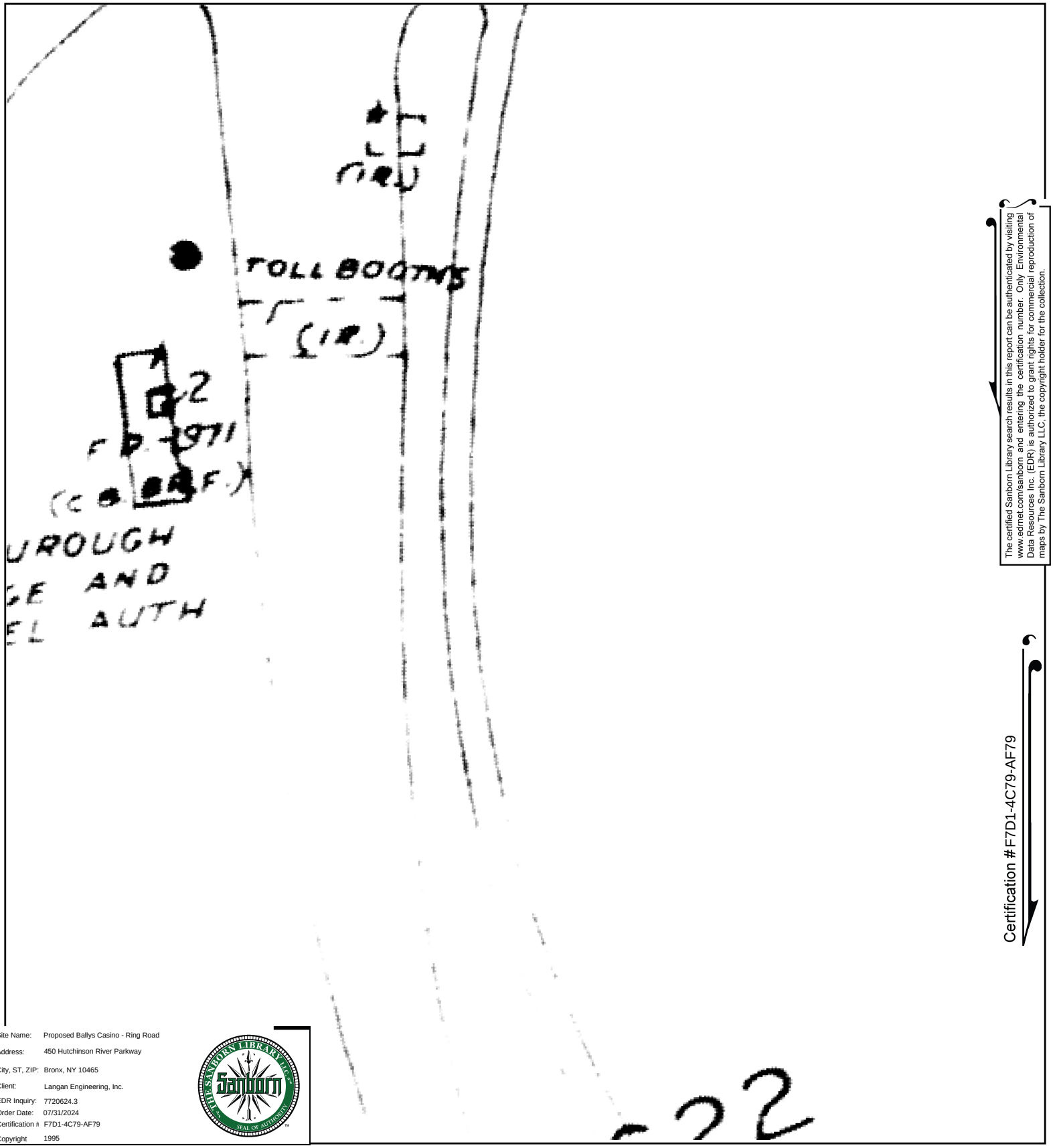


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Copyright: 1995

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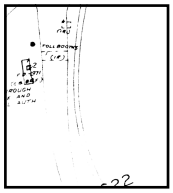

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Volume 21, Sheet 81

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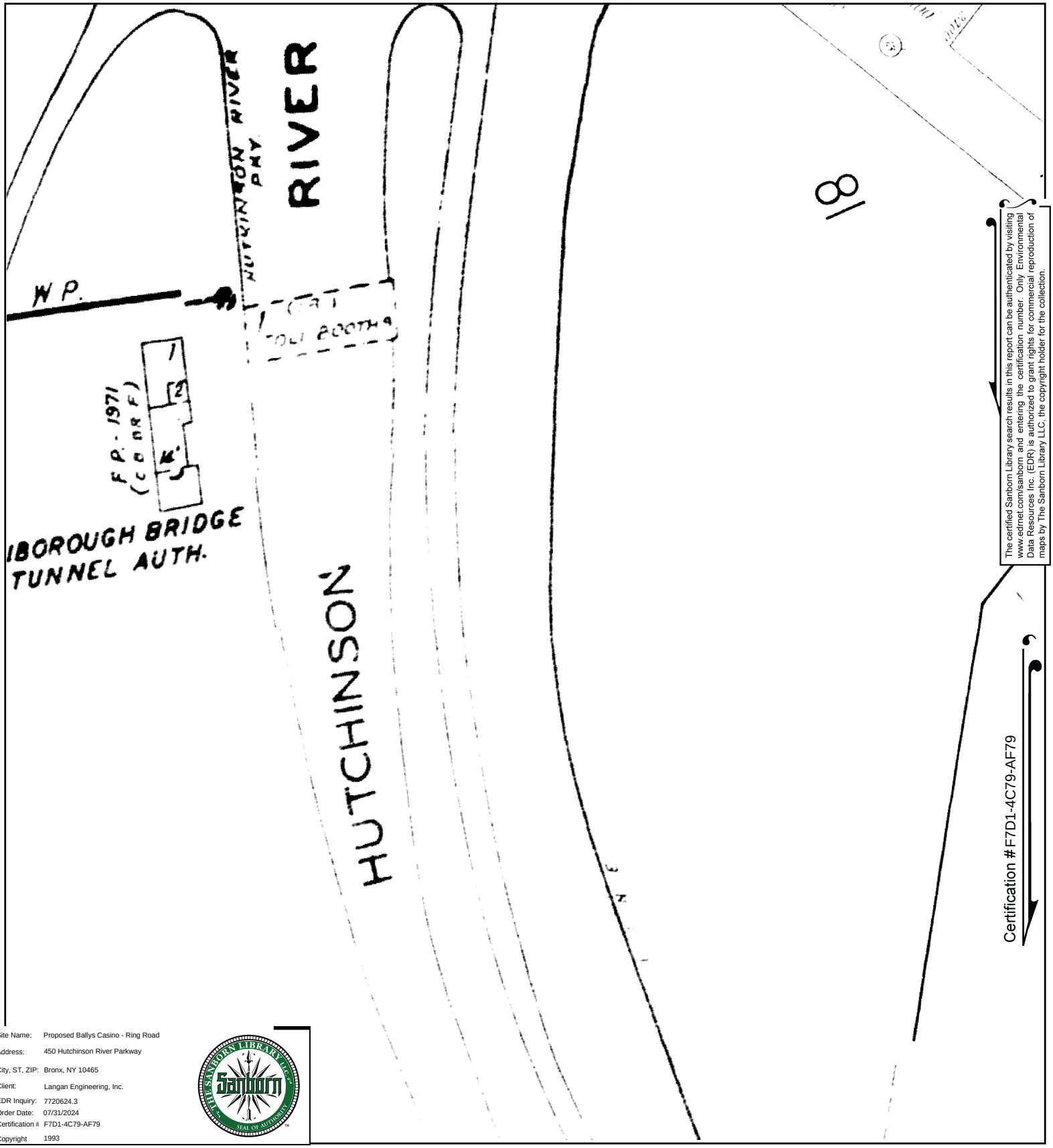


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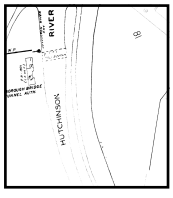

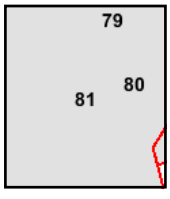


Volume 21, Sheet 80
Volume 21, Sheet 79
Volume 21, Sheet 81

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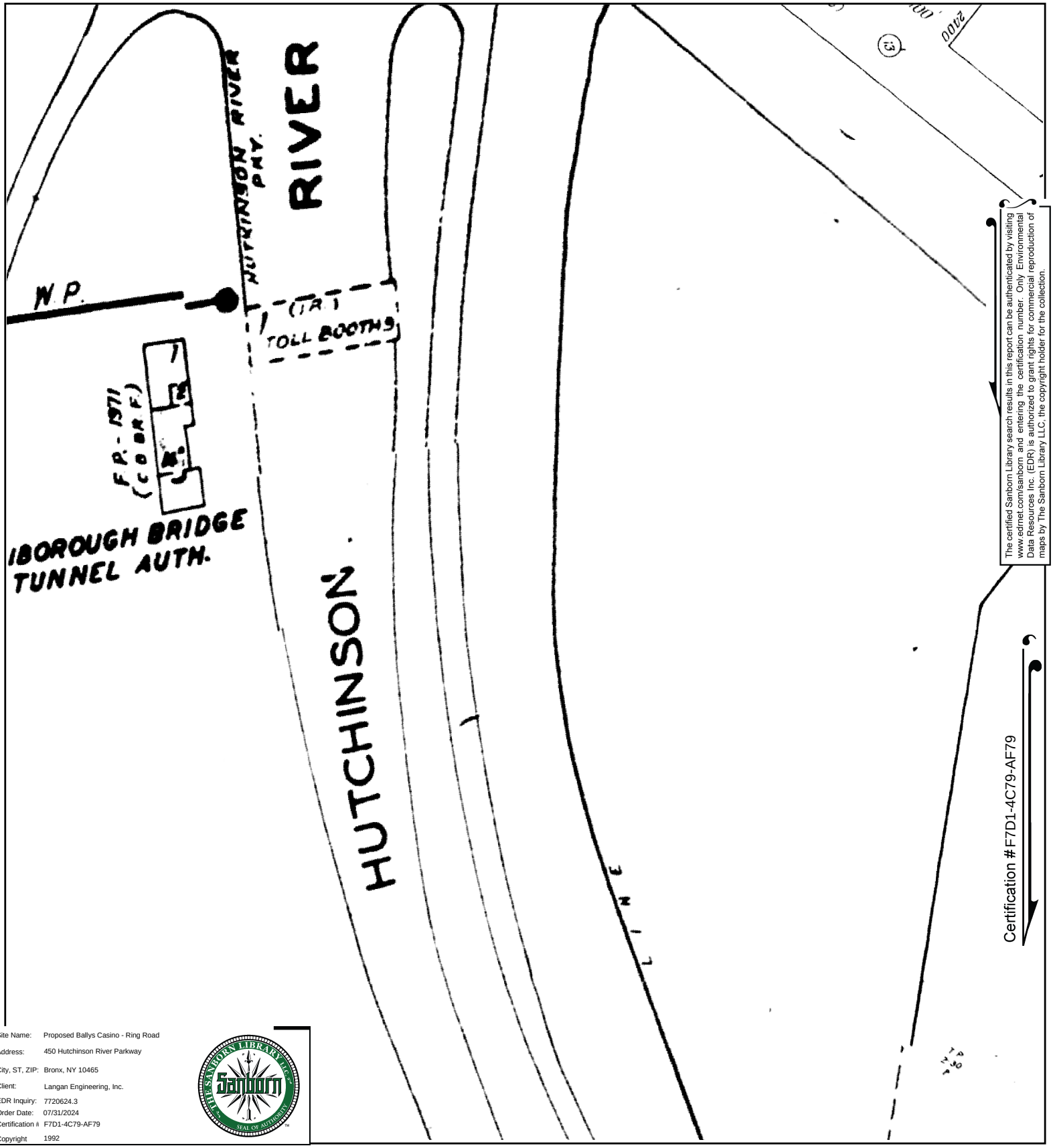


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| EDR Inquiry: | 7720624.3 |
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| Certification #: | F7D1-4C79-AF79 |
| Copyright | 1992 |

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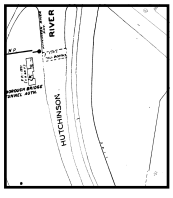
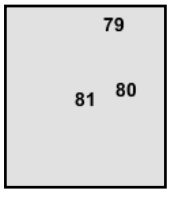
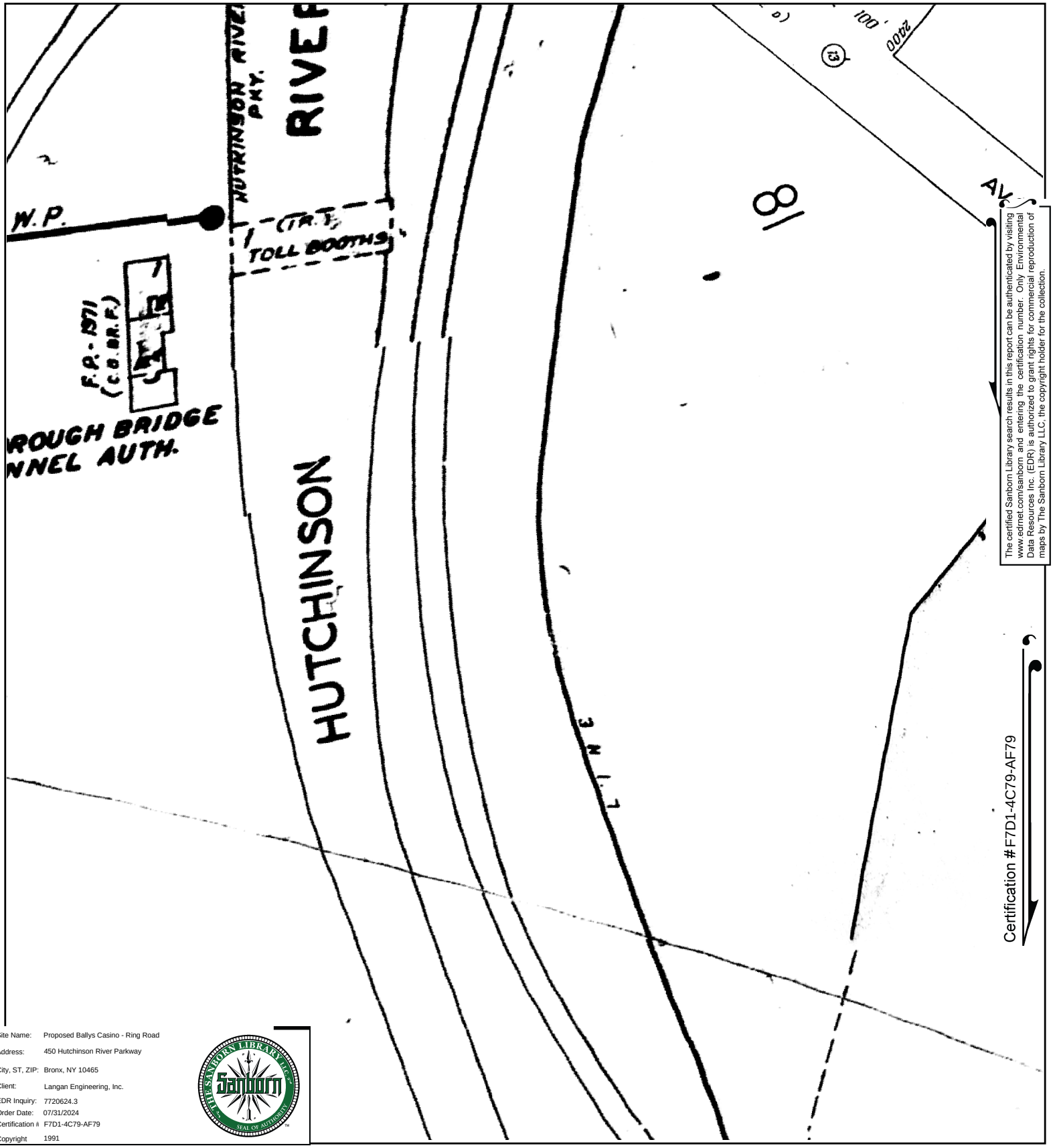



Volume 21, Sheet 81
Volume 21, Sheet 80
Volume 21, Sheet 79

0 Feet 150 300 600

N

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| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
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| Copyright | 1991 |

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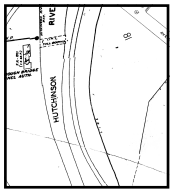

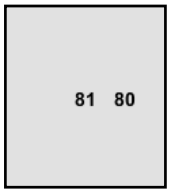


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Volume 21, Sheet 81

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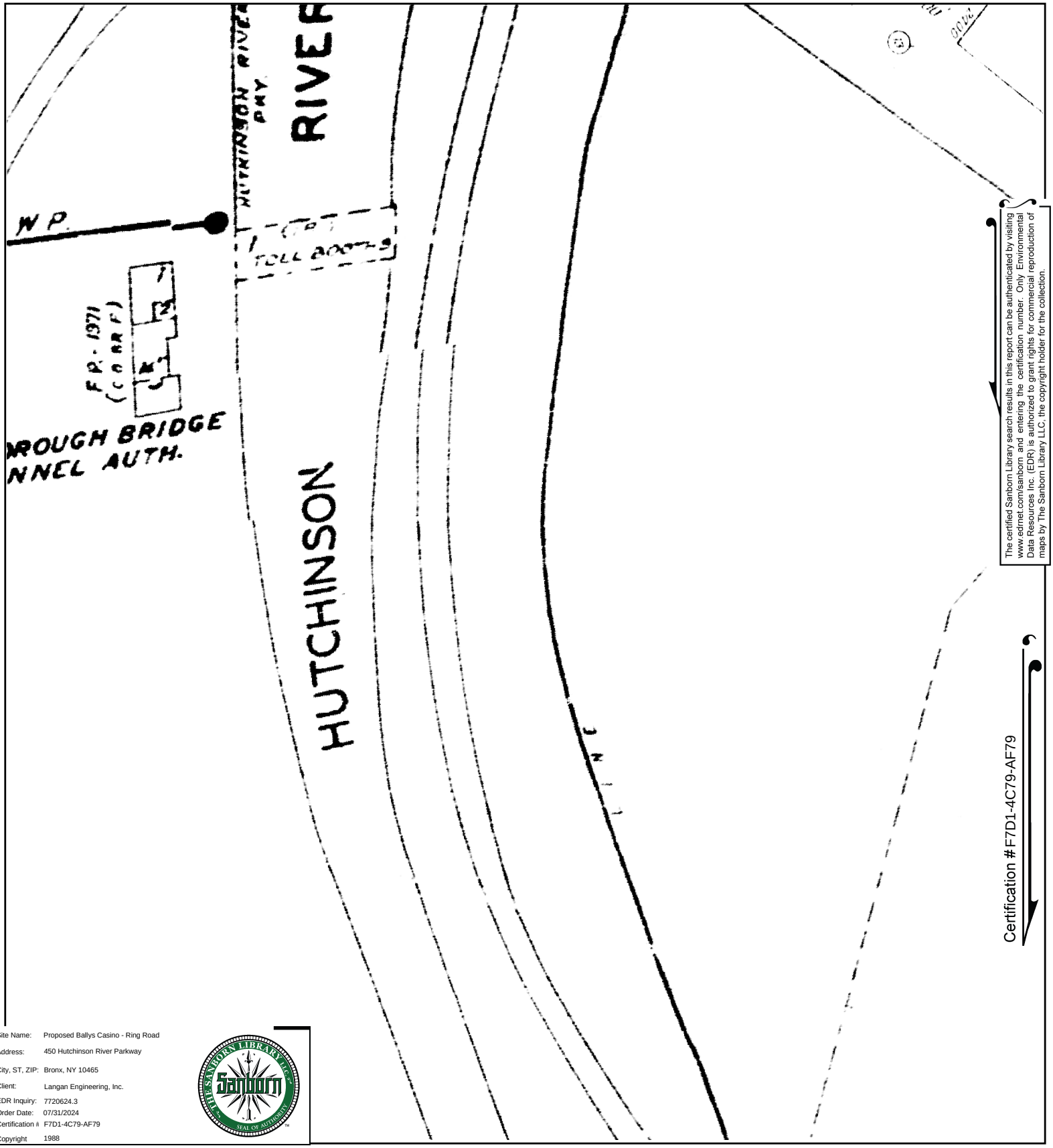


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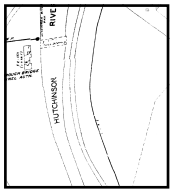

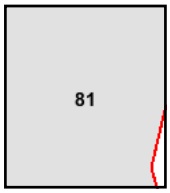


Volume 21, Sheet 81

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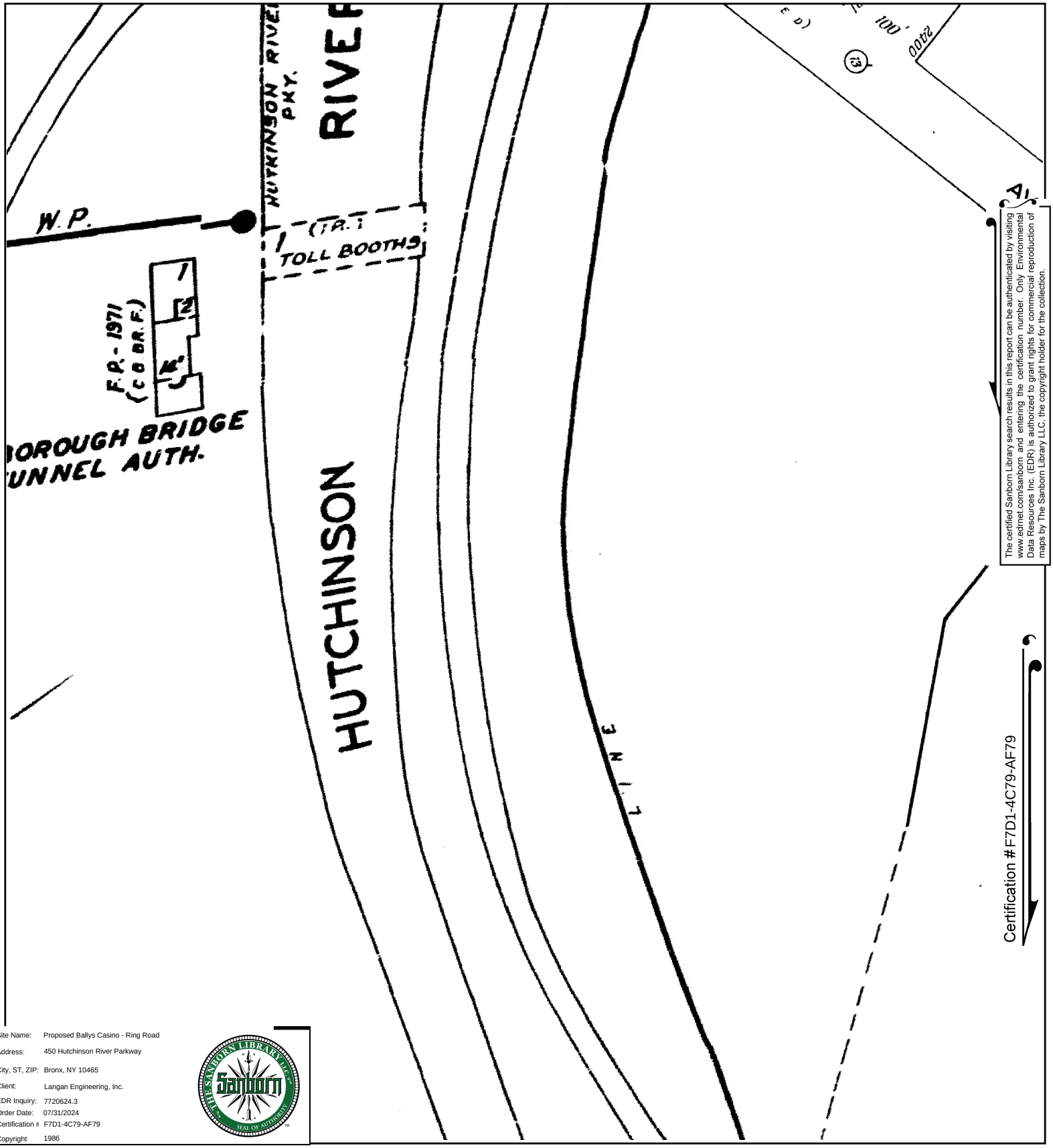


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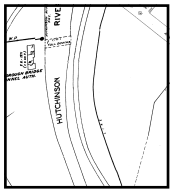

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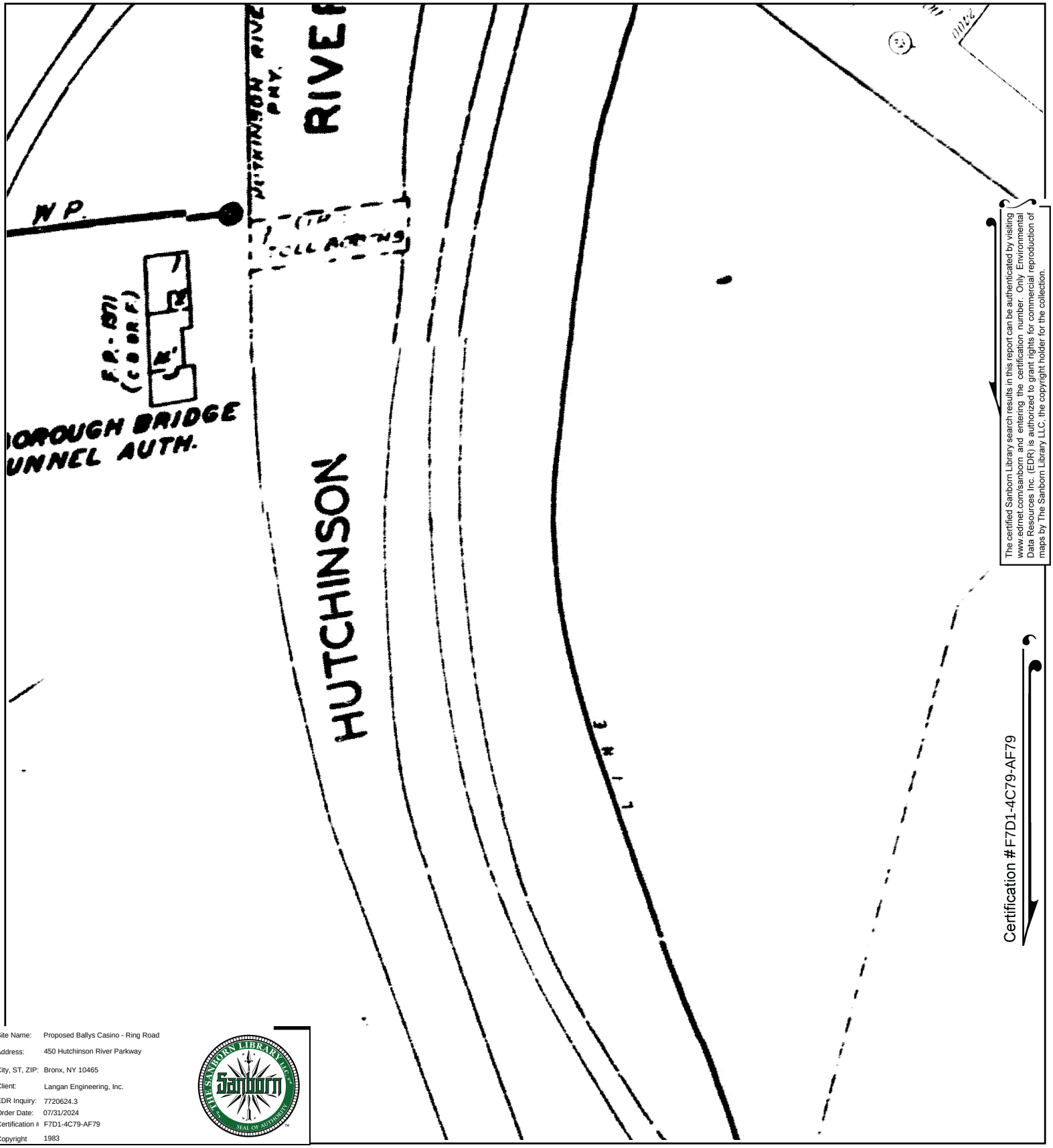


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Copyright: 1983

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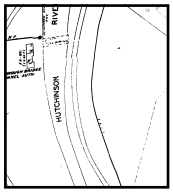

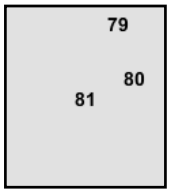


Volume 21, Sheet 81
Volume 21, Sheet 80
Volume 21, Sheet 79

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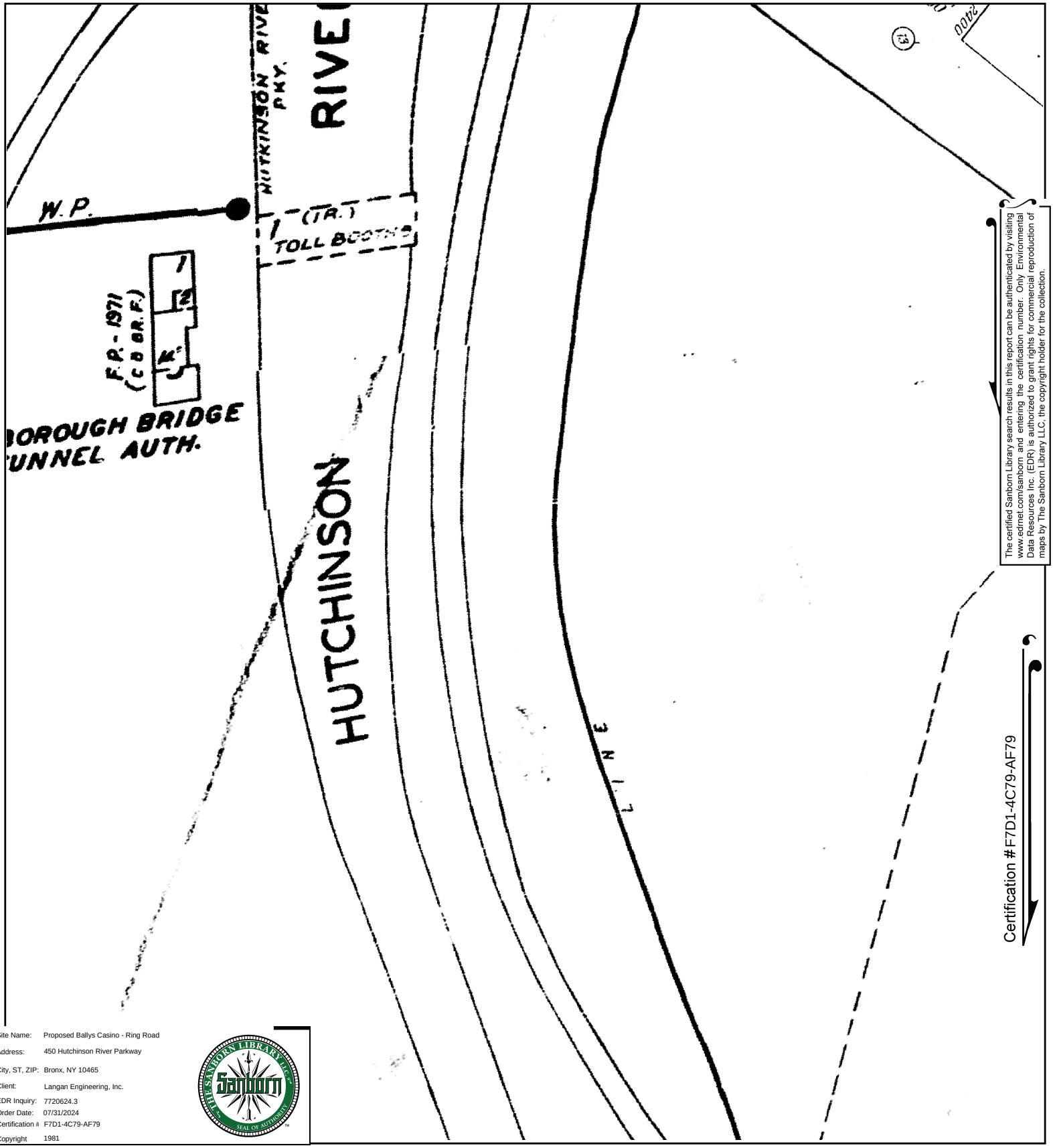


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| Copyright | 1981 |

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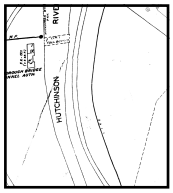

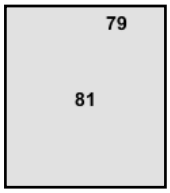


Volume 21, Sheet 79
Volume 21, Sheet 81

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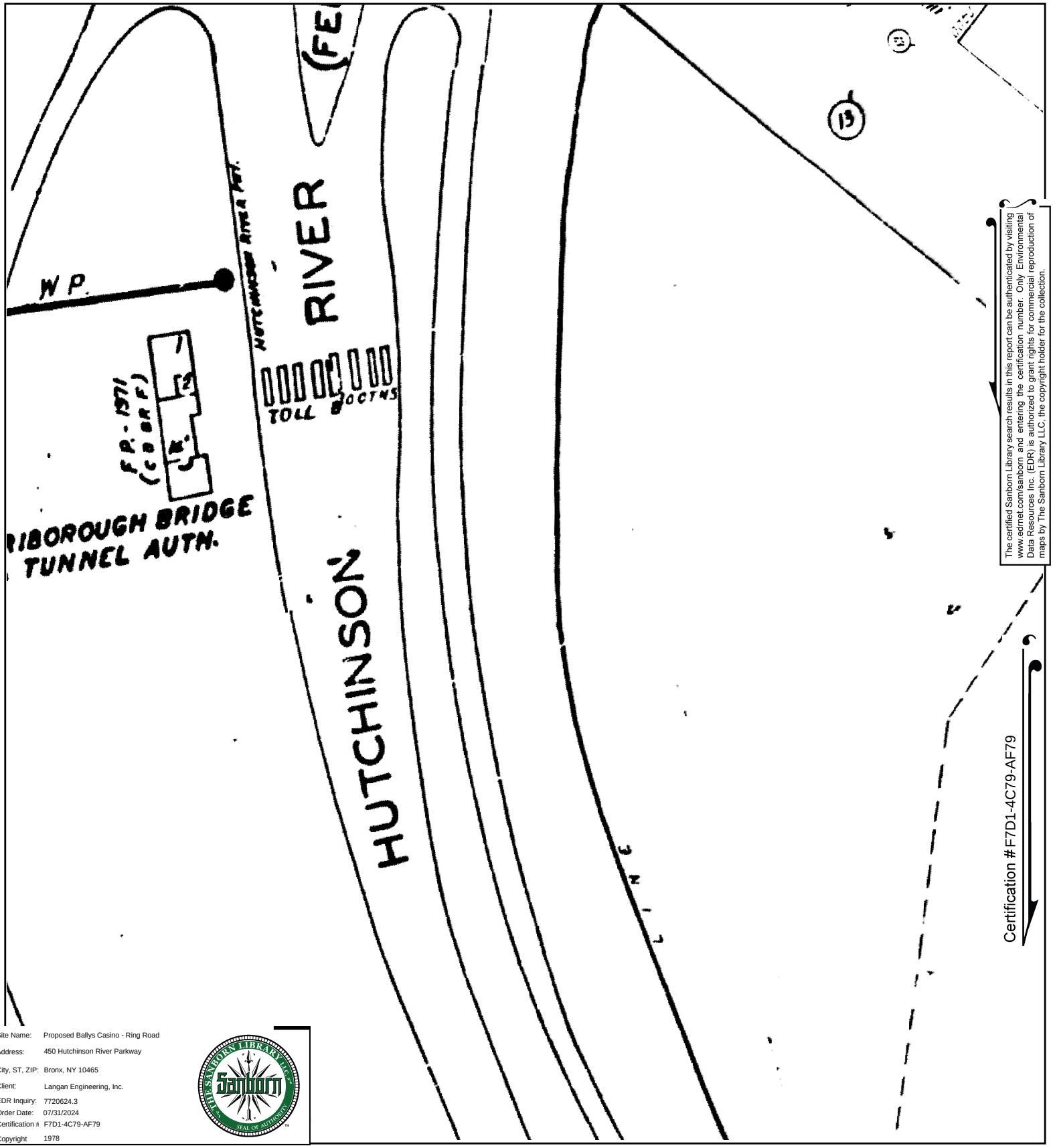


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| Copyright | 1978 |

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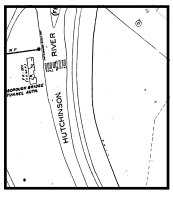

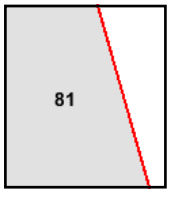


Volume 21, Sheet 81

0 Feet 150 300 600

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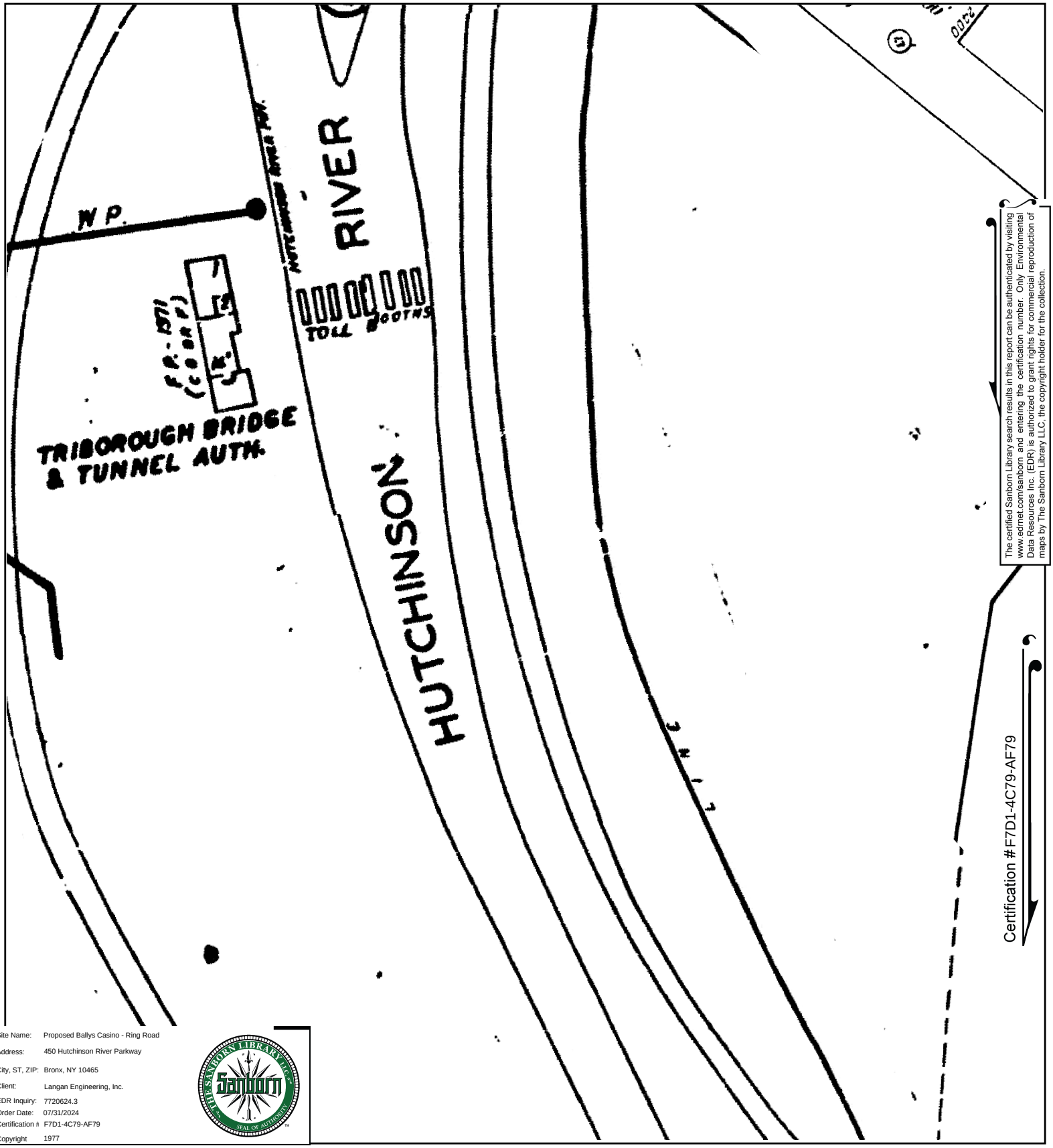


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| Copyright | 1977 |

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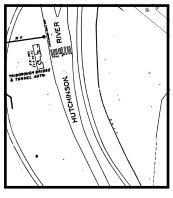

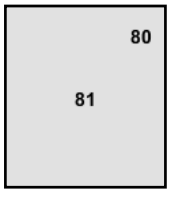


Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

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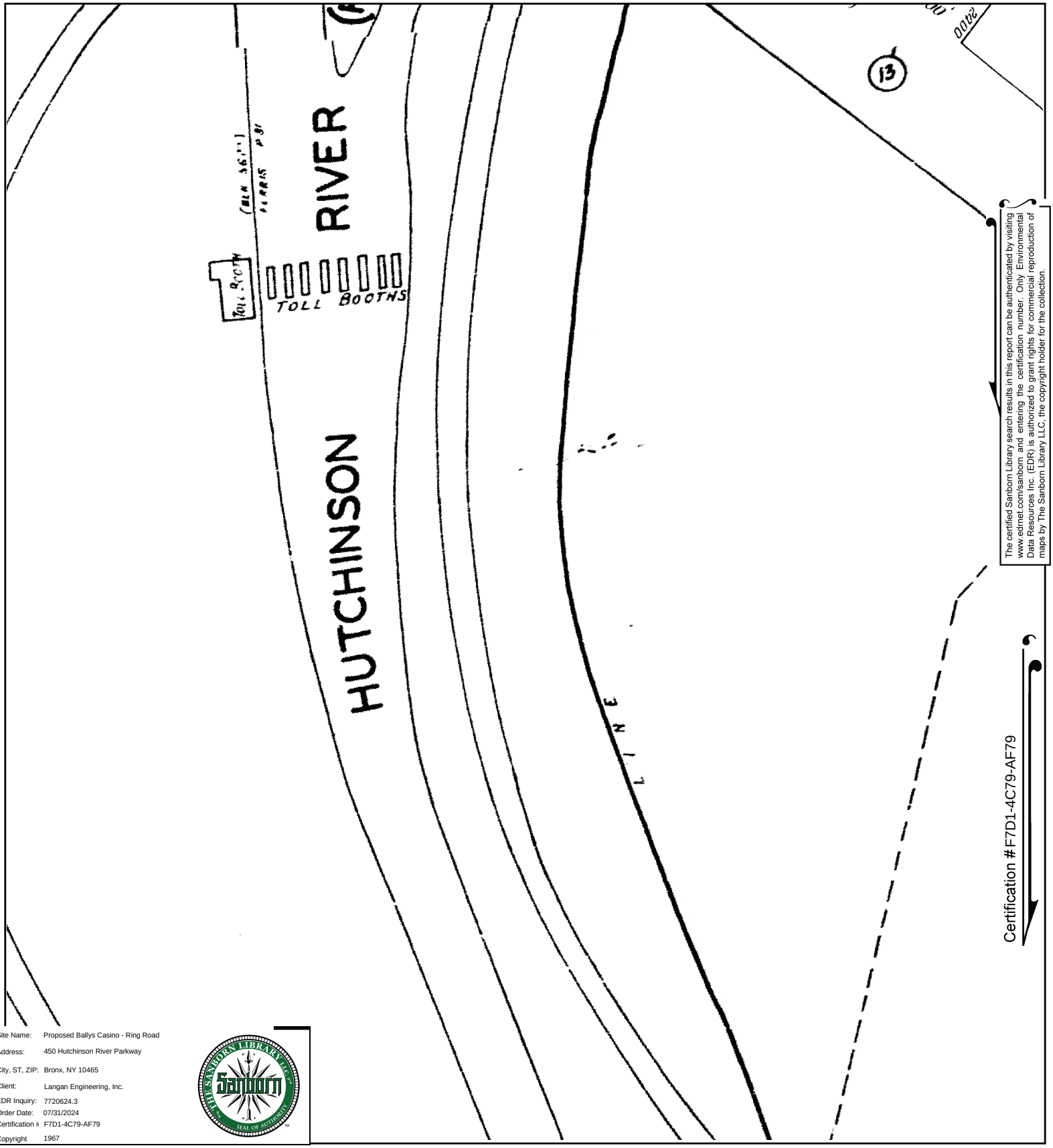


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Order Date: 07/31/2024
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Copyright: 1967

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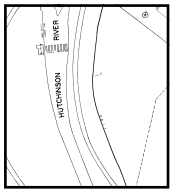

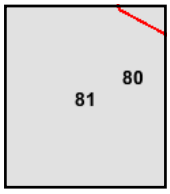


Volume 21, Sheet 81
Volume 21, Sheet 80

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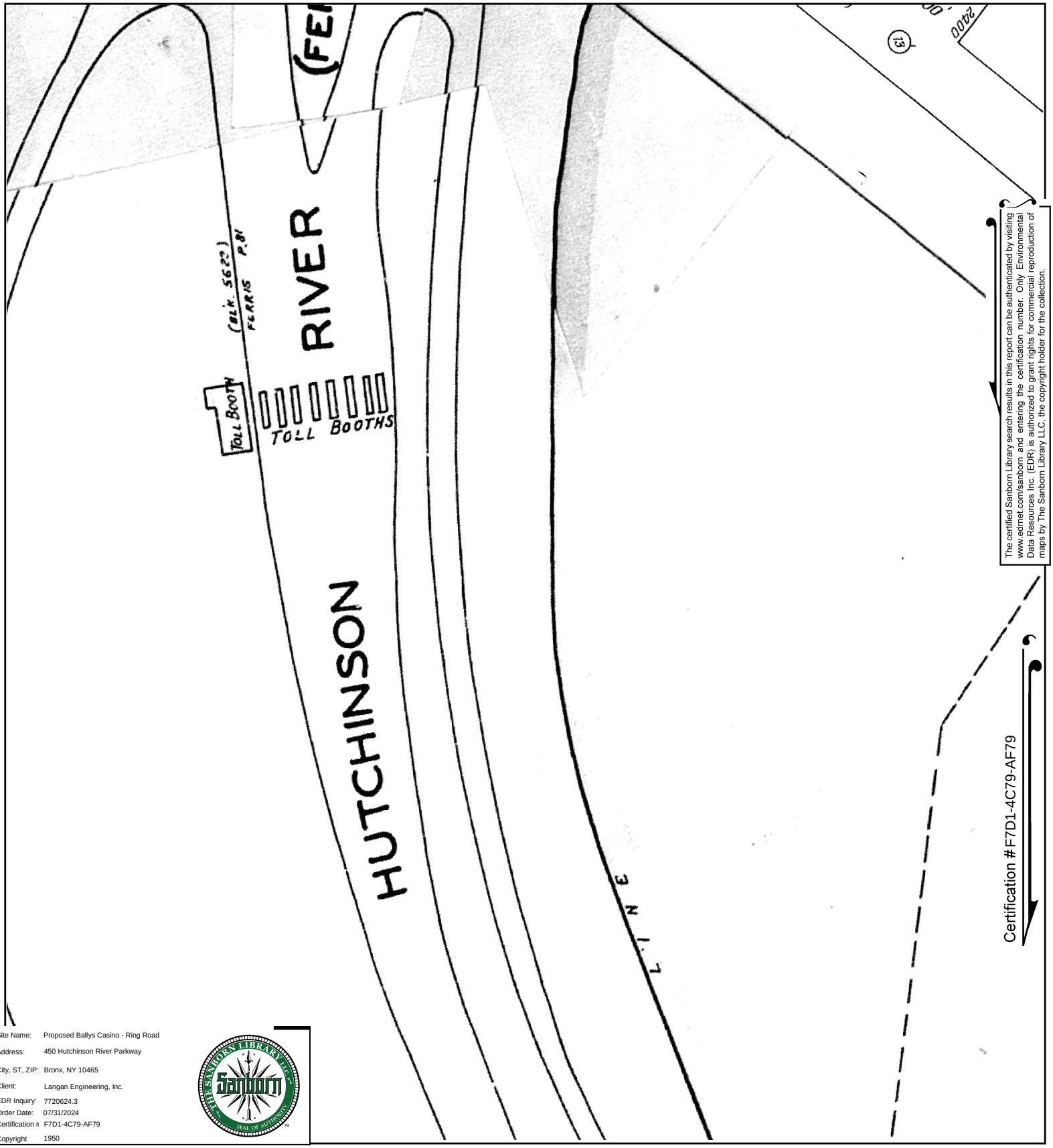


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Volume 21, Sheet 81



81

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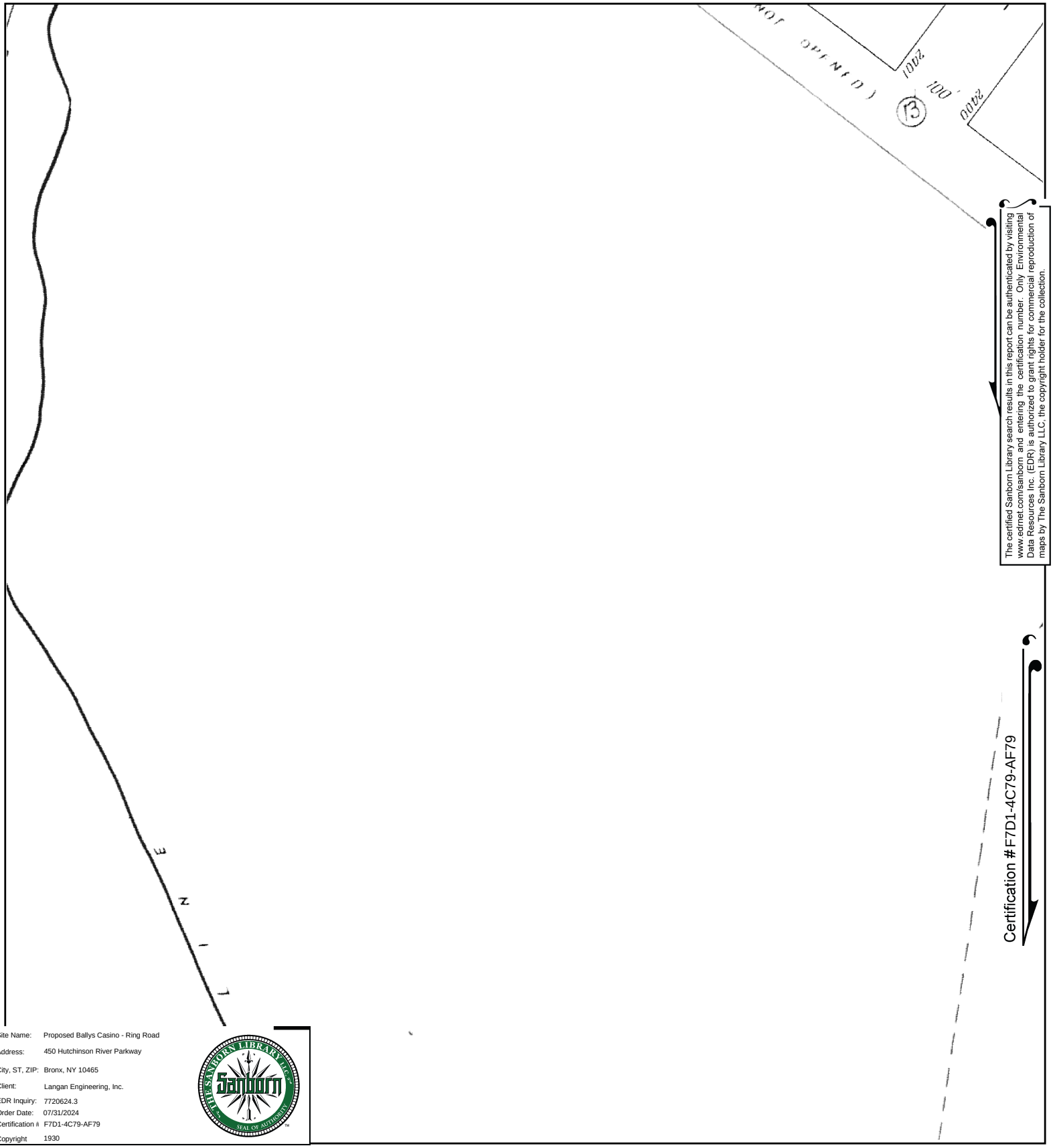


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Copyright: 1930

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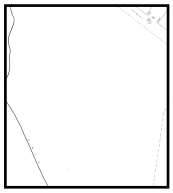

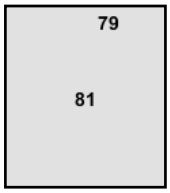


Volume 21, Sheet 81
Volume 21, Sheet 79

0 Feet 150 300 600

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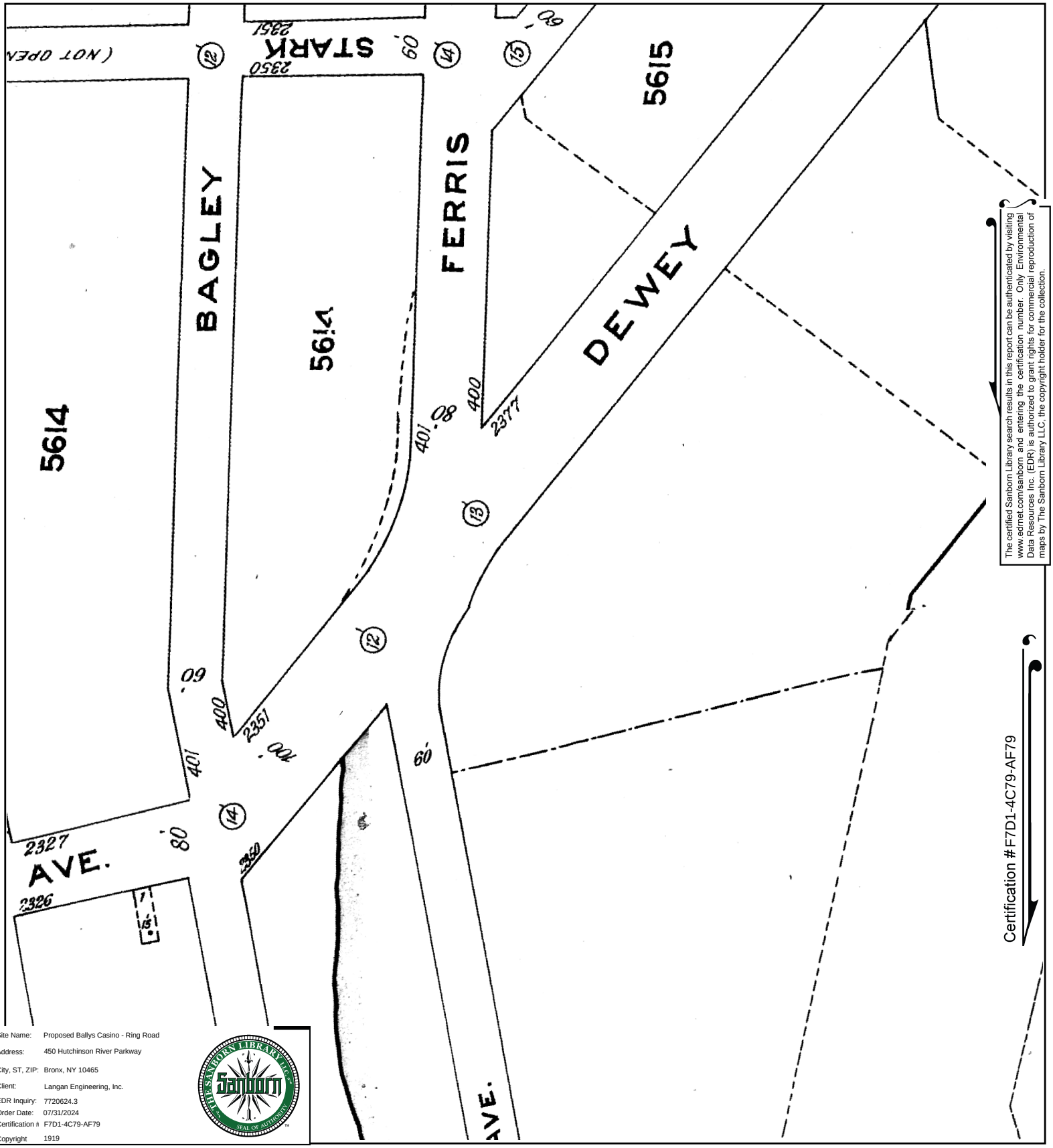


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| Copyright | 1919 |

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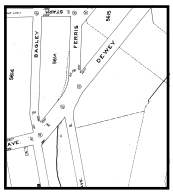

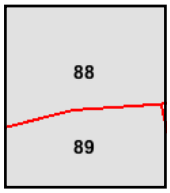


Volume 17, Sheet 89
Volume 17, Sheet 88

0 Feet 150 300 600

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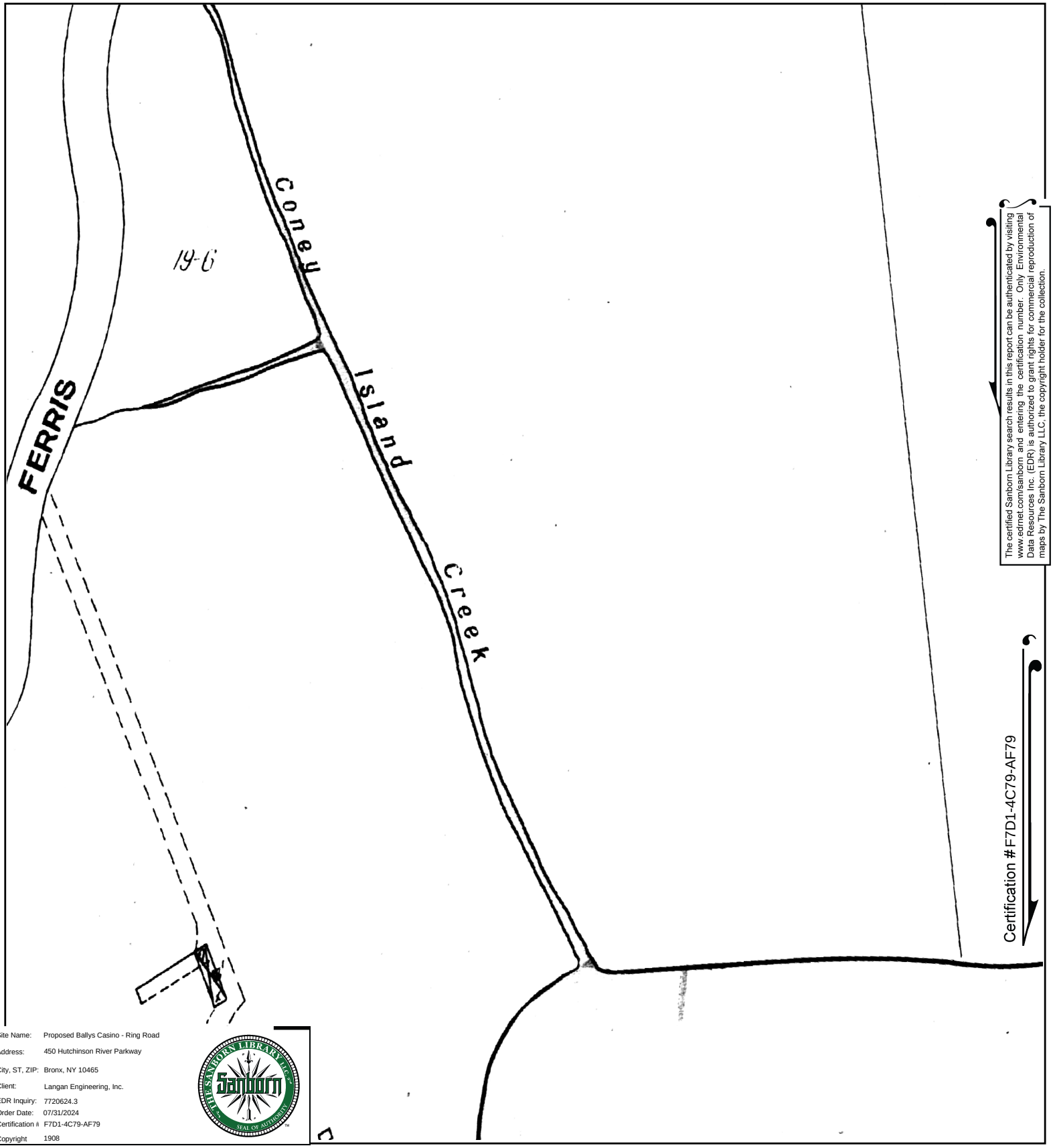


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| Certification # | F7D1-4C79-AF79 |
| Copyright | 1908 |

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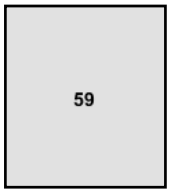


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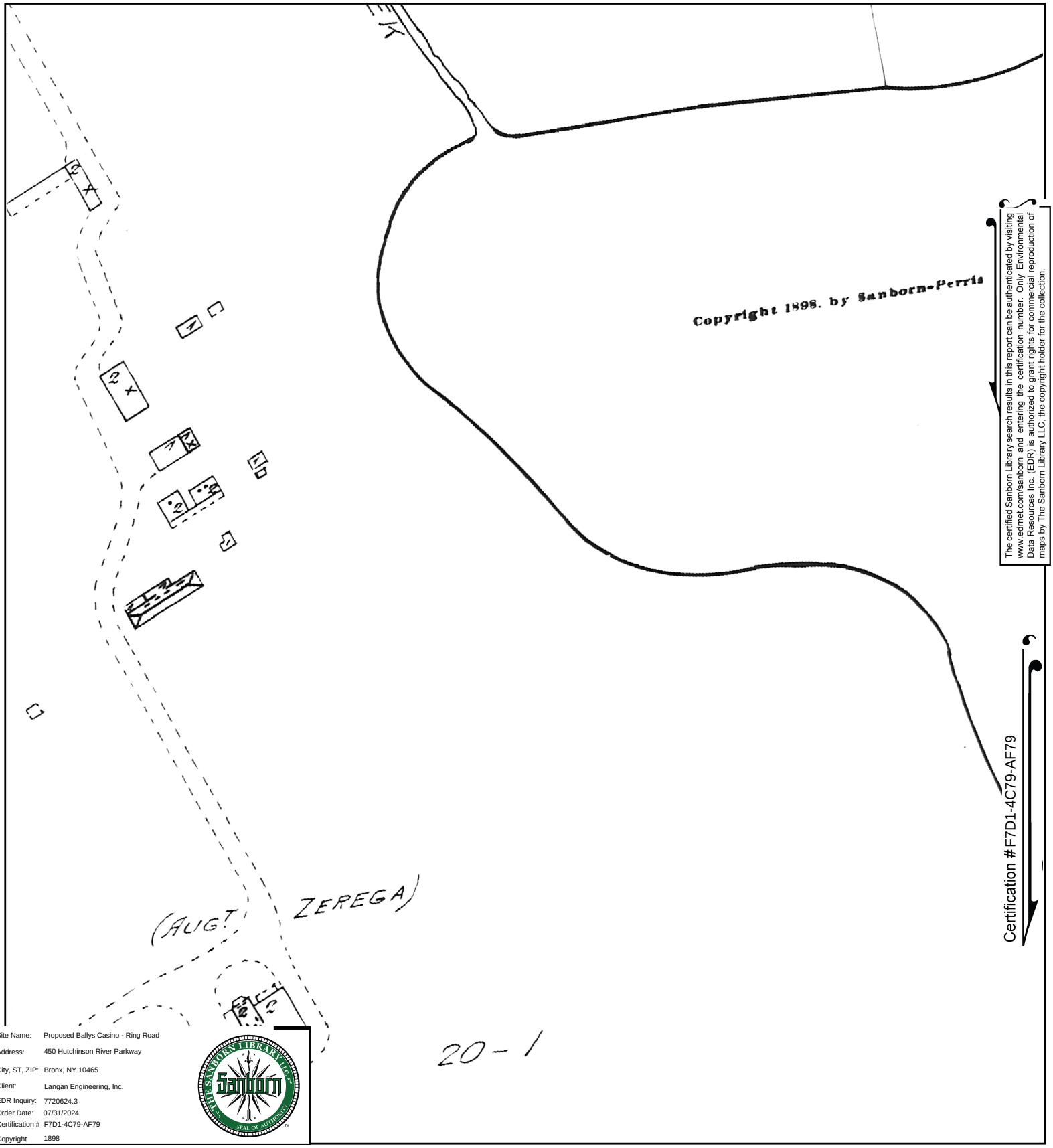


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Copyright: 1898

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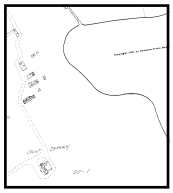

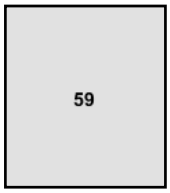


Volume A, Sheet 59

0 Feet 150 300 600

N

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.3

July 31, 2024

# Certified Sanborn® Map Report

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# Certified Sanborn® Map Report

07/31/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.3

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## *Certified Sanborn Results:*

**Certification #** F7D1-4C79-AF79

**PO #** 170773001

**Project** Prpsd Bally s Casino - Ring Rd

**Maps Provided:**

| | | | |
|---|---|---|---|
| 2007 | 1996 | 1981 | 1898 |
| 2006 | 1995 | 1978 | |
| 2005 | 1993 | 1977 | |
| 2004 | 1992 | 1967 | |
| 2003 | 1991 | 1950 | |
| 2002 | 1988 | 1930 | |
| 2001 | 1986 | 1919 | |
| 1998 | 1983 | 1908 | |

Sanborn® Library search results

Certification #: F7D1-4C79-AF79

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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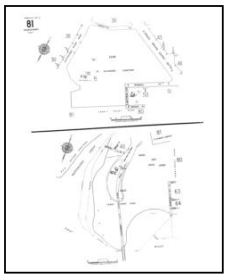
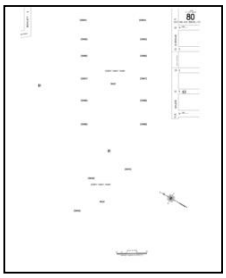
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 2007 Source Sheets



Volume 21, Sheet 81
2007



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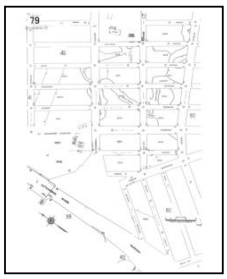
2007

### 2006 Source Sheets



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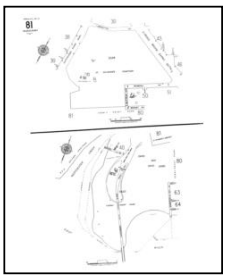
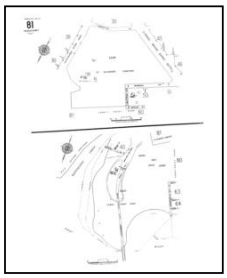
2006



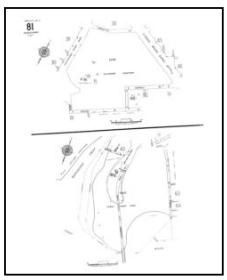
Volume 21, Sheet 81
2006

### 2005 Source Sheets



Volume 21, Sheet 81
2005

### 2004 Source Sheets



Volume 21, Sheet 81
2004

## *Sanborn Sheet Key*

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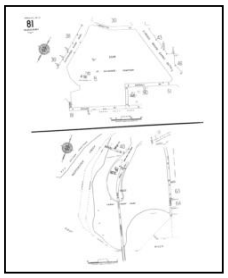
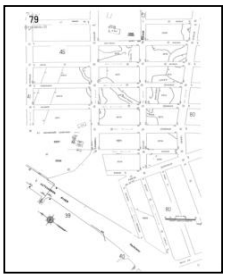
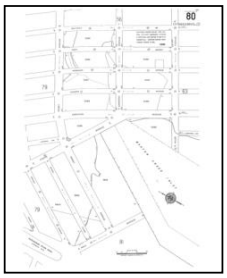
### 2003 Source Sheets



Volume 21, Sheet 81
2003



Volume 21, Sheet 79
2003



Volume 21, Sheet 80
2003

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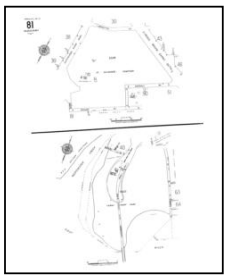

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2002

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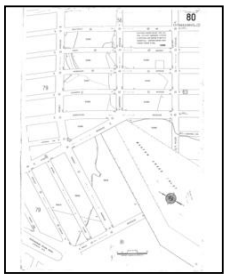

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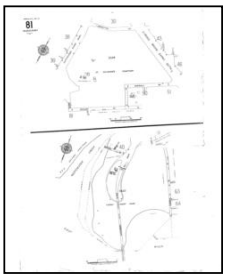
2001



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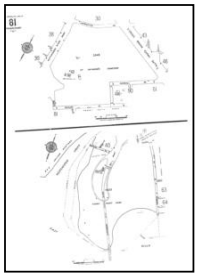
2001

### 1998 Source Sheets



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1998

## *Sanborn Sheet Key*

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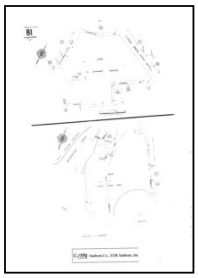
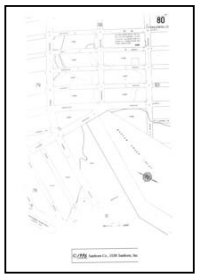
### 1996 Source Sheets



Volume 21, Sheet 81
1996



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1996



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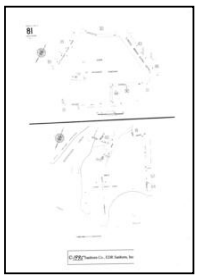
1996

### 1995 Source Sheets



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1995

### 1993 Source Sheets



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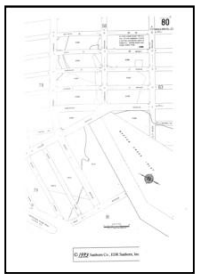
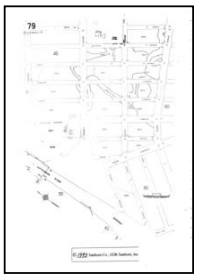
1993

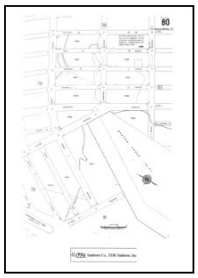


Volume 21, Sheet 80
1993

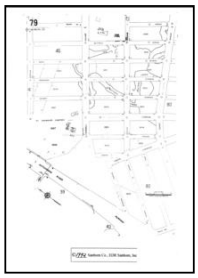


Volume 21, Sheet 79
1993

### 1992 Source Sheets



Volume 21, Sheet 80
1992



Volume 21, Sheet 79
1992

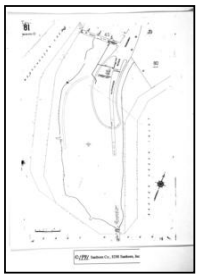


Volume 21, Sheet 81
1992

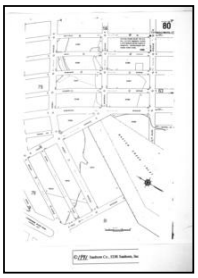
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1991 Source Sheets



Volume 21, Sheet 81
1991



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1991

### 1988 Source Sheets



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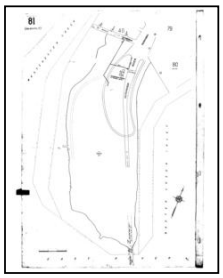
1988

### 1986 Source Sheets



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1986

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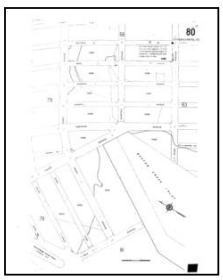
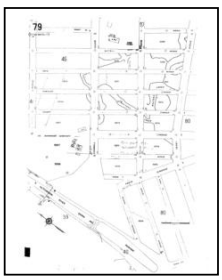
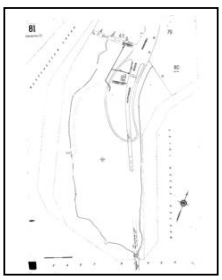


Volume 21, Sheet 80
1983



Volume 21, Sheet 79
1983



Volume 21, Sheet 81
1983

## *Sanborn Sheet Key*

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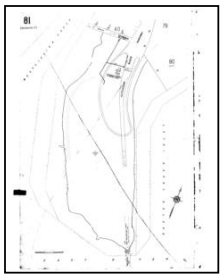
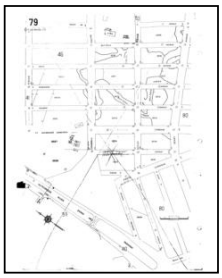
### 1981 Source Sheets

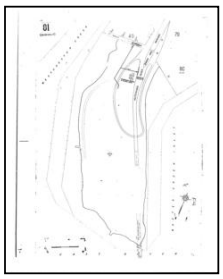


Volume 21, Sheet 81
1981



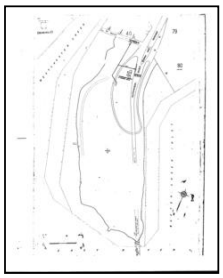
Volume 21, Sheet 79
1981

### 1978 Source Sheets



Volume 21, Sheet 81
1978

### 1977 Source Sheets



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1977



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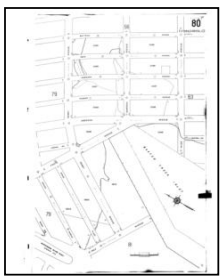
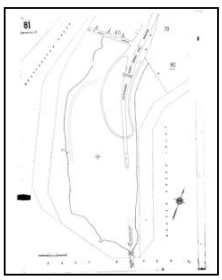
1977

### 1967 Source Sheets



Volume 21, Sheet 80
1967



Volume 21, Sheet 81
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## *Sanborn Sheet Key*

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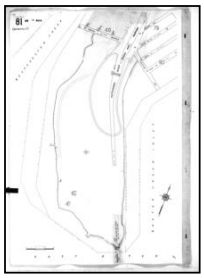
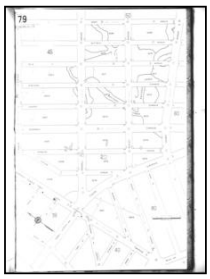


Volume 21, Sheet 81
1950

### 1930 Source Sheets



Volume 21, Sheet 79
1930



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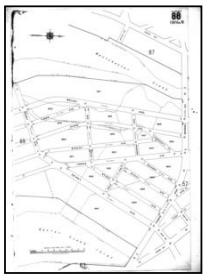
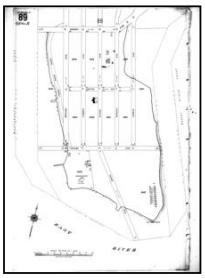
1930

### 1919 Source Sheets

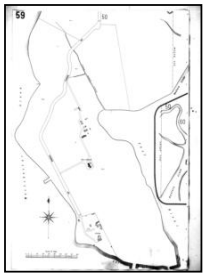


Volume 17, Sheet 88
1919



Volume 17, Sheet 89
1919

### 1908 Source Sheets



Volume A, Sheet 59
1908

## *Sanborn Sheet Key*

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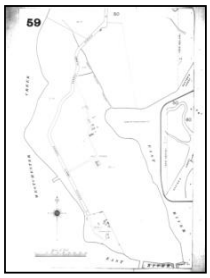
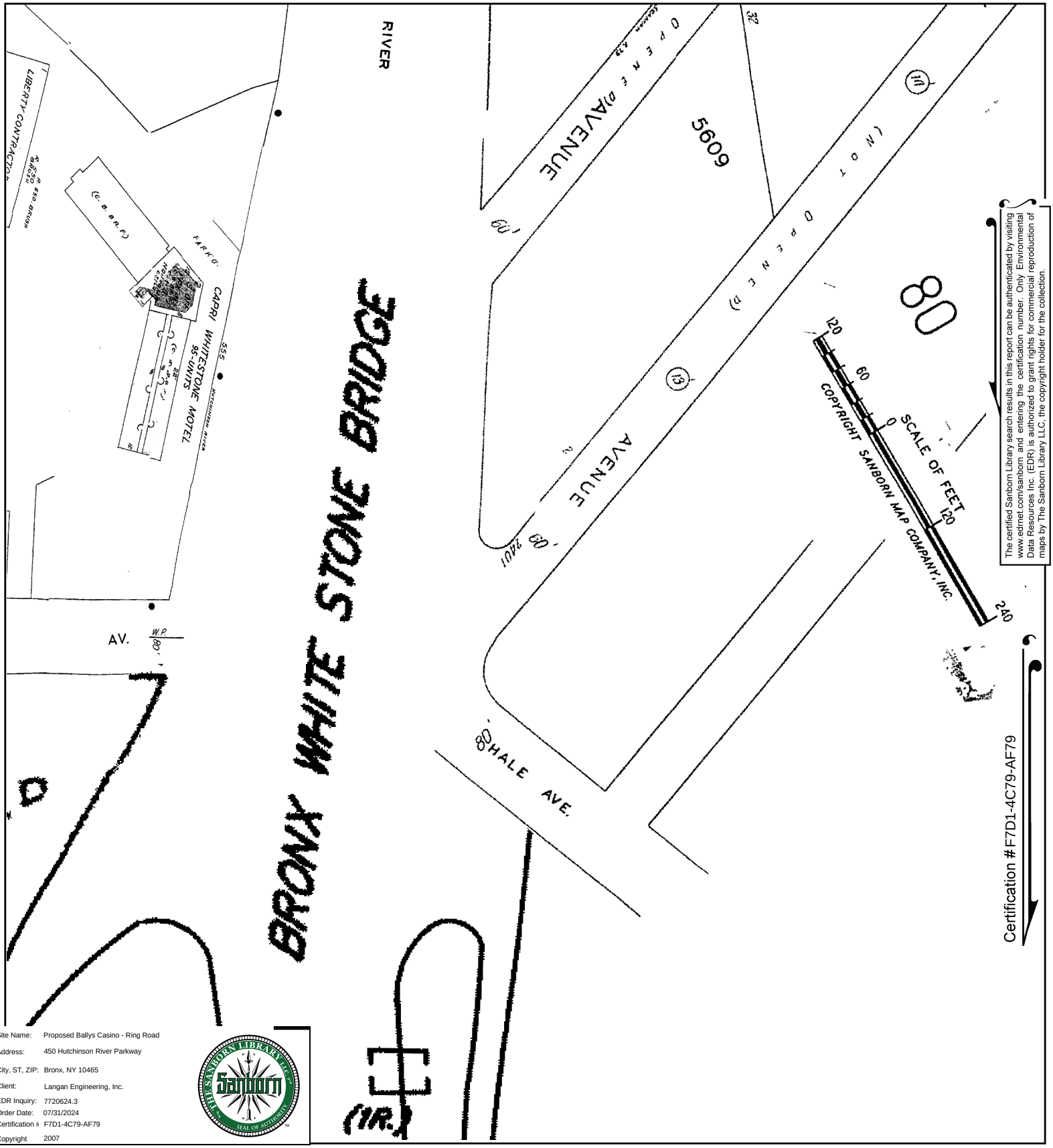
### 1898 Source Sheets




Volume A, Sheet 59
1898

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Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
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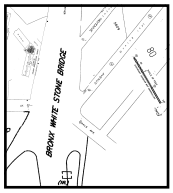
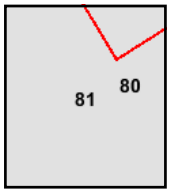
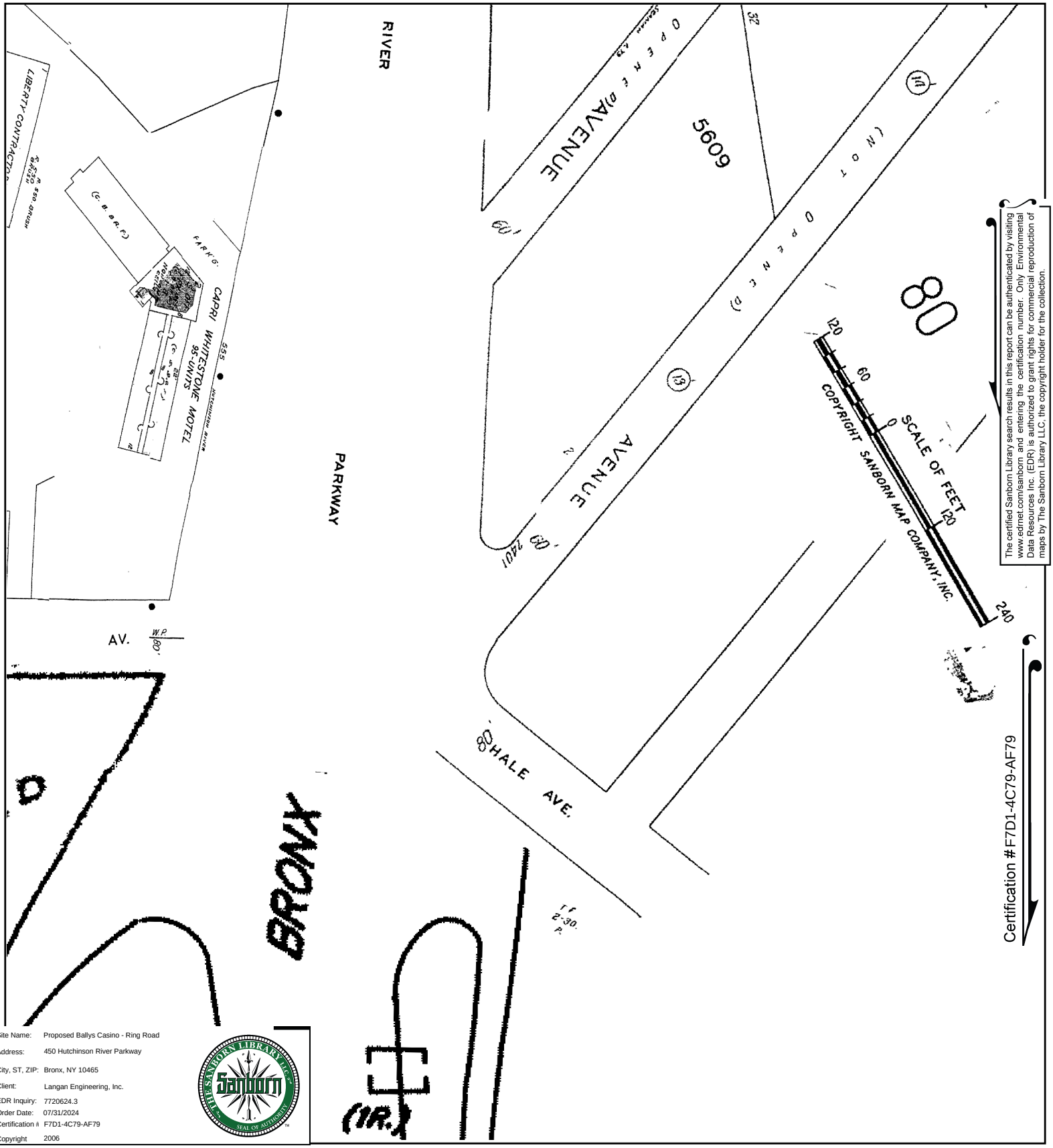



Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

N

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| Certification # | F7D1-4C79-AF79 |
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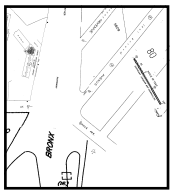

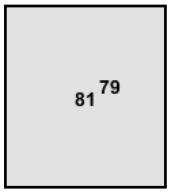


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Volume 21, Sheet 79

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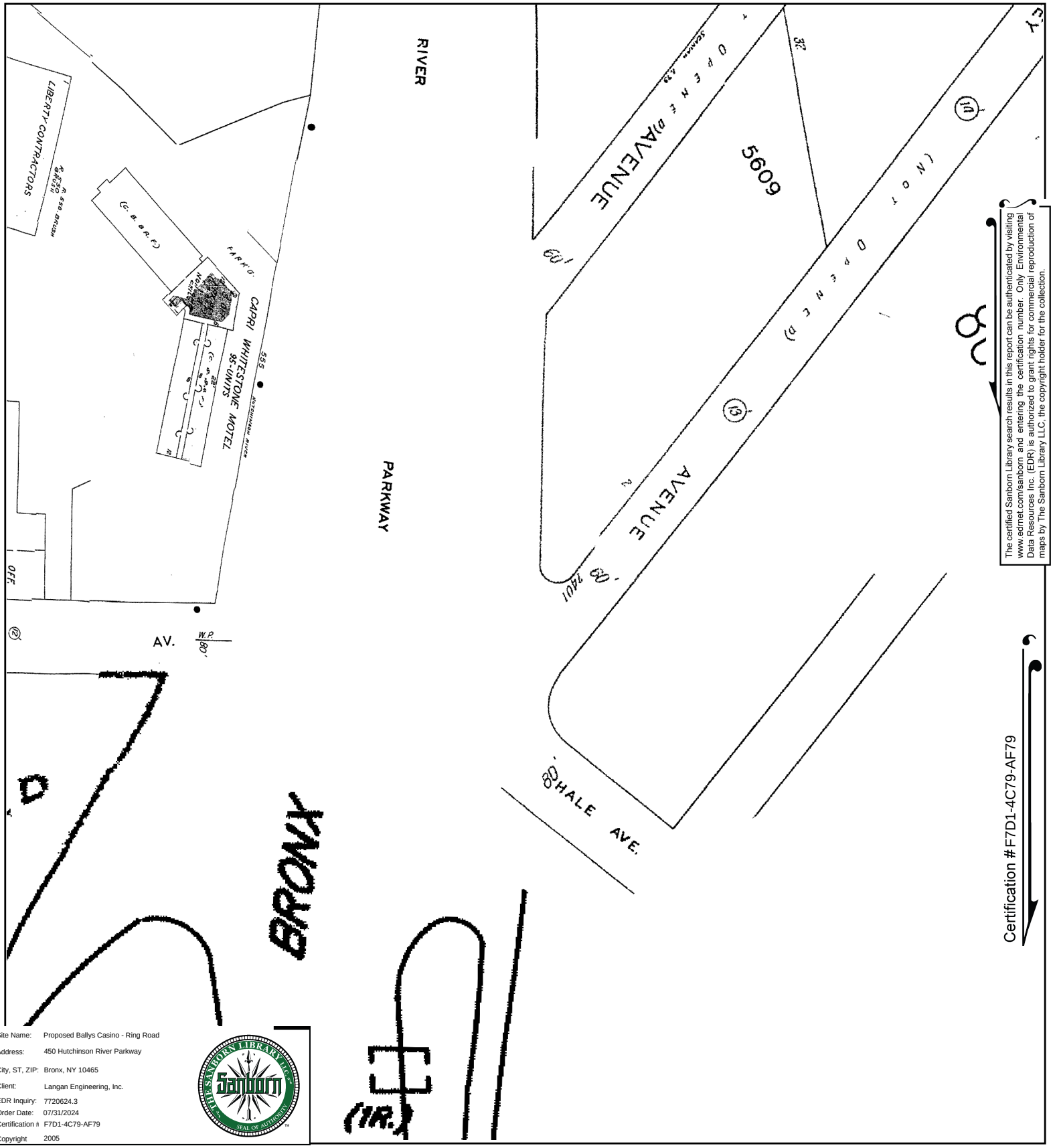


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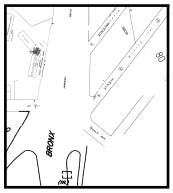

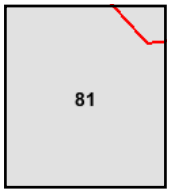


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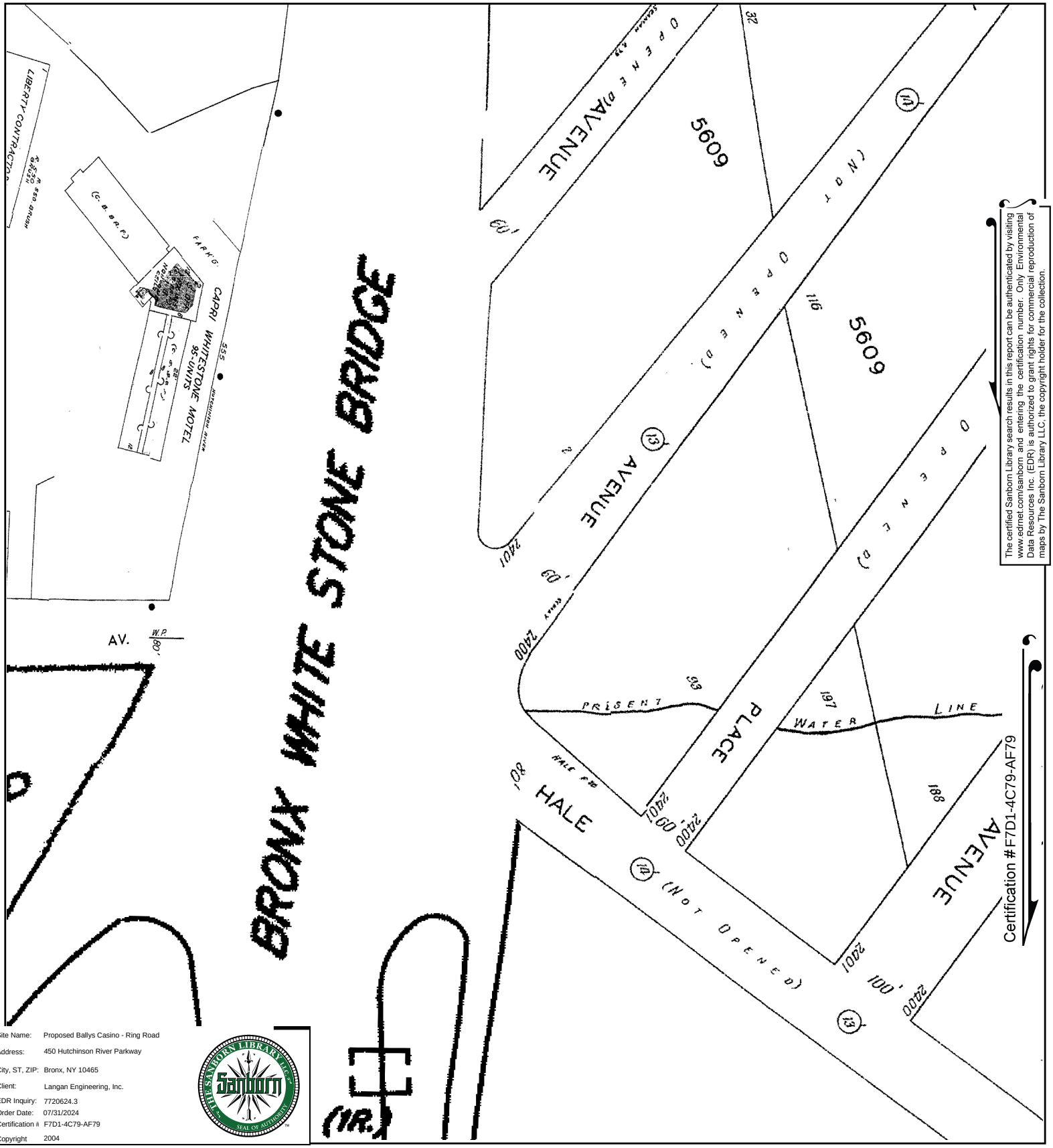


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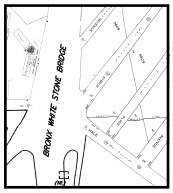


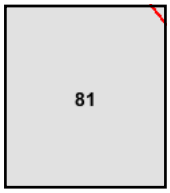


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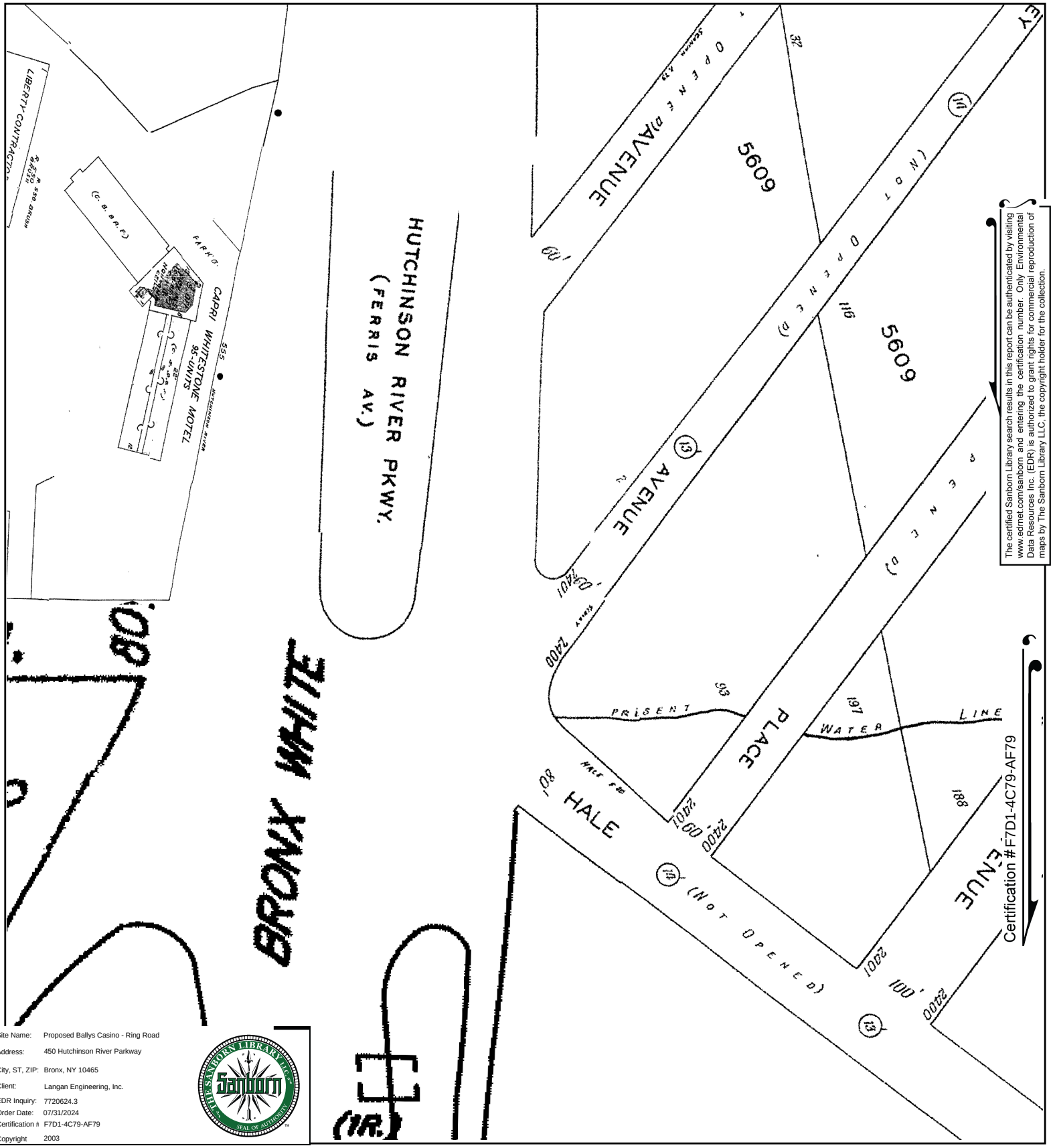


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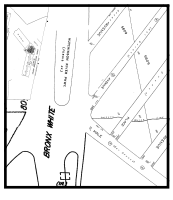

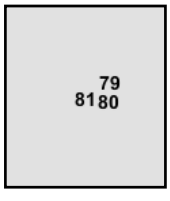


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Volume 21, Sheet 79
Volume 21, Sheet 81

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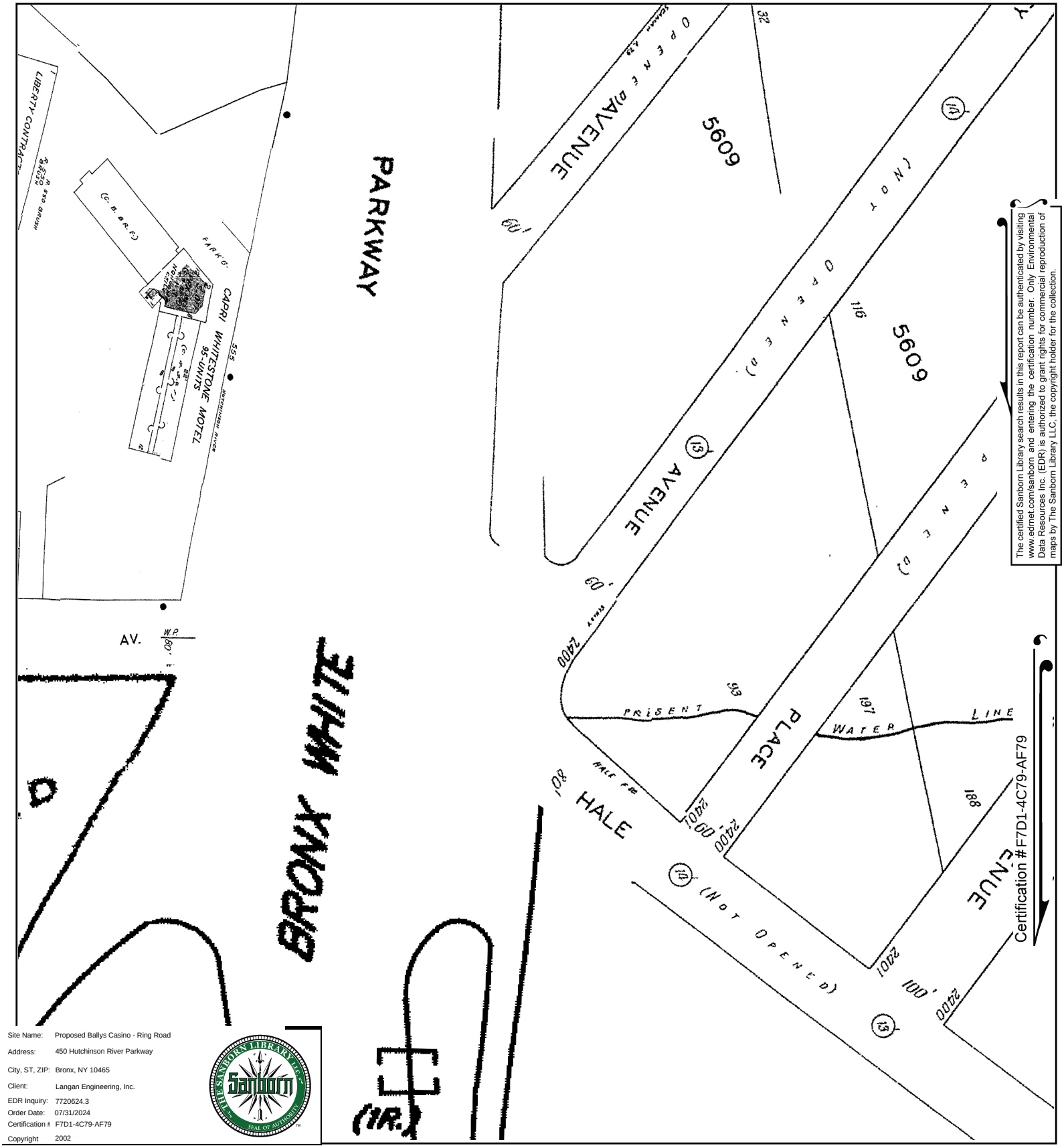


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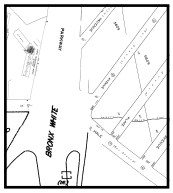

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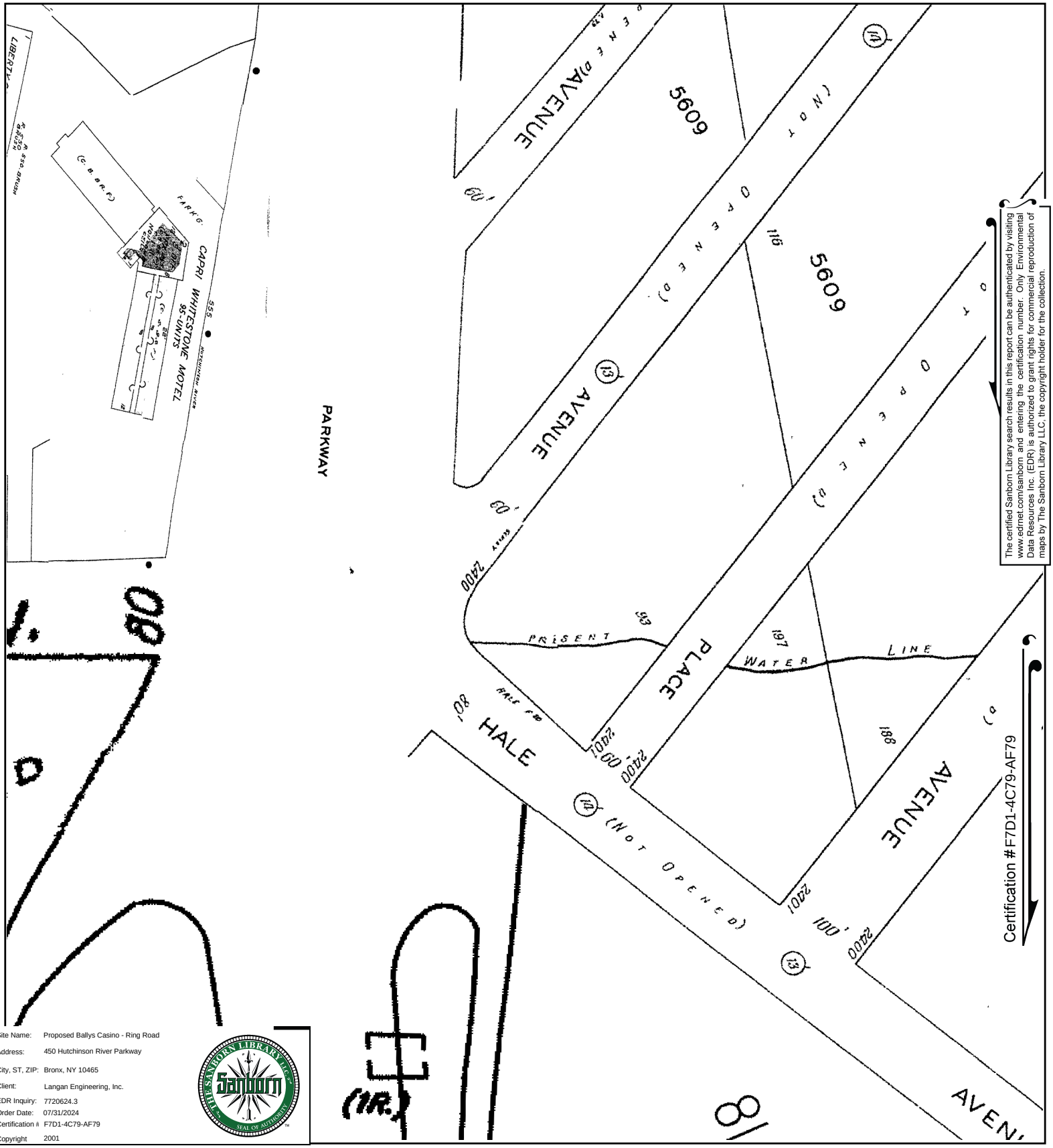


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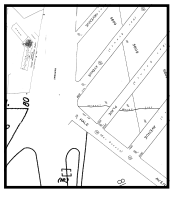

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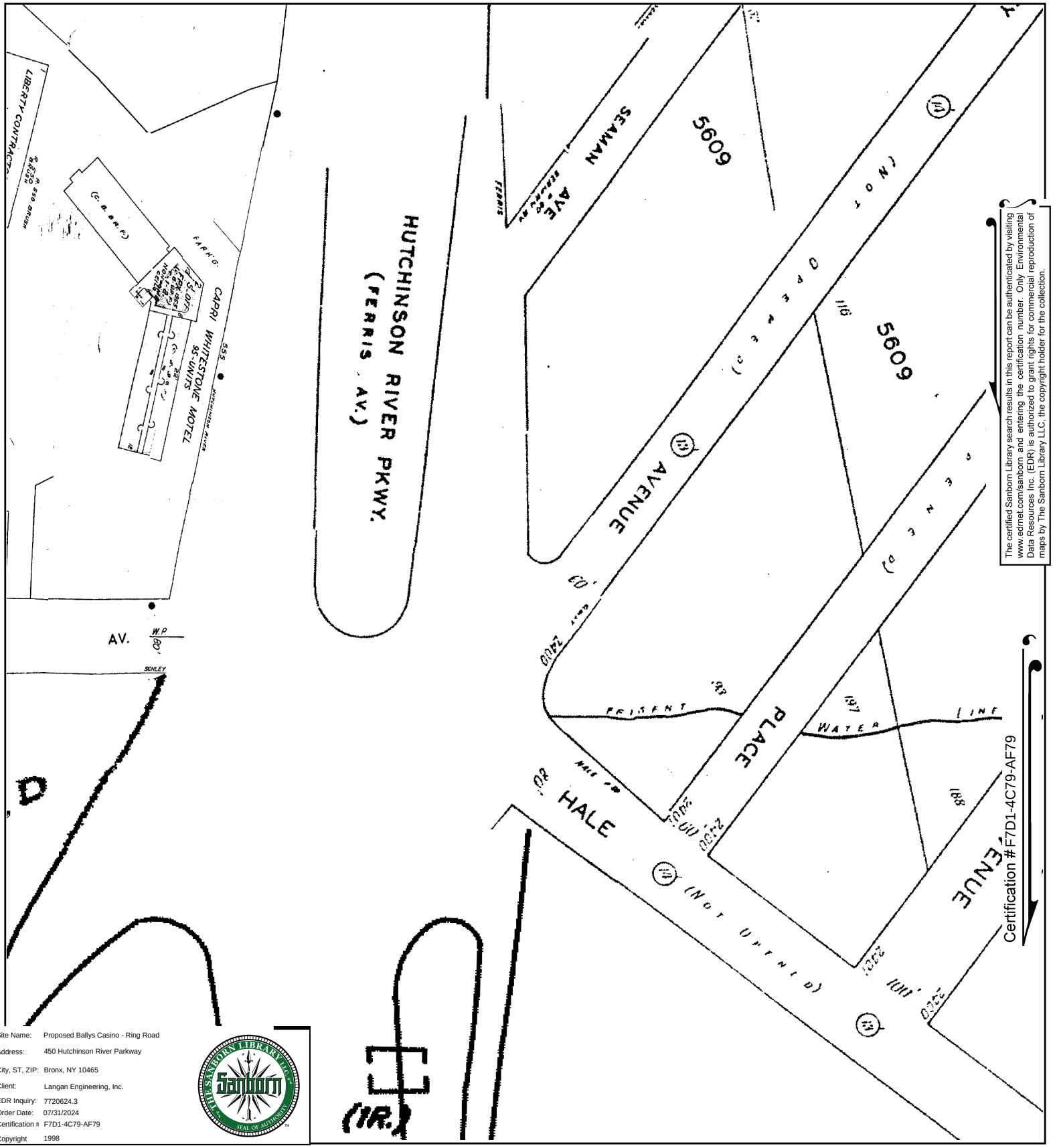


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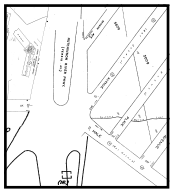

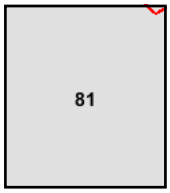


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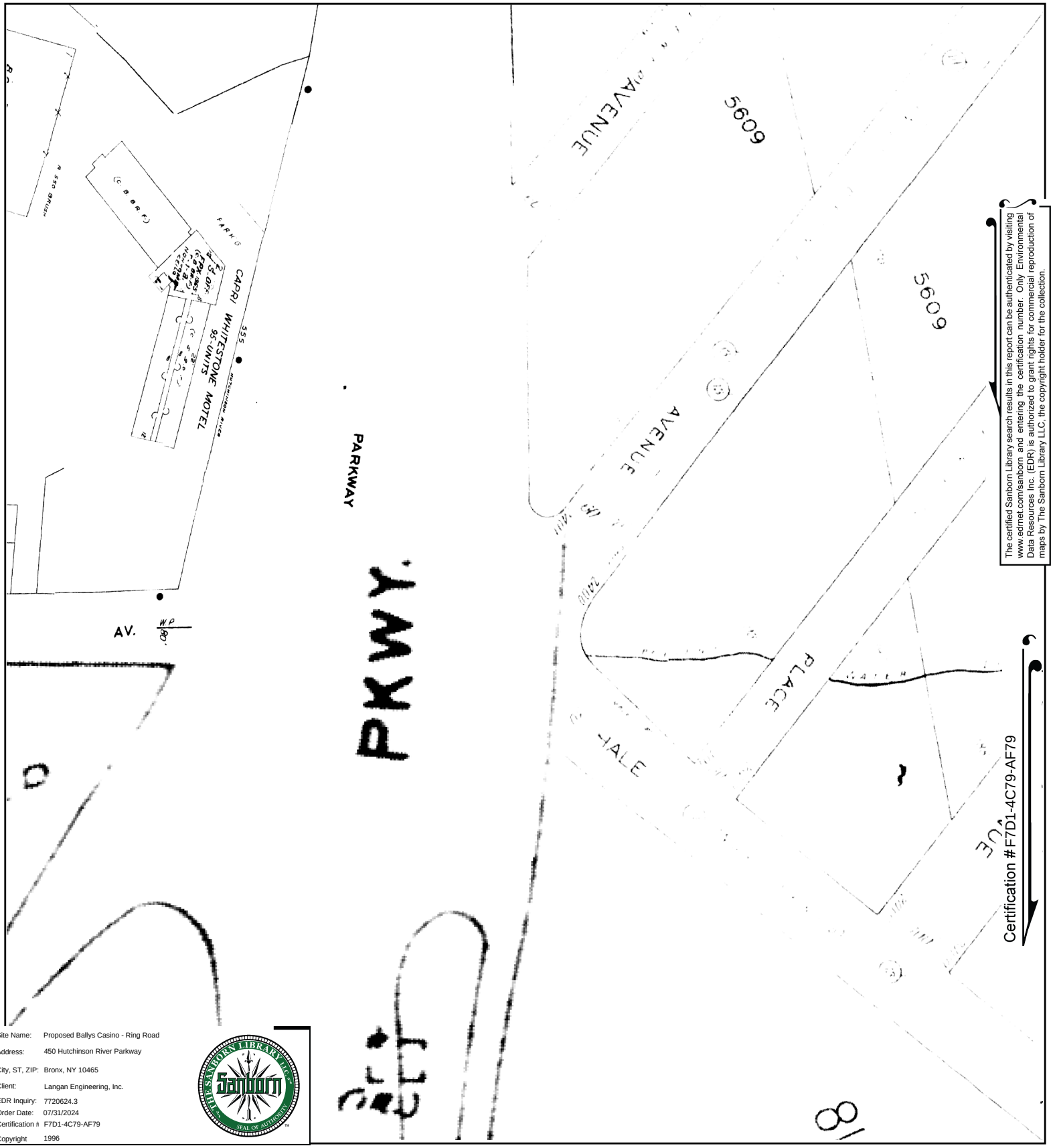


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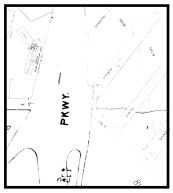


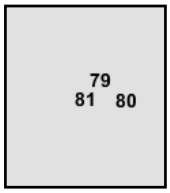


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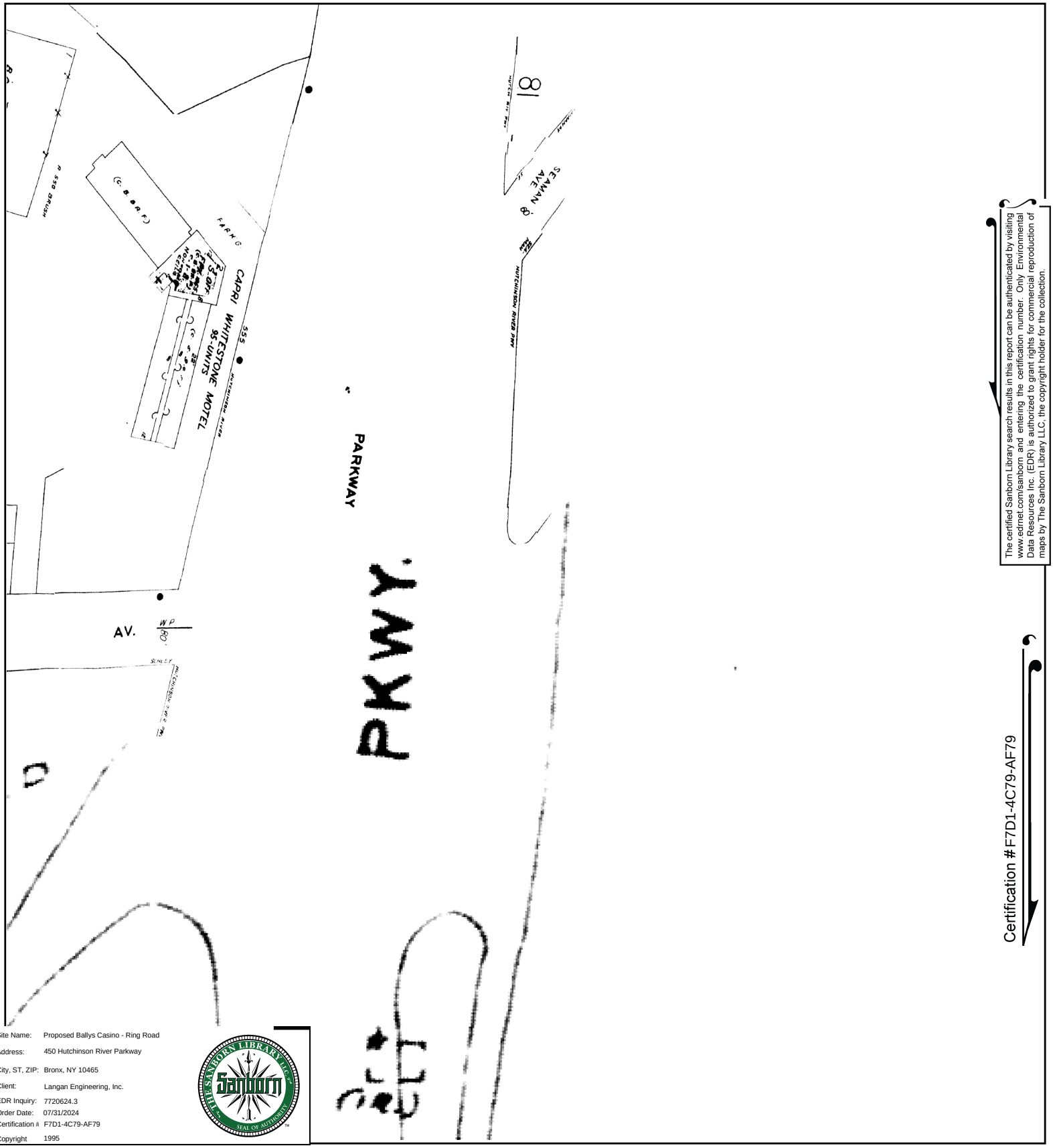


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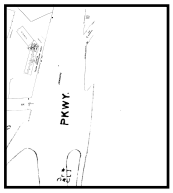


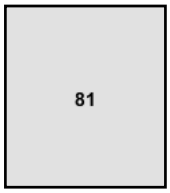


Volume 21, Sheet 81

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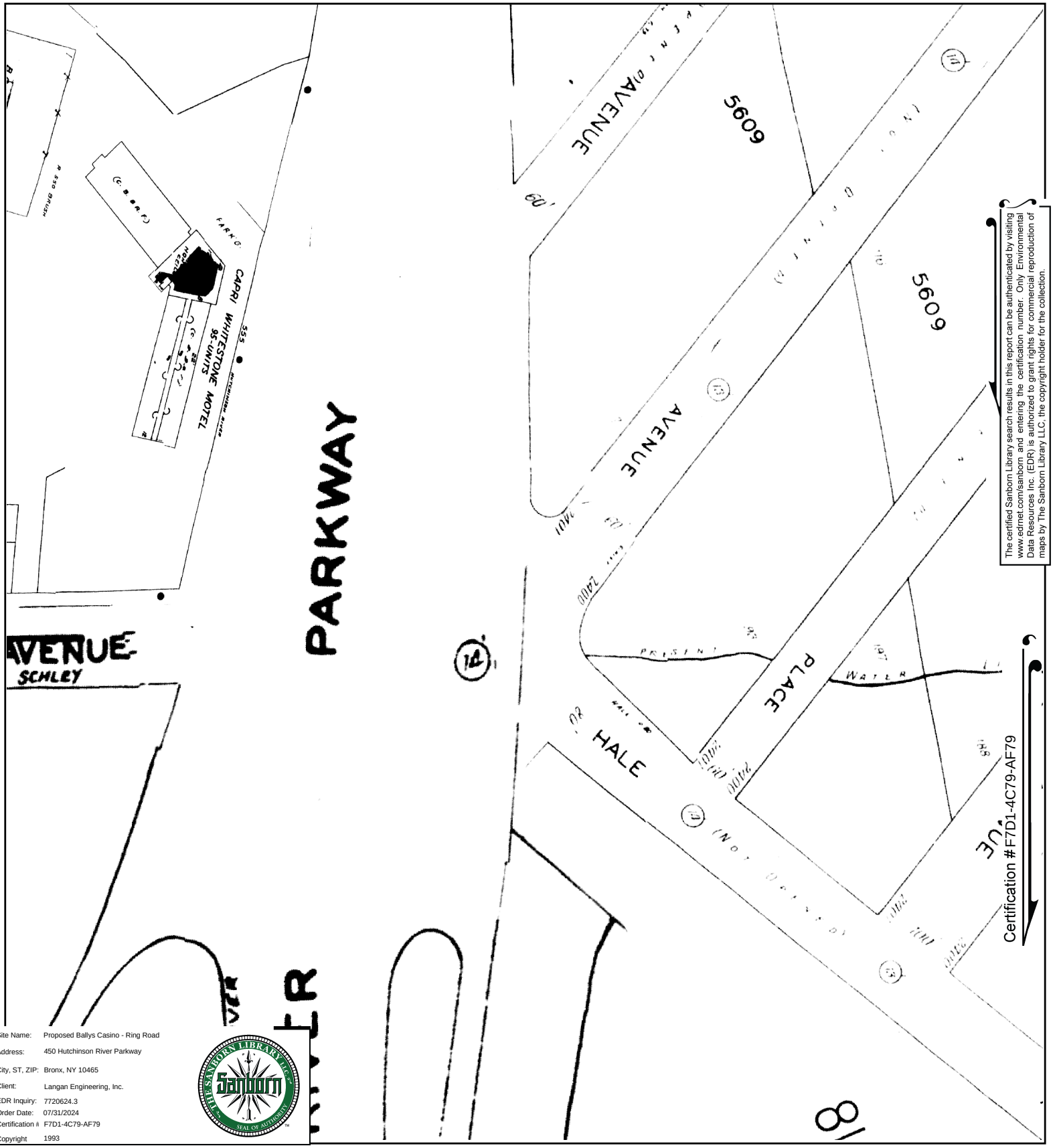


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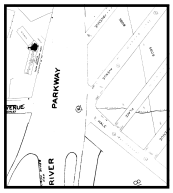


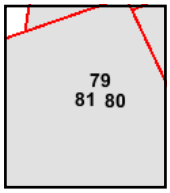


Volume 21, Sheet 79
Volume 21, Sheet 80
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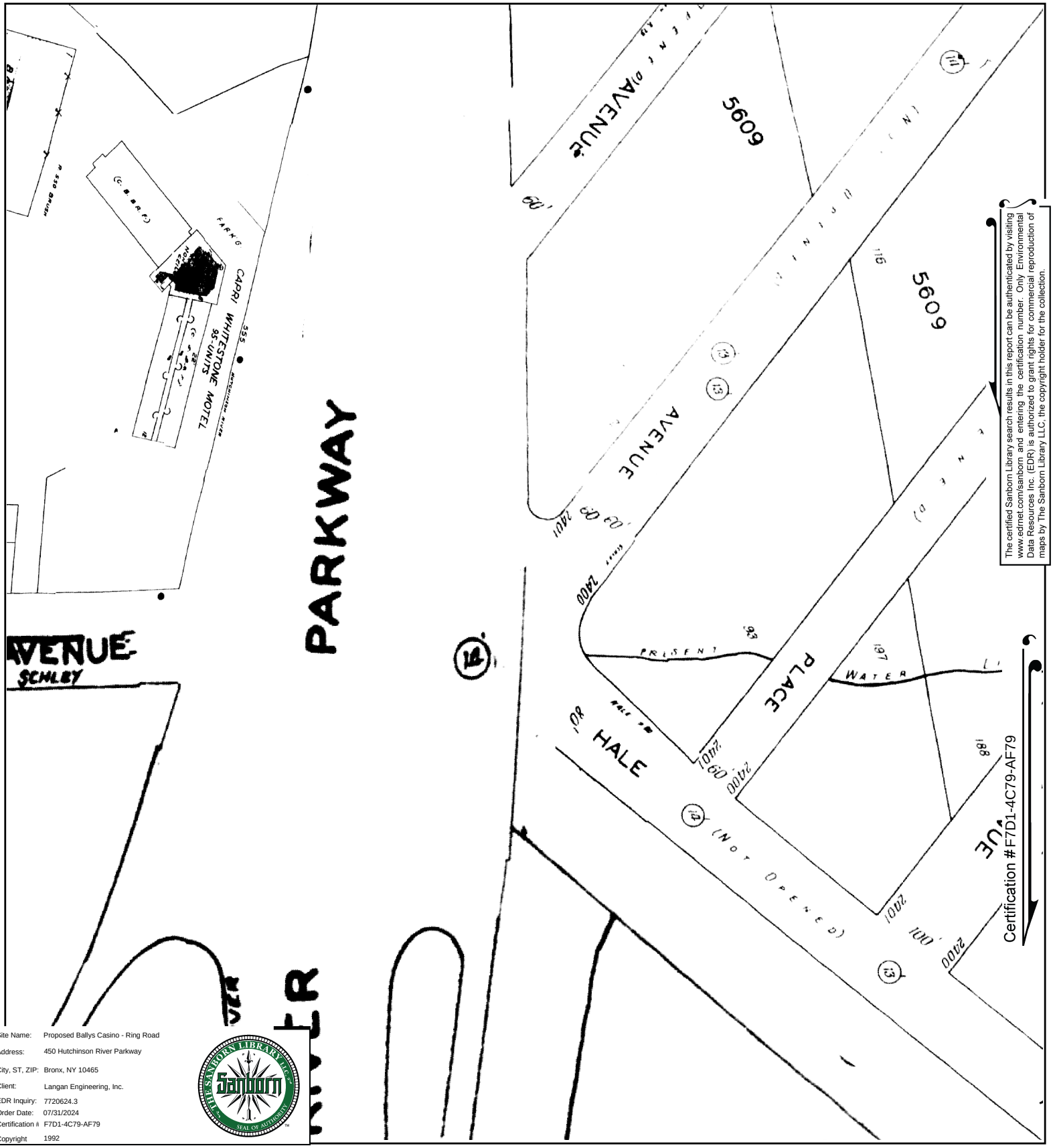


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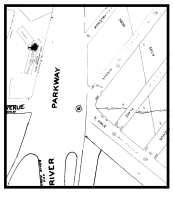

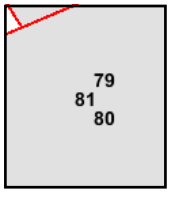


Volume 21, Sheet 81
Volume 21, Sheet 79
Volume 21, Sheet 80

0 Feet 150 300 600

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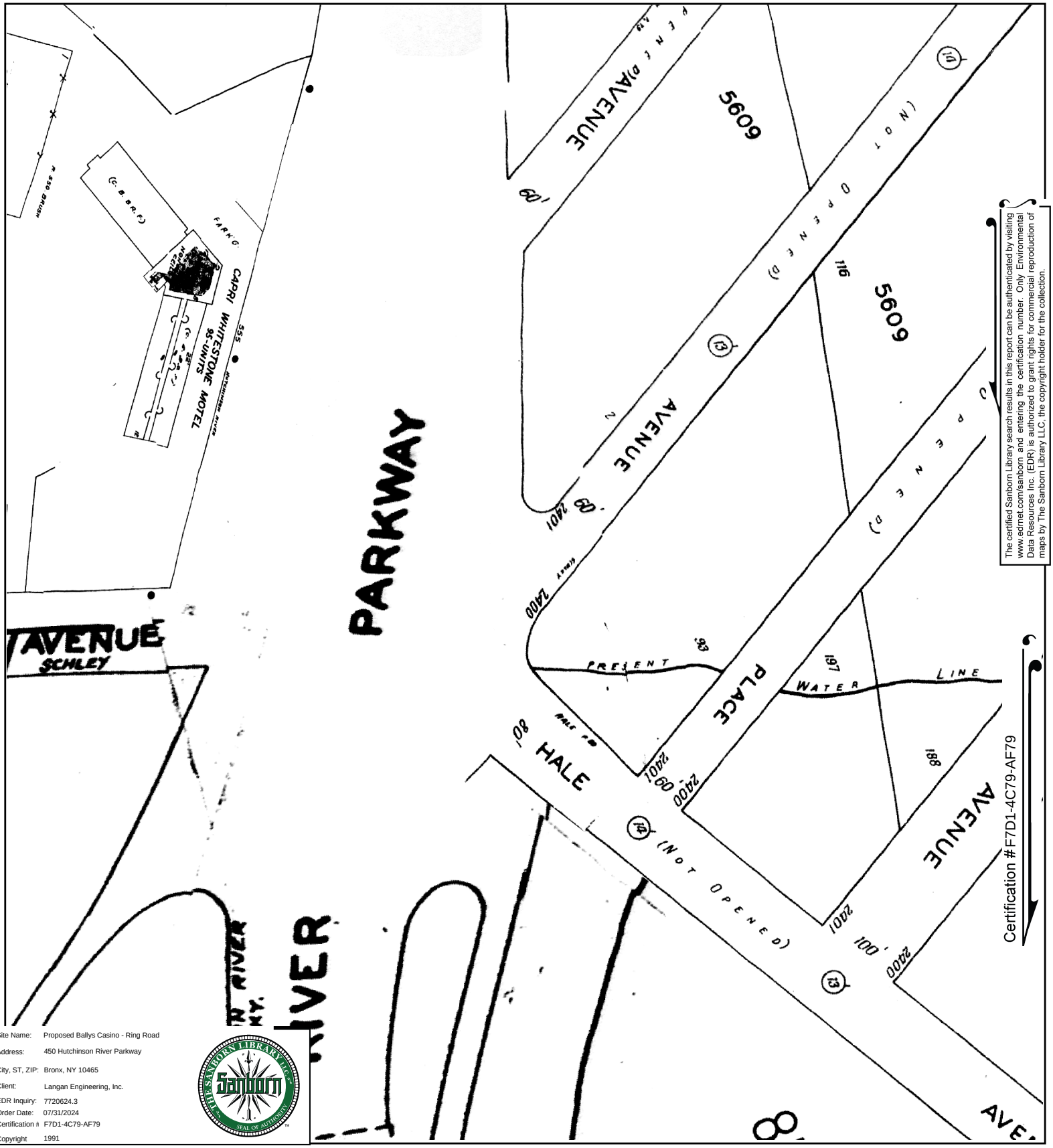


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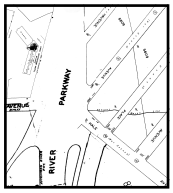


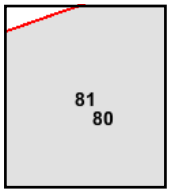


Volume 21, Sheet 80
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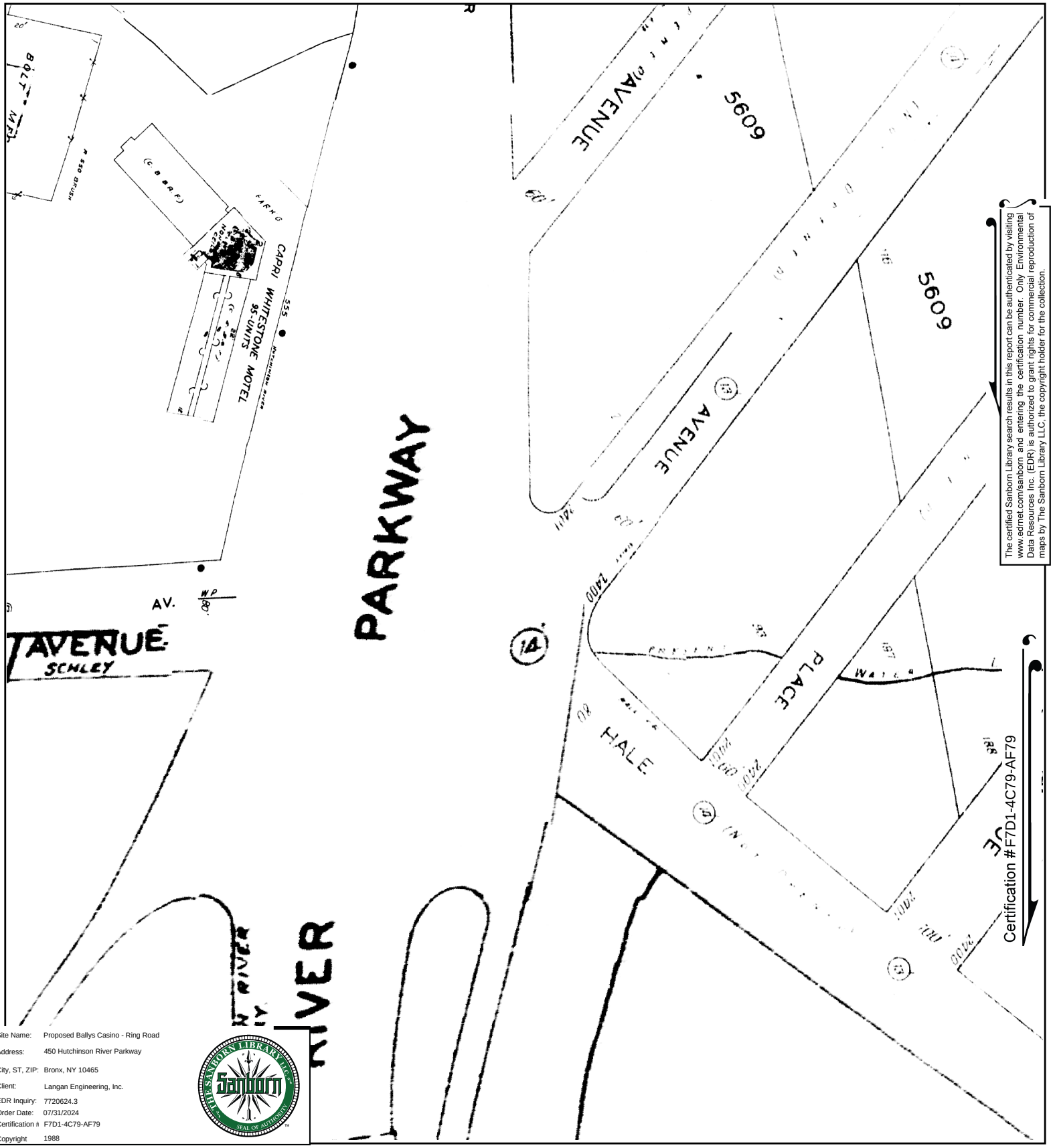


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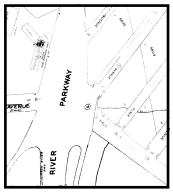

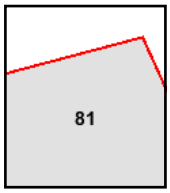


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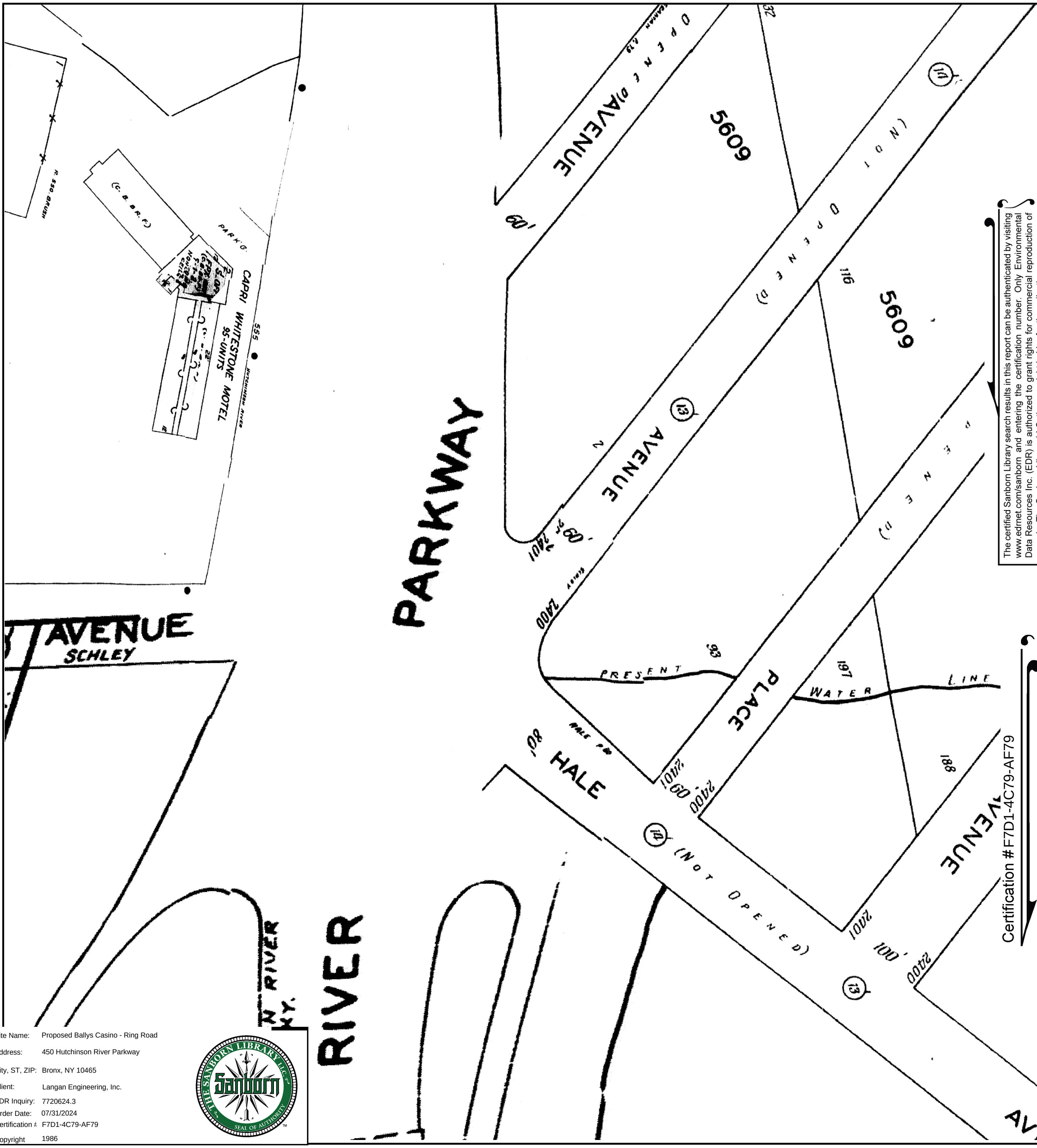


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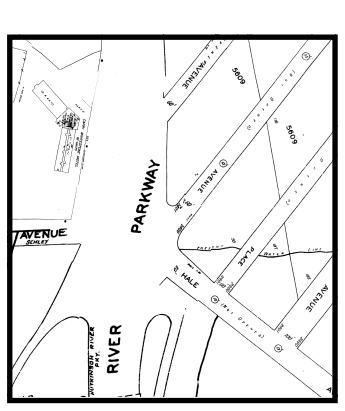

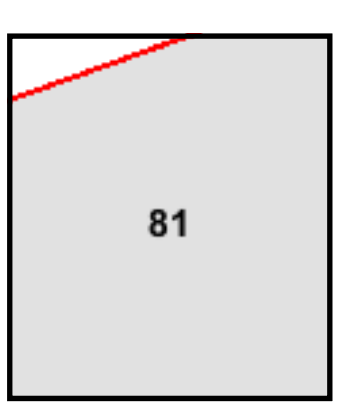


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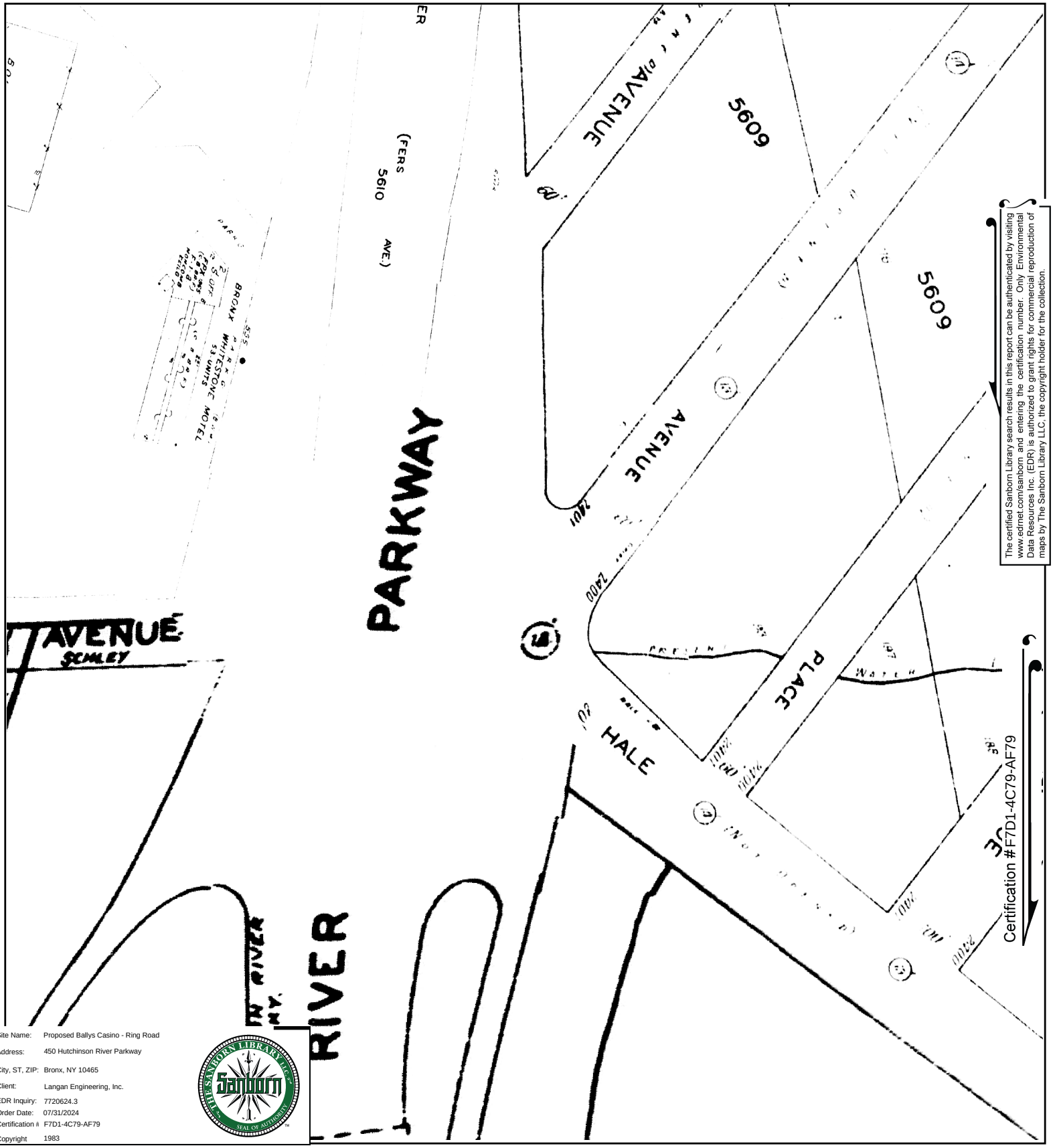


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|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1983 |

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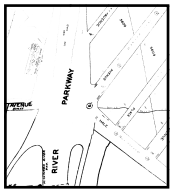

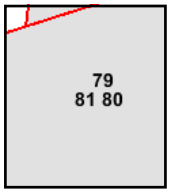


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Volume 21, Sheet 79
Volume 21, Sheet 80

0 Feet 150 300 600

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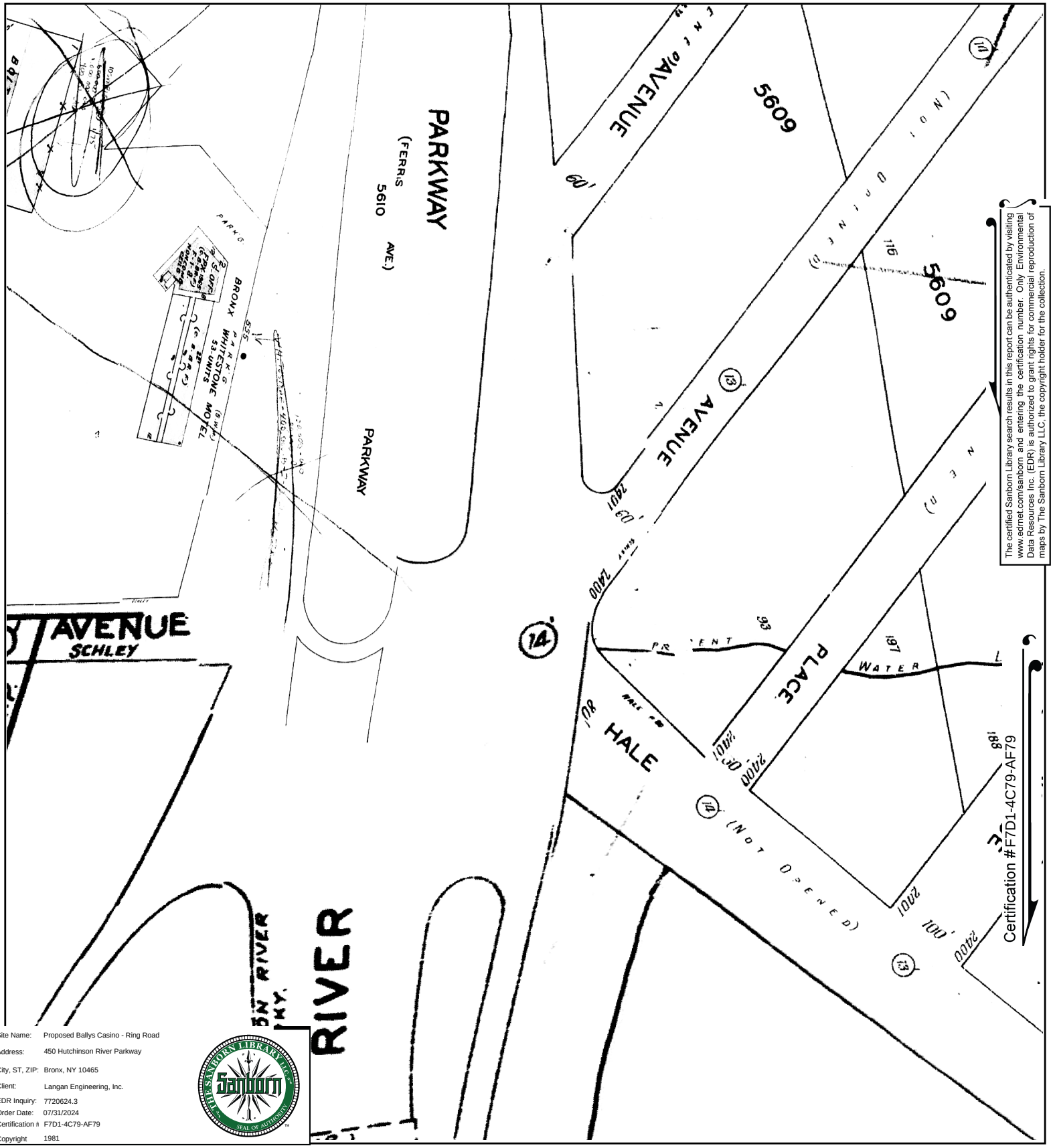


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| Client: | Langan Engineering, Inc. |
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| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1981 |

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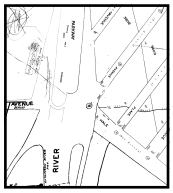

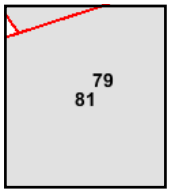


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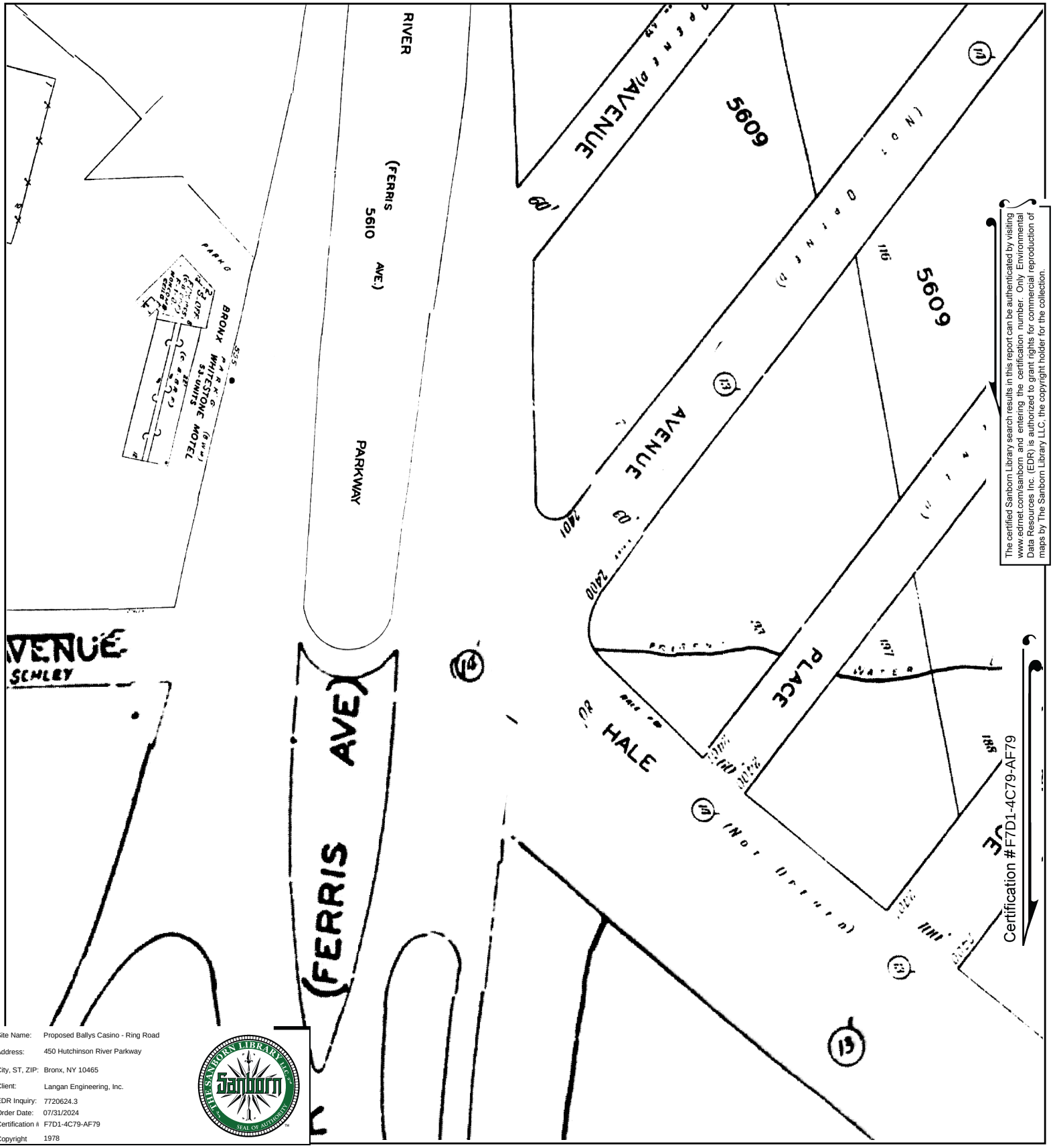


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|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1978 |

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0 Feet 150 300 600

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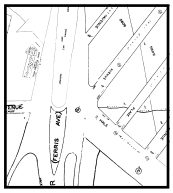

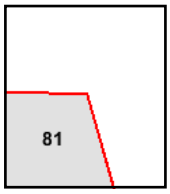


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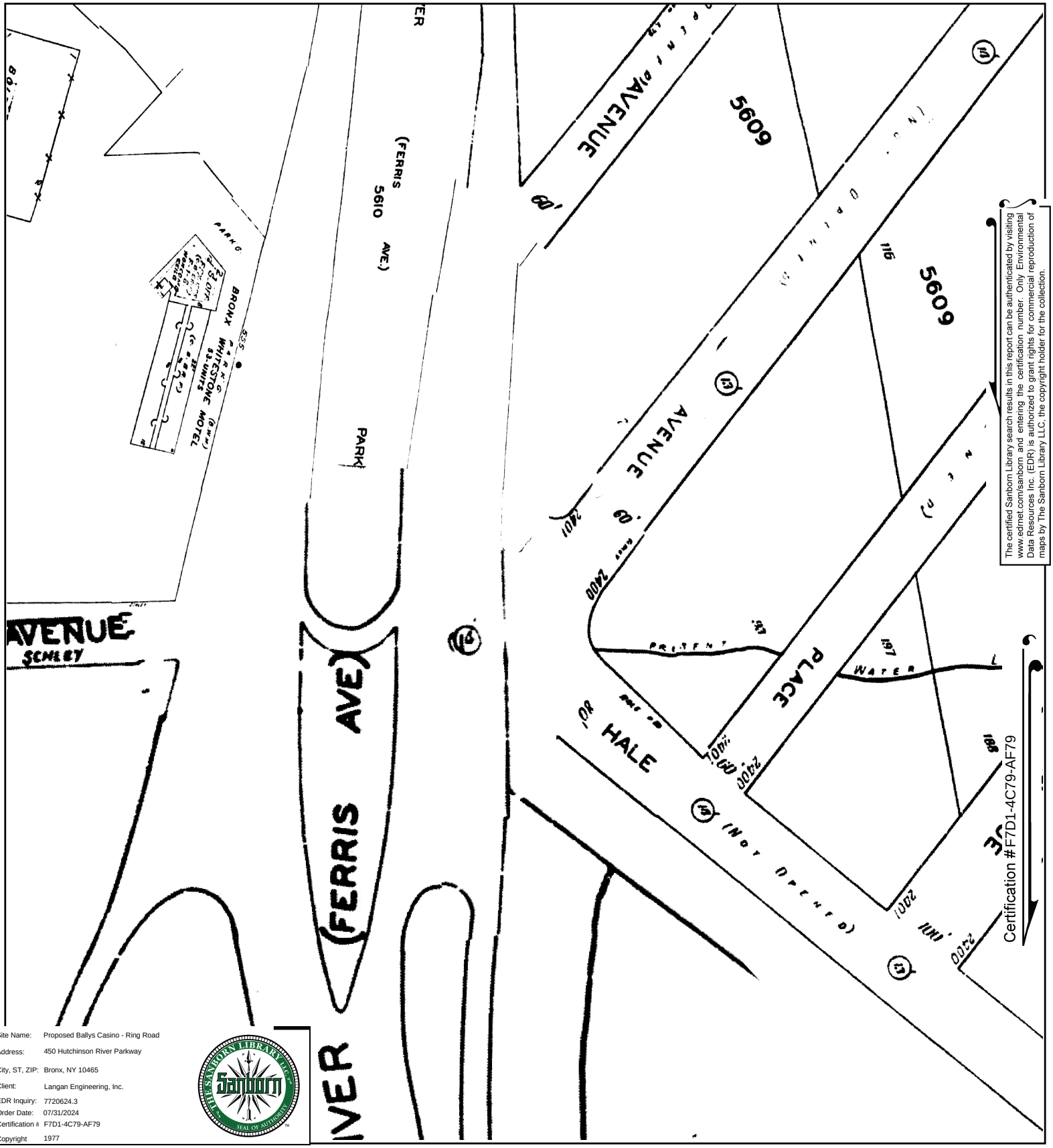


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Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1977

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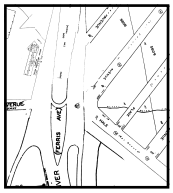

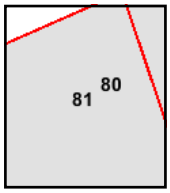


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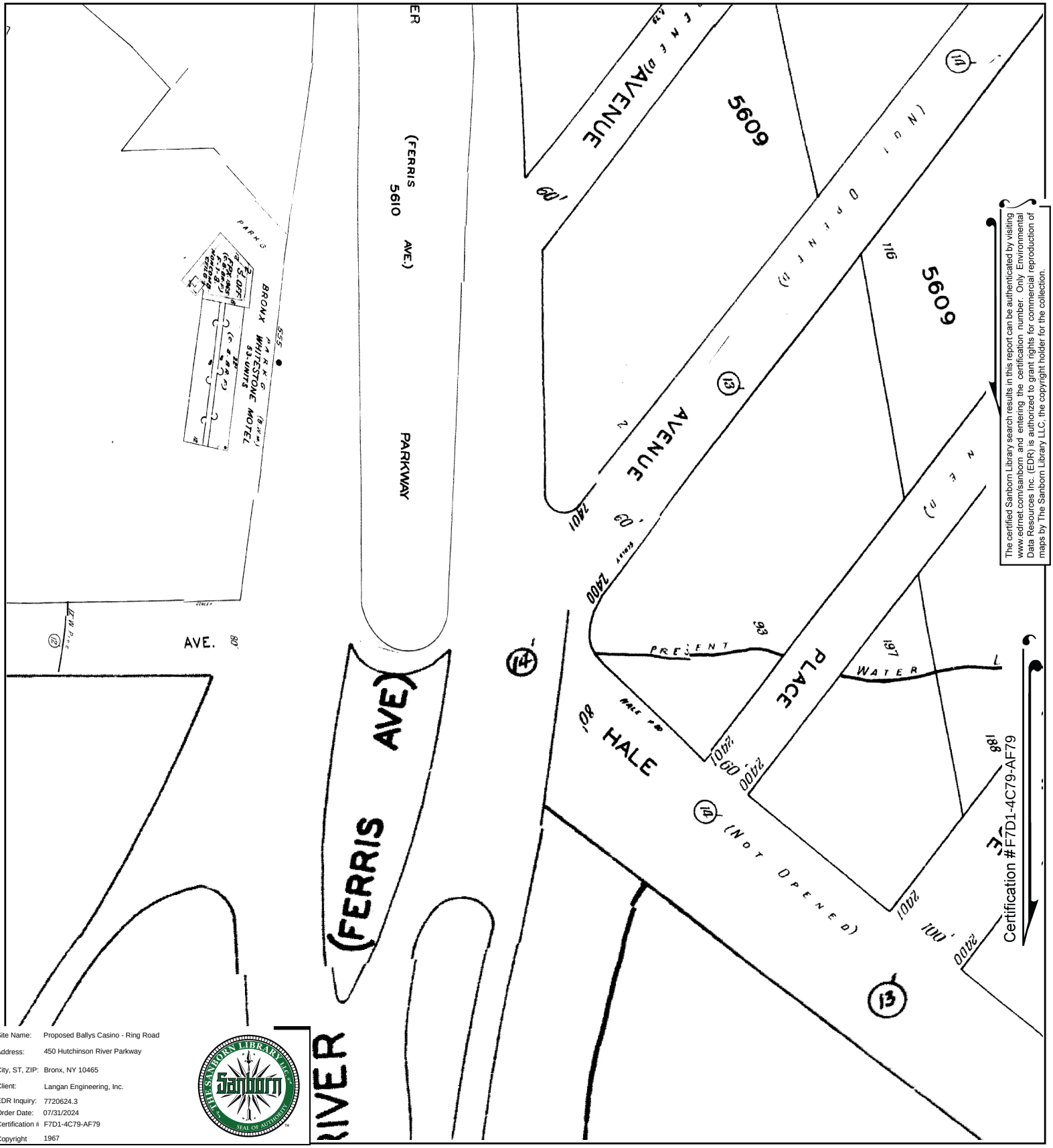


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| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification #: | F7D1-4C79-AF79 |
| Copyright | 1967 |

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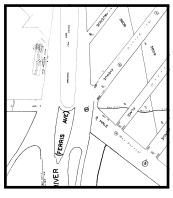
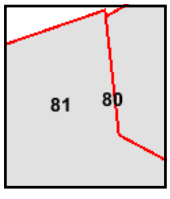
0 Feet 150 300 600






Volume 21, Sheet 81
Volume 21, Sheet 80

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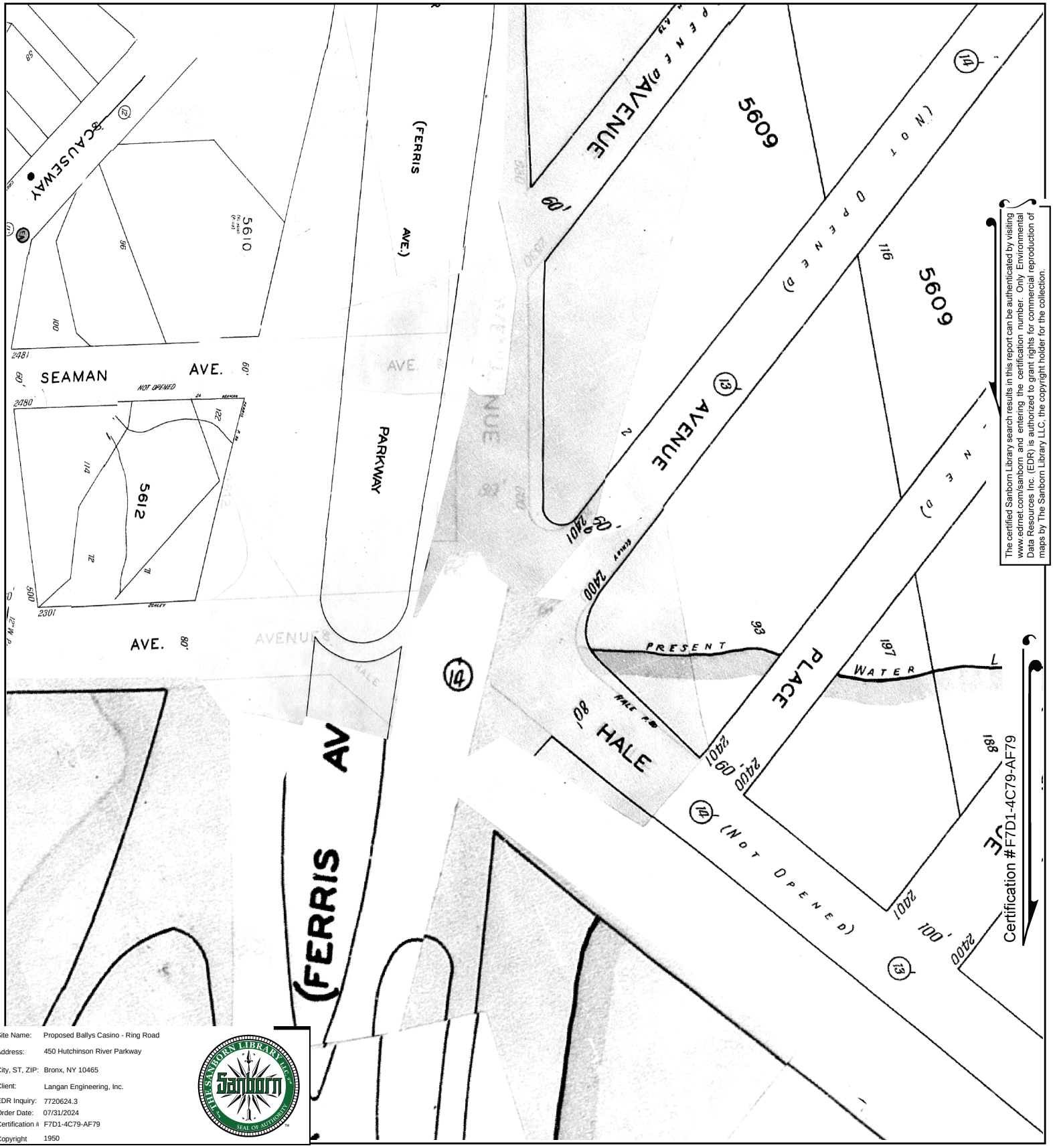


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| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification #: | F7D1-4C79-AF79 |
| Copyright | 1950 |

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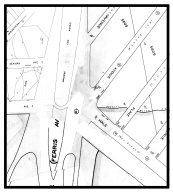
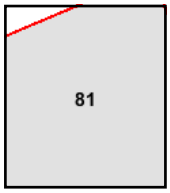
0 Feet 150 300 600






Volume 21, Sheet 81

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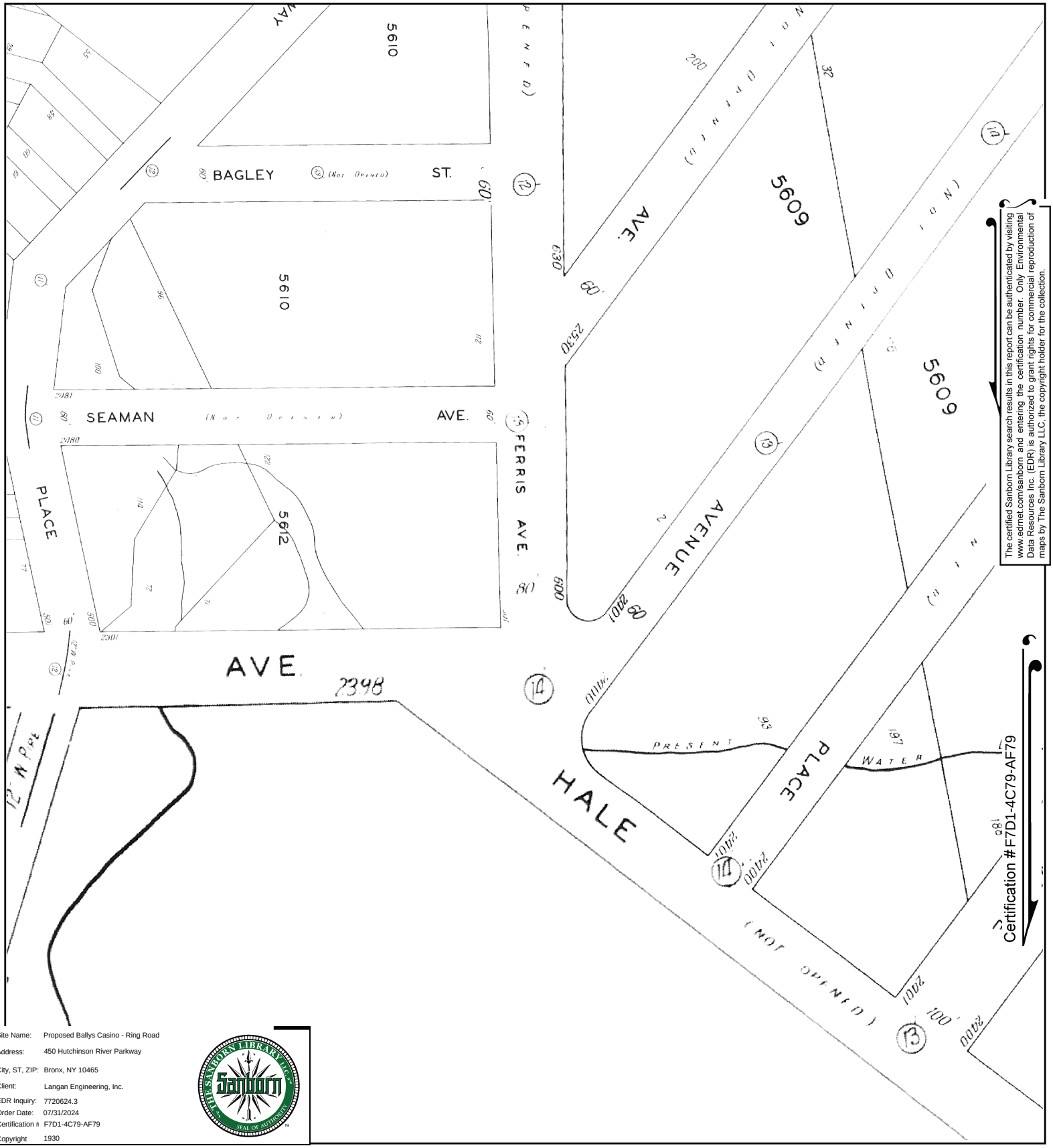


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| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1930 |

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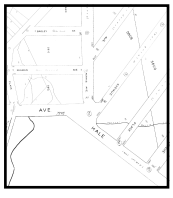

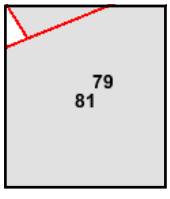


Volume 21, Sheet 81
Volume 21, Sheet 79

0 Feet 150 300 600

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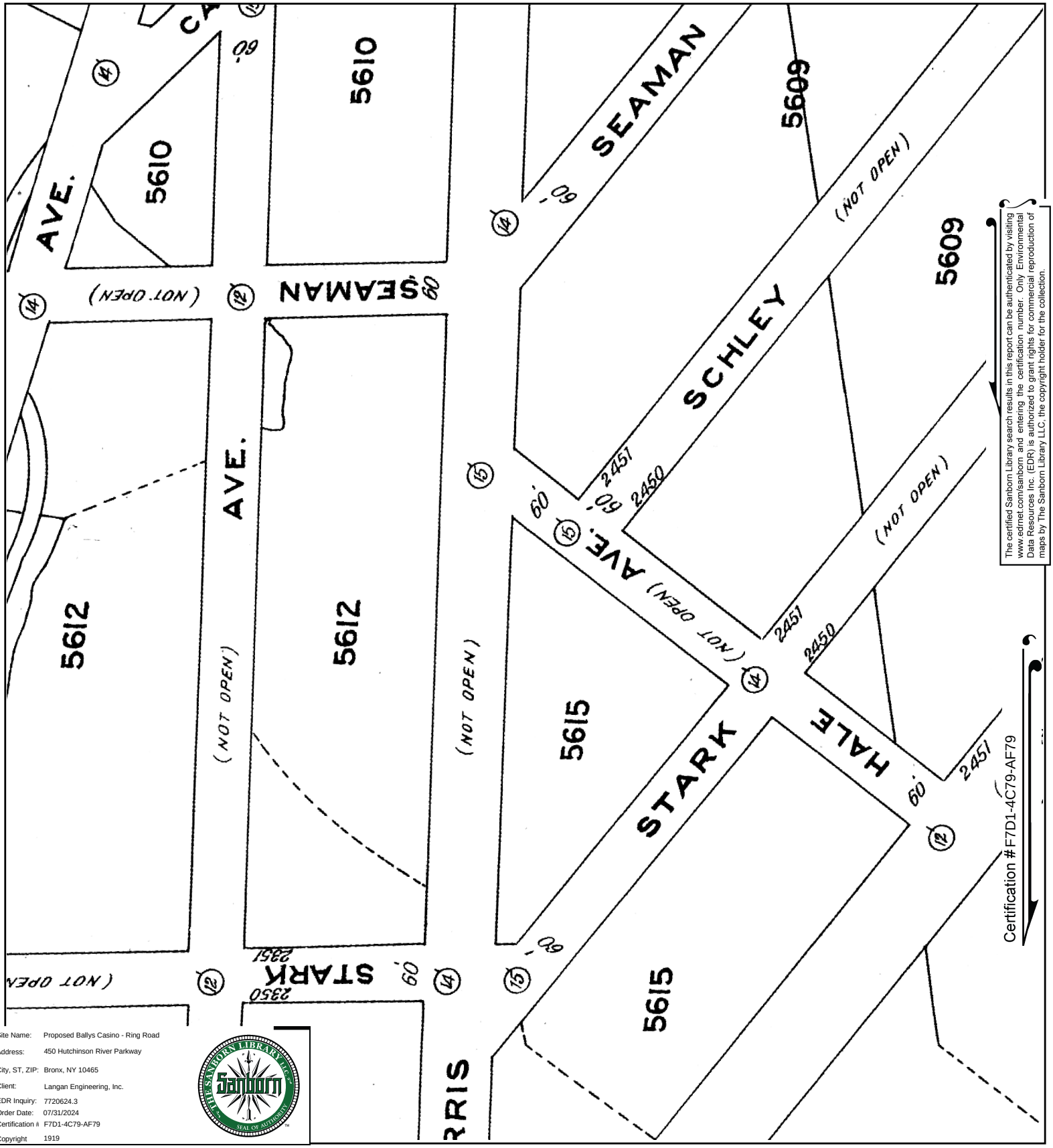


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Certification #F7D1-4C79-AF79

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| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification #: | F7D1-4C79-AF79 |
| Copyright | 1919 |

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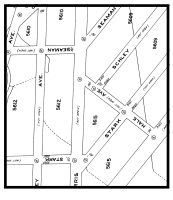
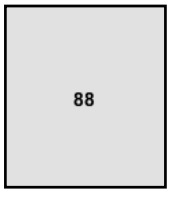
0 Feet 150 300 600






Volume 17, Sheet 89
Volume 17, Sheet 88

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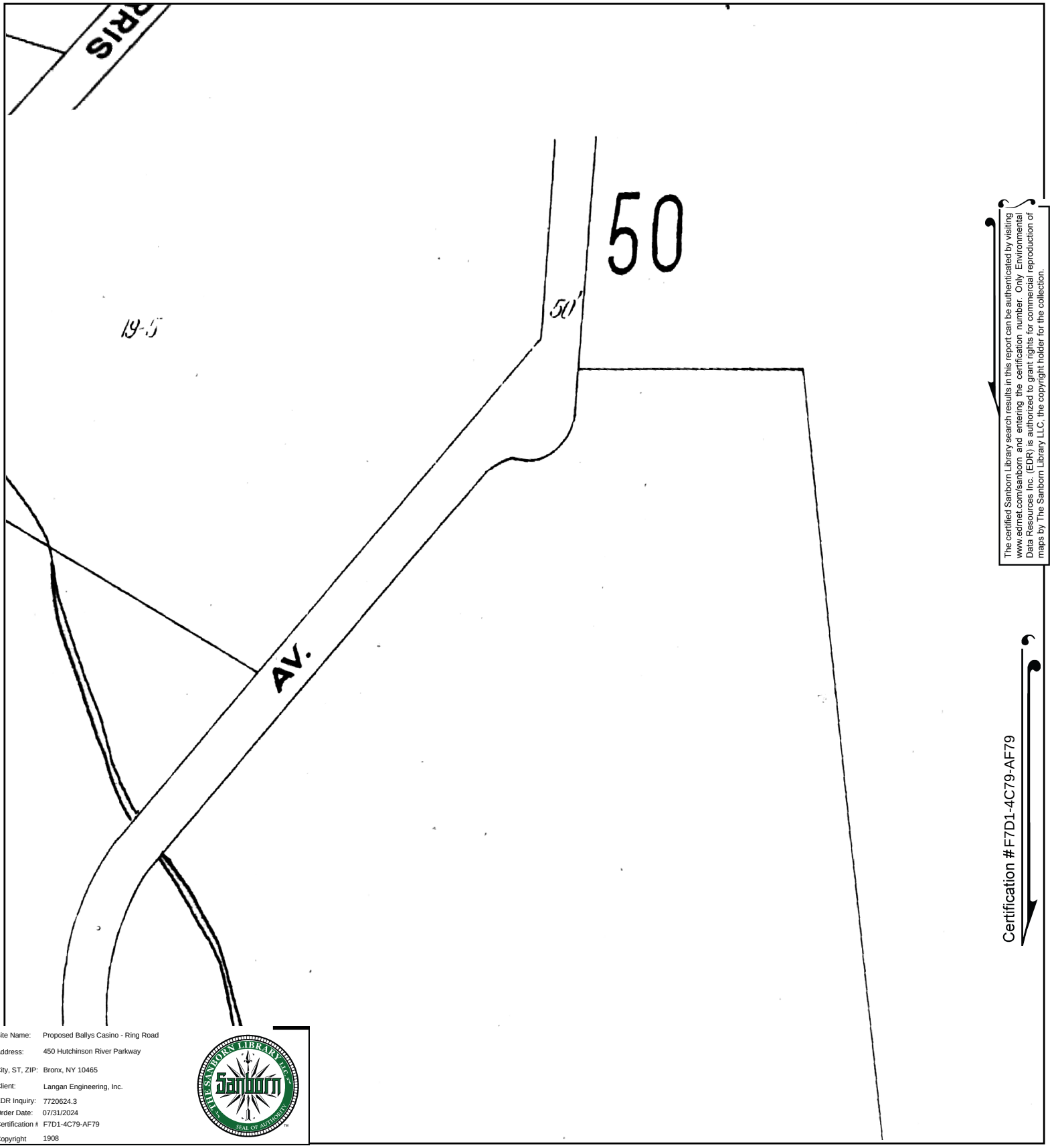


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| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1908 |

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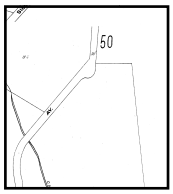


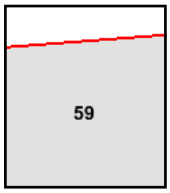


Volume A, Sheet 59

0 Feet 150 300 600

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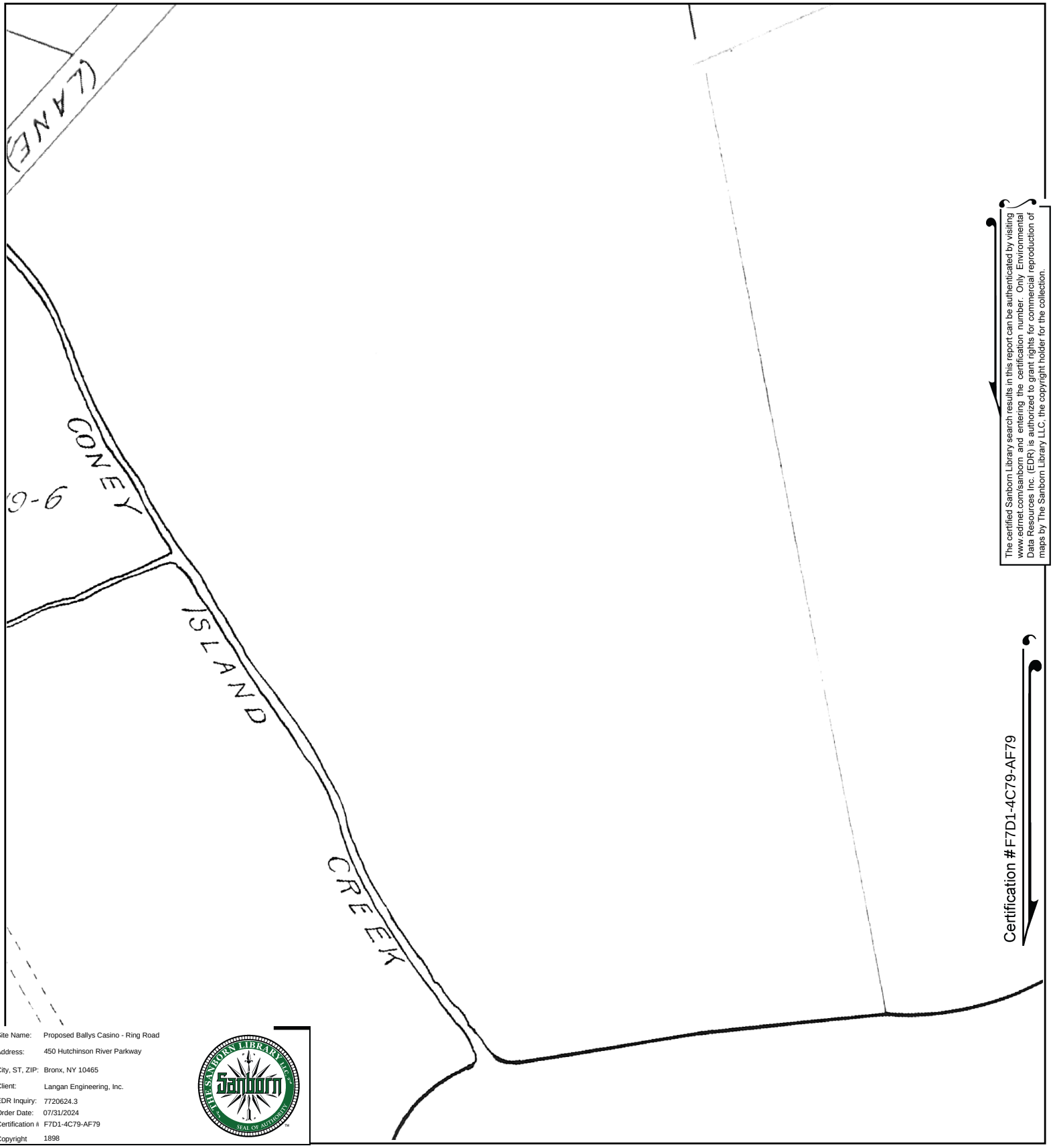


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Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1898

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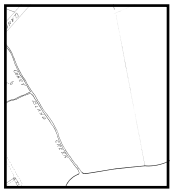
0 Feet 150 300 600

Volume A, Sheet 59



59

N

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.3

July 31, 2024

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

07/31/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.3

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

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## *Certified Sanborn Results:*

**Certification #** F7D1-4C79-AF79

**PO #** 170773001

**Project** Prpsd Bally s Casino - Ring Rd

**Maps Provided:**

| | | | |
|---|---|---|---|
| 2007 | 1996 | 1981 | 1898 |
| 2006 | 1995 | 1978 | |
| 2005 | 1993 | 1977 | |
| 2004 | 1992 | 1967 | |
| 2003 | 1991 | 1950 | |
| 2002 | 1988 | 1930 | |
| 2001 | 1986 | 1919 | |
| 1998 | 1983 | 1908 | |

Sanborn® Library search results

Certification #: F7D1-4C79-AF79

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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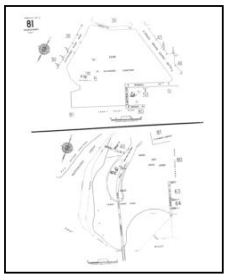
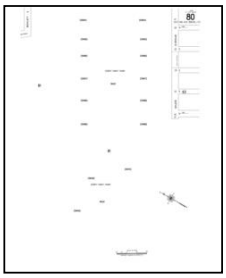
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 2007 Source Sheets



Volume 21, Sheet 81
2007



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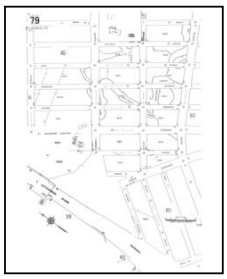
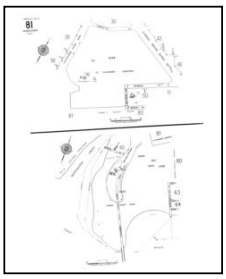
2007

### 2006 Source Sheets

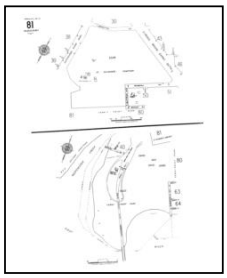


Volume 21, Sheet 79
2006



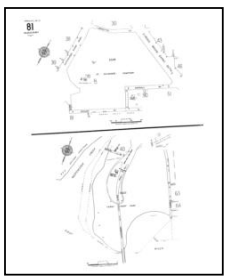
Volume 21, Sheet 81
2006

### 2005 Source Sheets



Volume 21, Sheet 81
2005

### 2004 Source Sheets

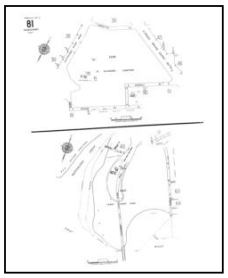


Volume 21, Sheet 81
2004

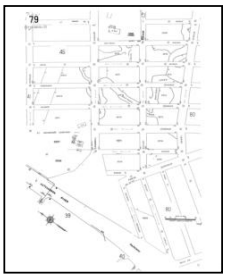
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

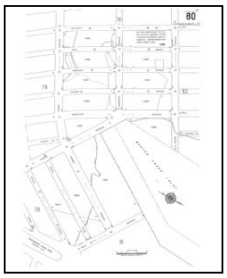
### 2003 Source Sheets



Volume 21, Sheet 81
2003

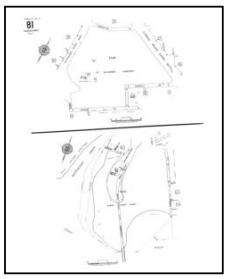


Volume 21, Sheet 79
2003



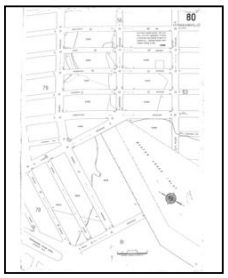
Volume 21, Sheet 80
2003

### 2002 Source Sheets

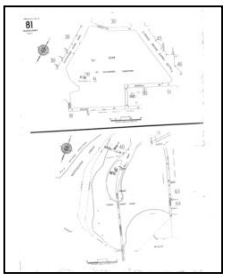


Volume 21, Sheet 81
2002

### 2001 Source Sheets

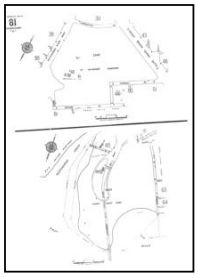


Volume 21, Sheet 80
2001



Volume 21, Sheet 81
2001

### 1998 Source Sheets

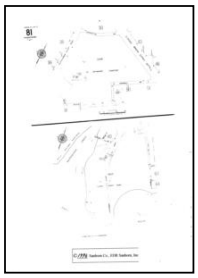


Volume 21, Sheet 81
1998

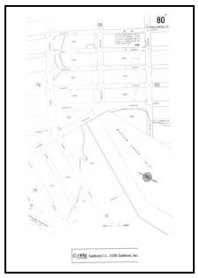
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1996 Source Sheets



Volume 21, Sheet 81
1996

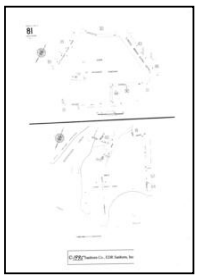


Volume 21, Sheet 80
1996



Volume 21, Sheet 79
1996

### 1995 Source Sheets

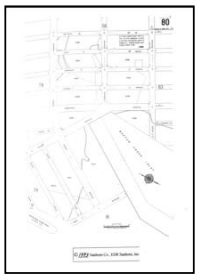


Volume 21, Sheet 81
1995

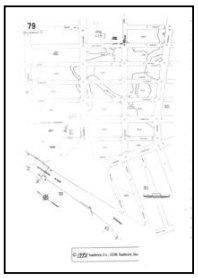
### 1993 Source Sheets



Volume 21, Sheet 81
1993

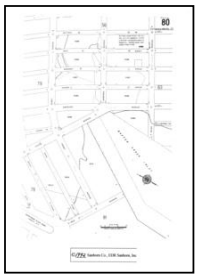


Volume 21, Sheet 80
1993

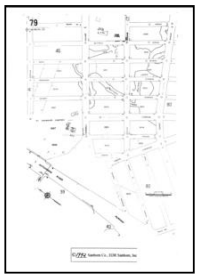


Volume 21, Sheet 79
1993

### 1992 Source Sheets



Volume 21, Sheet 80
1992



Volume 21, Sheet 79
1992

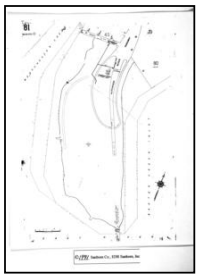


Volume 21, Sheet 81
1992

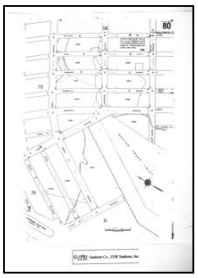
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1991 Source Sheets



Volume 21, Sheet 81
1991



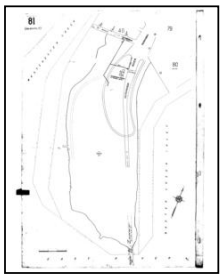
Volume 21, Sheet 80
1991

### 1988 Source Sheets



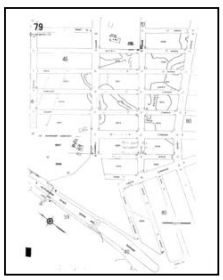
Volume 21, Sheet 81
1988

### 1986 Source Sheets

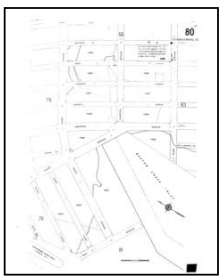


Volume 21, Sheet 81
1986

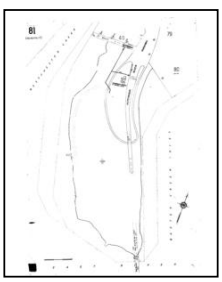
### 1983 Source Sheets



Volume 21, Sheet 79
1983



Volume 21, Sheet 80
1983

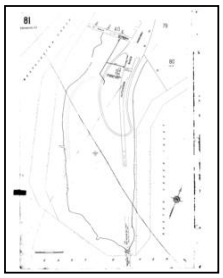


Volume 21, Sheet 81
1983

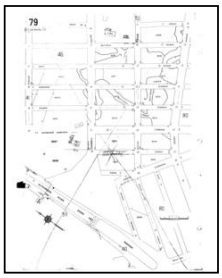
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1981 Source Sheets

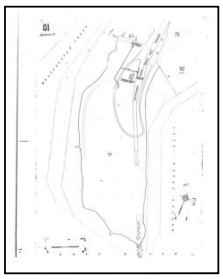


Volume 21, Sheet 81
1981



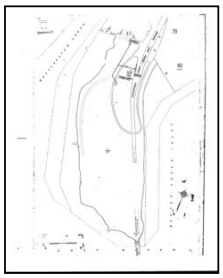
Volume 21, Sheet 79
1981

### 1978 Source Sheets



Volume 21, Sheet 81
1978

### 1977 Source Sheets



Volume 21, Sheet 81
1977



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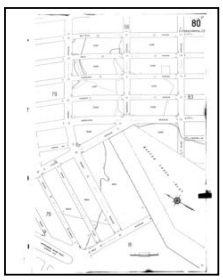
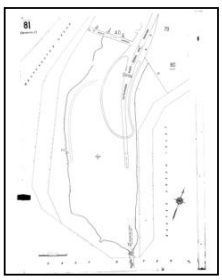
1977

### 1967 Source Sheets



Volume 21, Sheet 80
1967

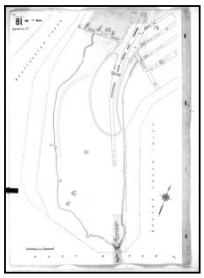


Volume 21, Sheet 81
1967

## *Sanborn Sheet Key*

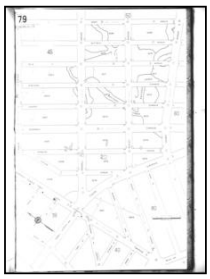
This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1950 Source Sheets



Volume 21, Sheet 81
1950

### 1930 Source Sheets

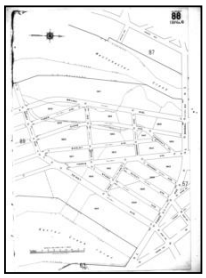


Volume 21, Sheet 79
1930

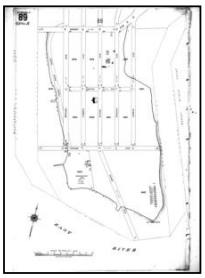


Volume 21, Sheet 81
1930

### 1919 Source Sheets

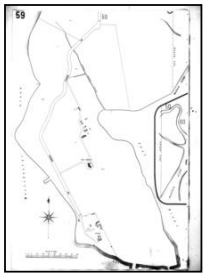


Volume 17, Sheet 88
1919



Volume 17, Sheet 89
1919

### 1908 Source Sheets



Volume A, Sheet 59
1908

## *Sanborn Sheet Key*

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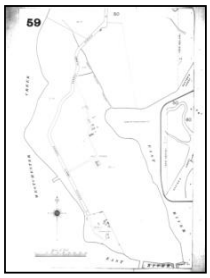
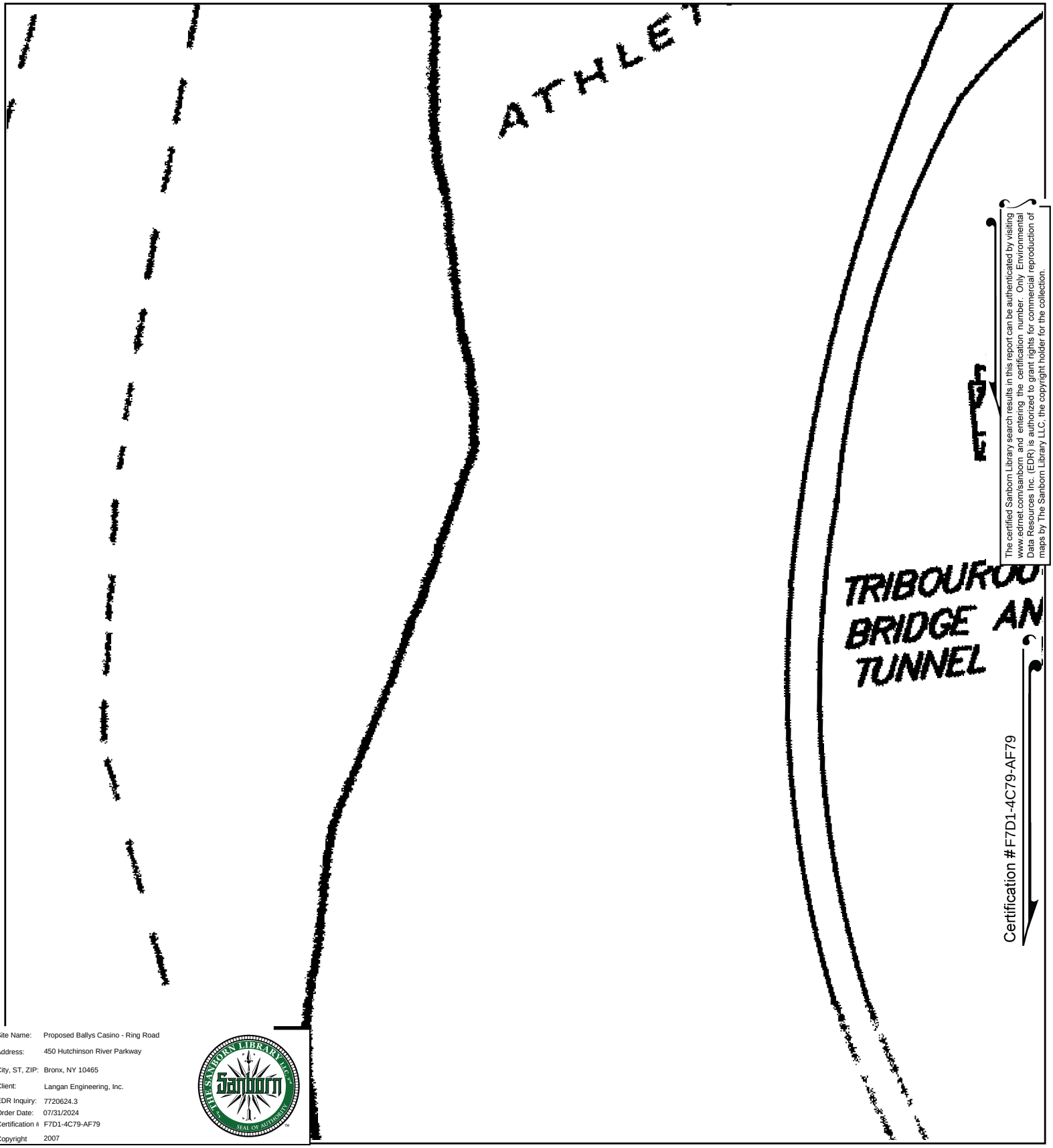
### 1898 Source Sheets




Volume A, Sheet 59
1898

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Certification #F7D1-4C79-AF79

Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 2007

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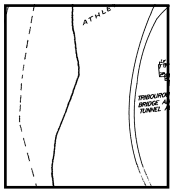

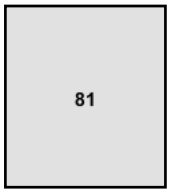


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Volume 21, Sheet 81

0 Feet 150 300 600

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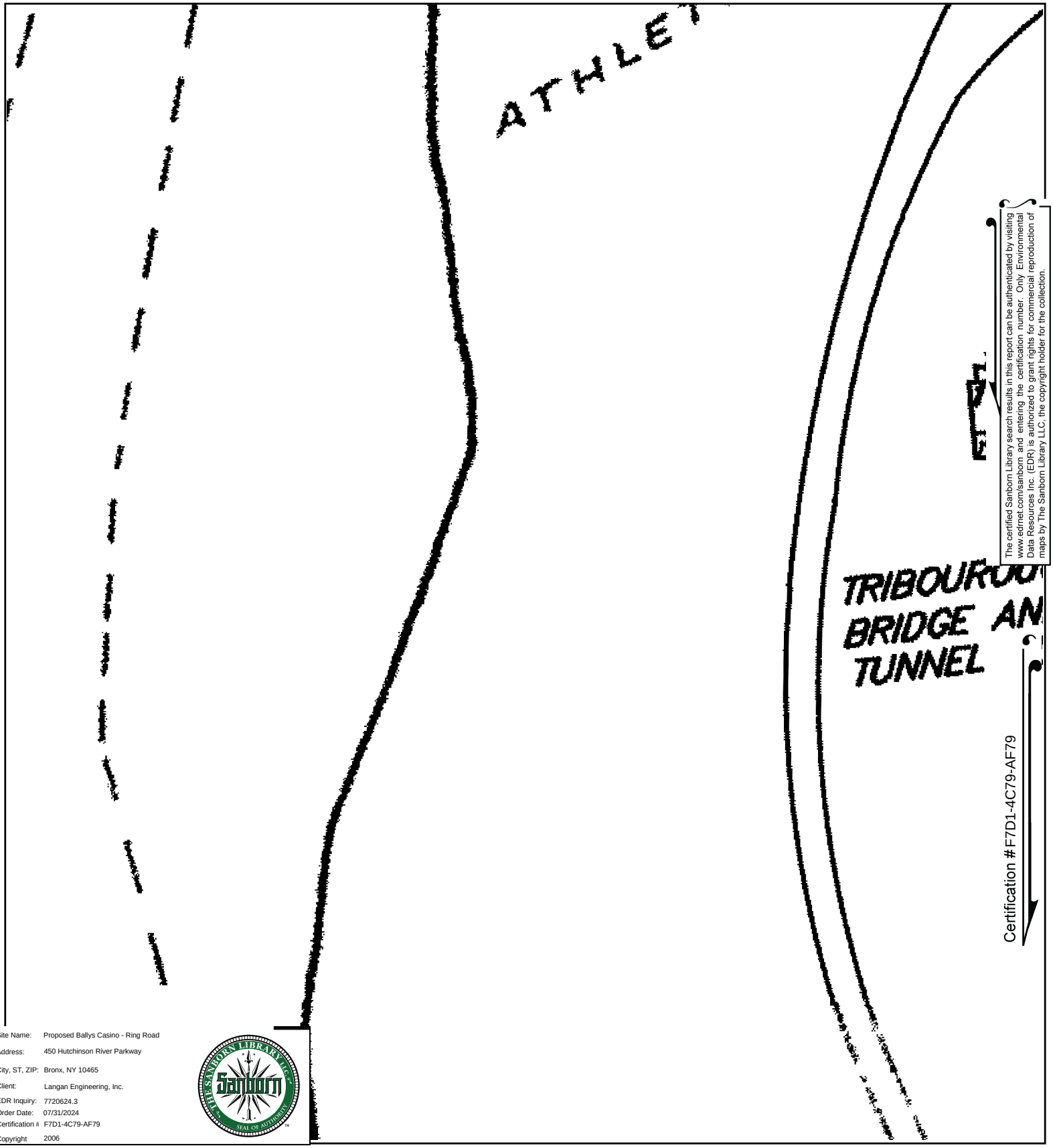


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Address: 450 Hutchinson River Parkway
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EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
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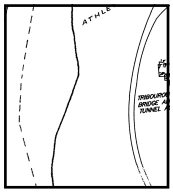

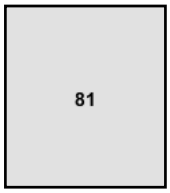


Volume 21, Sheet 81
Volume 21, Sheet 79

0 Feet 150 300 600

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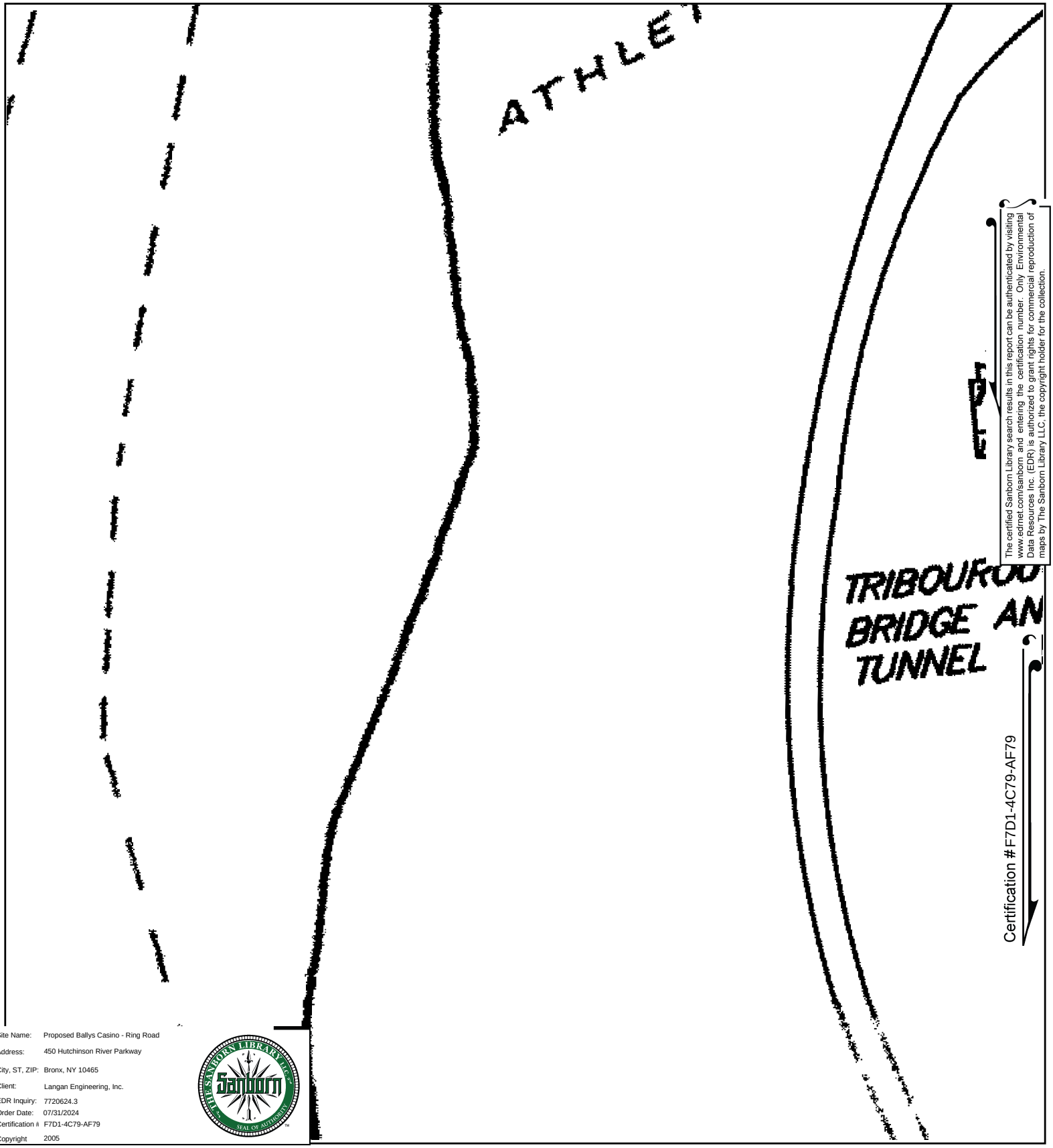


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|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
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| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
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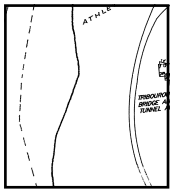

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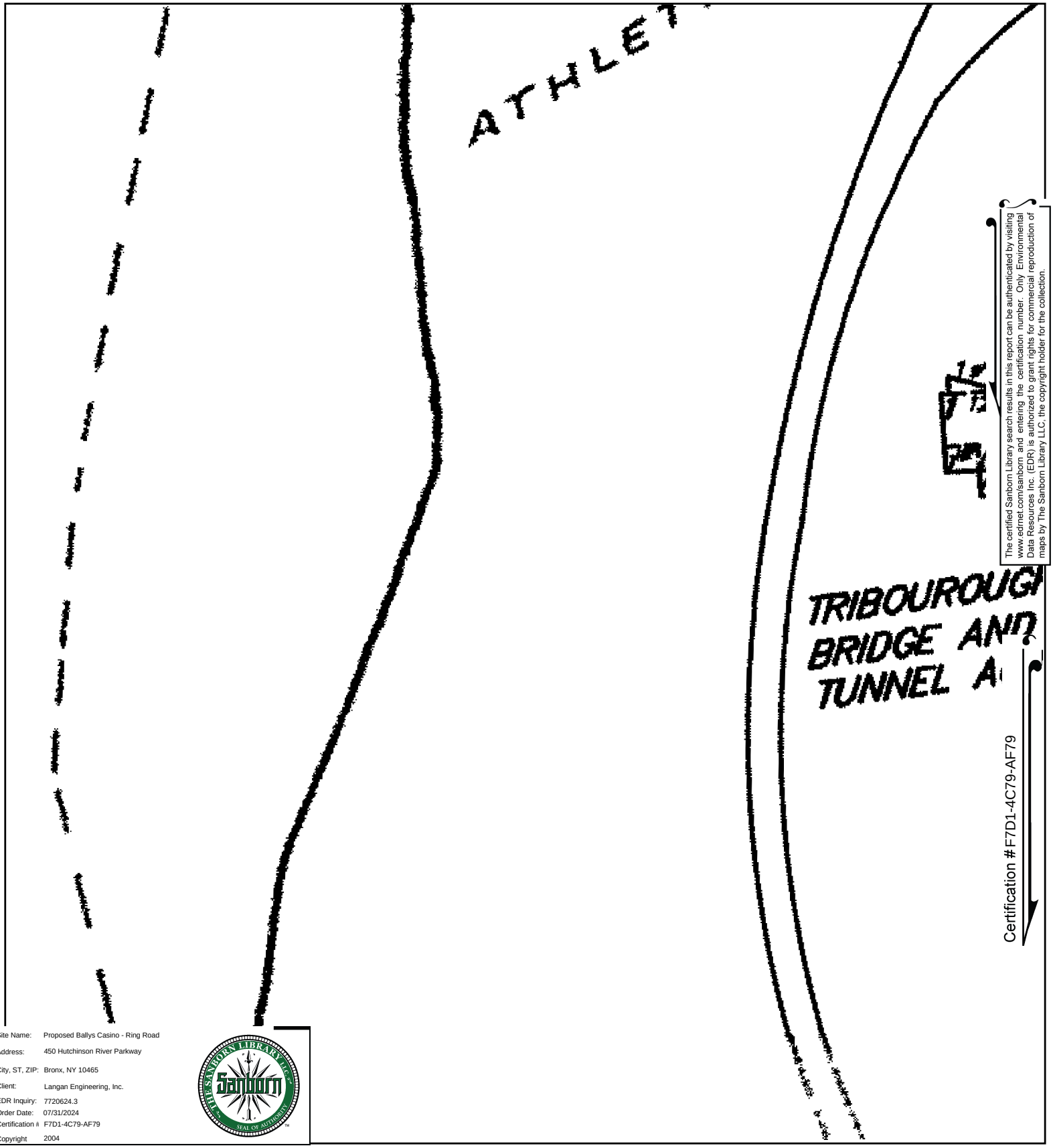
N

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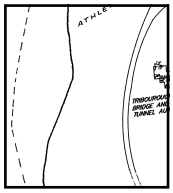
0 Feet 150 300 600



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Volume 21, Sheet 81

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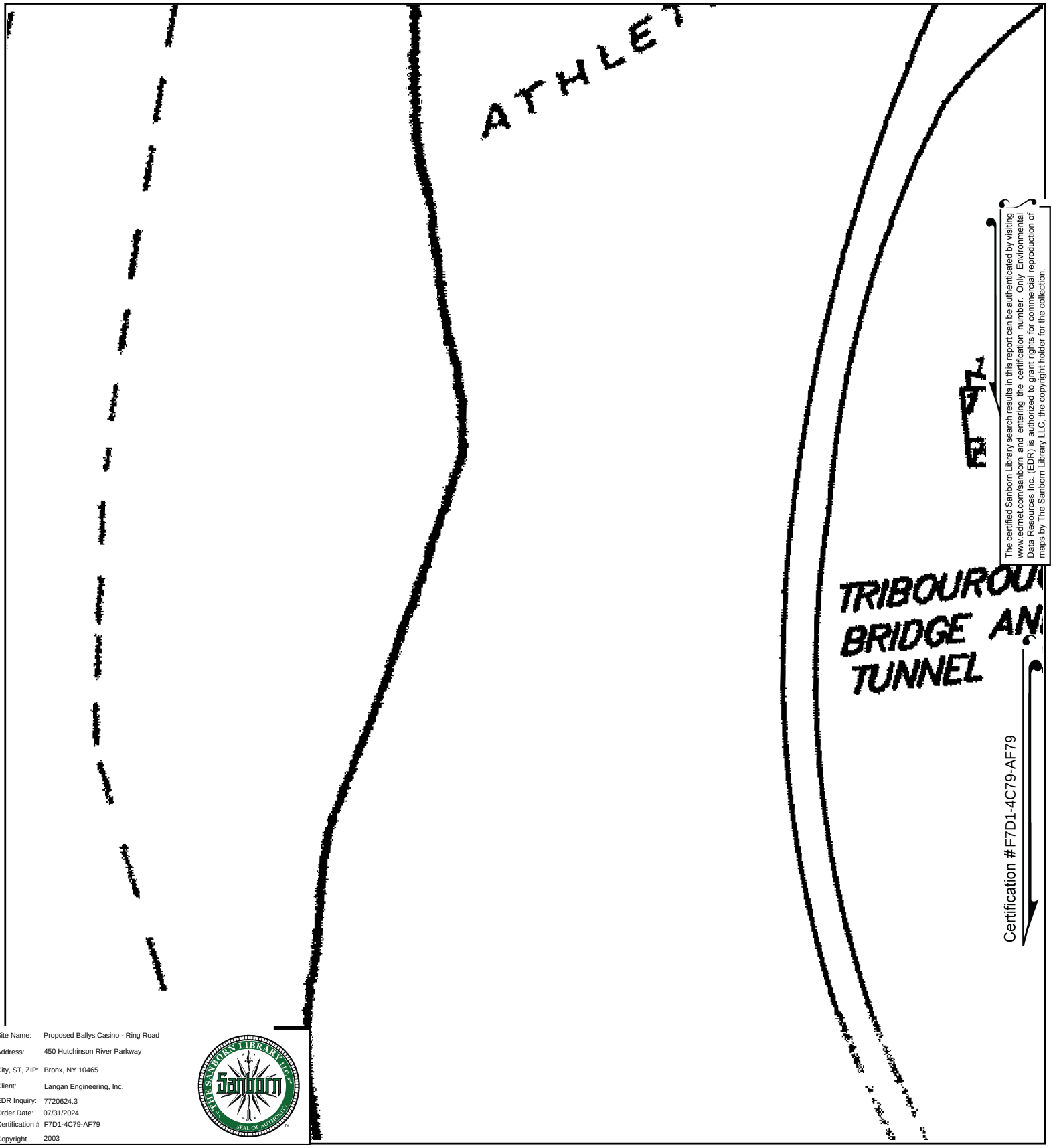


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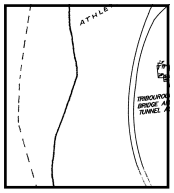

81

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Volume 21, Sheet 79
Volume 21, Sheet 81

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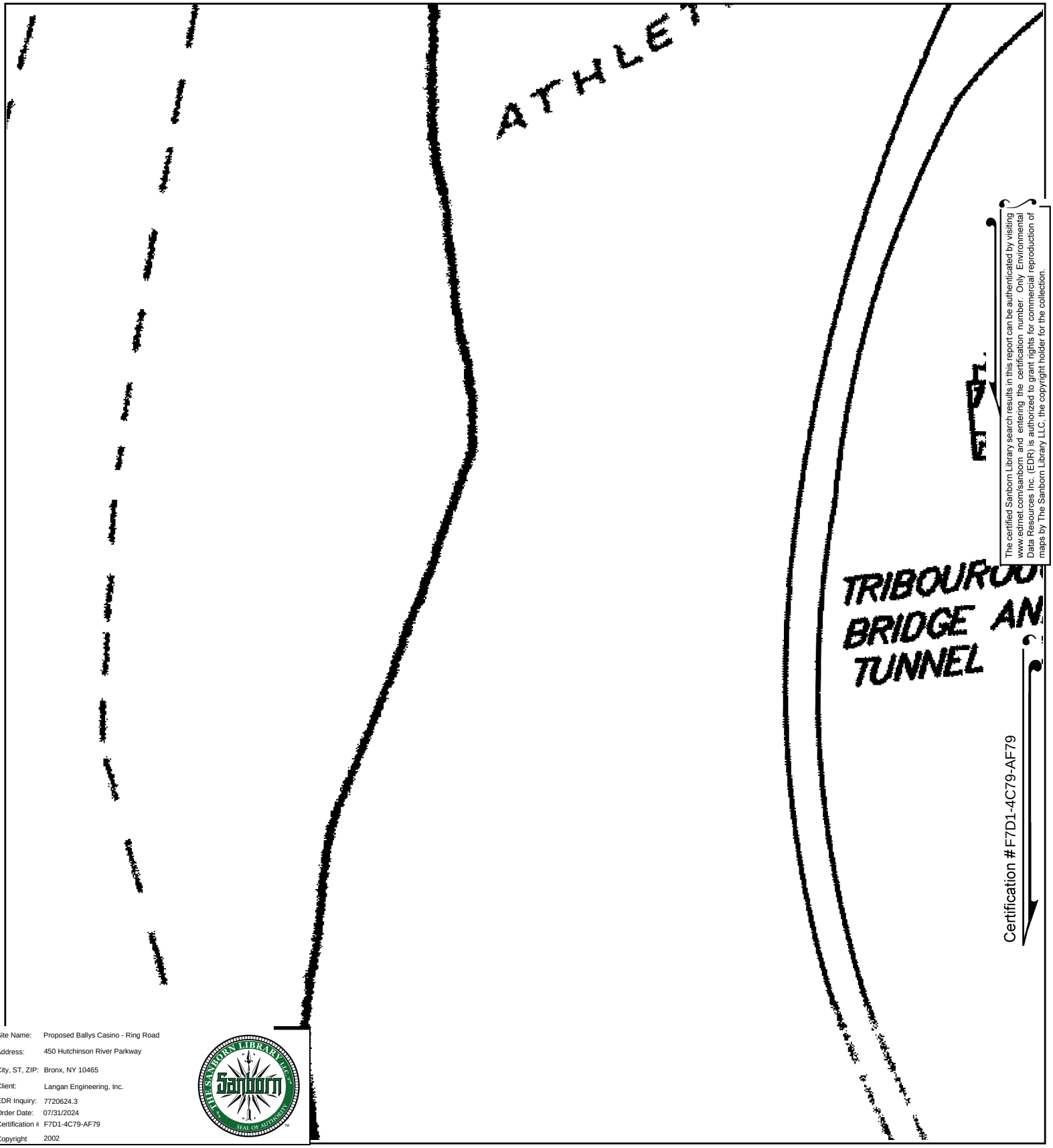


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Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
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Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
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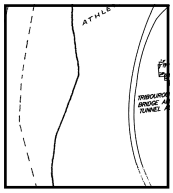

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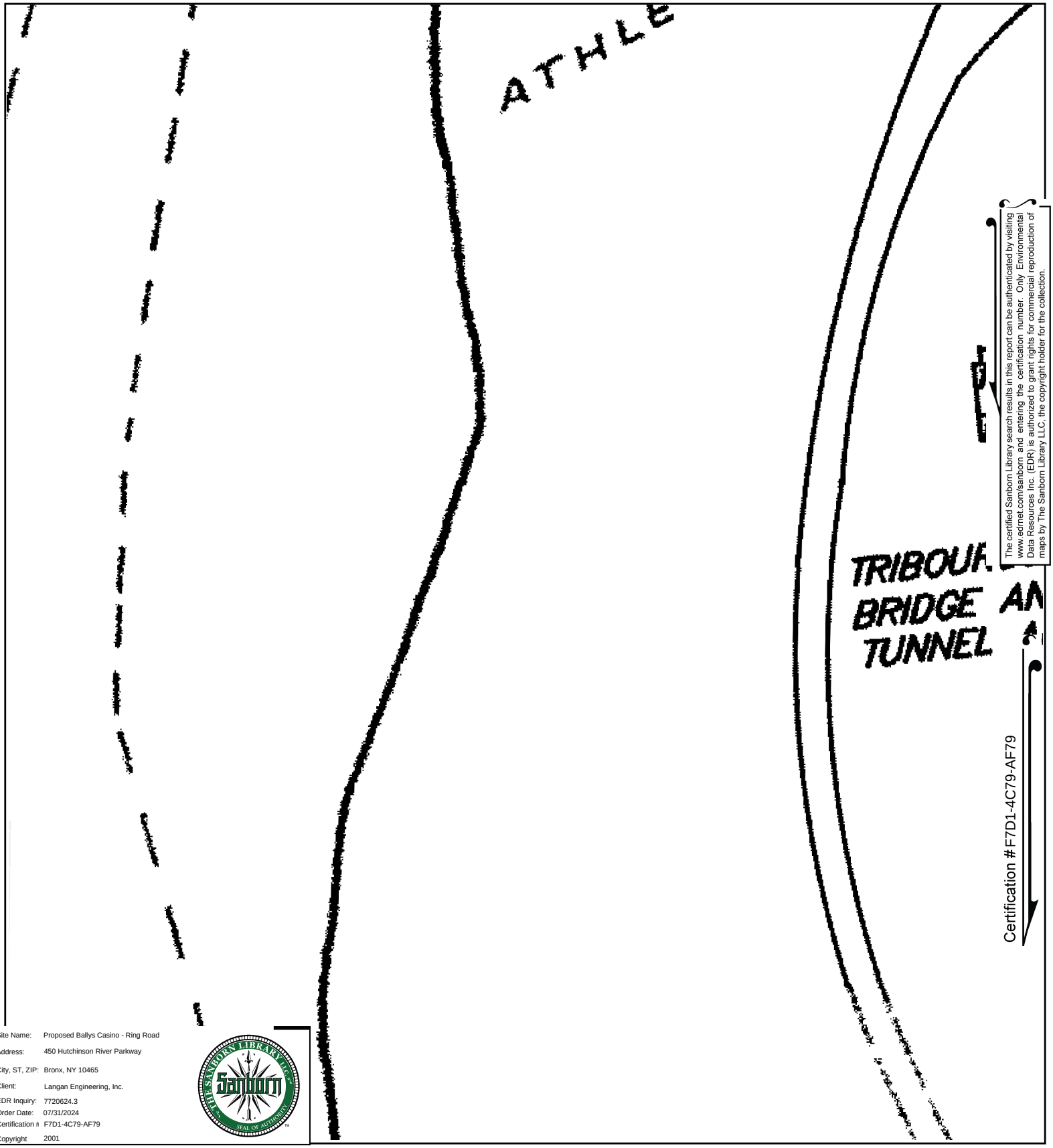


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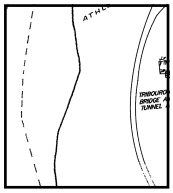

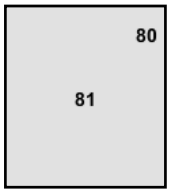


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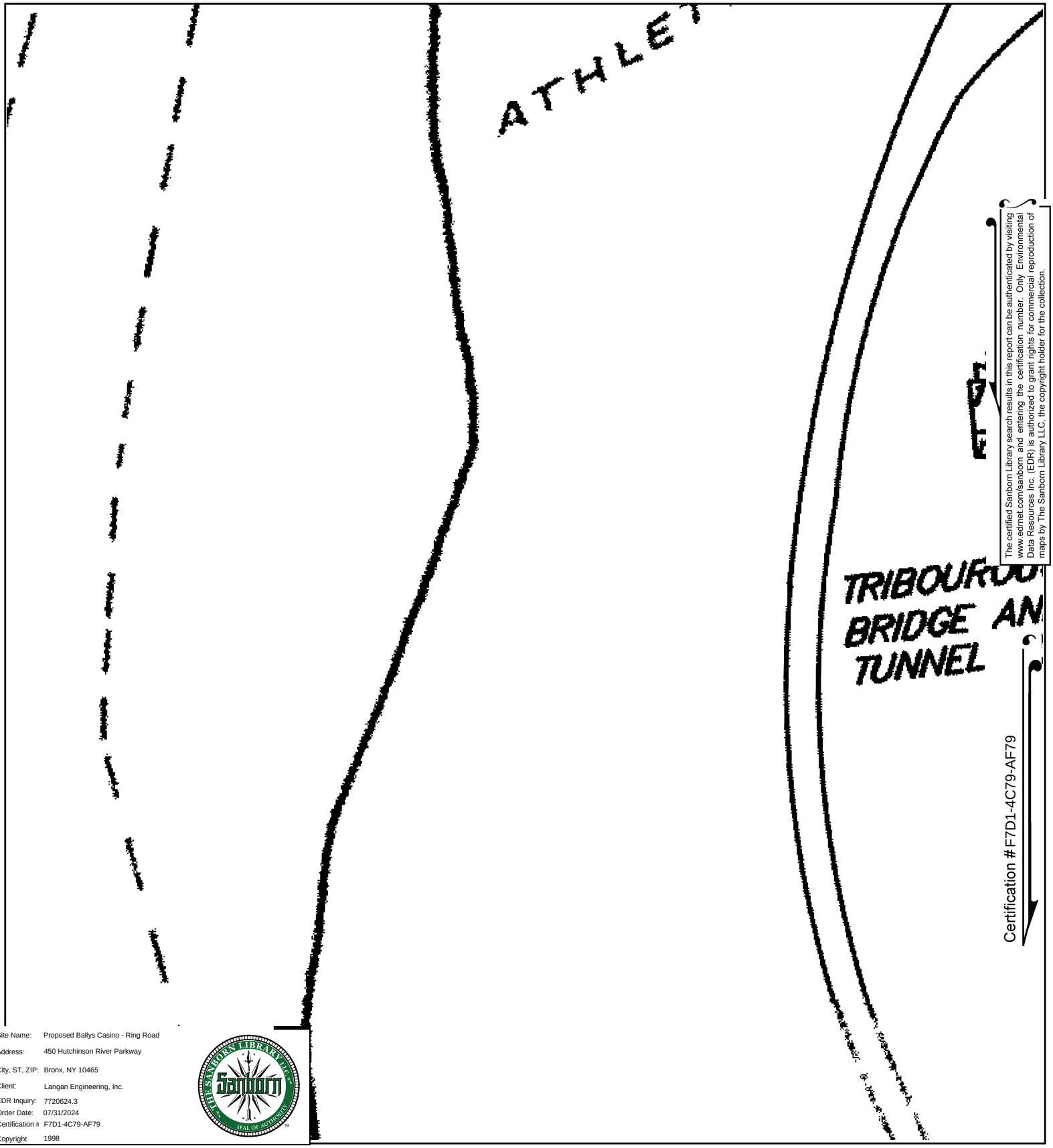


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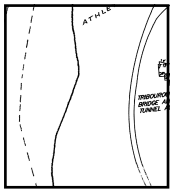

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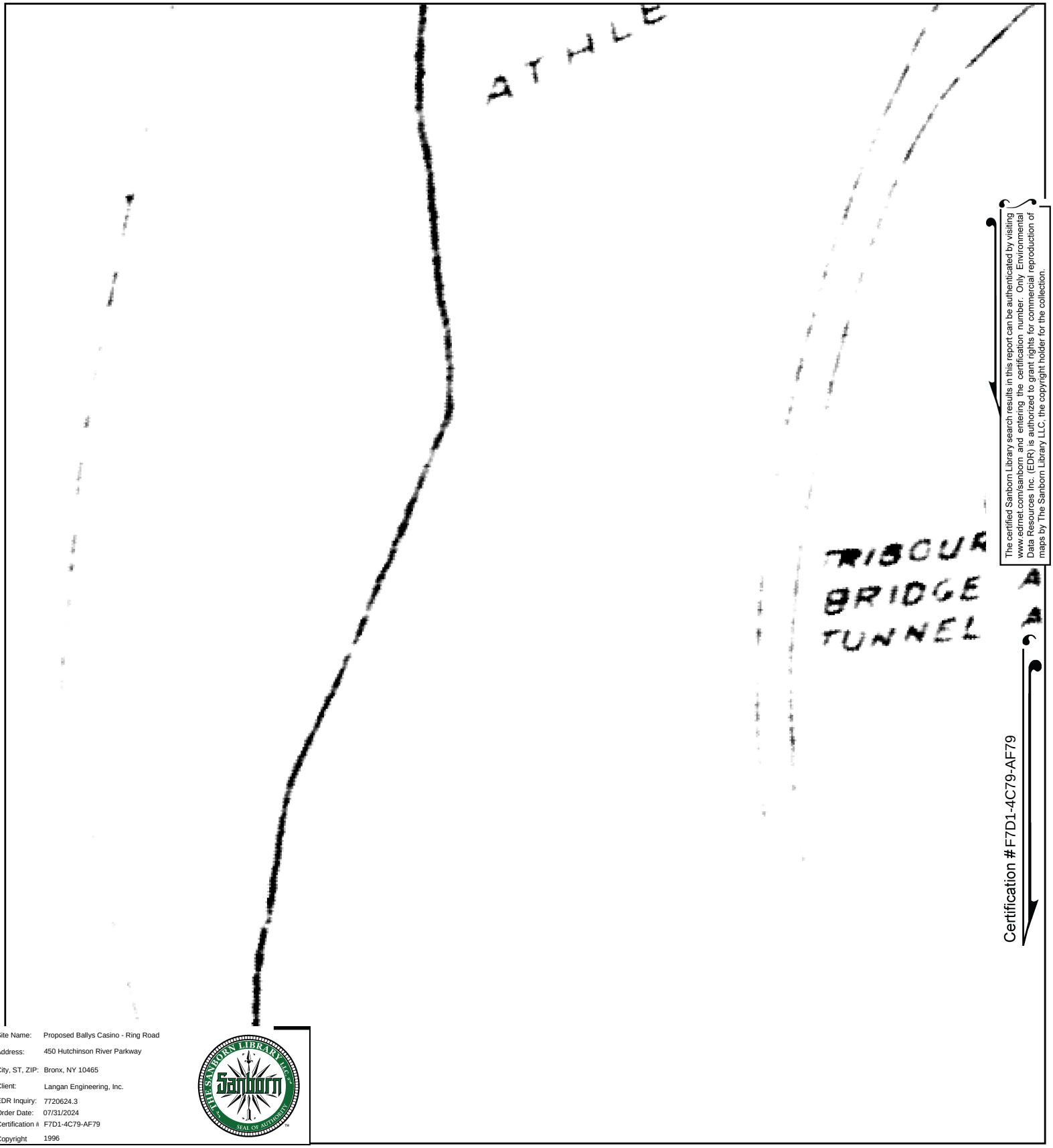


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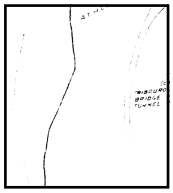

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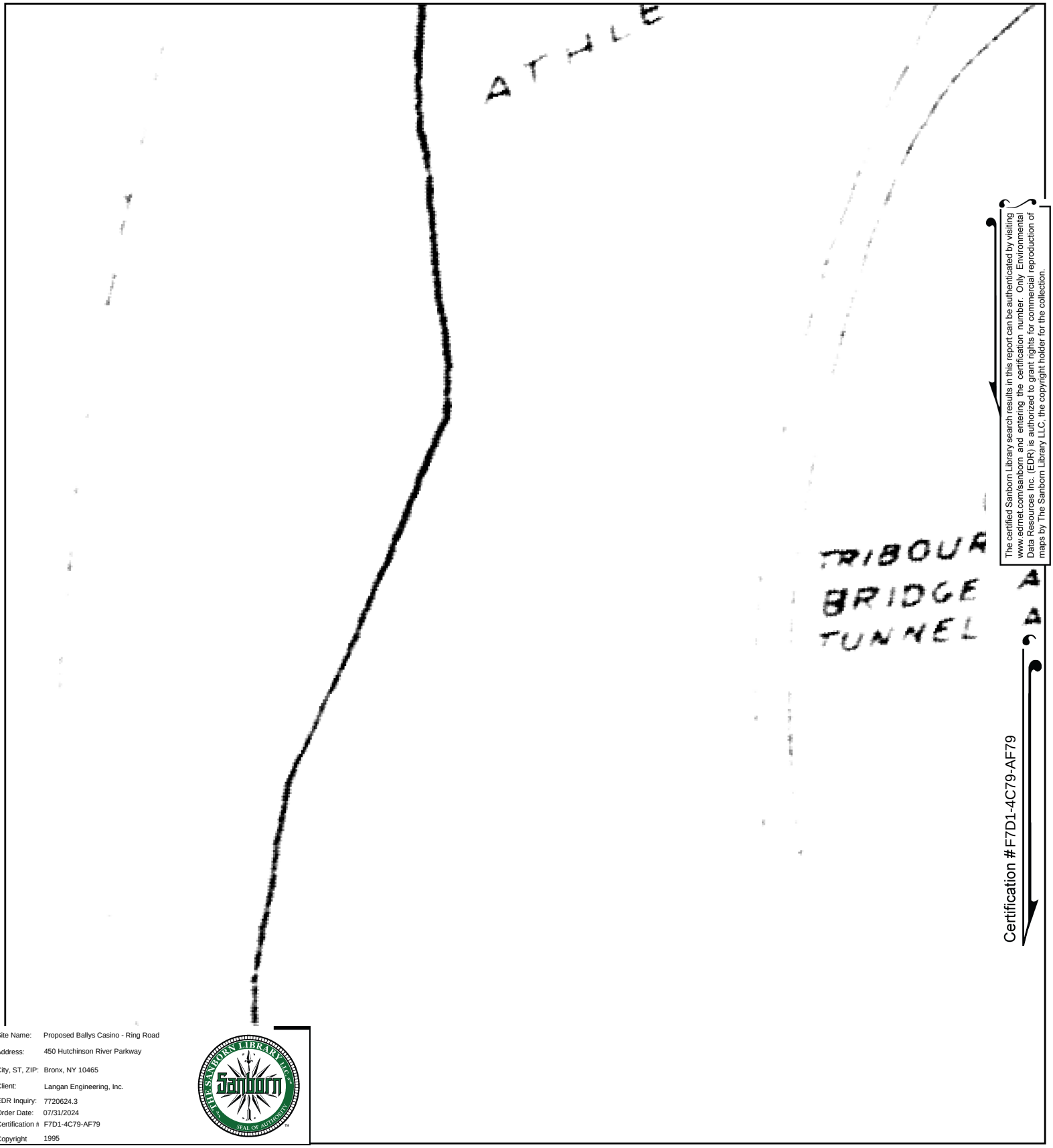


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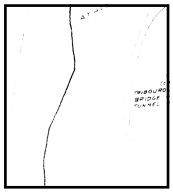

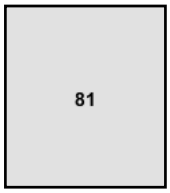


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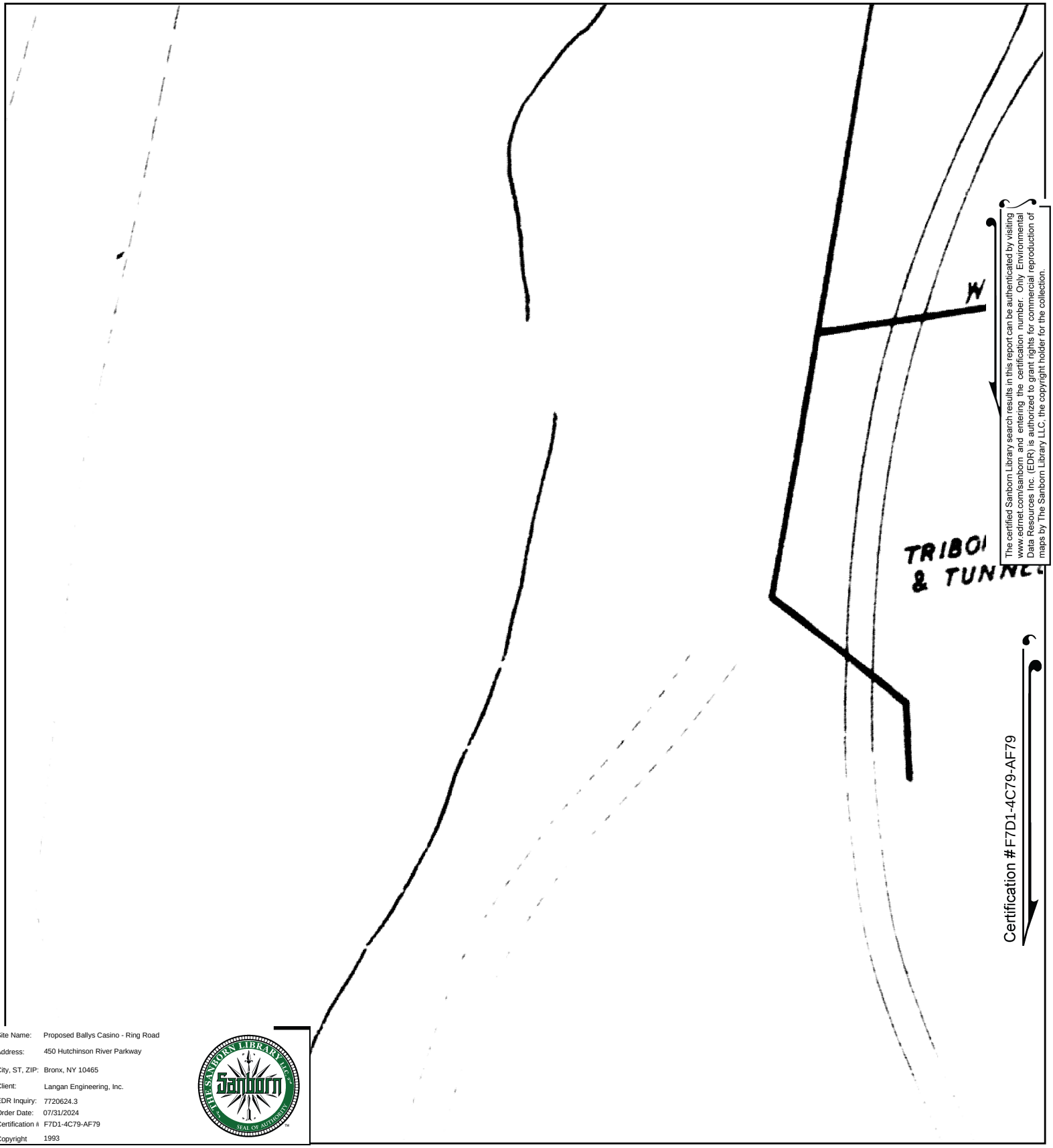


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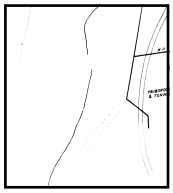

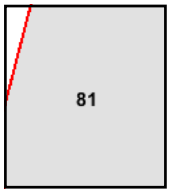


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0 Feet 150 300 600

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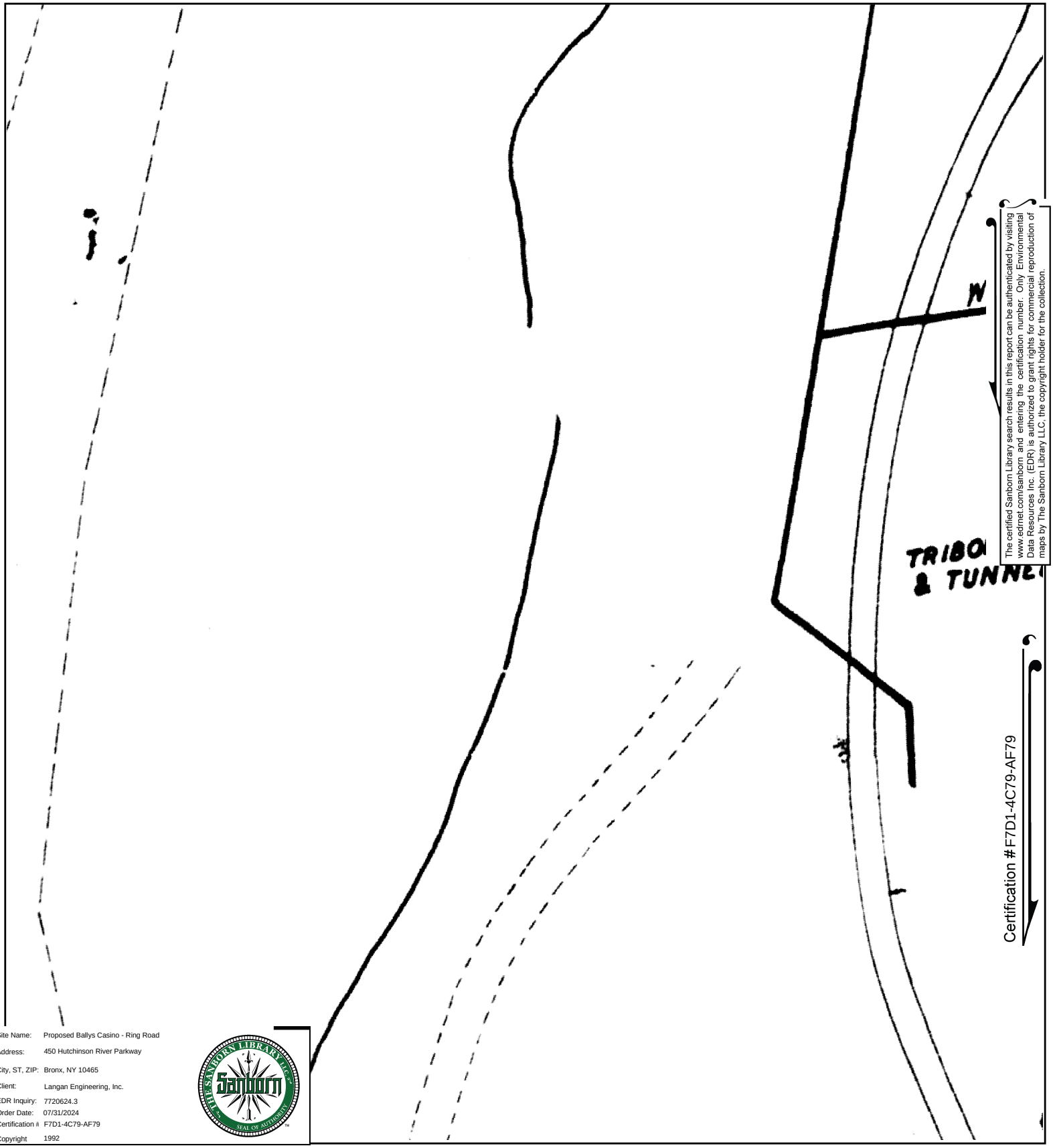


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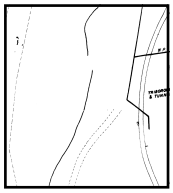

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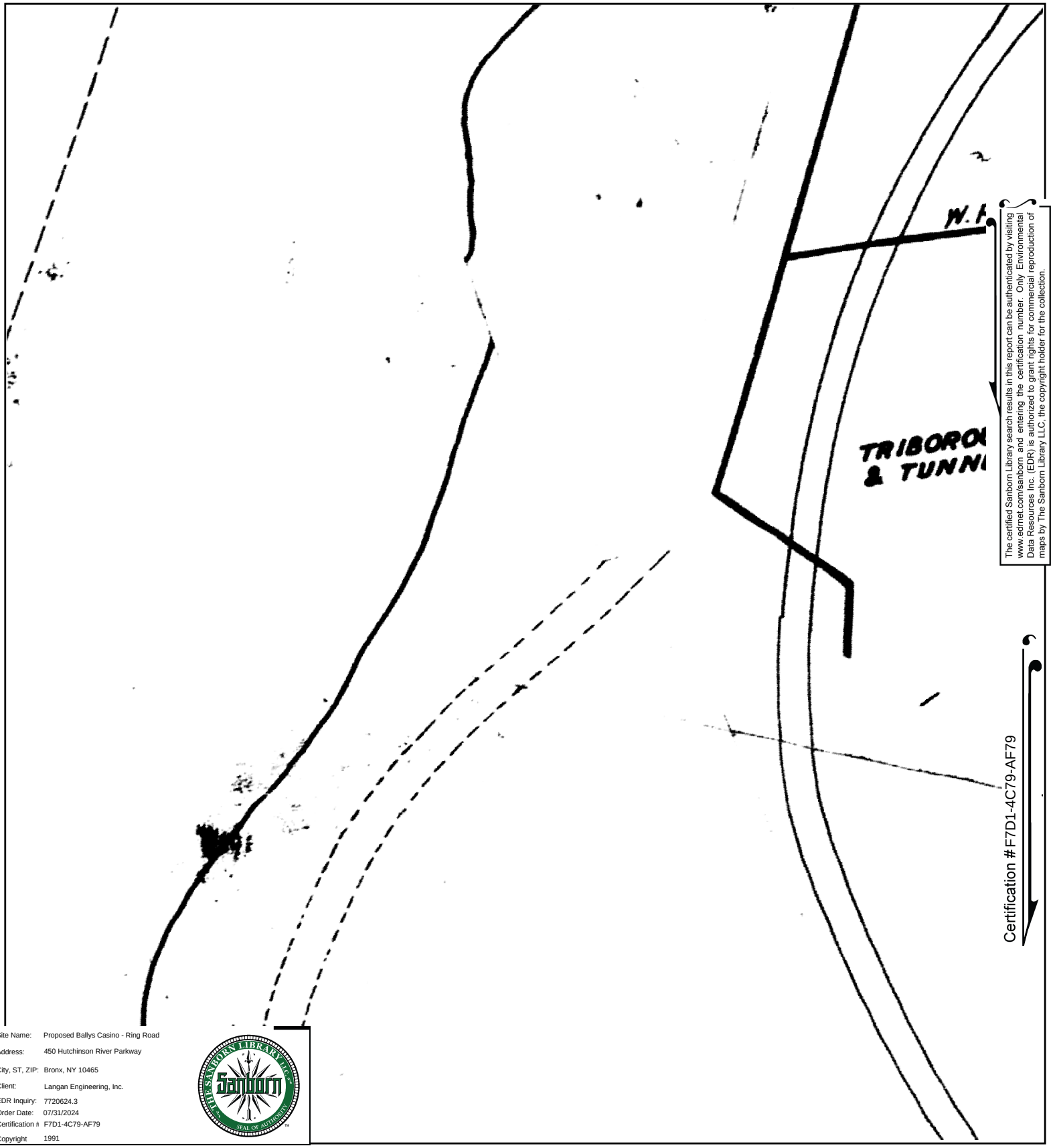


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| Client: | Langan Engineering, Inc. |
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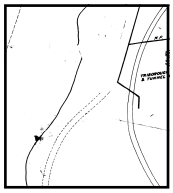

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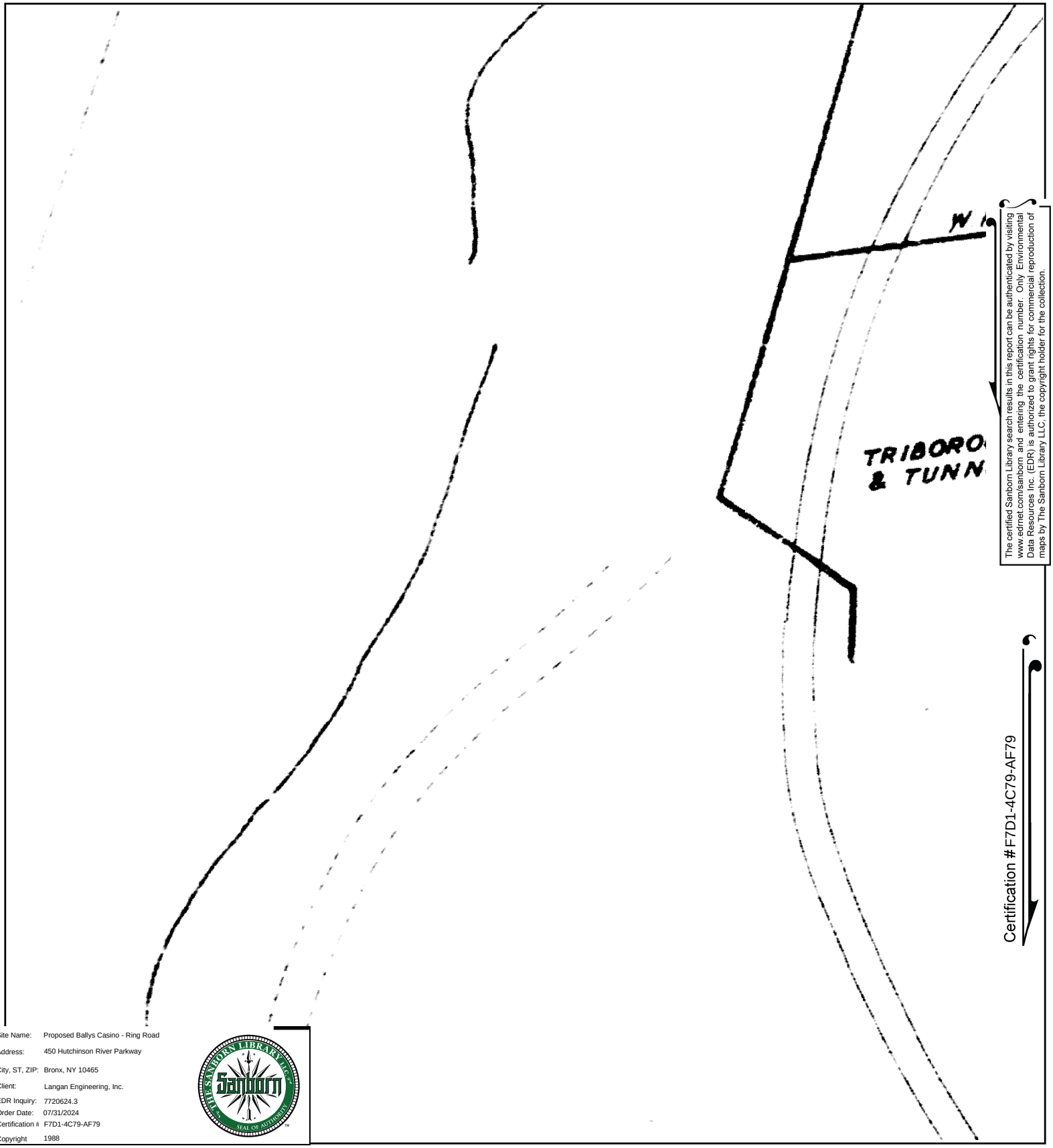


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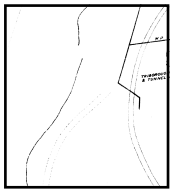

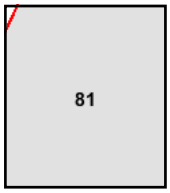


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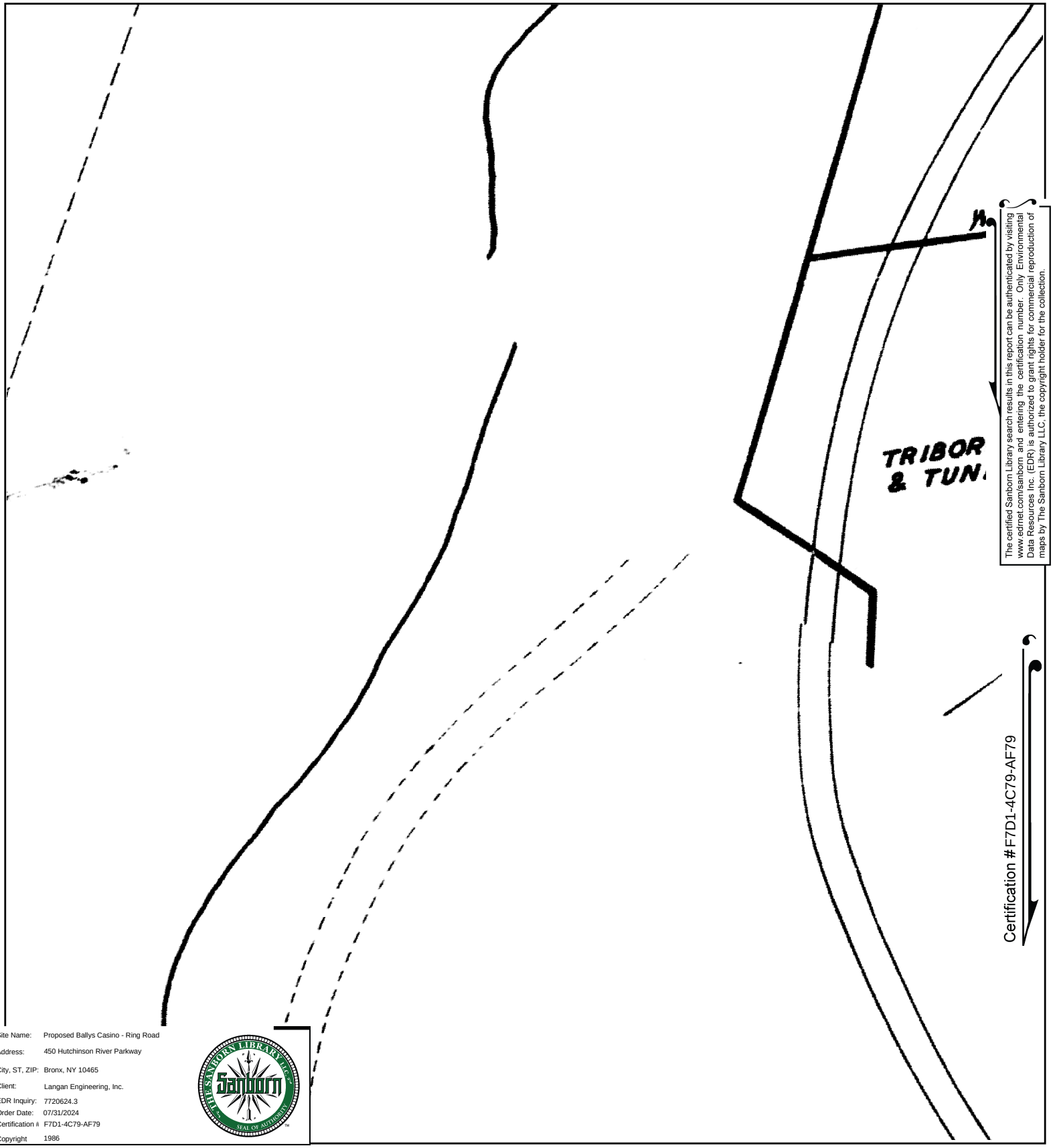


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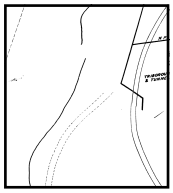

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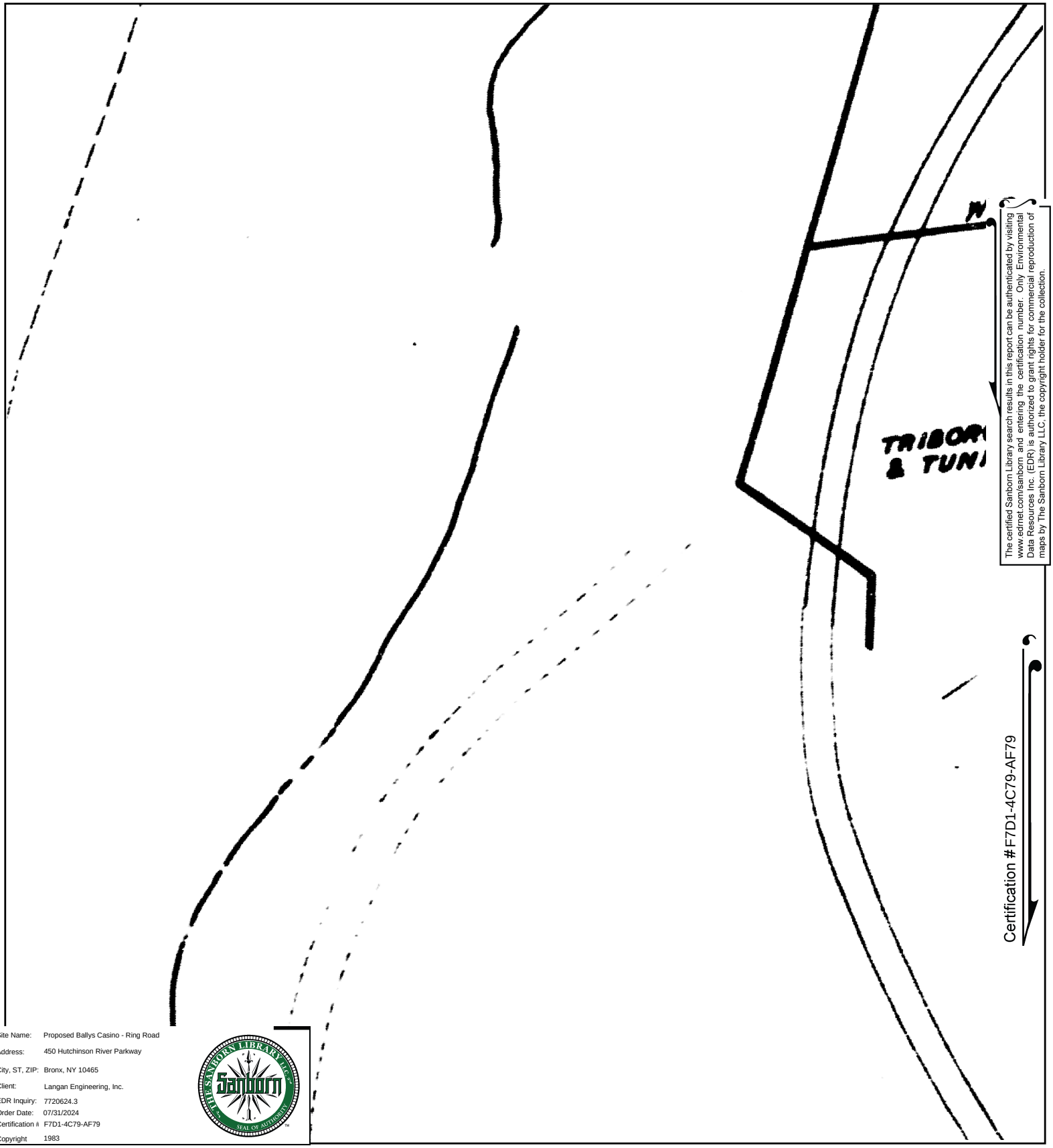


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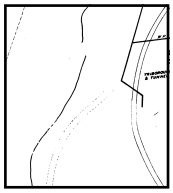

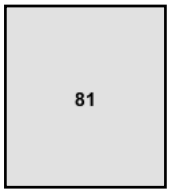


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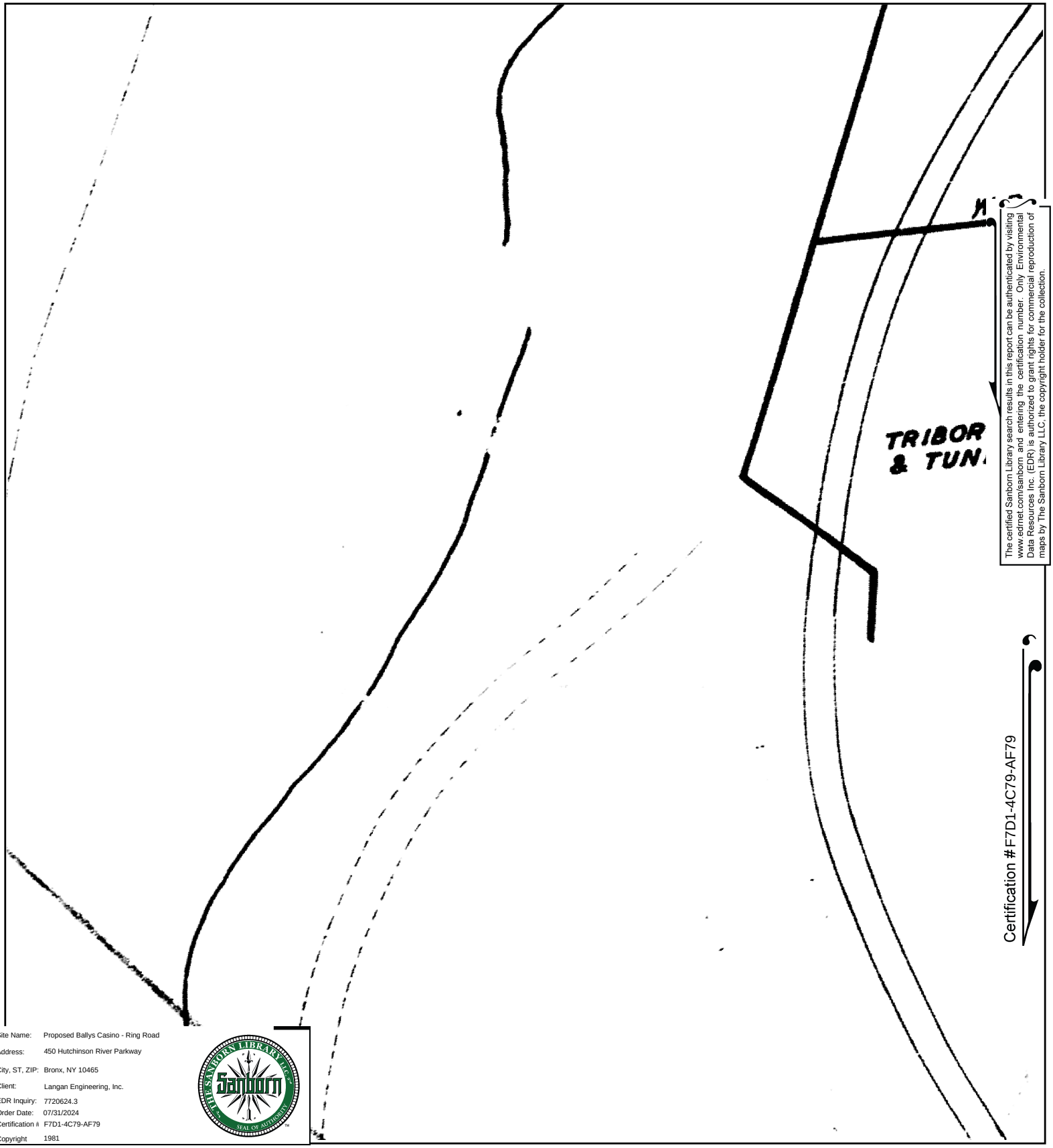


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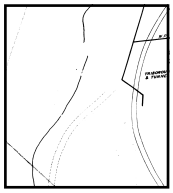

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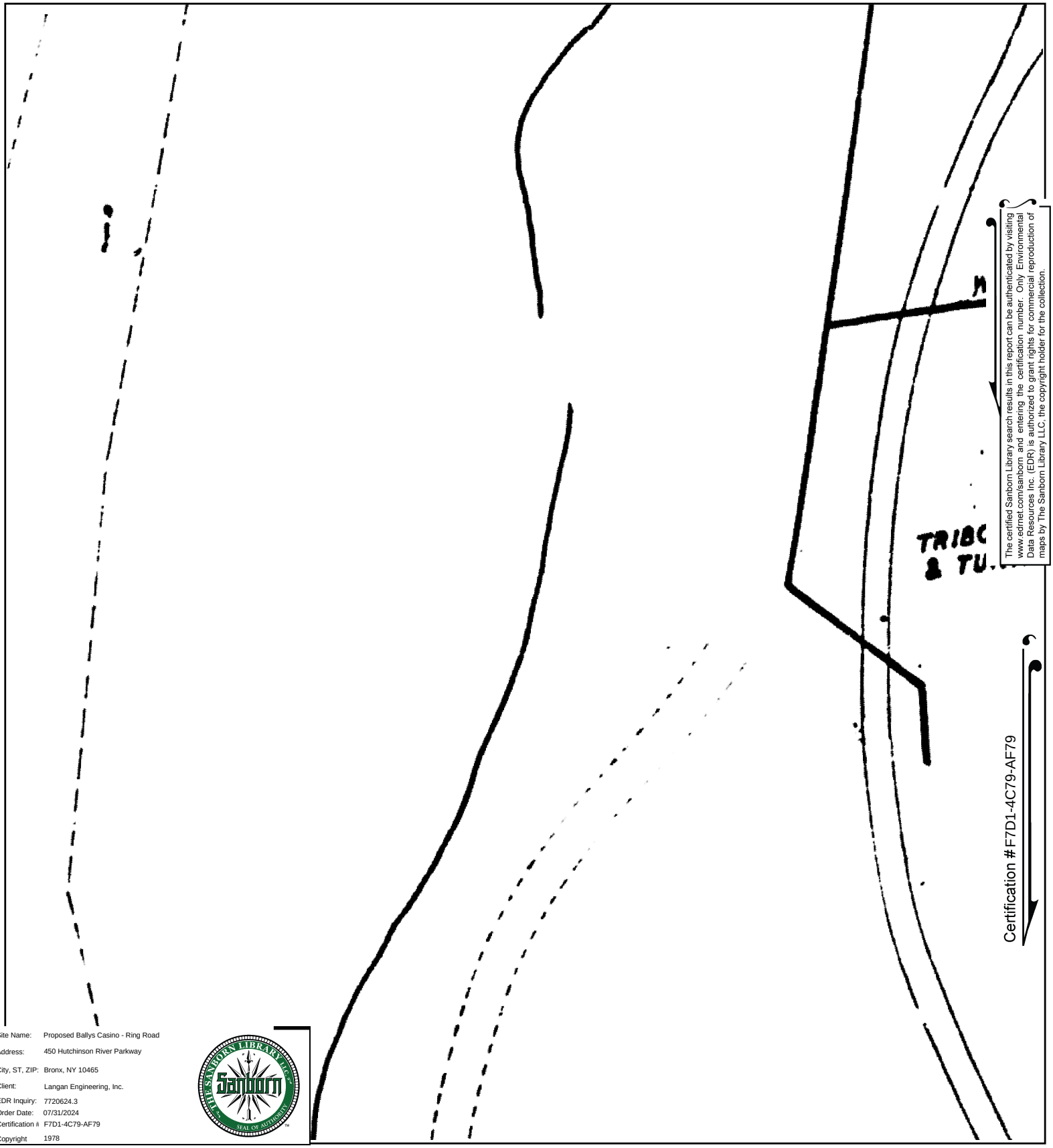


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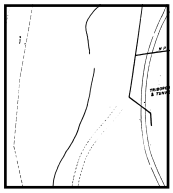

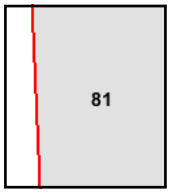


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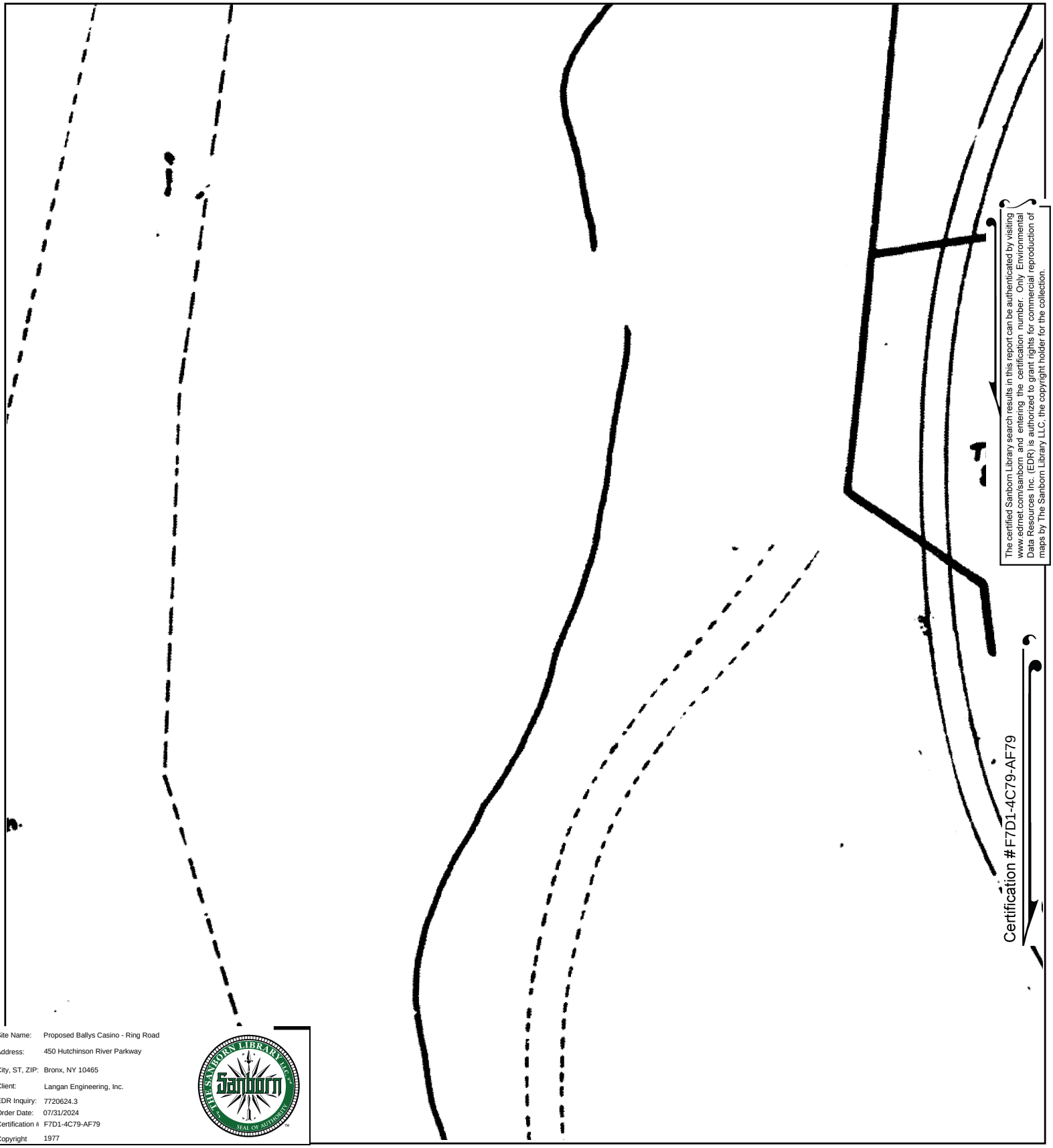

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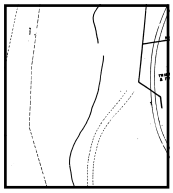

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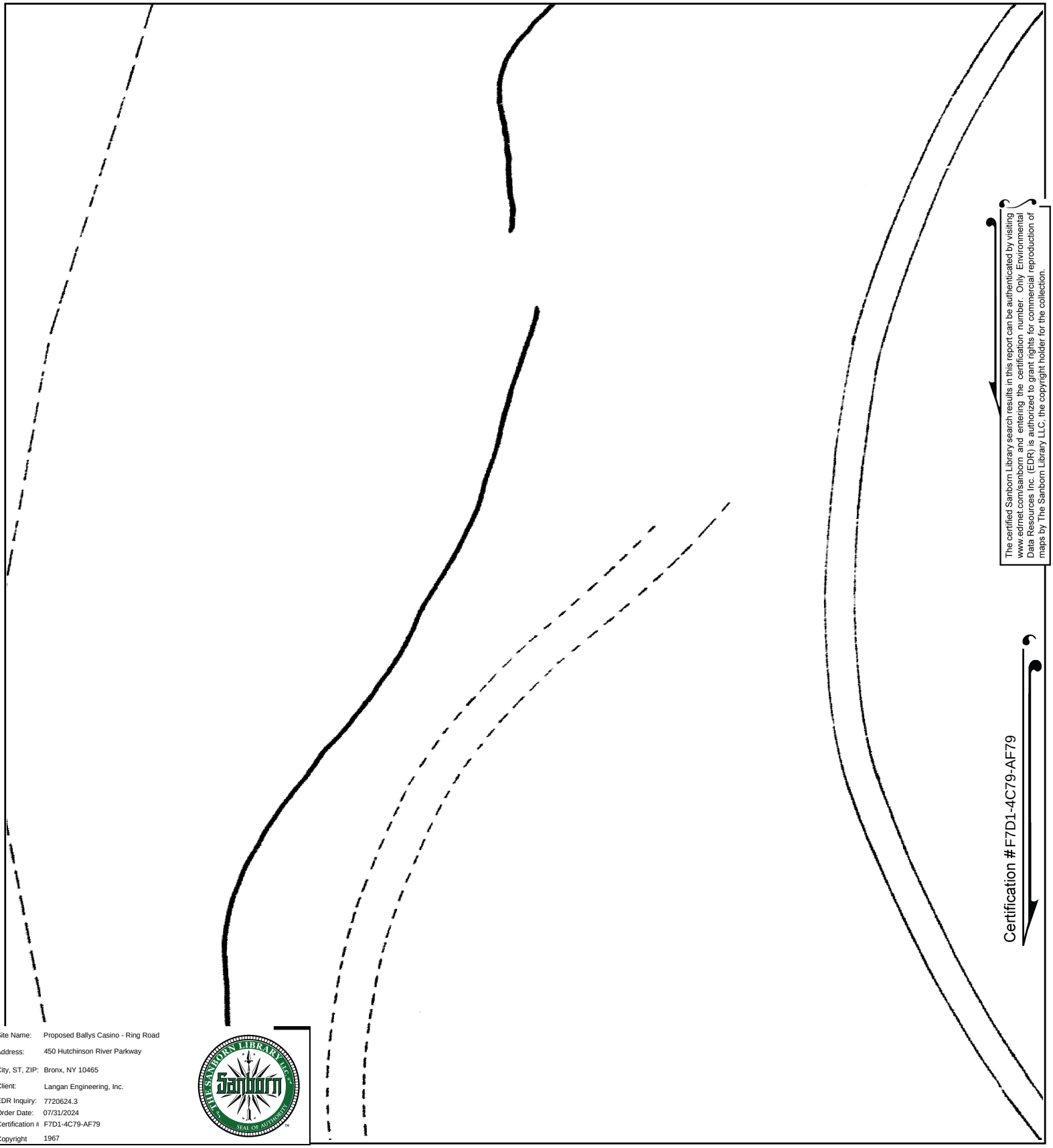

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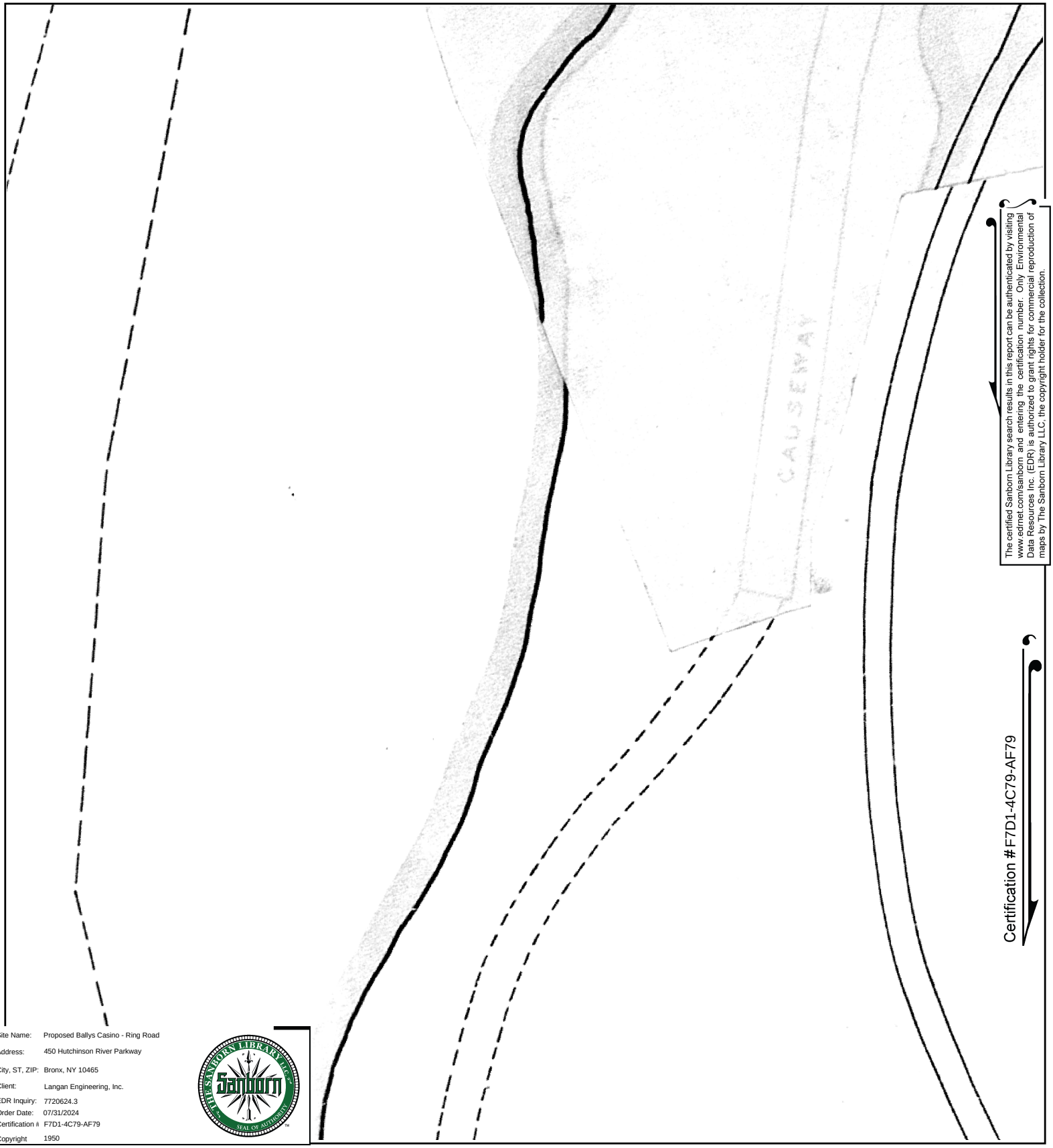
N



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Certification #F7D1-4C79-AF79

Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1950

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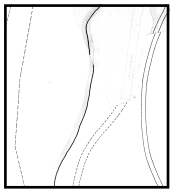

81

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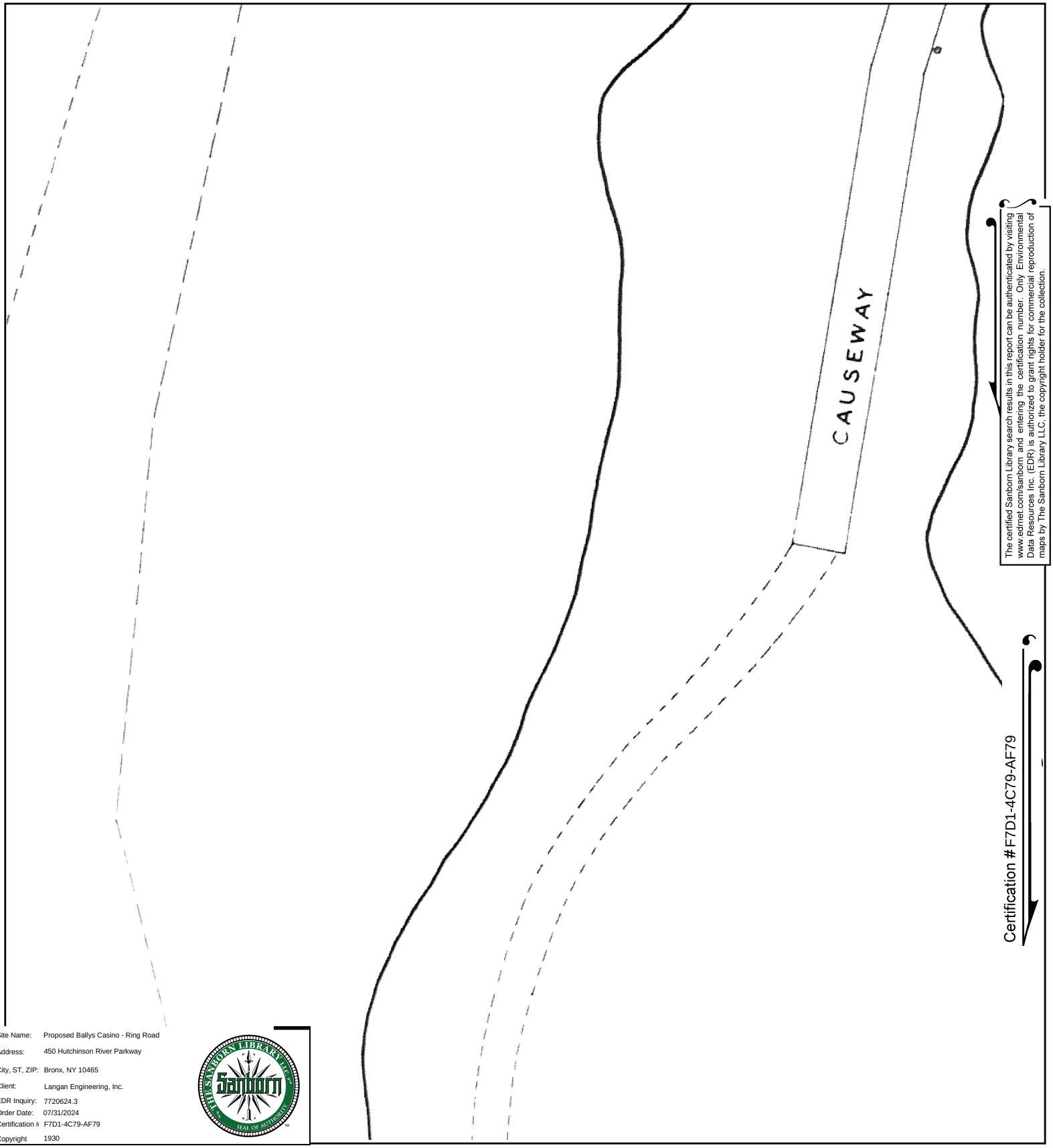
N

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Certification #F7D1-4C79-AF79

Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1930

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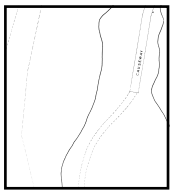

81

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Volume 21, Sheet 79

0 Feet 150 300 600

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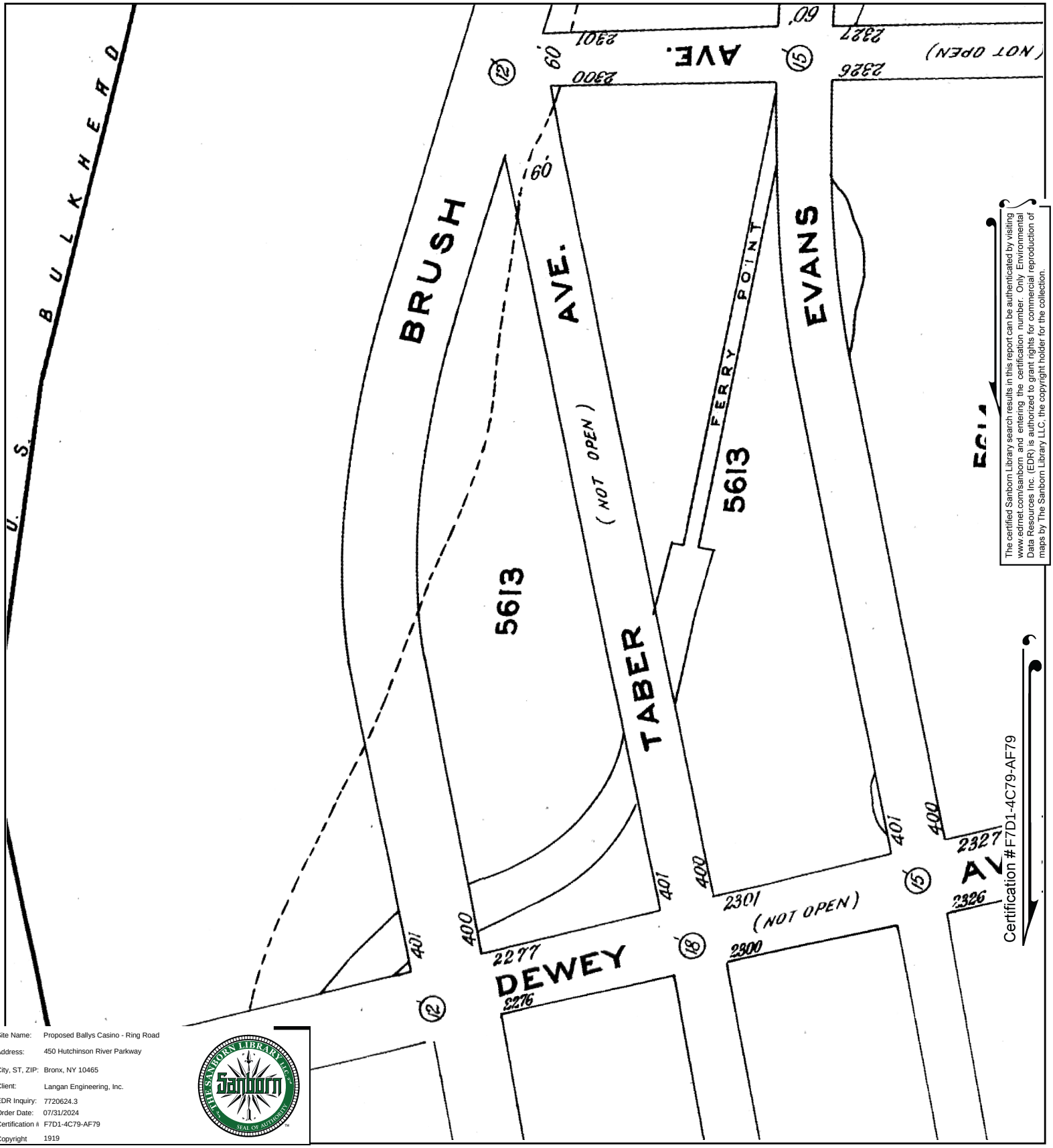


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Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1919 |

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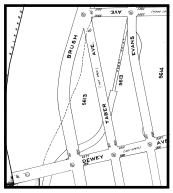

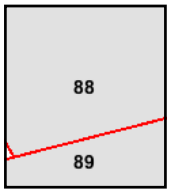


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Volume 17, Sheet 88

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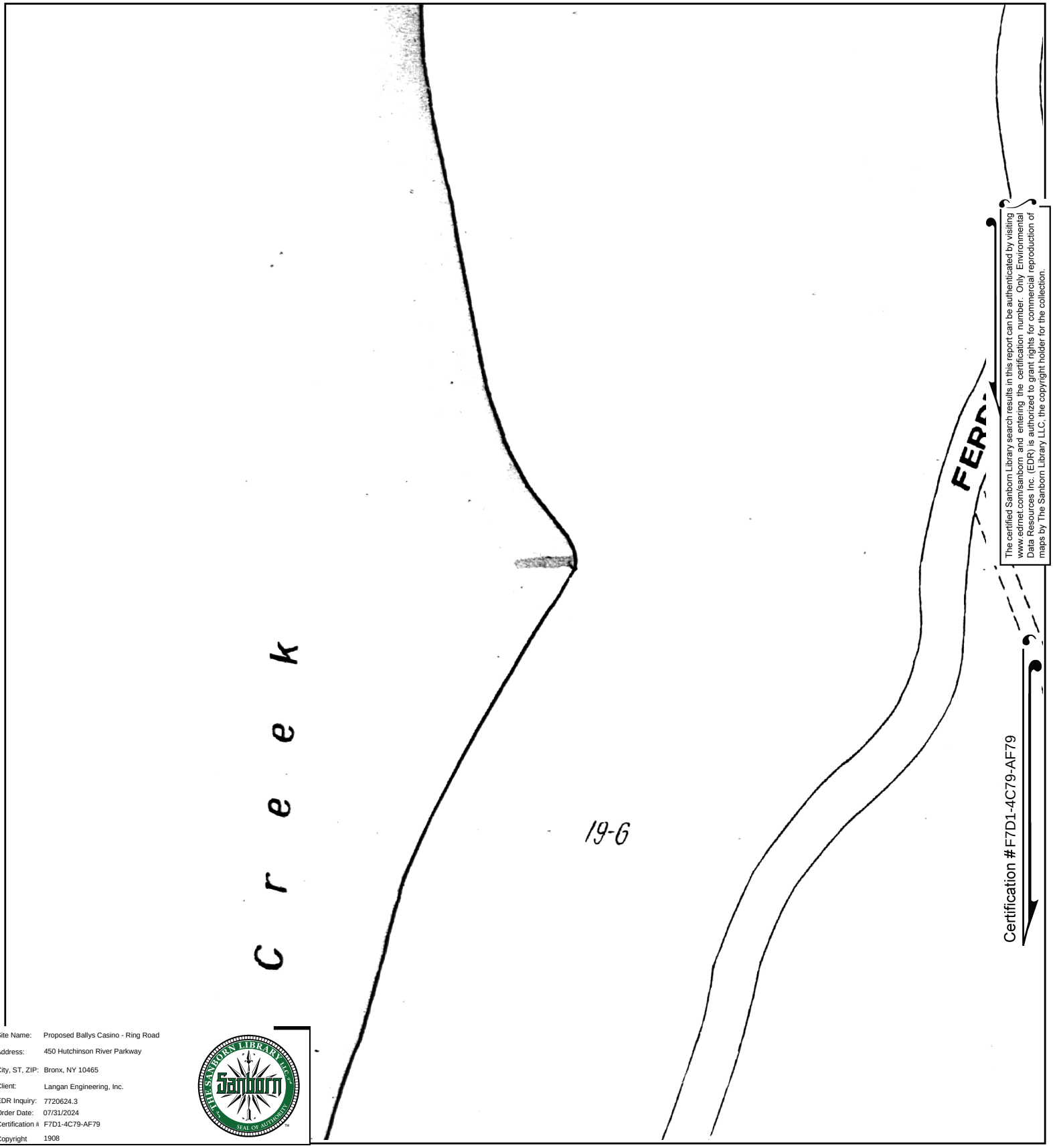


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Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1908

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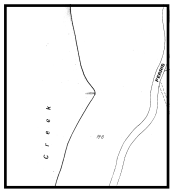

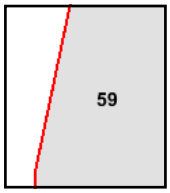


Volume A, Sheet 59

0 Feet 150 300 600

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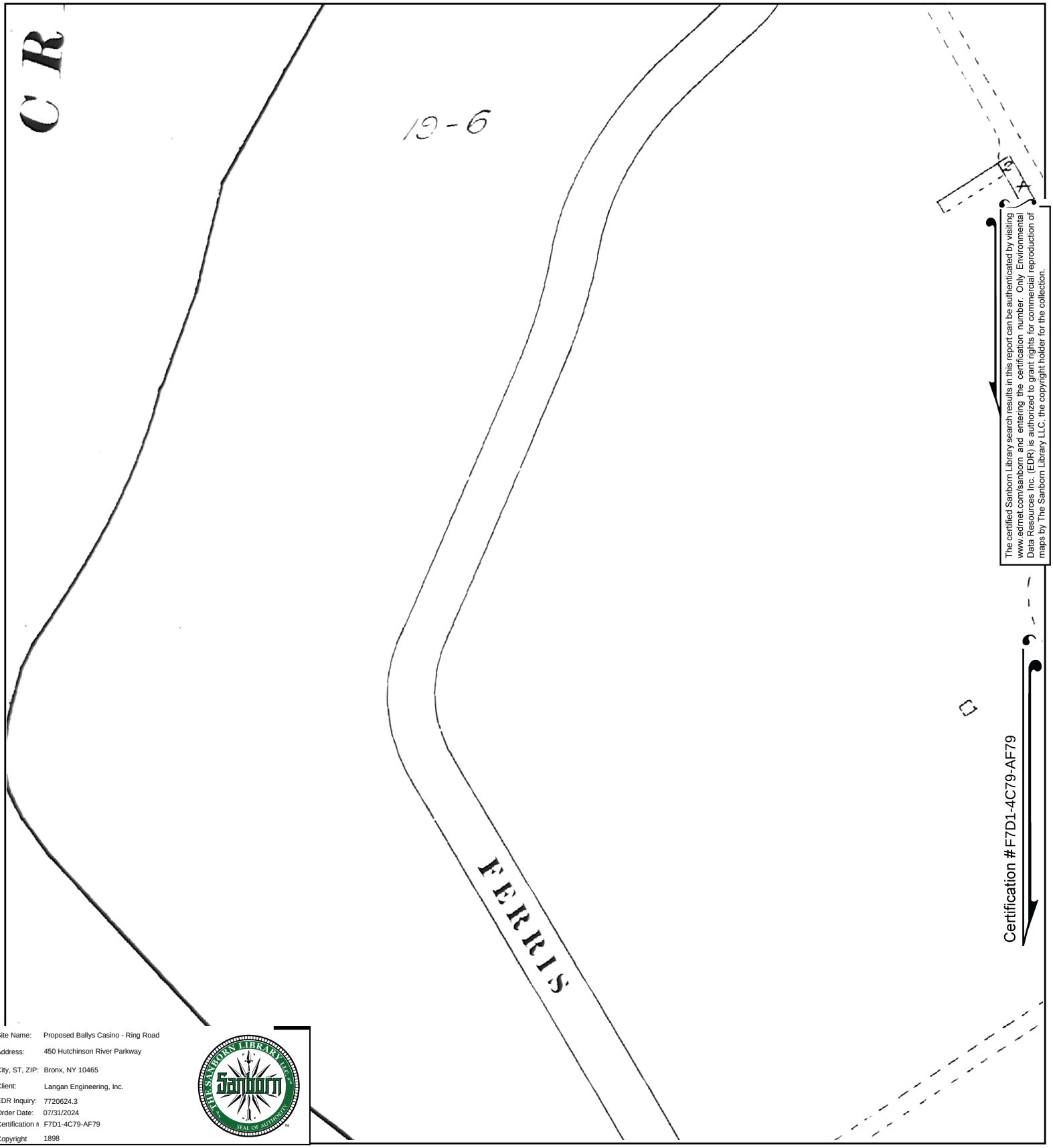


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Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1898 |

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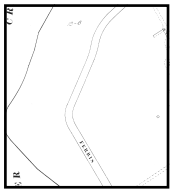
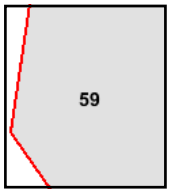
Outlined areas indicate map sheets within the collection.






Volume A, Sheet 59

0 Feet 150 300 600

N

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.3

July 31, 2024

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

07/31/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.3

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Langan Engineering, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

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## *Certified Sanborn Results:*

**Certification #** F7D1-4C79-AF79

**PO #** 170773001

**Project** Prpsd Bally s Casino - Ring Rd

**Maps Provided:**

| | | | |
|---|---|---|---|
| 2007 | 1996 | 1981 | 1898 |
| 2006 | 1995 | 1978 | |
| 2005 | 1993 | 1977 | |
| 2004 | 1992 | 1967 | |
| 2003 | 1991 | 1950 | |
| 2002 | 1988 | 1930 | |
| 2001 | 1986 | 1919 | |
| 1998 | 1983 | 1908 | |

Sanborn® Library search results

Certification #: F7D1-4C79-AF79

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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## *Sanborn Sheet Key*

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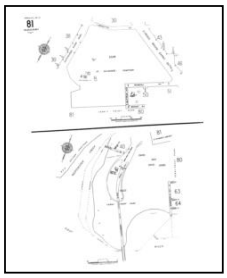
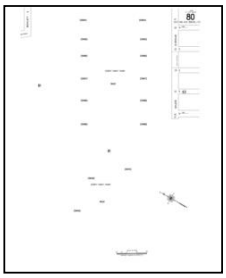
### 2007 Source Sheets

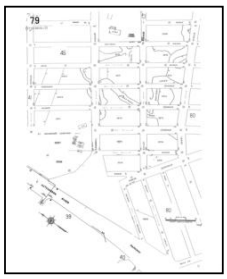


Volume 21, Sheet 81
2007

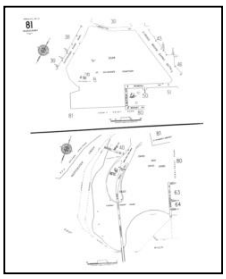


Volume 21, Sheet 80
2007

### 2006 Source Sheets



Volume 21, Sheet 79
2006



Volume 21, Sheet 81
2006

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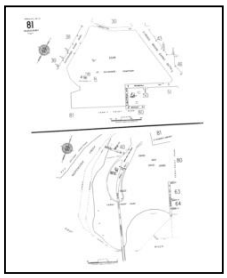
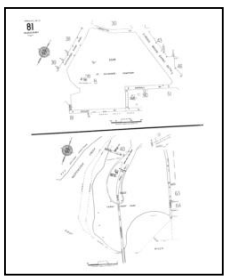


Volume 21, Sheet 81
2005

### 2004 Source Sheets



Volume 21, Sheet 81
2004

## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

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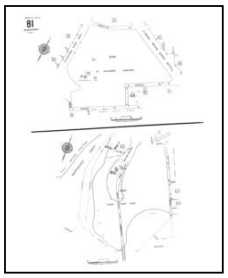
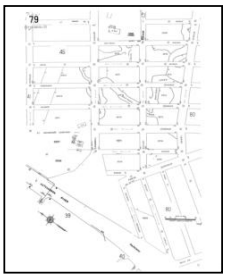
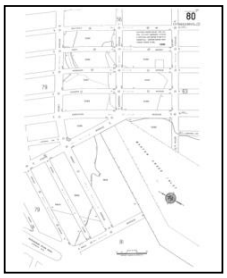


Volume 21, Sheet 81
2003

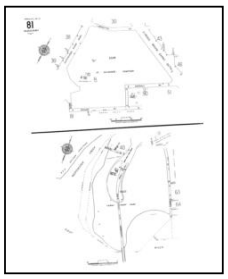


Volume 21, Sheet 79
2003



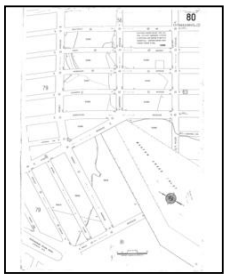
Volume 21, Sheet 80
2003

### 2002 Source Sheets

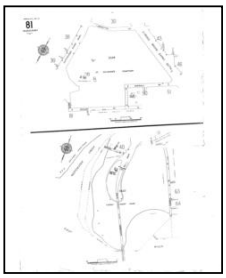


Volume 21, Sheet 81
2002

### 2001 Source Sheets

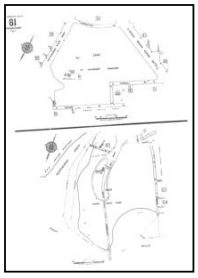


Volume 21, Sheet 80
2001



Volume 21, Sheet 81
2001

### 1998 Source Sheets



Volume 21, Sheet 81
1998

## *Sanborn Sheet Key*

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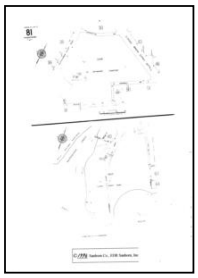
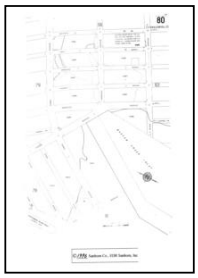


Volume 21, Sheet 81
1996

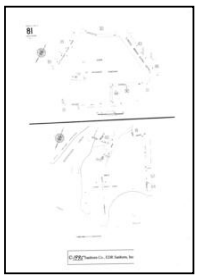


Volume 21, Sheet 80
1996



Volume 21, Sheet 79
1996

### 1995 Source Sheets

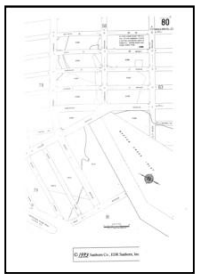


Volume 21, Sheet 81
1995

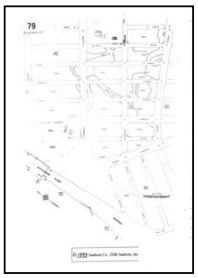
### 1993 Source Sheets



Volume 21, Sheet 81
1993



Volume 21, Sheet 80
1993



Volume 21, Sheet 79
1993

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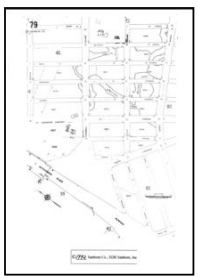
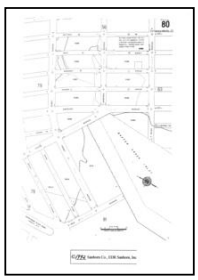
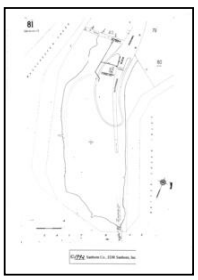


Volume 21, Sheet 79
1992



Volume 21, Sheet 80
1992



Volume 21, Sheet 81
1992

## *Sanborn Sheet Key*

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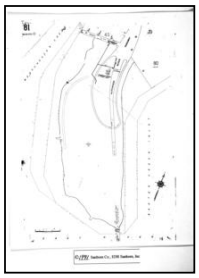

Volume 21, Sheet 81
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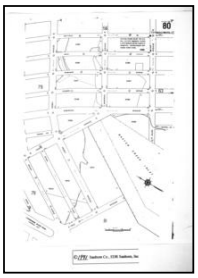


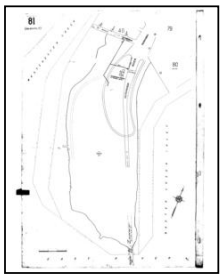
Volume 21, Sheet 80
1991

### 1988 Source Sheets



Volume 21, Sheet 81
1988

### 1986 Source Sheets



Volume 21, Sheet 81
1986

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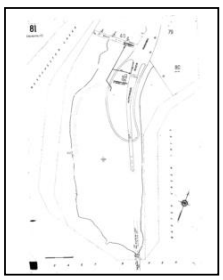
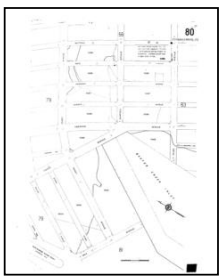
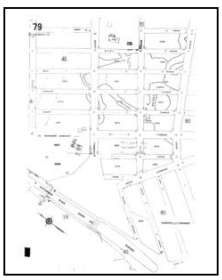


Volume 21, Sheet 81
1983



Volume 21, Sheet 80
1983

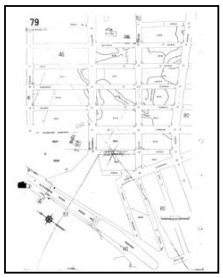


Volume 21, Sheet 79
1983

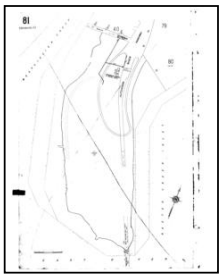
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1981 Source Sheets

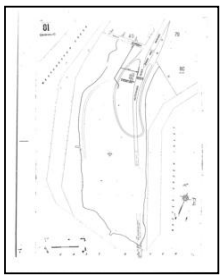


Volume 21, Sheet 79
1981



Volume 21, Sheet 81
1981

### 1978 Source Sheets



Volume 21, Sheet 81
1978

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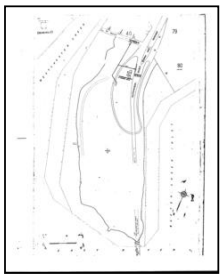
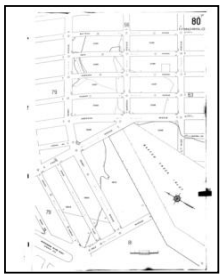


Volume 21, Sheet 81
1977

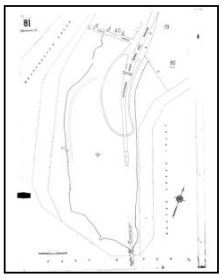


Volume 21, Sheet 80
1977

### 1967 Source Sheets



Volume 21, Sheet 80
1967



Volume 21, Sheet 81
1967

## *Sanborn Sheet Key*

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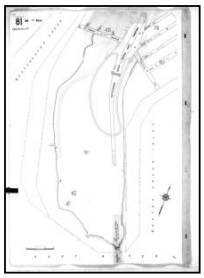
### 1950 Source Sheets

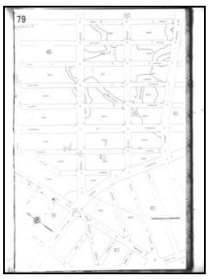


Volume 21, Sheet 81
1950

### 1930 Source Sheets

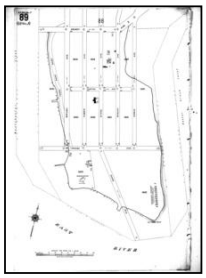


Volume 21, Sheet 81
1930

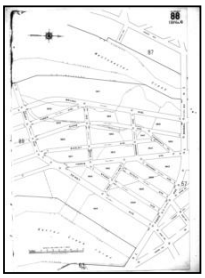


Volume 21, Sheet 79
1930

### 1919 Source Sheets

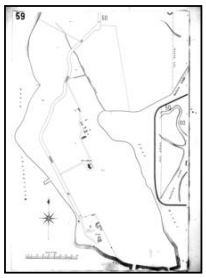


Volume 17, Sheet 89
1919



Volume 17, Sheet 88
1919

### 1908 Source Sheets

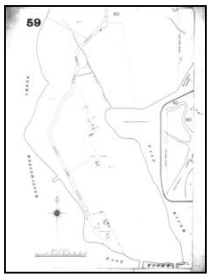


Volume A, Sheet 59
1908

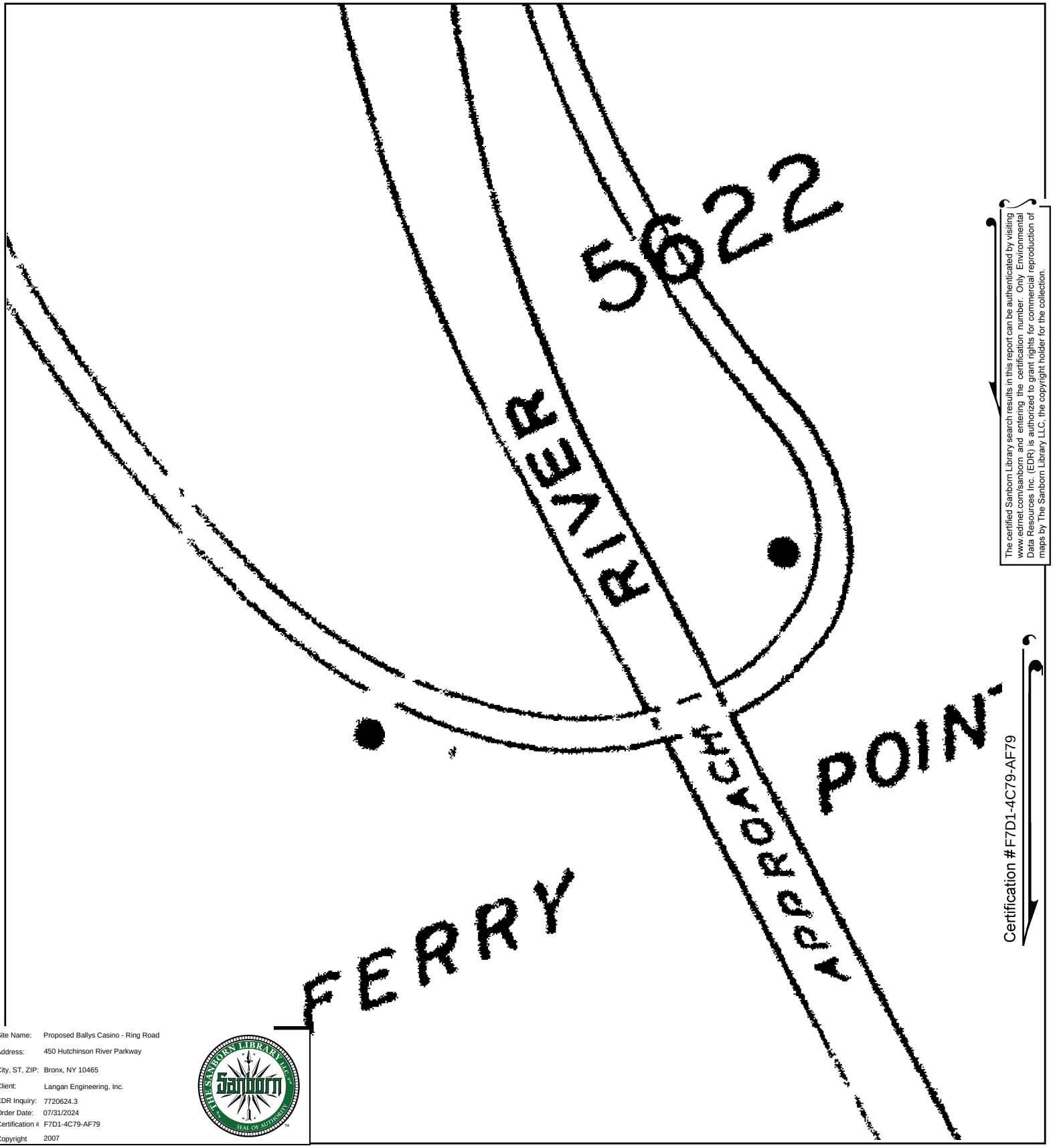
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1898 Source Sheets




Volume A, Sheet 59
1898

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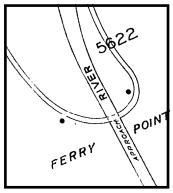
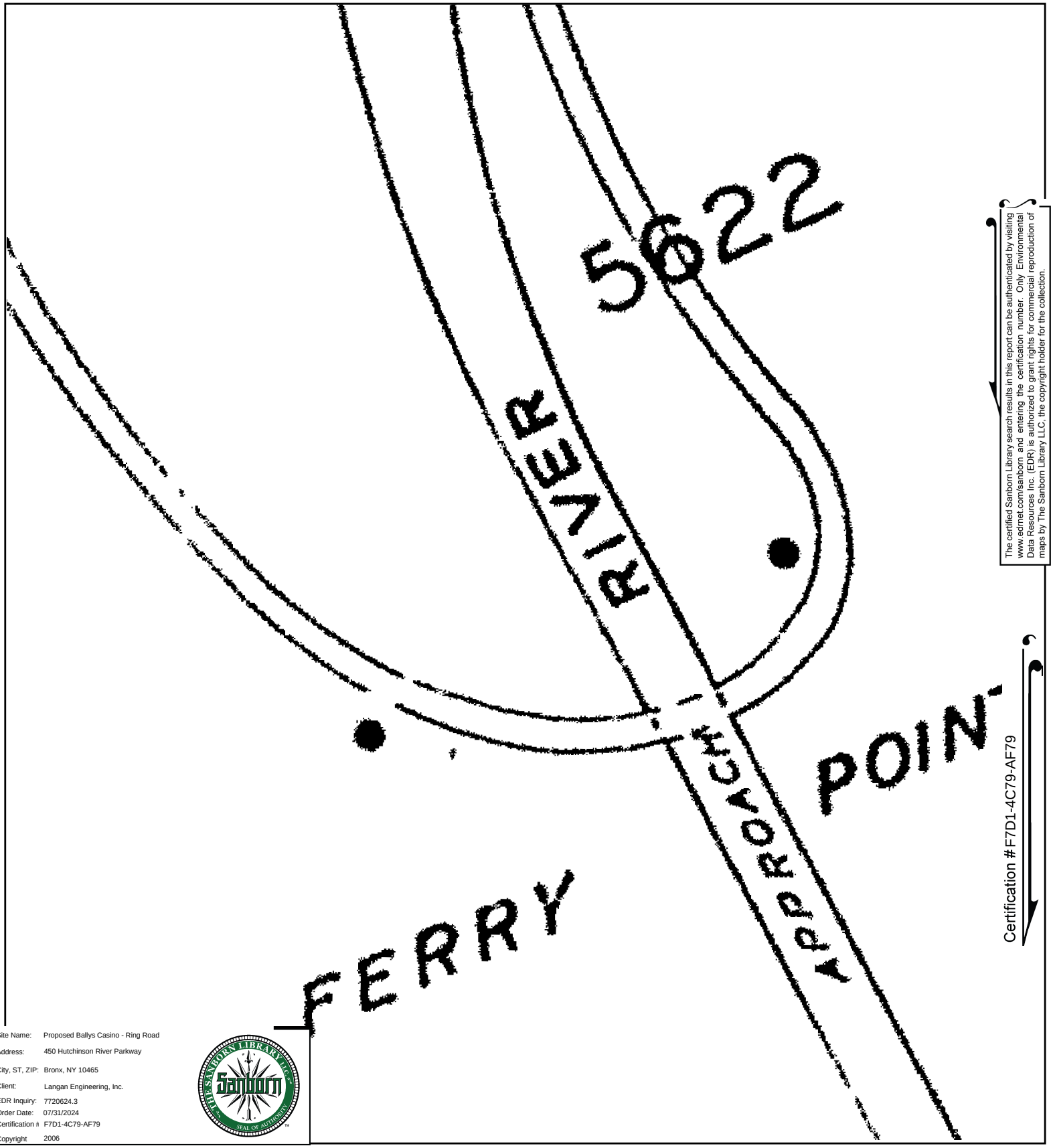



81

Volume 21, Sheet 80
Volume 21, Sheet 81

N

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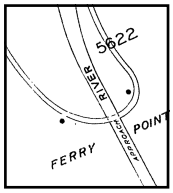
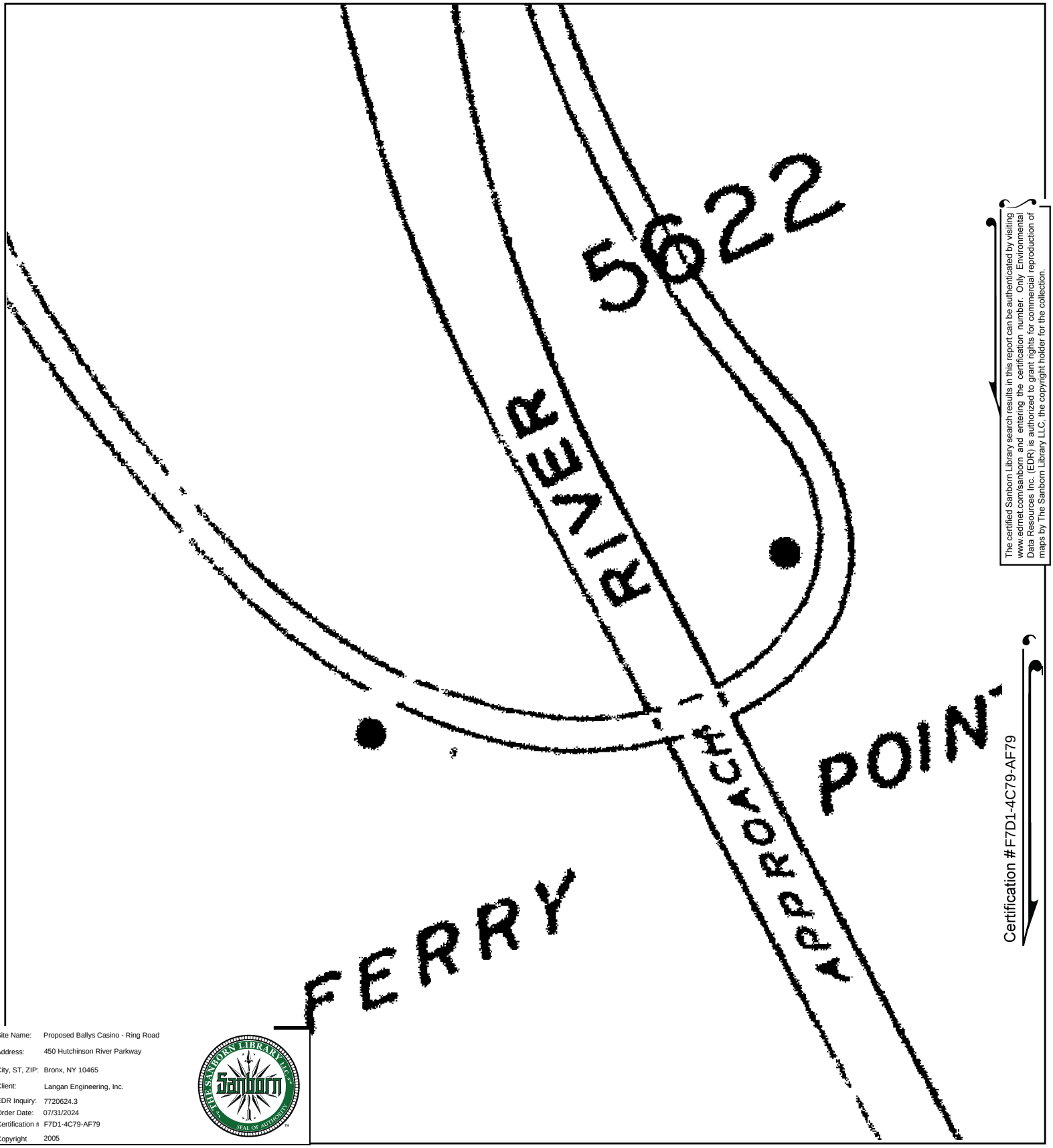



81

Volume 21, Sheet 81
Volume 21, Sheet 79

N

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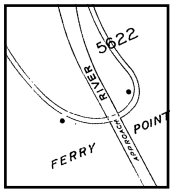


81

Volume 21, Sheet 81

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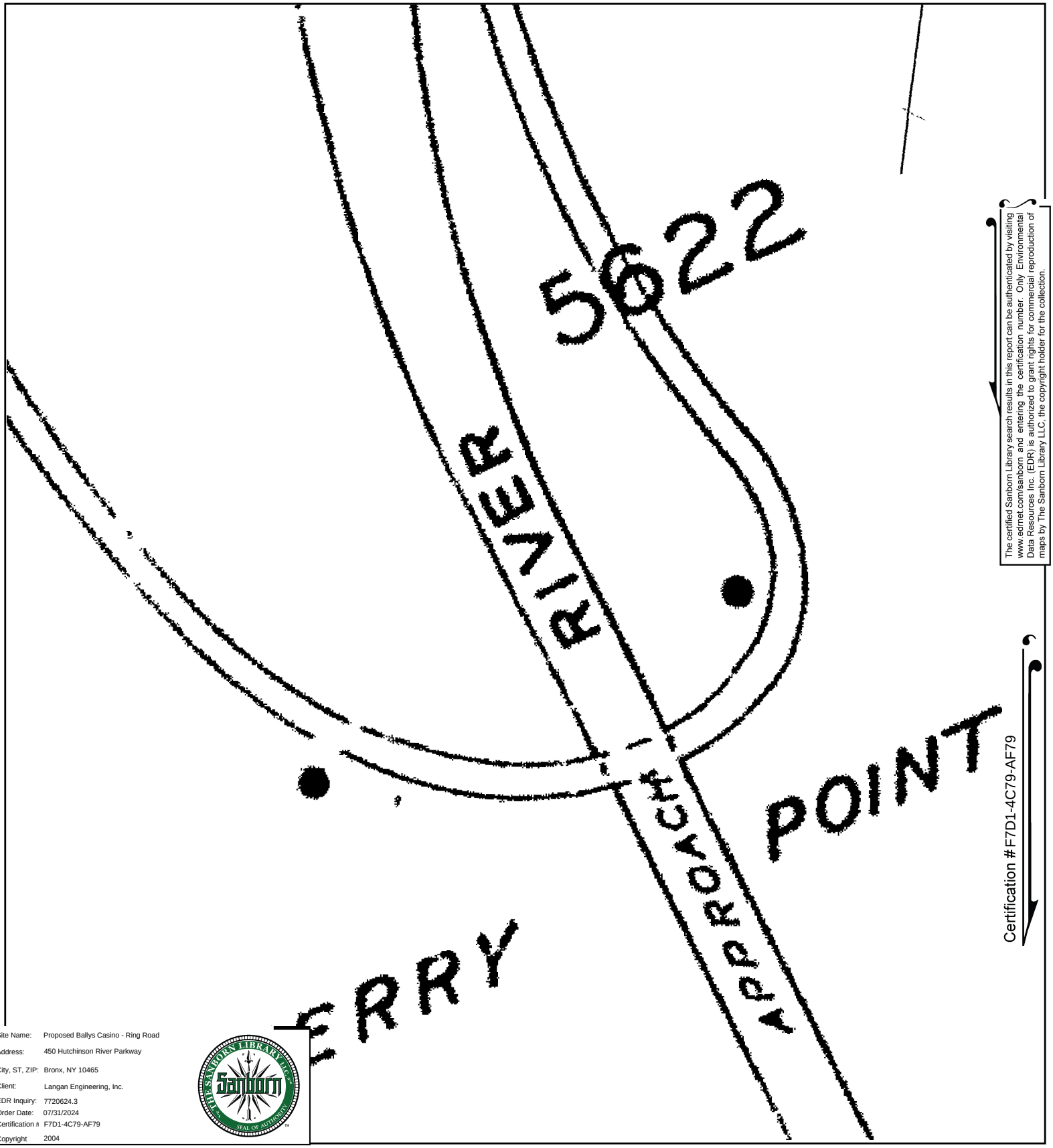


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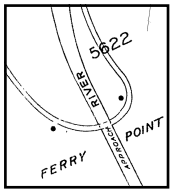


81

Volume 21, Sheet 81

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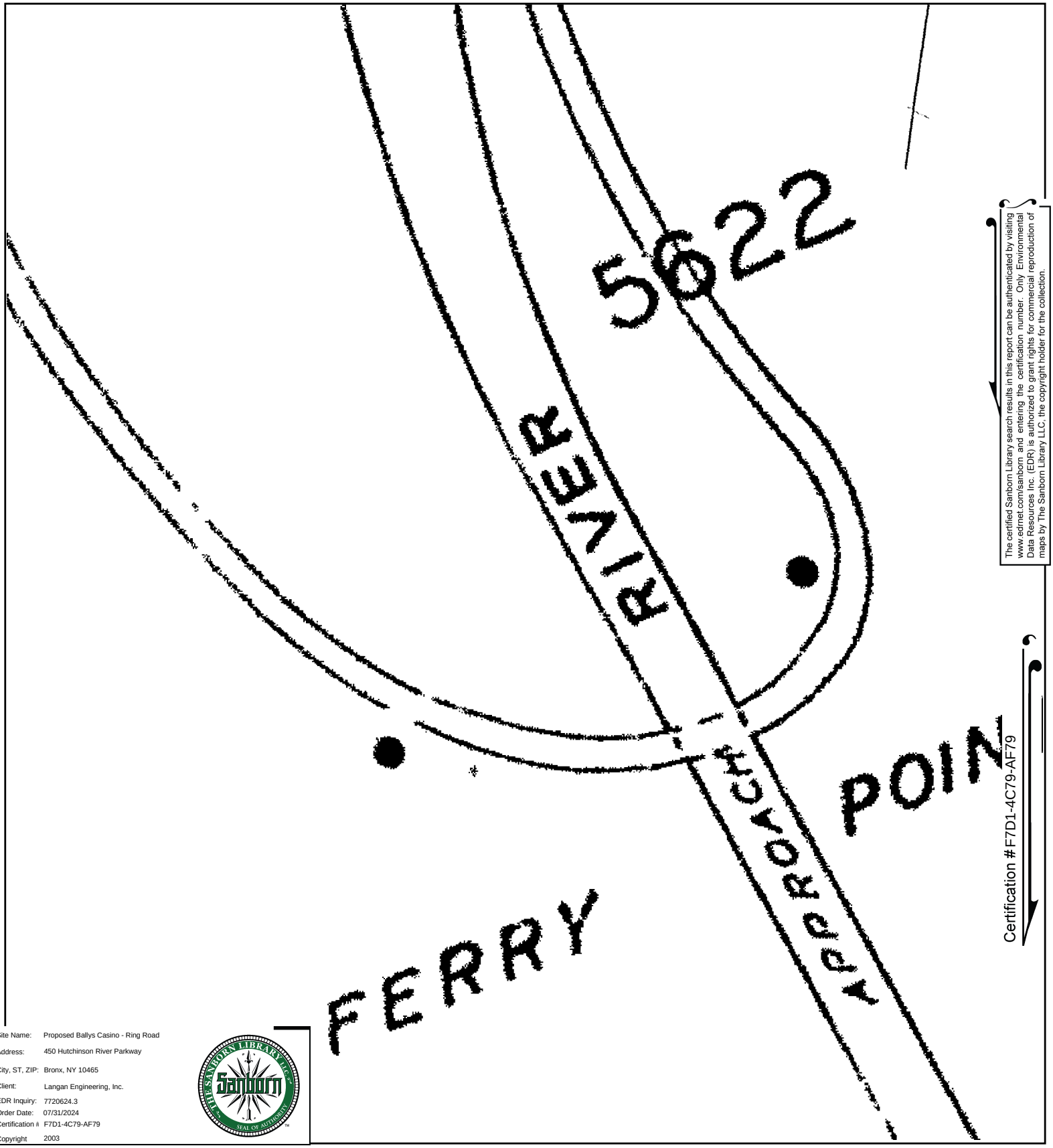


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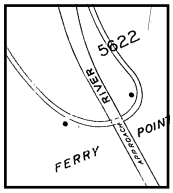


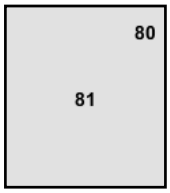


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Volume 21, Sheet 79
Volume 21, Sheet 81

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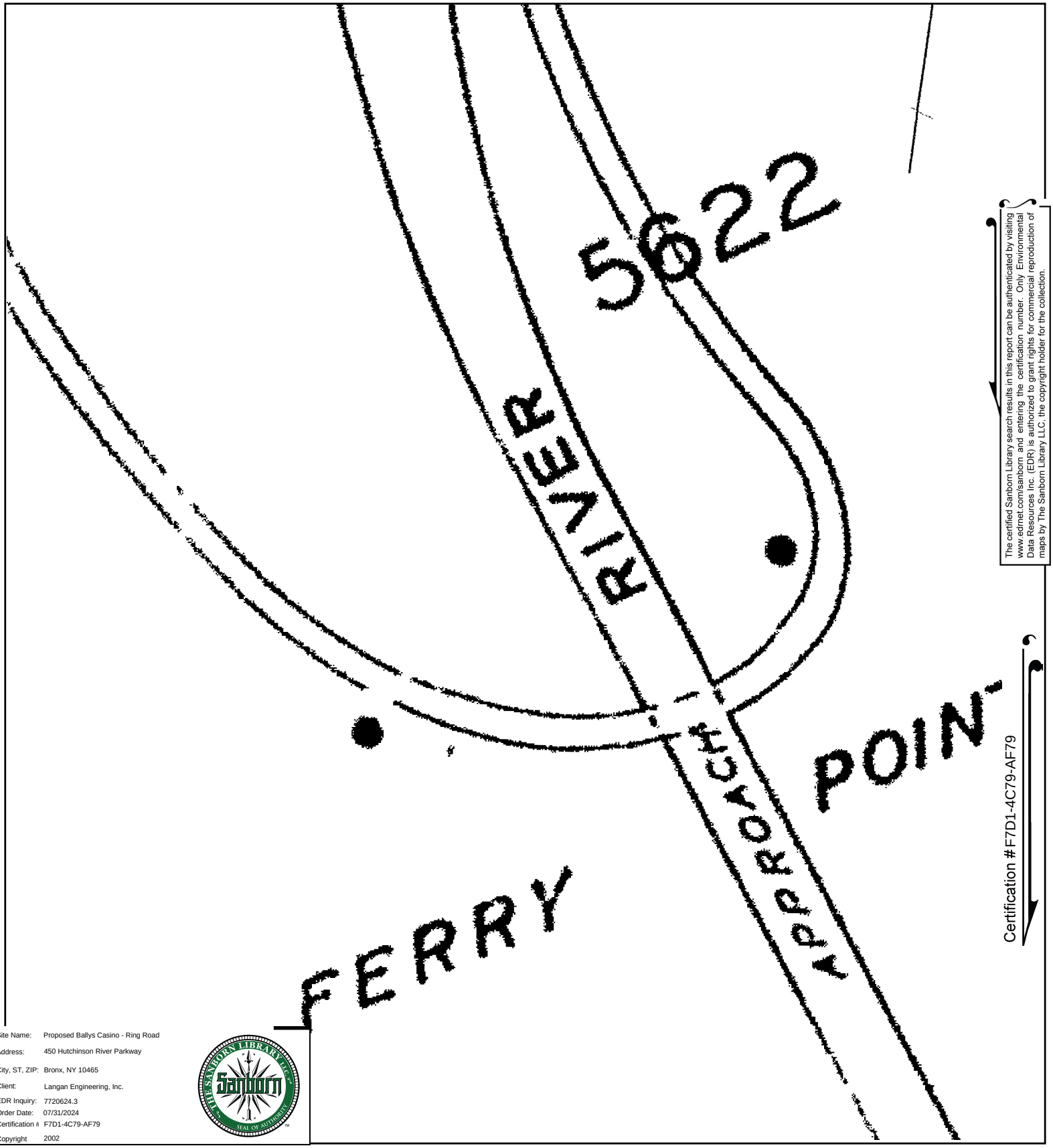


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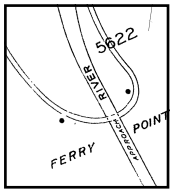


81

Volume 21, Sheet 81

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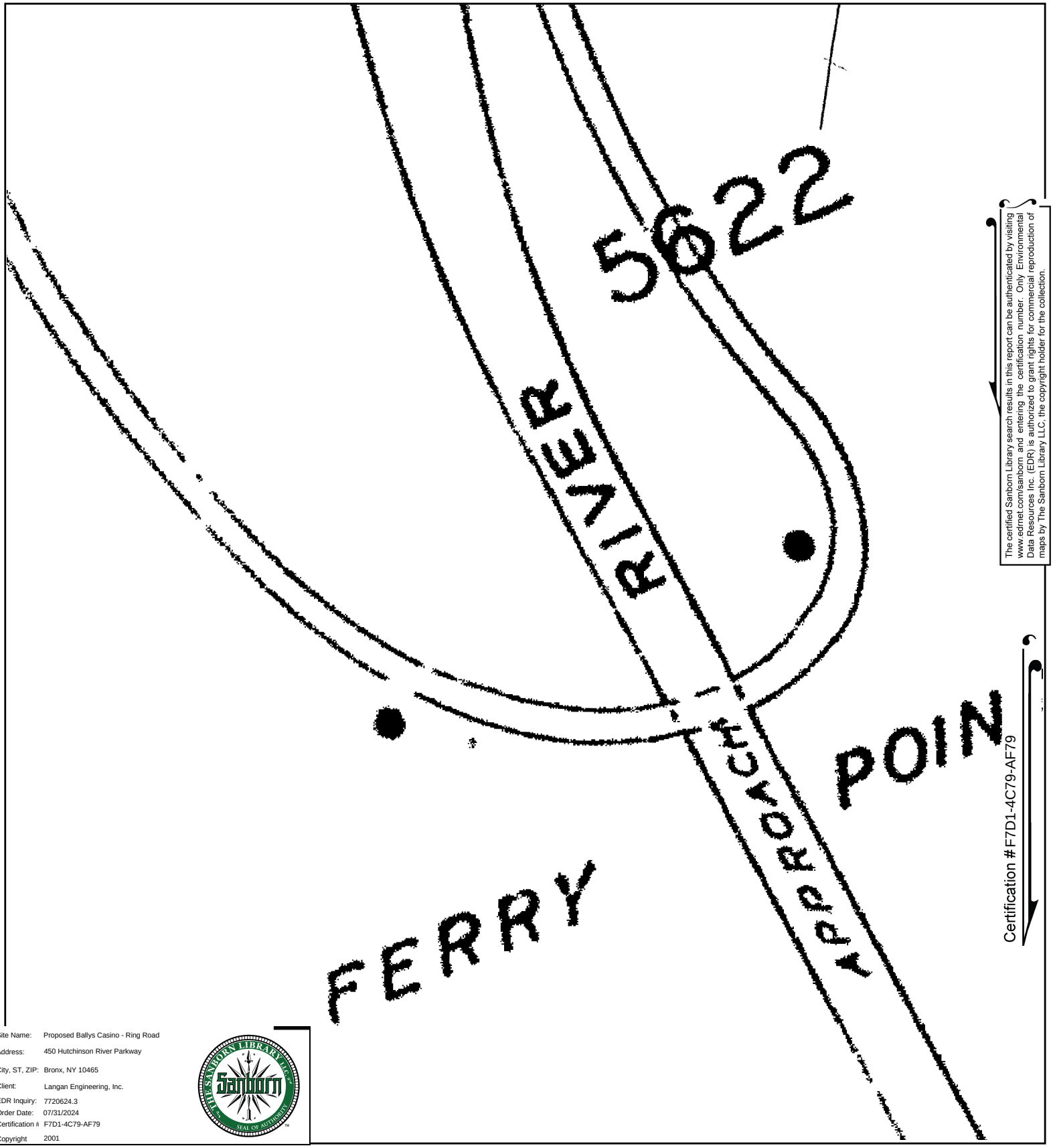


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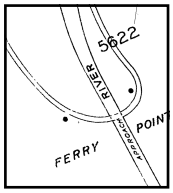


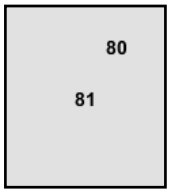


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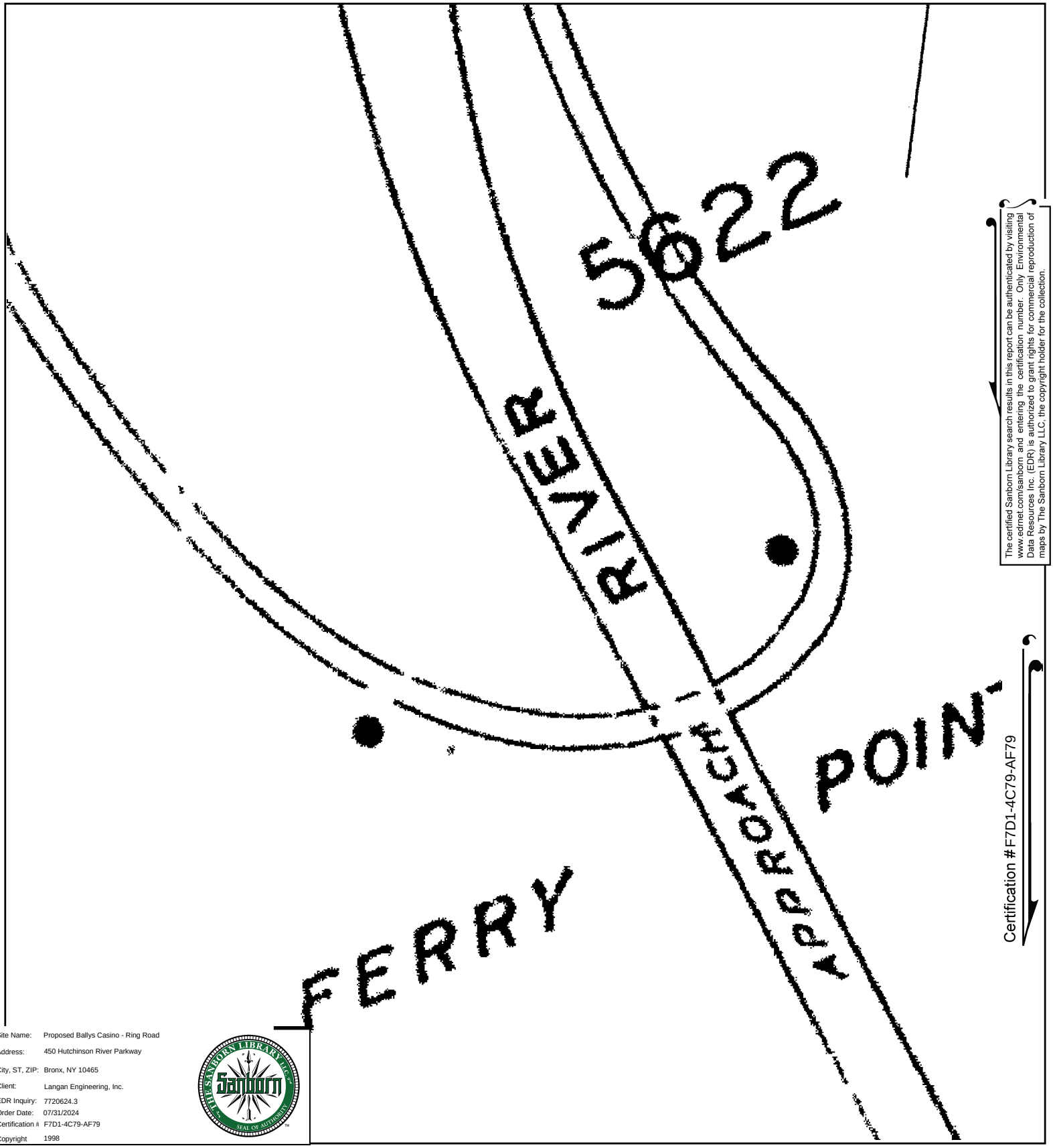
Volume 21, Sheet 80

N

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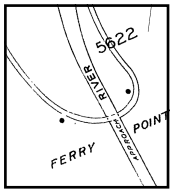
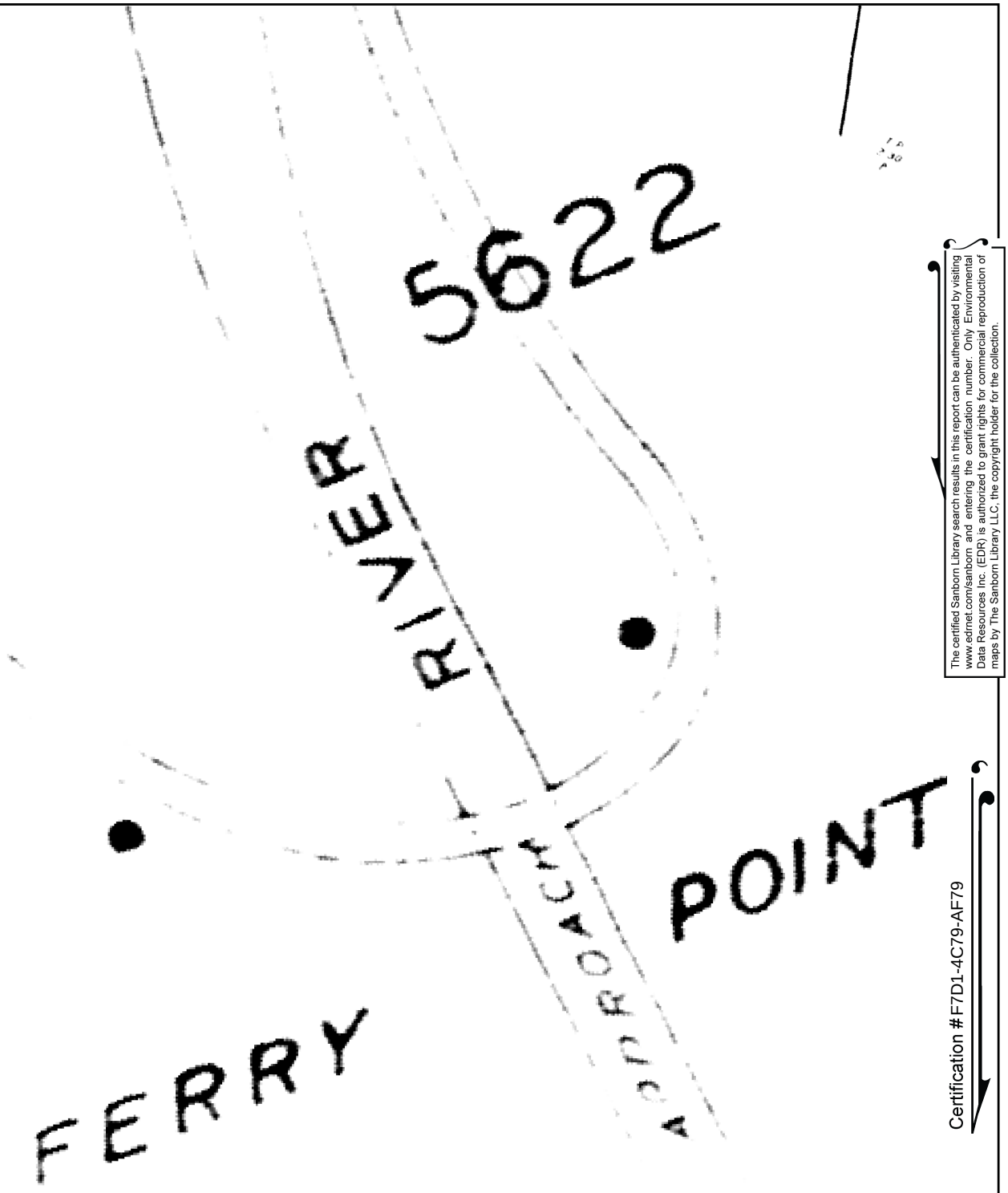



81

Volume 21, Sheet 81

N

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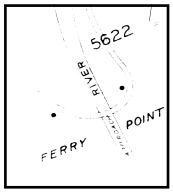


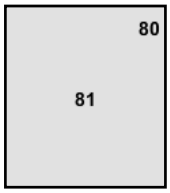


Volume 21, Sheet 79
Volume 21, Sheet 80
Volume 21, Sheet 81

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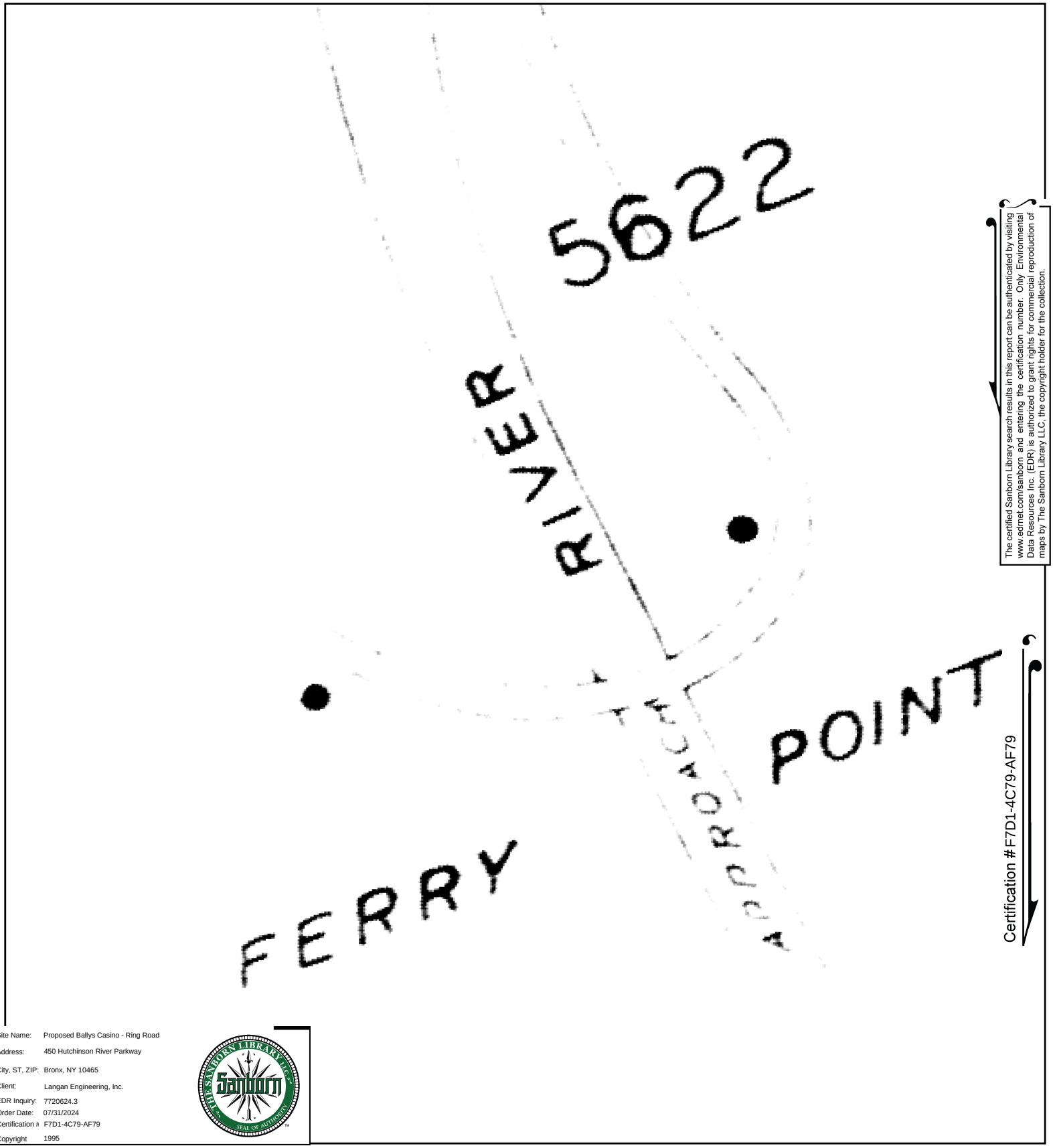


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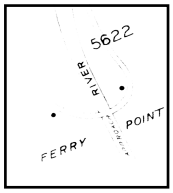


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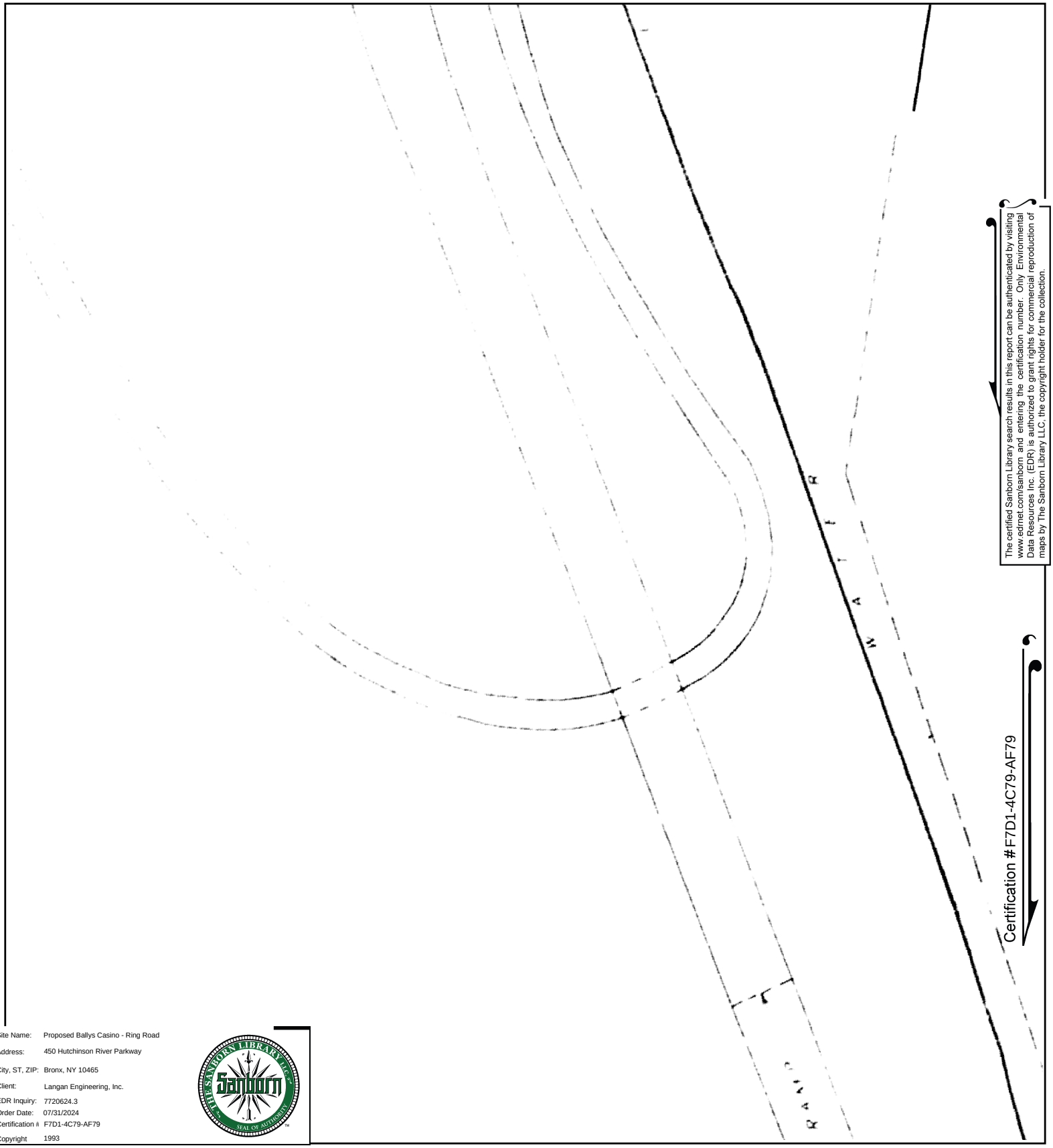

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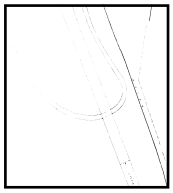

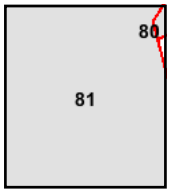


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Volume 21, Sheet 80
Volume 21, Sheet 81

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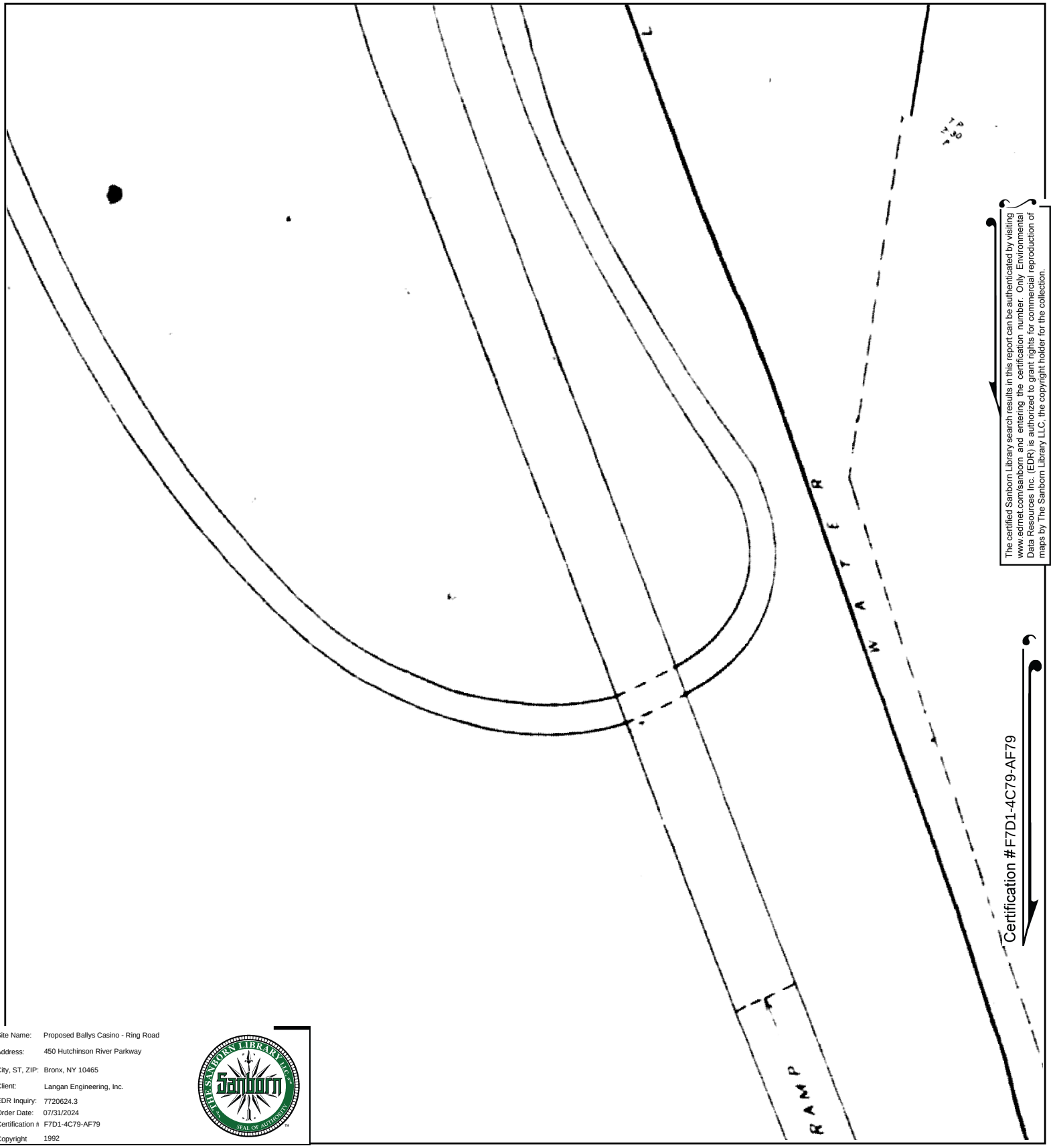


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| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
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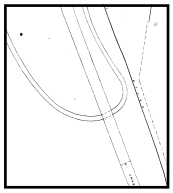

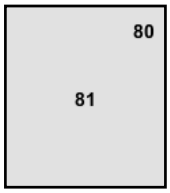


Volume 21, Sheet 81
Volume 21, Sheet 80
Volume 21, Sheet 79

0 Feet 150 300 600

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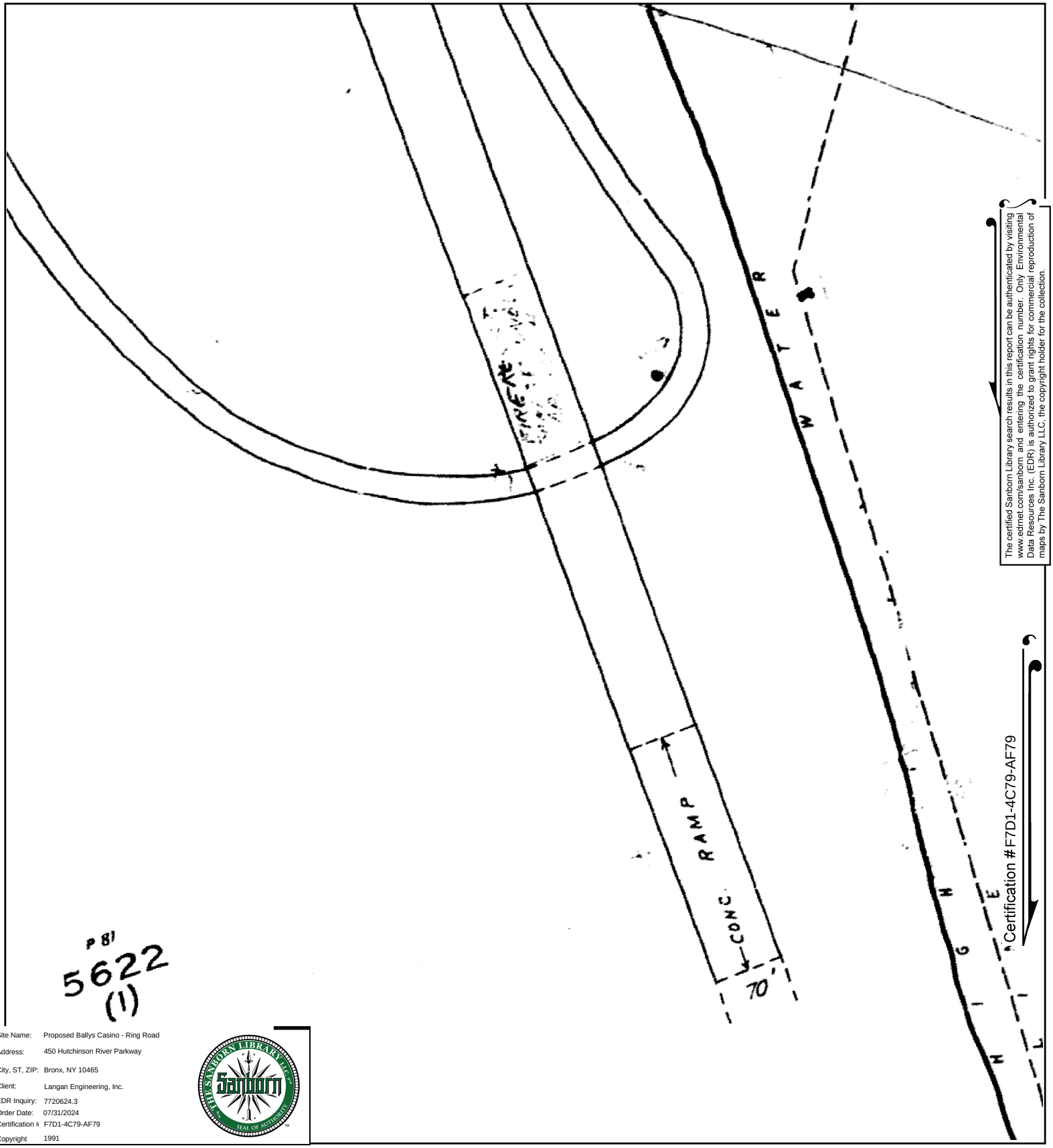


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| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
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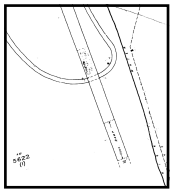

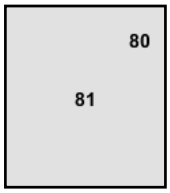


Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

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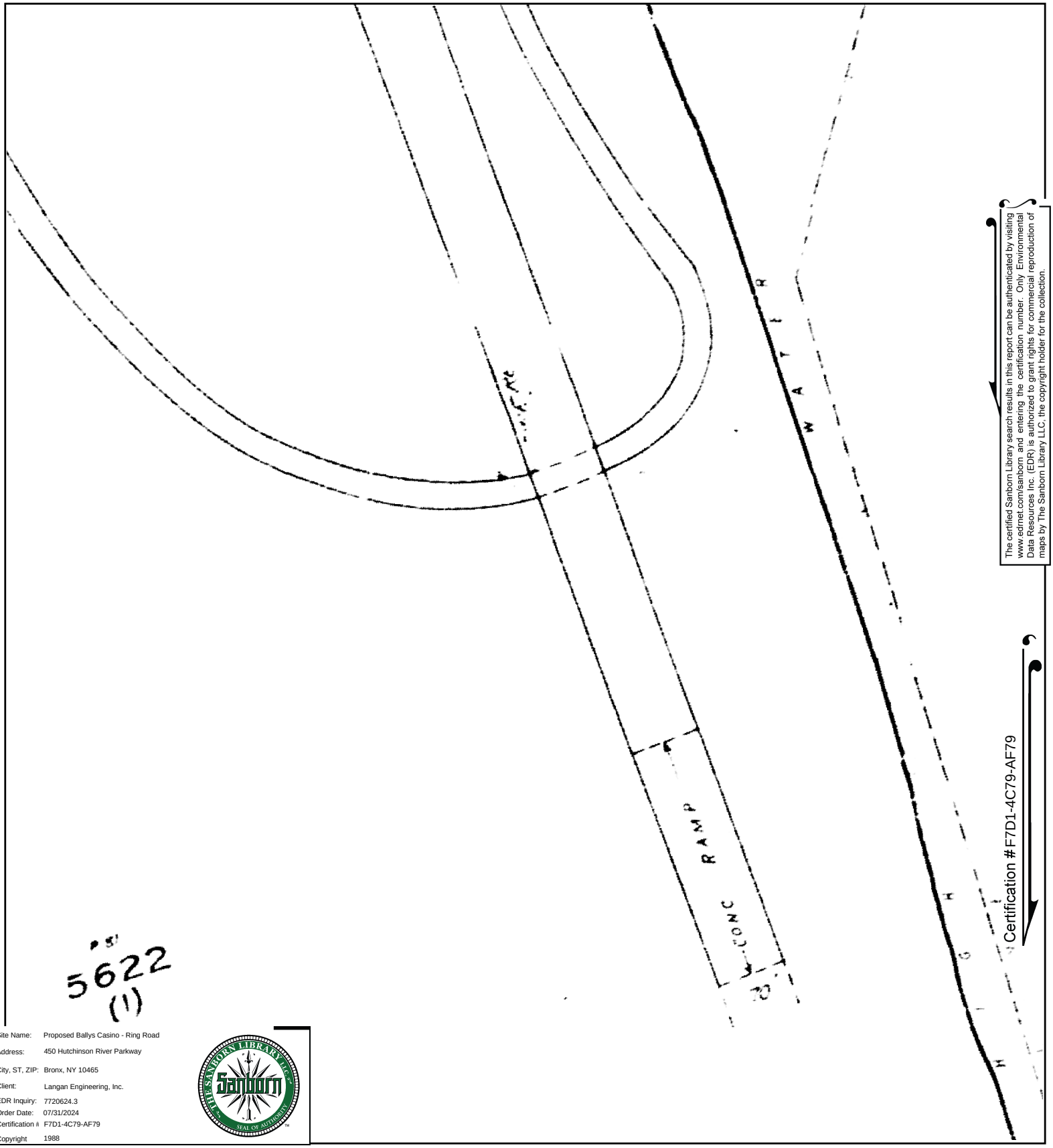


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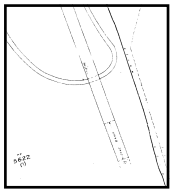

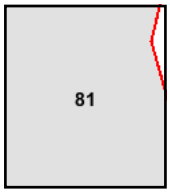


Volume 21, Sheet 81

0 Feet 150 300 600

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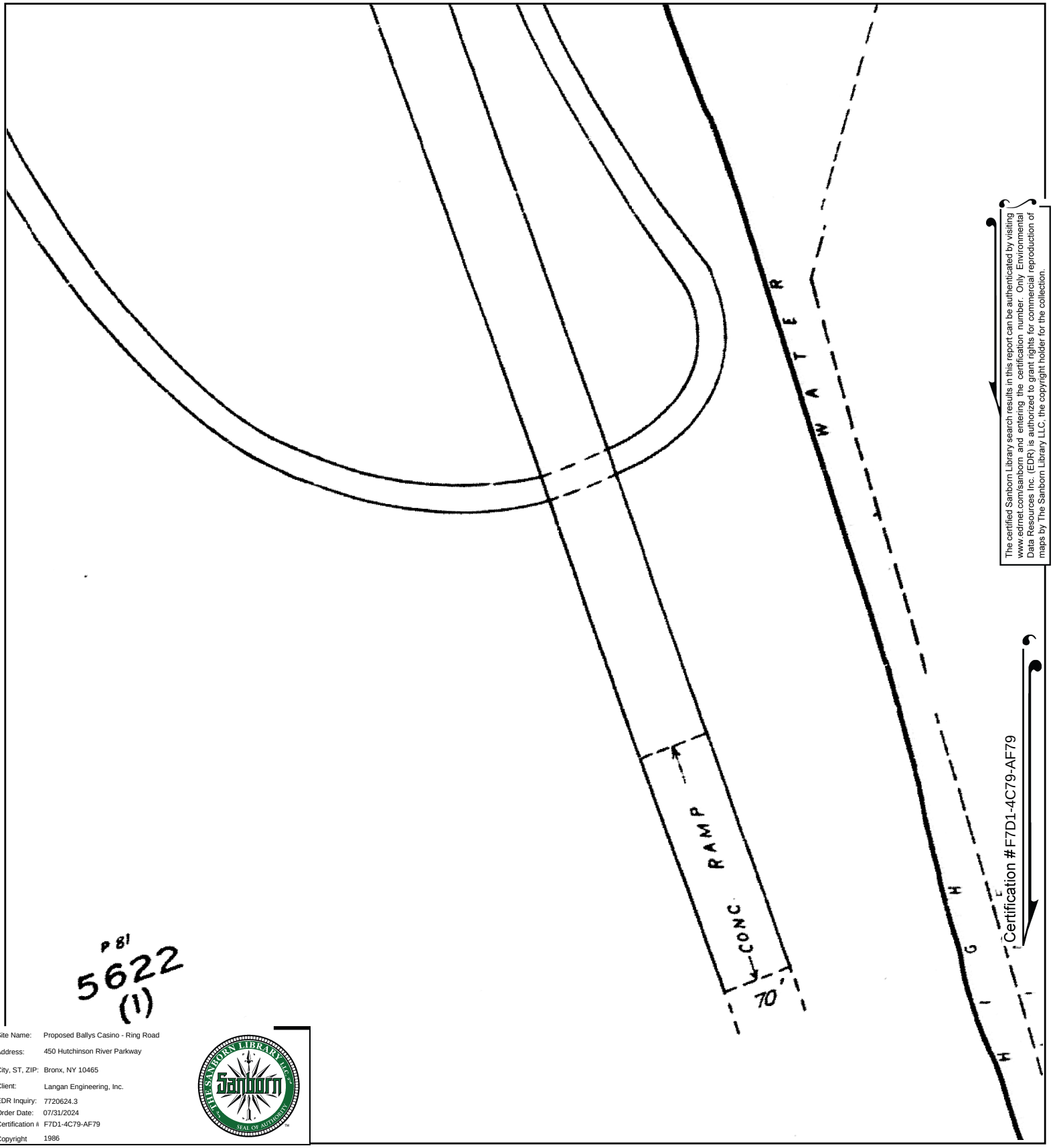


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Copyright: 1986

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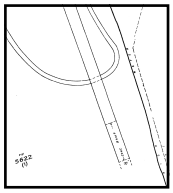

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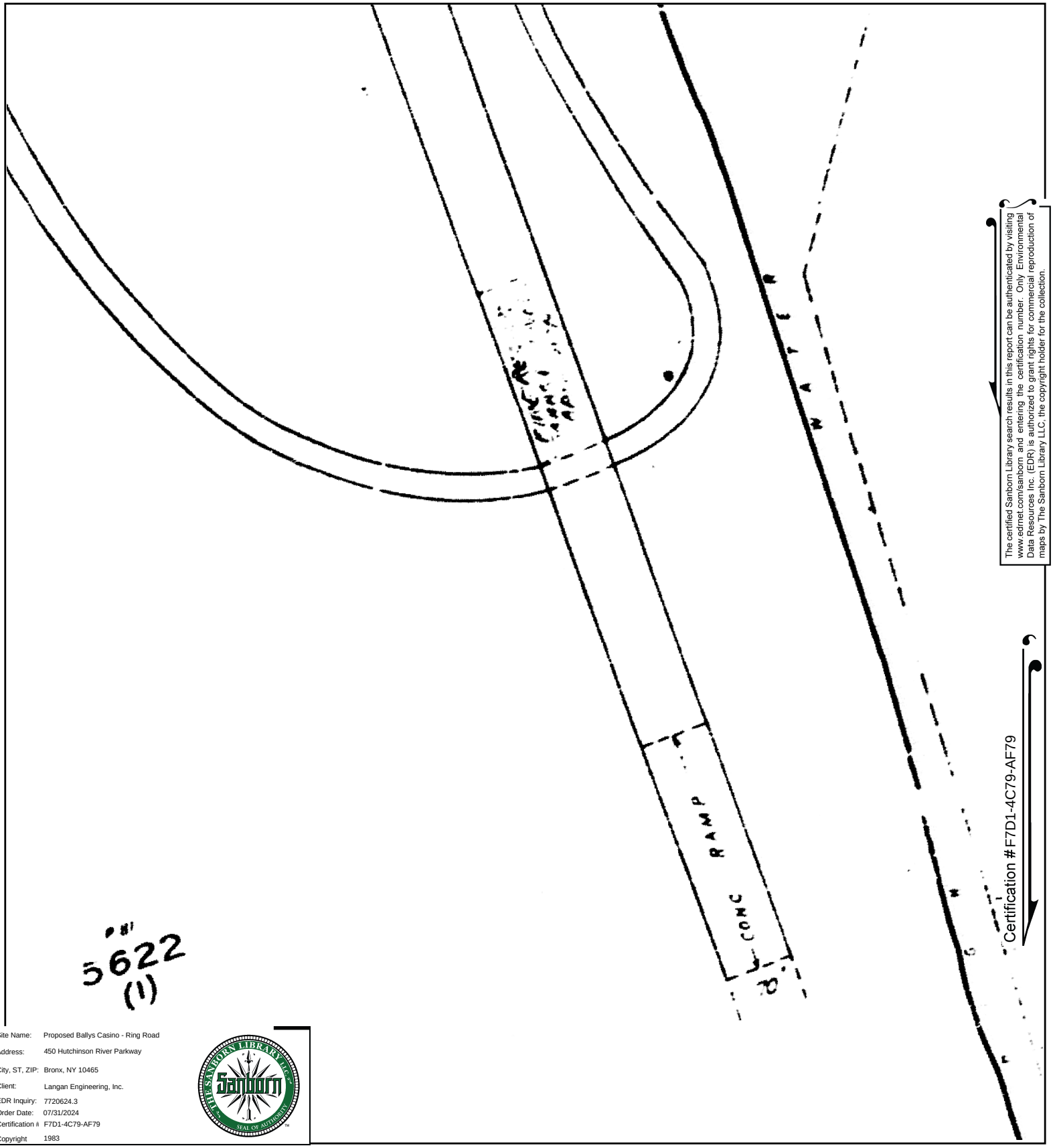


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| Copyright | 1983 |

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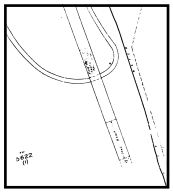

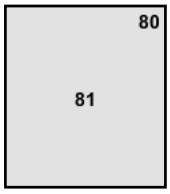


Volume 21, Sheet 79
Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

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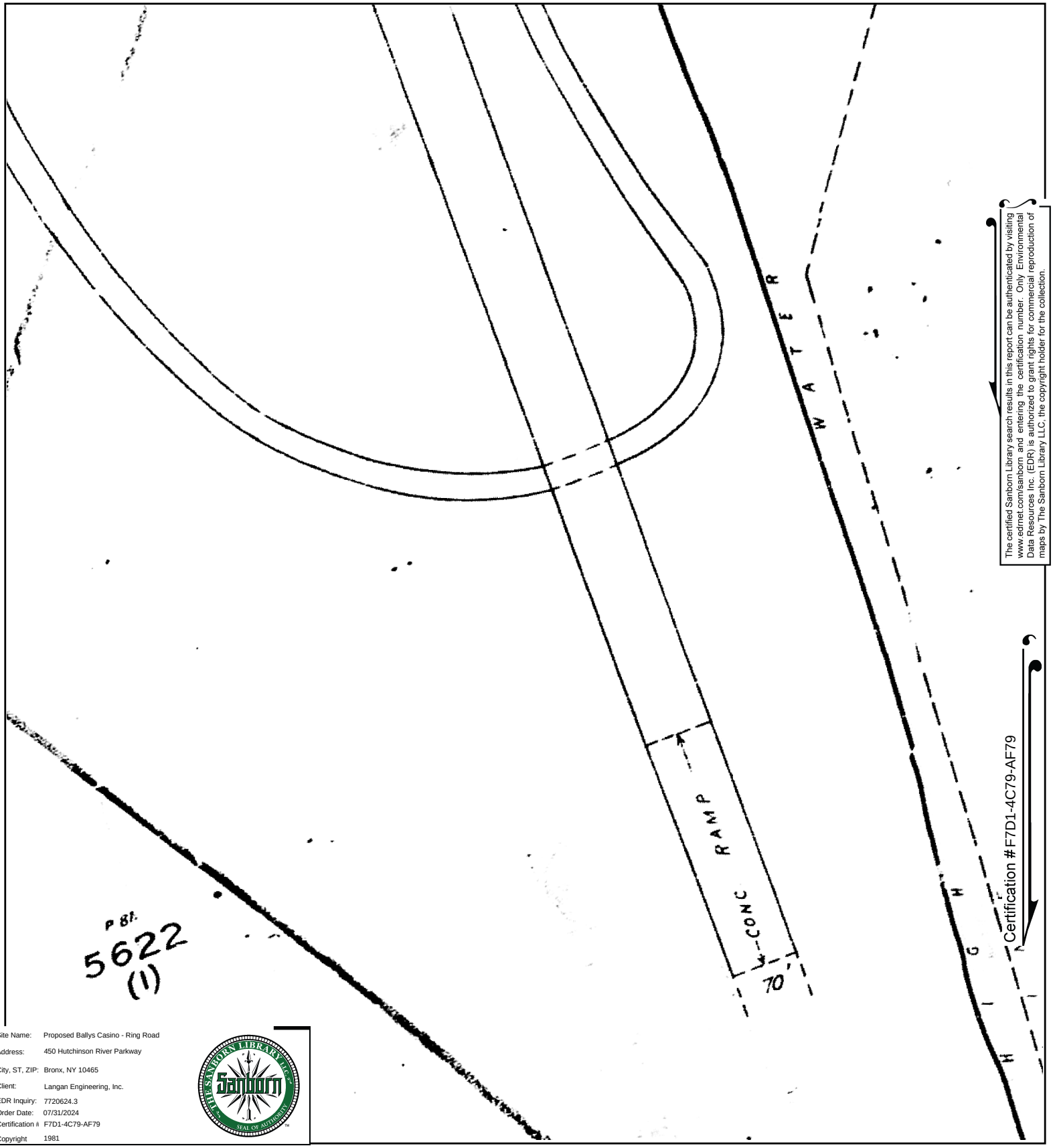


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| Copyright | 1981 |

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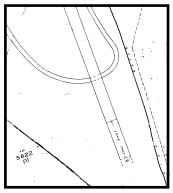

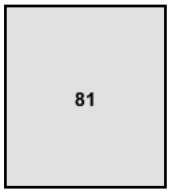


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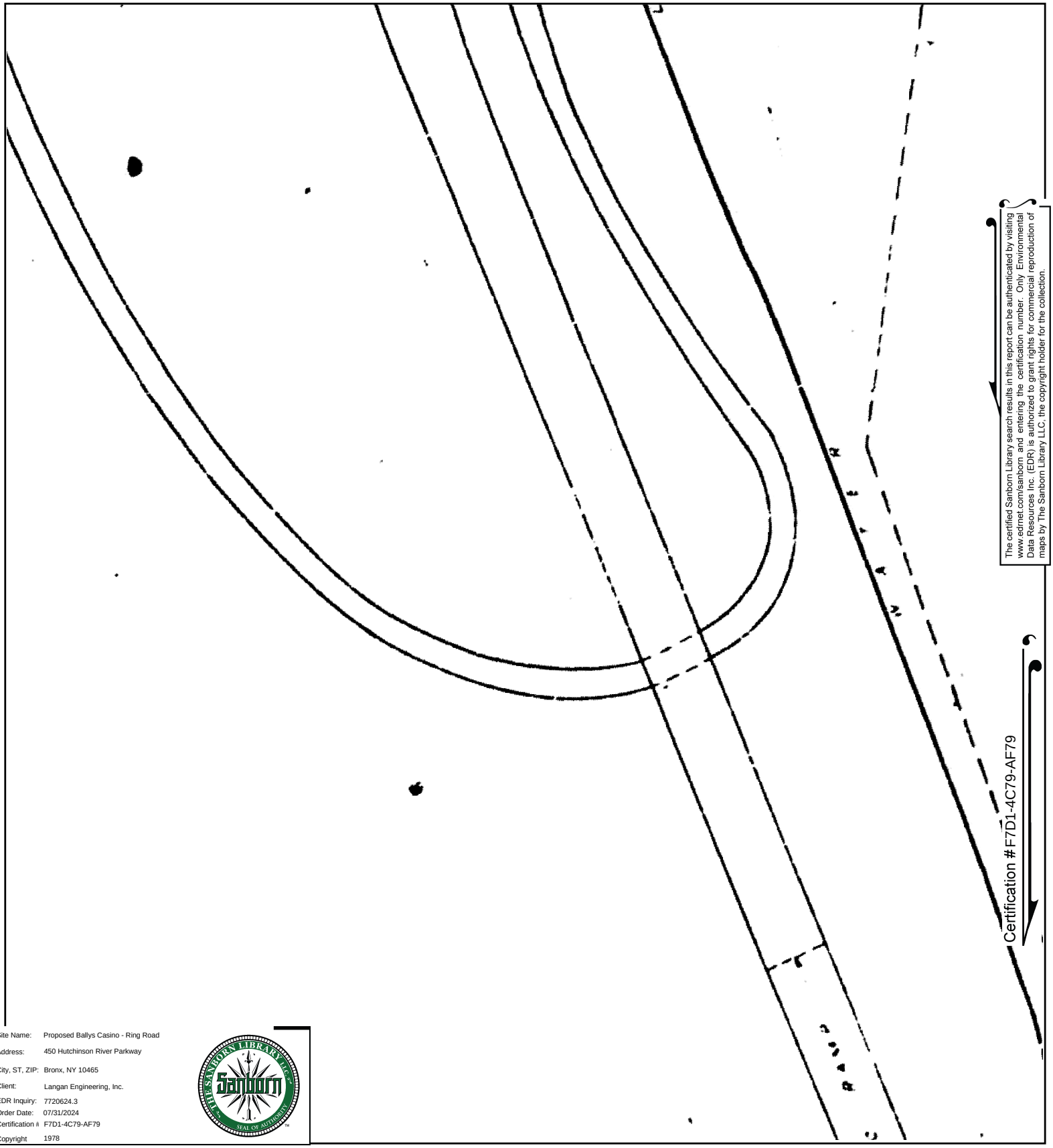

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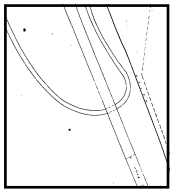

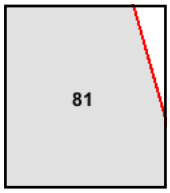


Volume 21, Sheet 81

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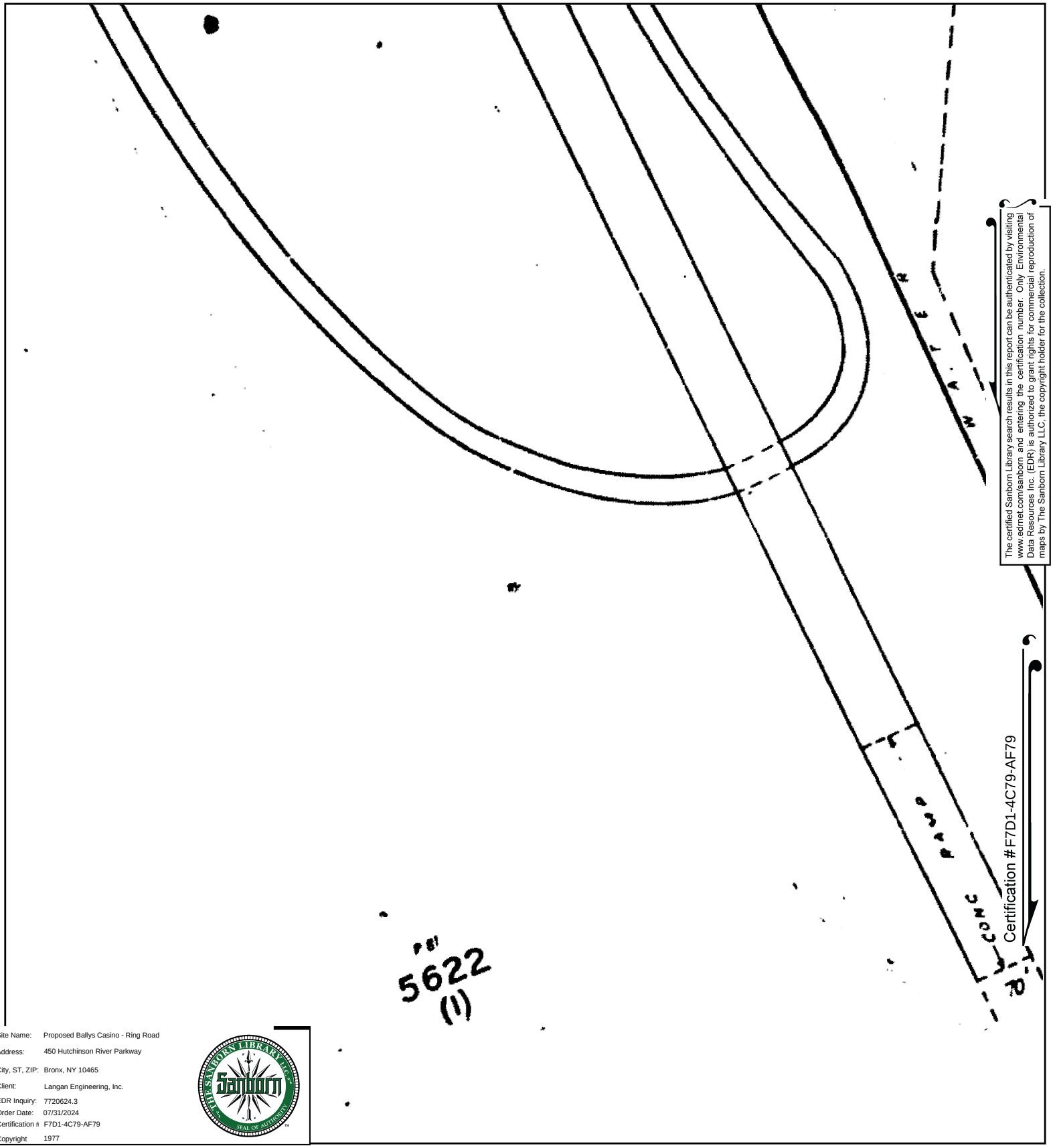


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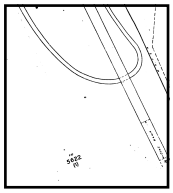

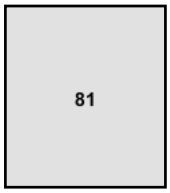


Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

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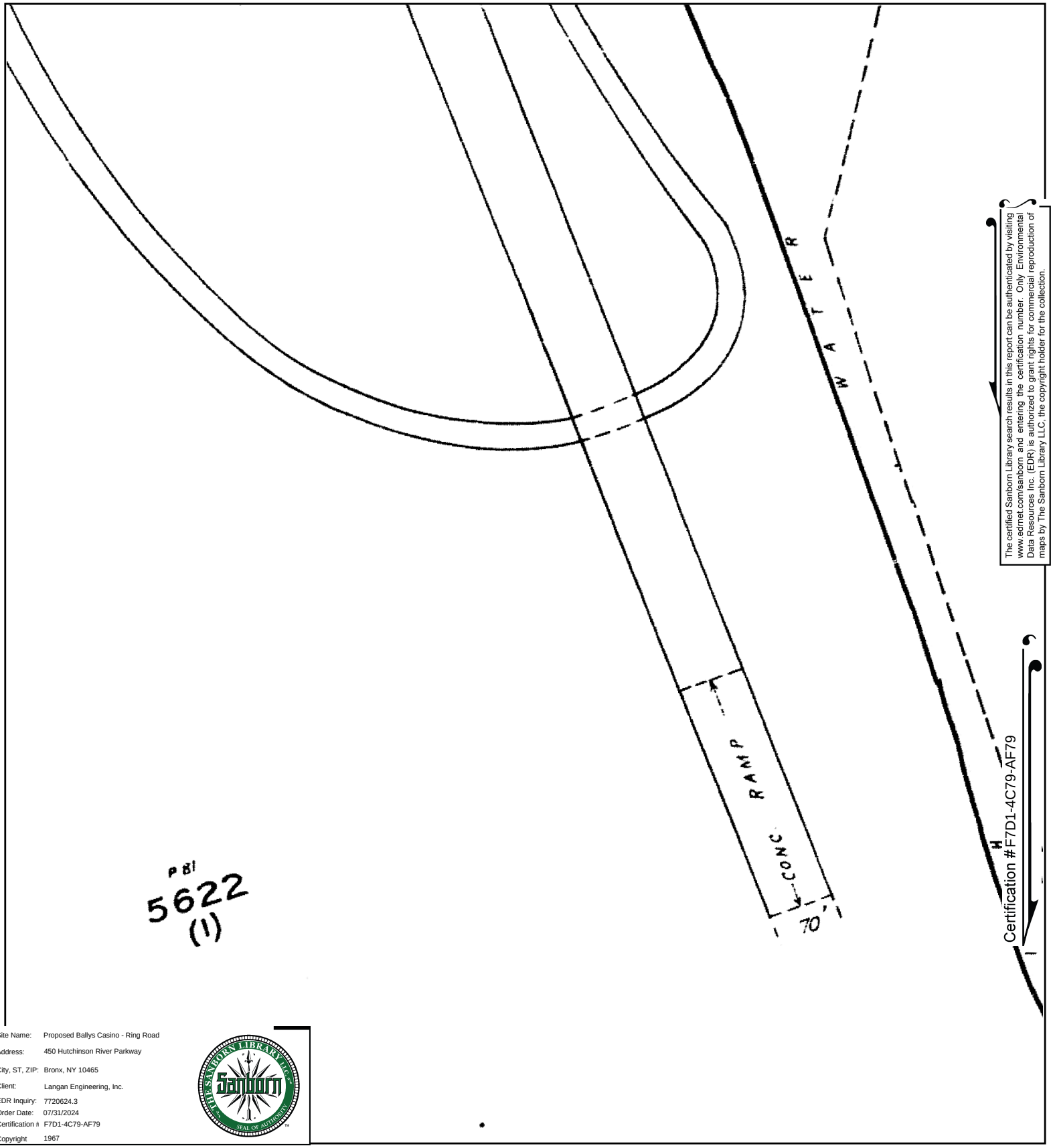


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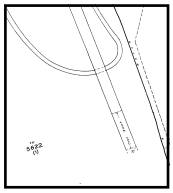

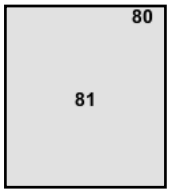


Volume 21, Sheet 81
Volume 21, Sheet 80

0 Feet 150 300 600

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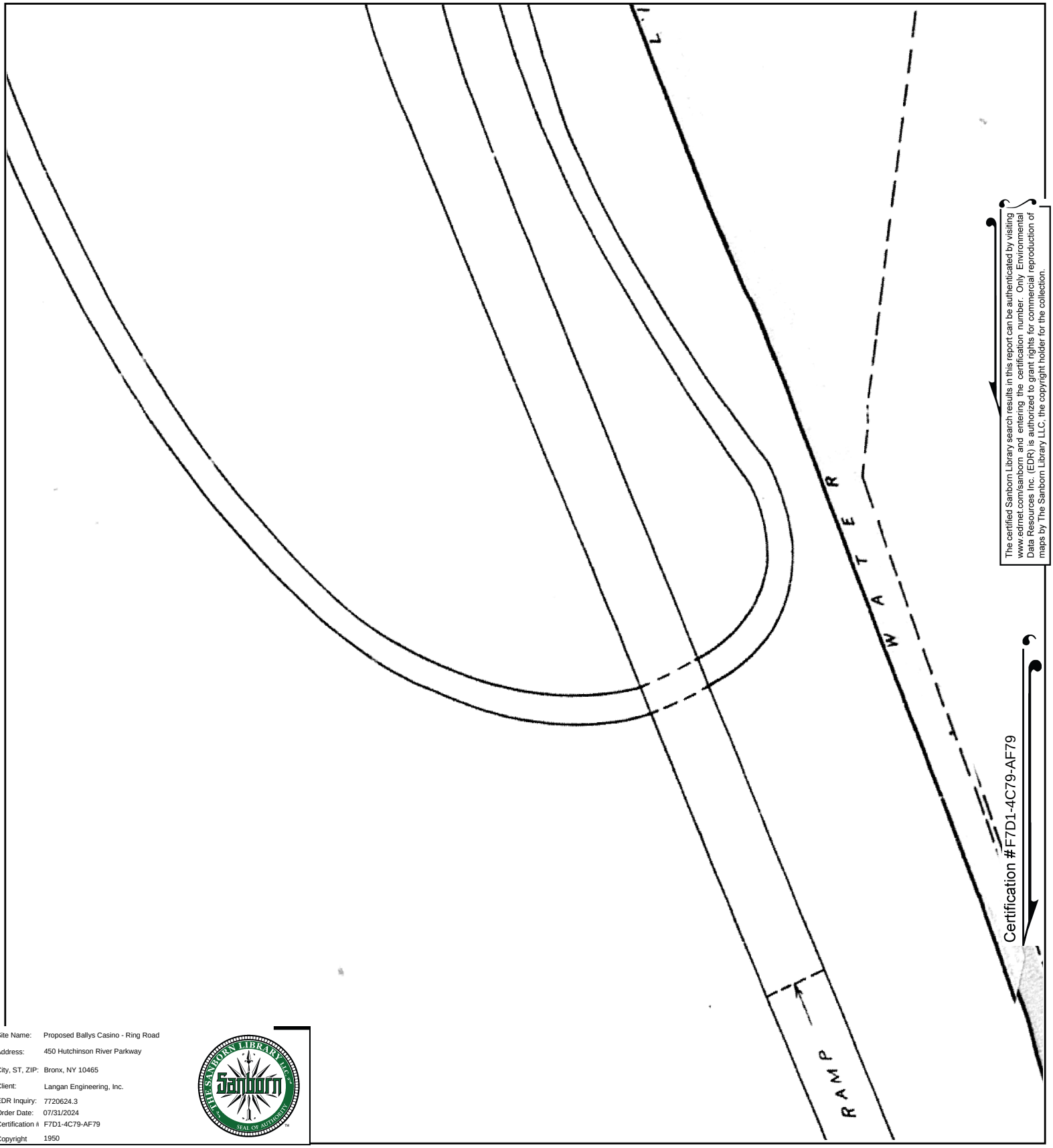


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Copyright: 1950

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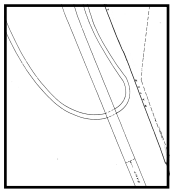

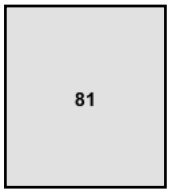


Volume 21, Sheet 81

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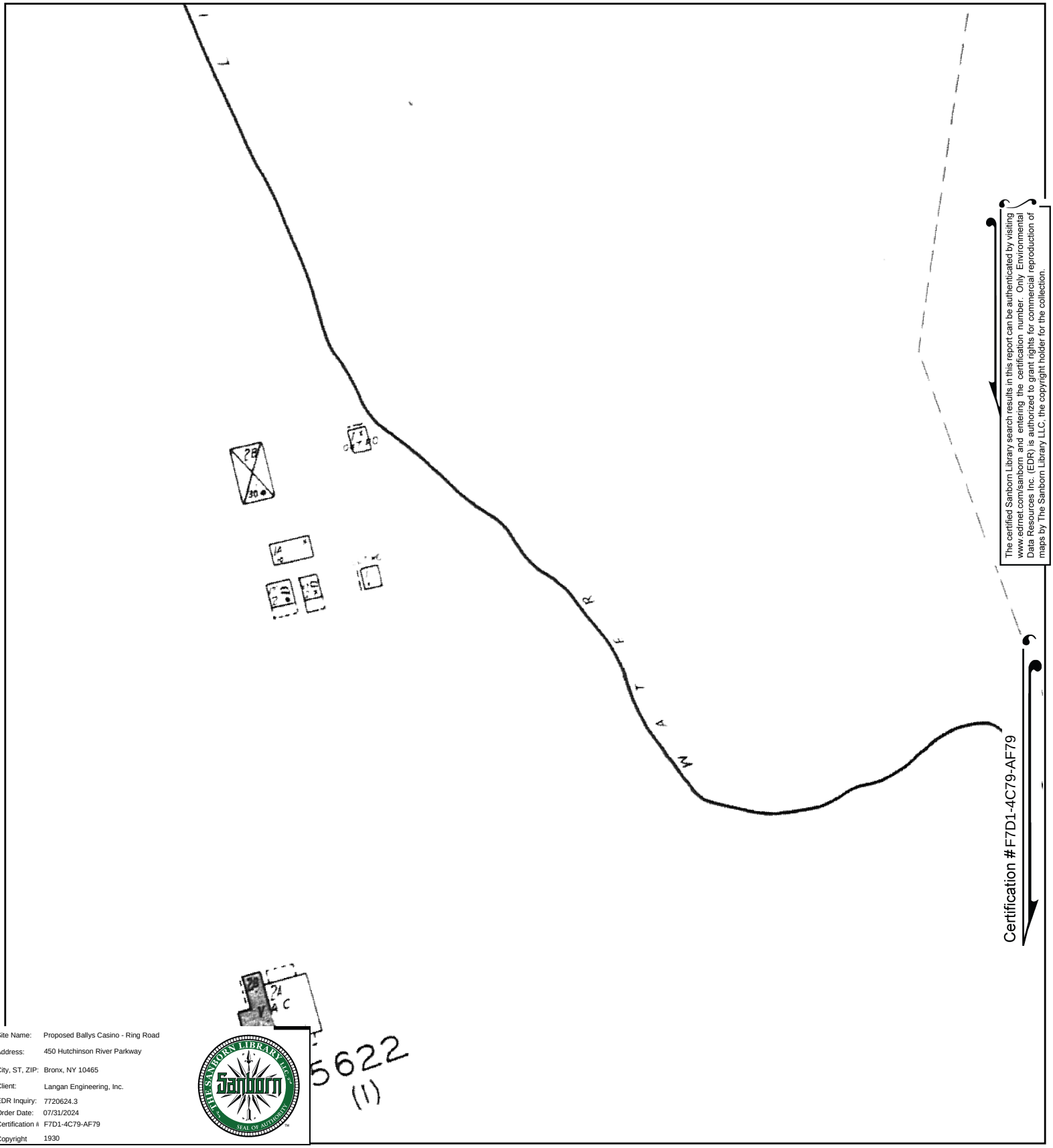


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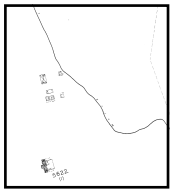

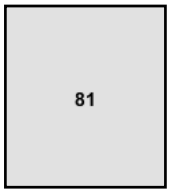


Volume 21, Sheet 79
Volume 21, Sheet 81

0 Feet 150 300 600

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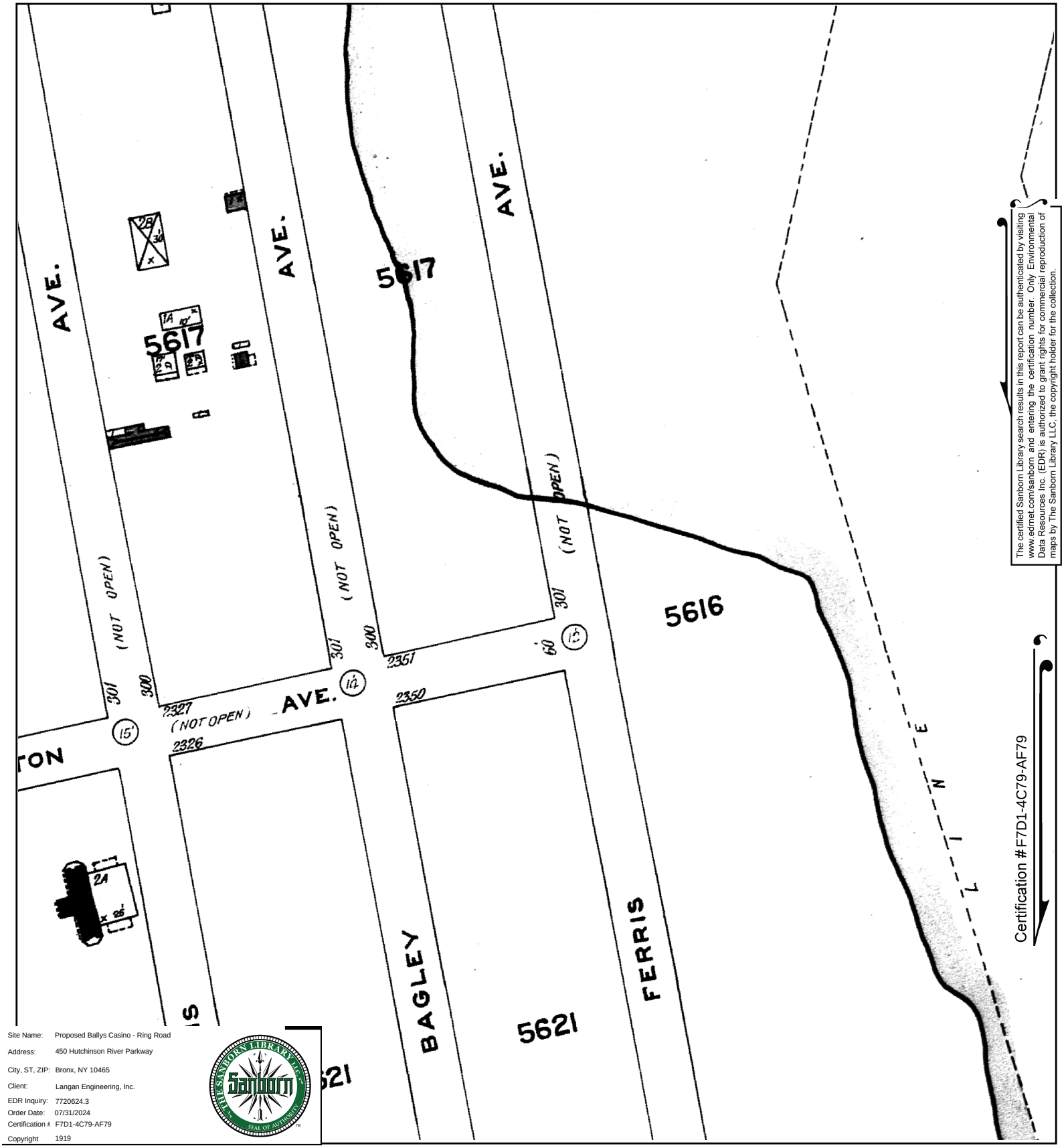


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| Copyright | 1919 |

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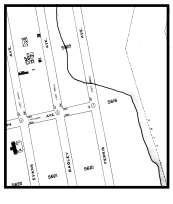

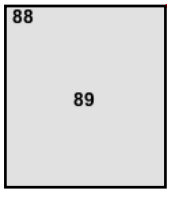


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Volume 17, Sheet 89

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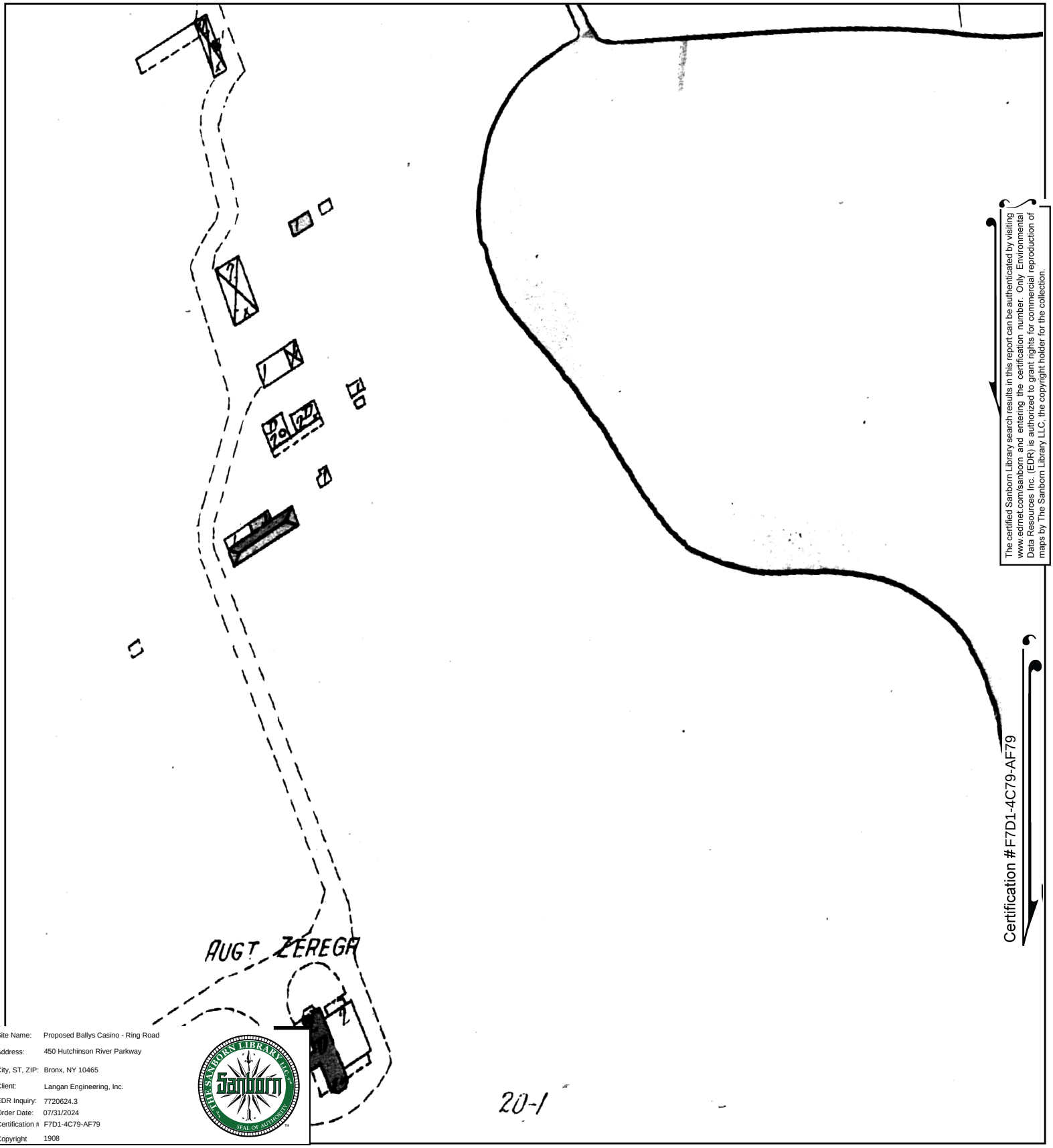


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| Client: | Langan Engineering, Inc. |
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| Certification # | F7D1-4C79-AF79 |
| Copyright | 1908 |

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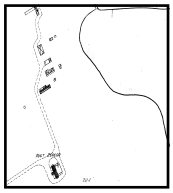

59

Volume A, Sheet 59

0 Feet 150 300 600

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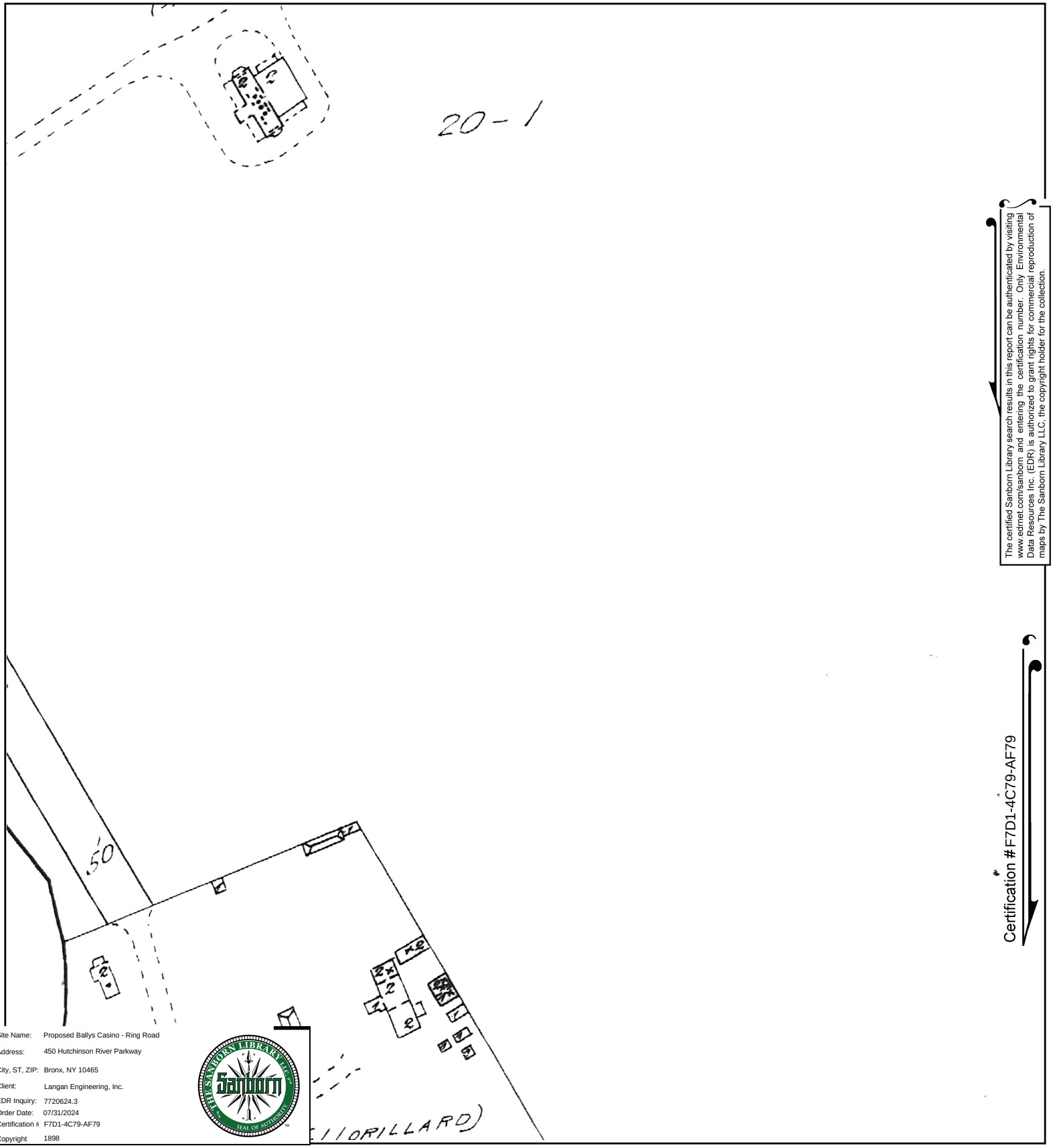


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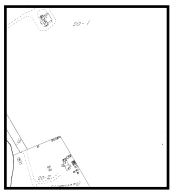
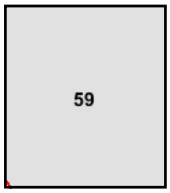
Outlined areas indicate map sheets within the collection.






Volume A, Sheet 59

0 Feet 150 300 600

N

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.4

July 29, 2024

# EDR Historical Topo Map Report

## with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Historical Topo Map Report

07/29/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.4

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Langan Engineering, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

***Search Results:***

**P.O.#** 170773001

**Project:** Prpsd Bally s Casino - Ring Rd

***Coordinates:***

| | |
|---|---|
| **Latitude:** | 40.813693 40° 48' 49" North |
| **Longitude:** | -73.835803 -73° 50' 9" West |
| **UTM Zone:** | Zone 18 North |
| **UTM X Meters:** | 598186.93 |
| **UTM Y Meters:** | 4518727.59 |
| **Elevation:** | 16.00' above sea level |

**Maps Provided:**

| | |
|---|---|
| 2019 | 1900 |
| 2016 | 1898 |
| 2013 | 1897 |
| 1995 | |
| 1979 | |
| 1966 | |
| 1955 | |
| 1947 | |

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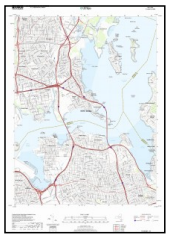
## *Topo Sheet Key*

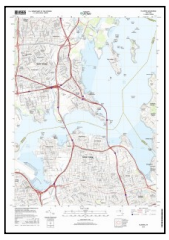
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2019 Source Sheets



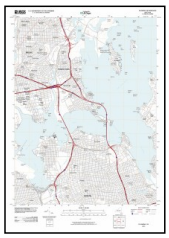
Flushing
2019
7.5-minute, 24000

### 2016 Source Sheets



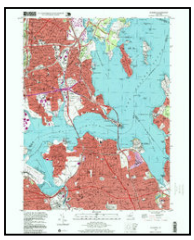
Flushing
2016
7.5-minute, 24000

### 2013 Source Sheets



Flushing
2013
7.5-minute, 24000

### 1995 Source Sheets



Flushing
1995
7.5-minute, 24000
Aerial Photo Revised 1977

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1979 Source Sheets



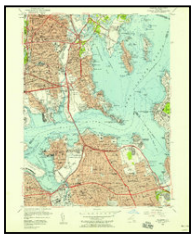
Flushing
1979
7.5-minute, 24000
Aerial Photo Revised 1977

### 1966 Source Sheets



Flushing
1966
7.5-minute, 24000
Aerial Photo Revised 1954

### 1955 Source Sheets



Flushing
1955
7.5-minute, 24000
Aerial Photo Revised 1954

### 1947 Source Sheets



Flushing
1947
7.5-minute, 24000
Aerial Photo Revised 1942

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1900 Source Sheets



Harlem
1900
15-minute, 62500

### 1898 Source Sheets



Harlem
1898
15-minute, 62500

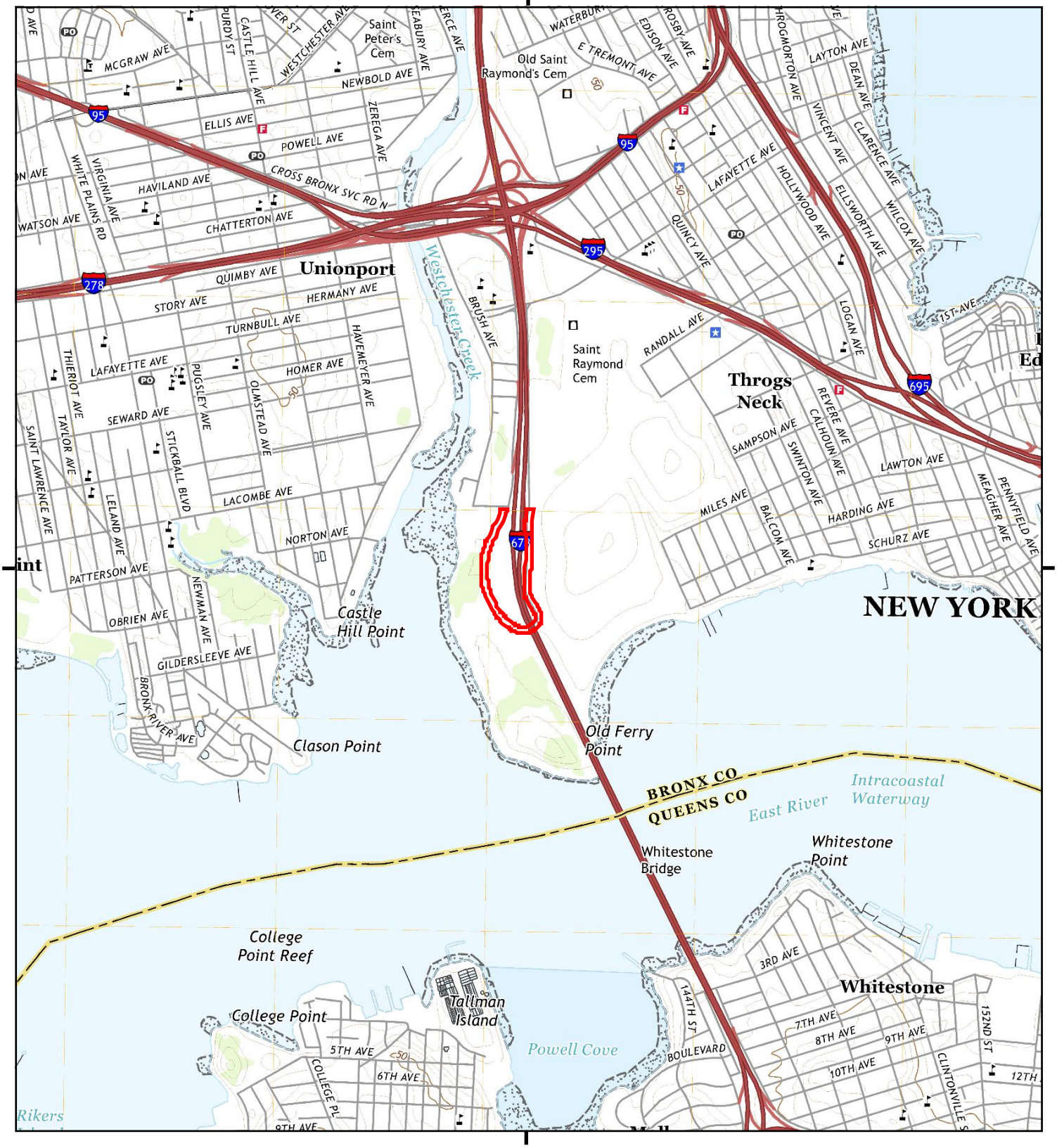
### 1897 Source Sheets



Harlem
1897
15-minute, 62500

# Historical Topo Map

2019




This report includes information from the following map sheet(s).

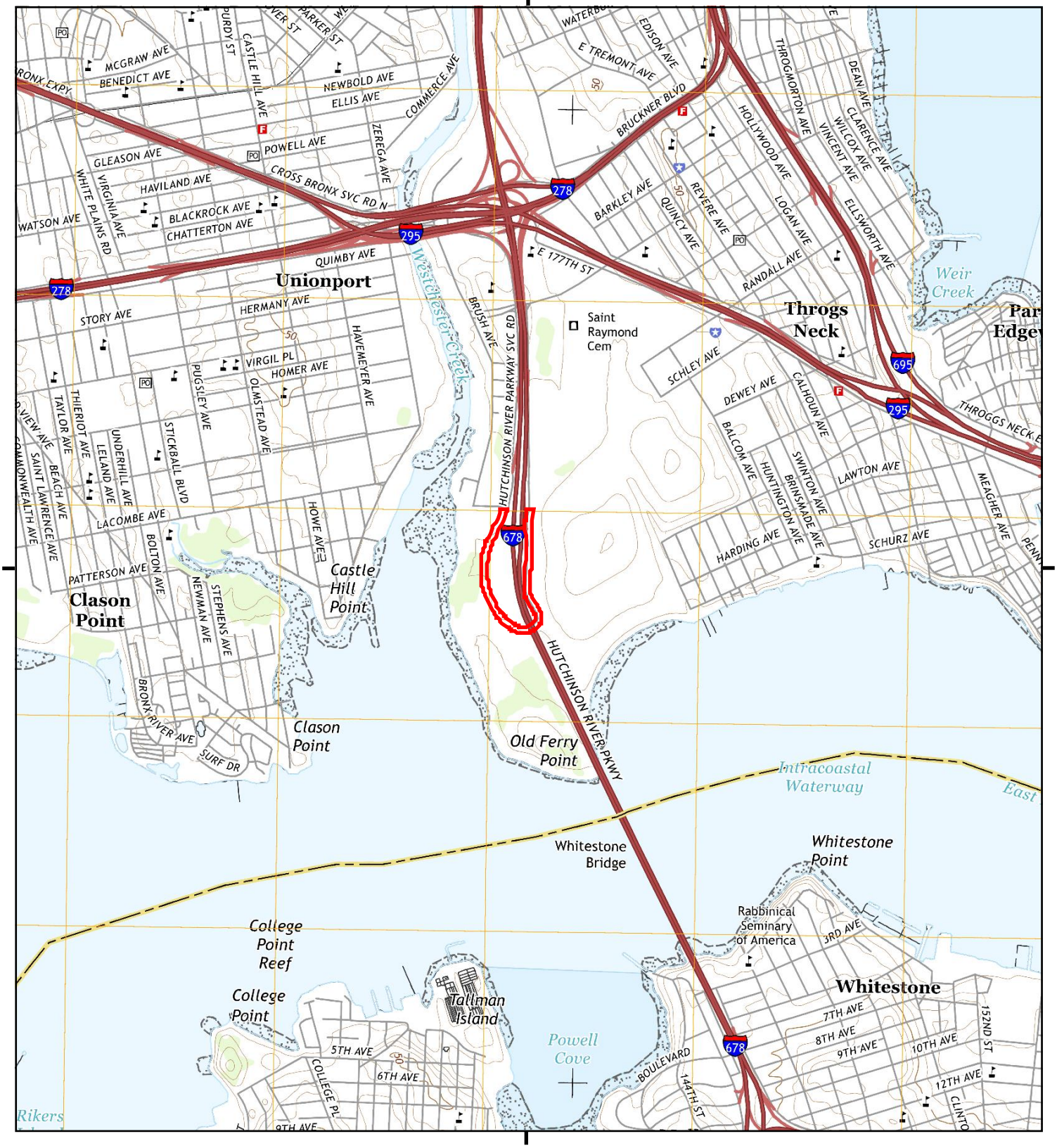
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 2019, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 2016, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N

# Historical Topo Map

2013




This report includes information from the following map sheet(s).

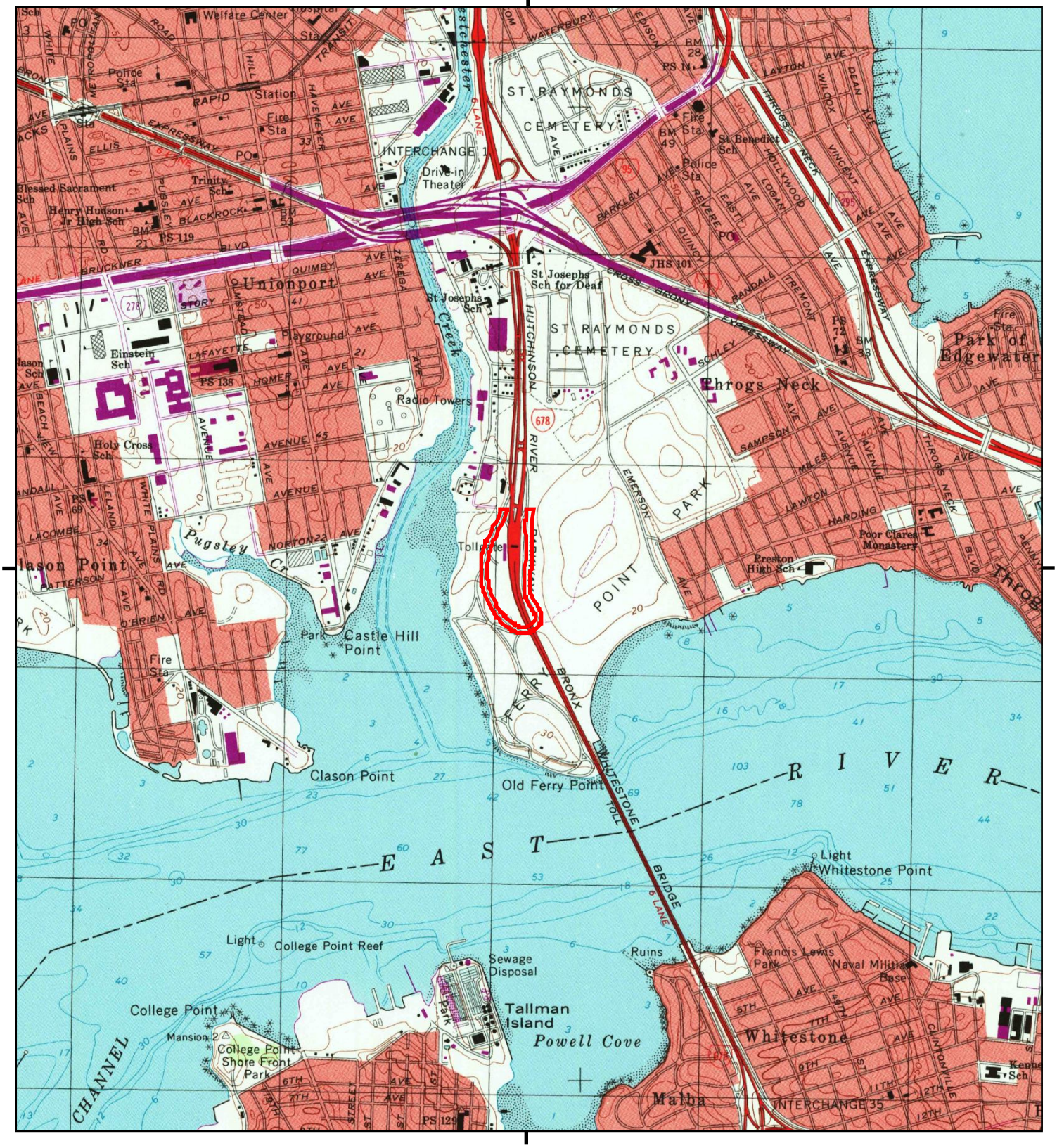
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 2013, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

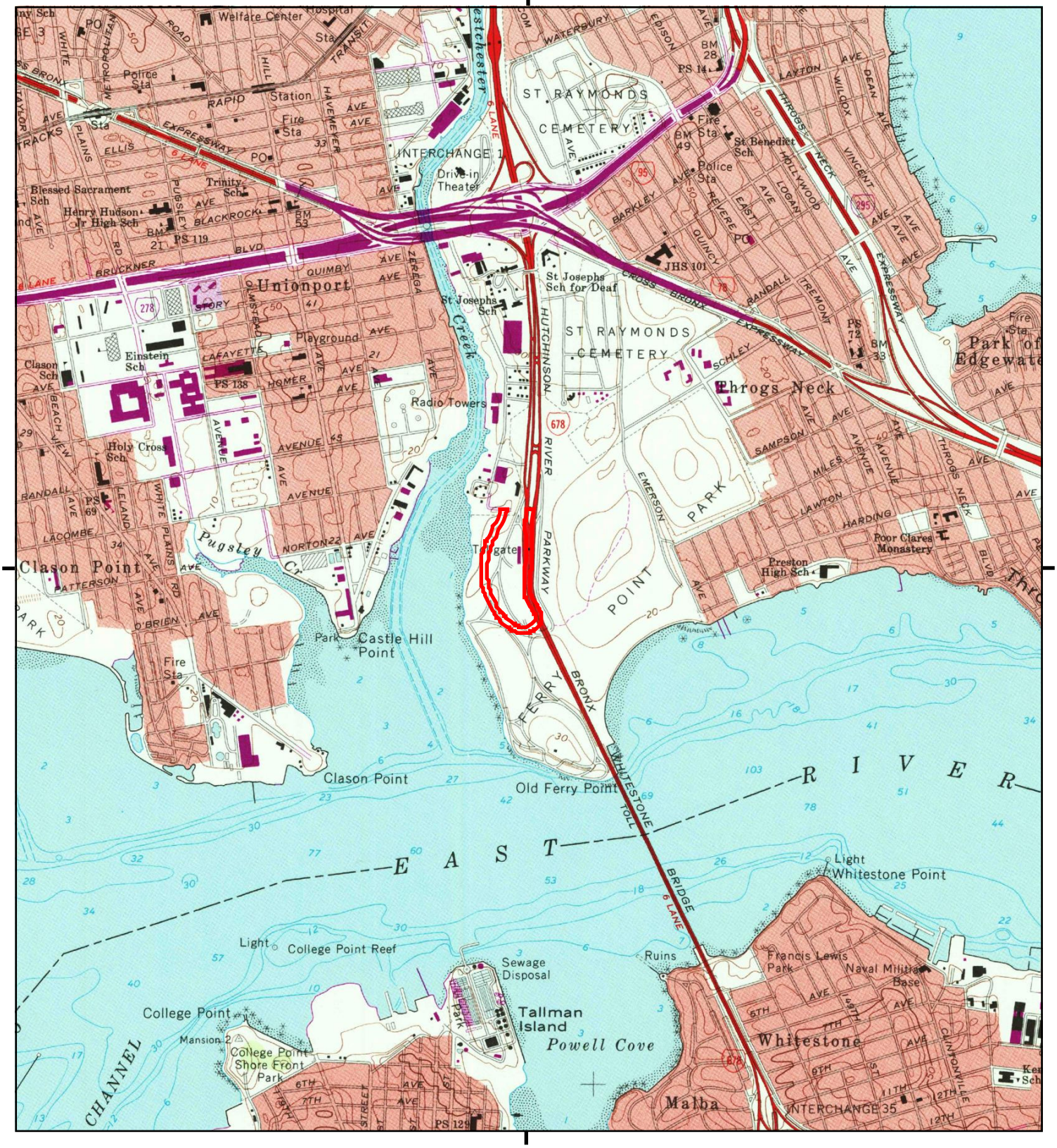
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 1995, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

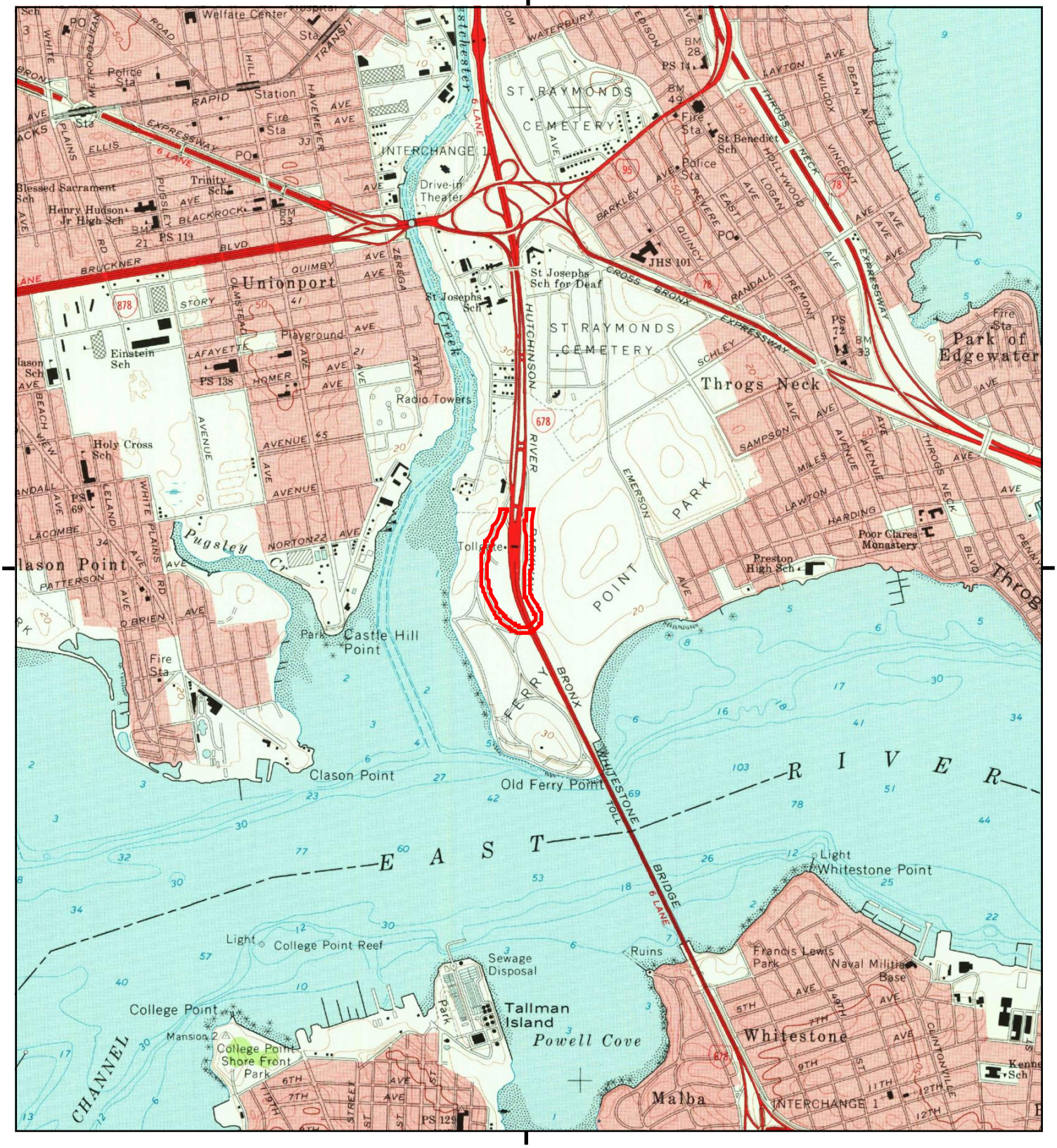
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 1979, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

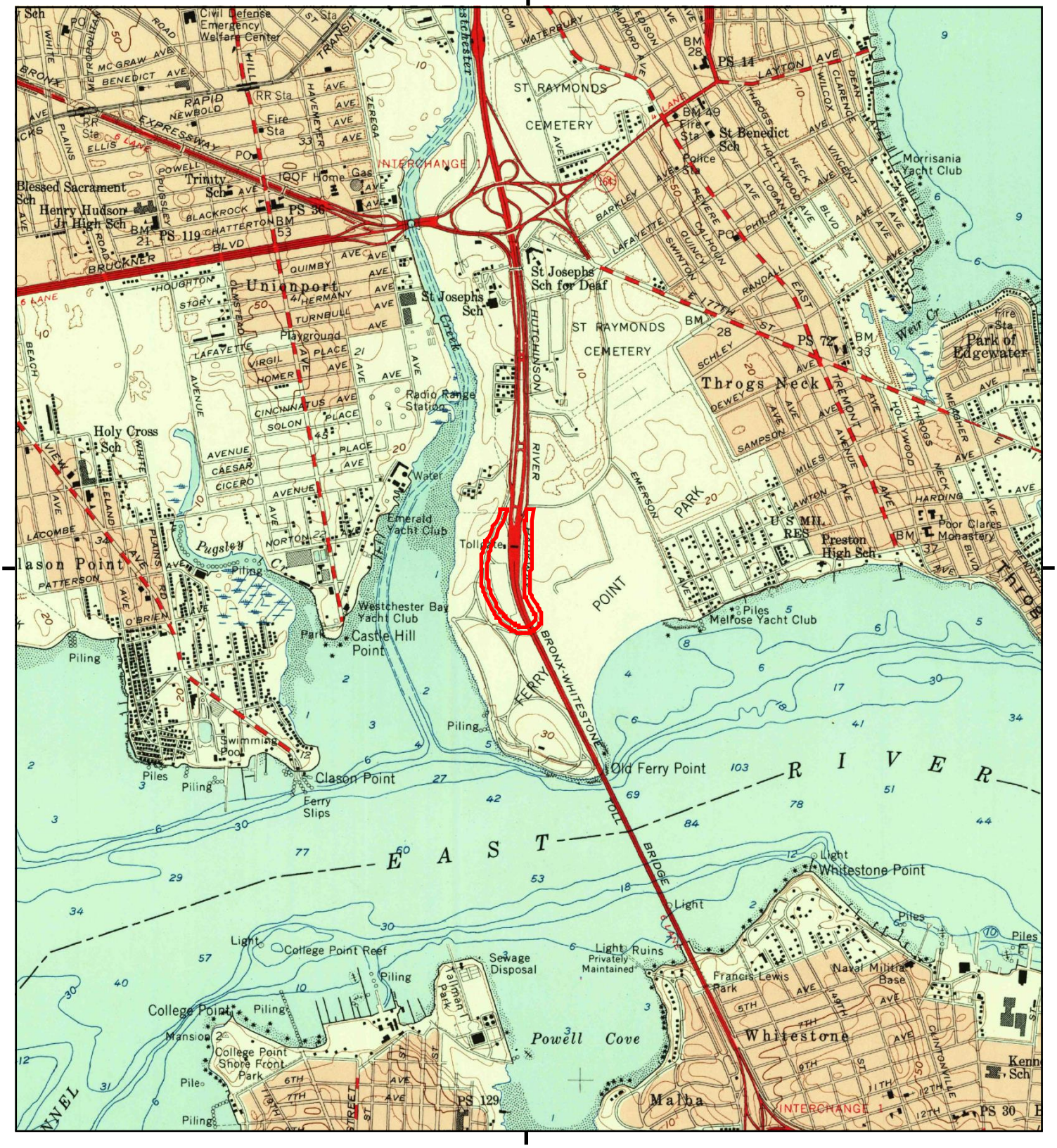
TP, Flushing, 1966, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N

# Historical Topo Map

1955




This report includes information from the following map sheet(s).

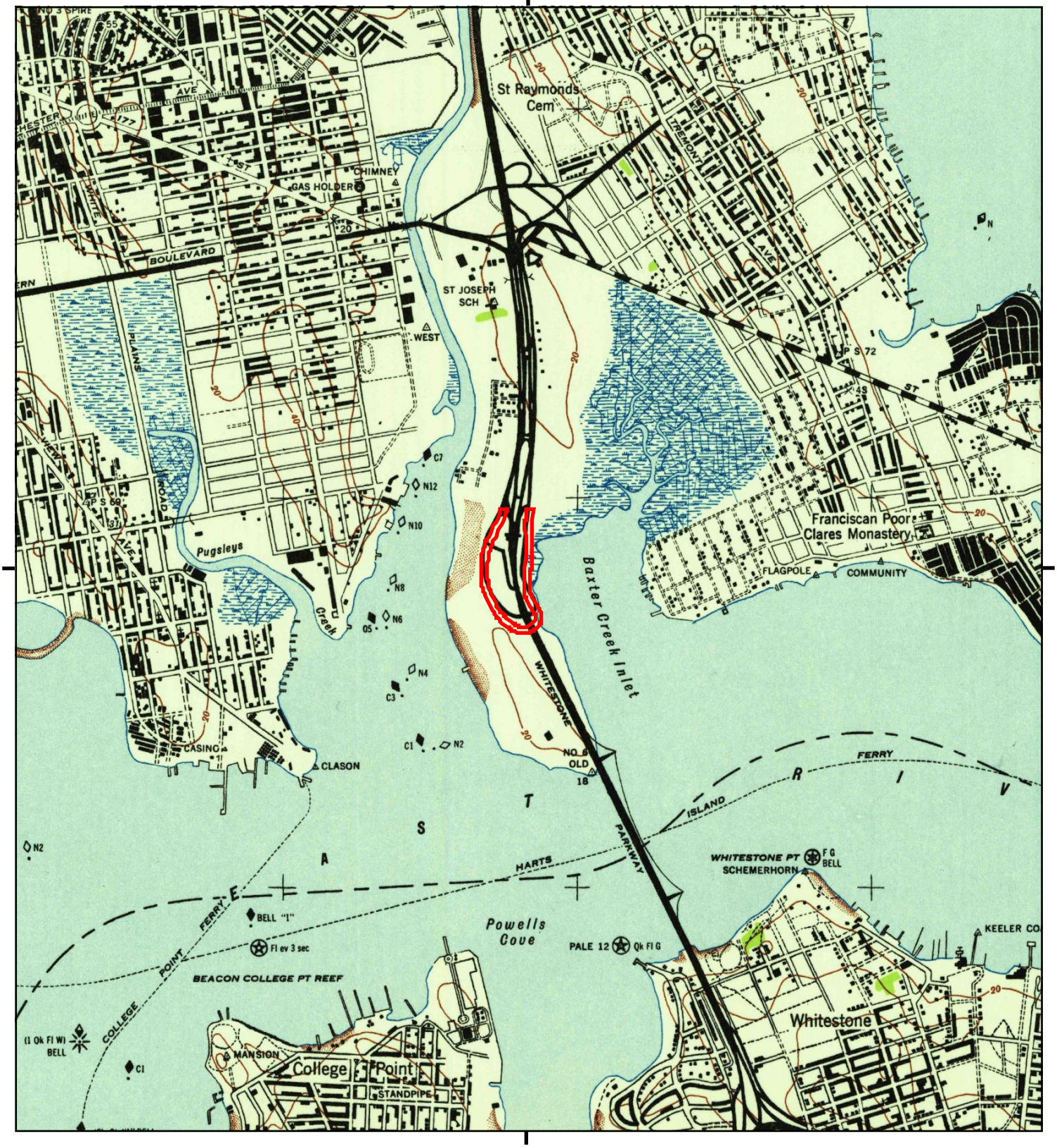
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 1955, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

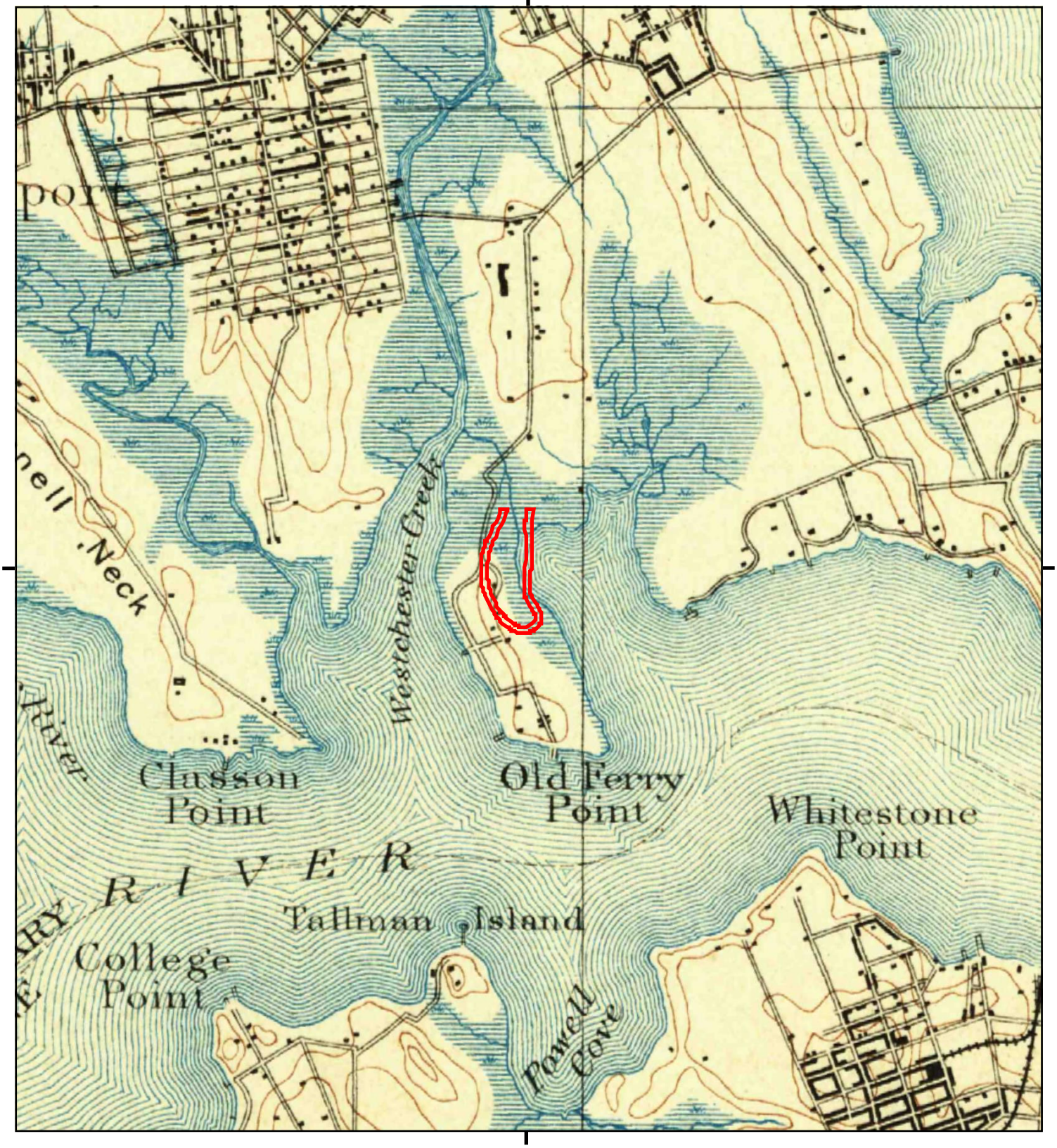
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 1947, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

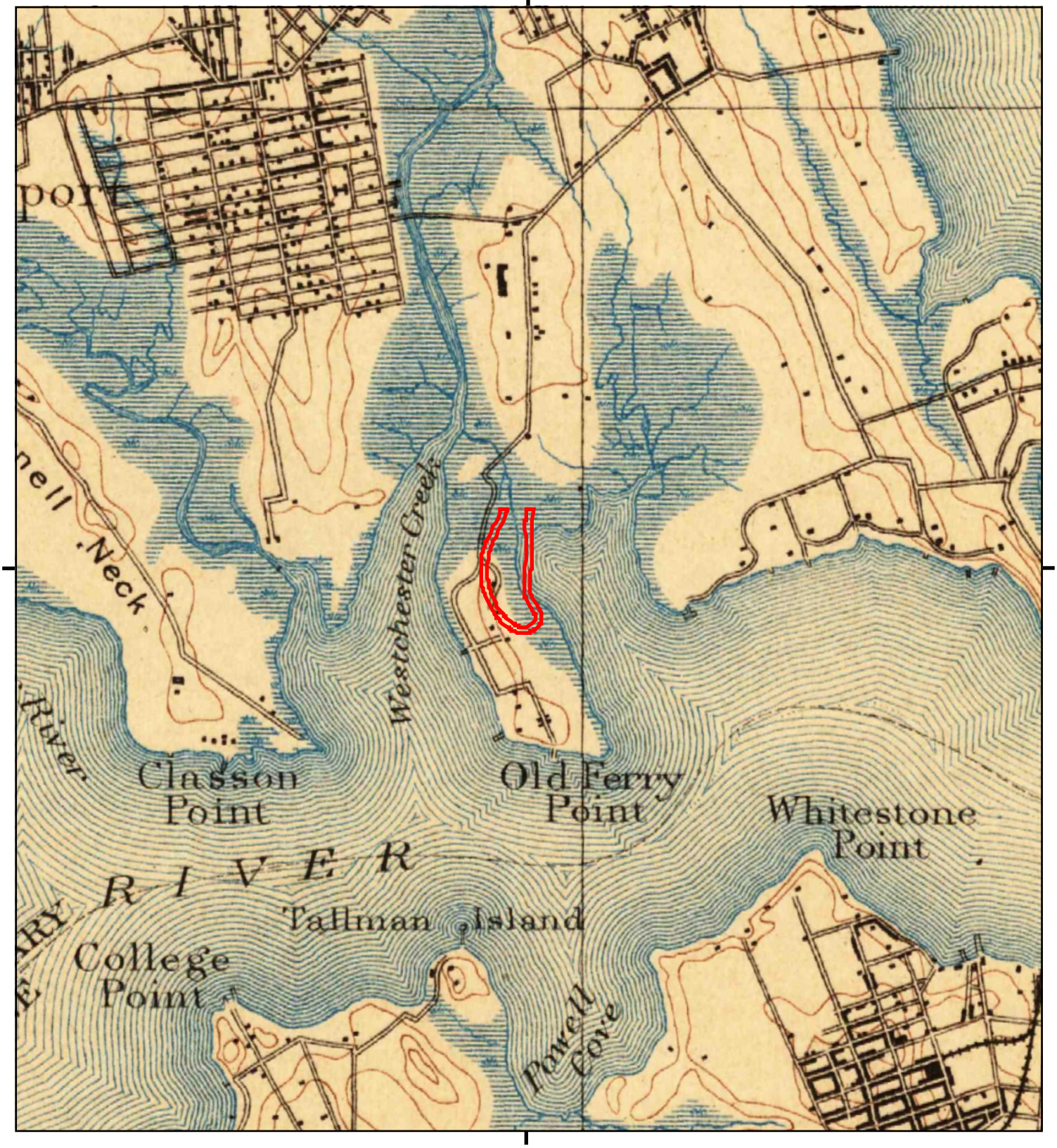
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Harlem, 1900, 15-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

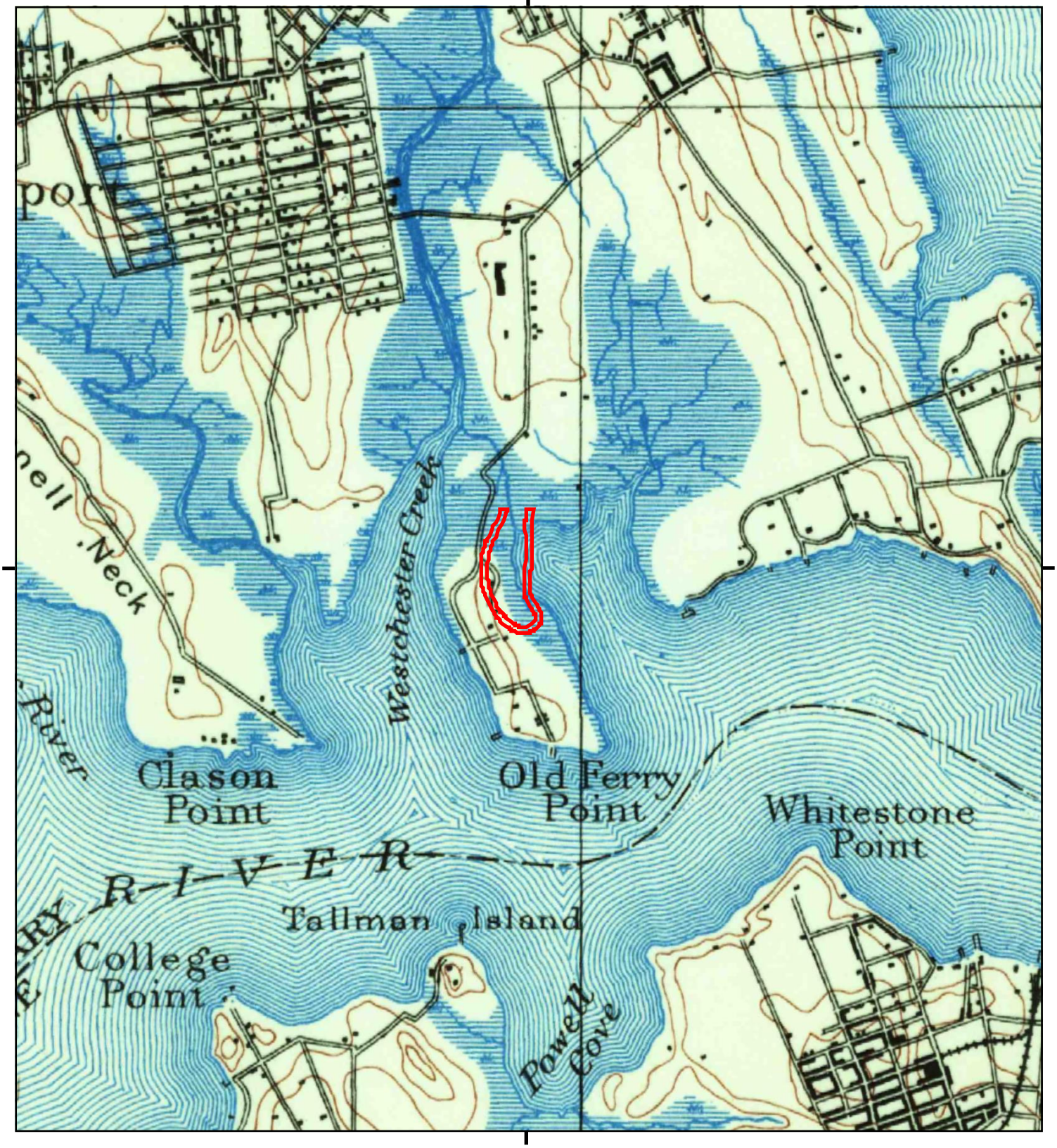
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Harlem, 1898, 15-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Harlem, 1897, 15-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N

**Proposed Ballys Casino - Ring Road**
450 Hutchinson River Parkway
Bronx, NY 10465

Inquiry Number: 7720624.5
July 30, 2024

# The EDR-City Directory Abstract

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR® Environmental Data Resources Inc

# TABLE OF CONTENTS

## SECTION

**Executive Summary**

**Findings**

**City Directory Images**

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

## DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at approximately five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1927 through current. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 2640 feet of the target property.

Summary information obtained is provided in the text of this report.

## RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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## RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

| Year | Source | TP | Adjoining | Text Abstract | Source Image |
|---|---|---|---|---|---|
| 2020 | EDR Digital Archive | - | X | X | - |
| 2017 | Cole Information | - | X | X | - |
| 2014 | Cole Information | - | X | X | - |
| 2010 | Cole Information | - | X | X | - |
| 2005 | Cole Information | - | X | X | - |
| | Hill-Donnelly Information Services | - | X | X | - |
| 2000 | Cole Information | - | X | X | - |
| | Cole Information Services | - | X | X | - |
| 1995 | Cole Information | - | X | X | - |
| 1993 | New York Telephone | - | X | X | - |
| 1992 | Cole Information | - | X | X | - |
| 1983 | New York Telephone | - | X | X | - |
| 1976 | New York Telephone Company | - | X | X | - |
| 1971 | New York Telephone | - | X | X | - |
| 1965 | New York Telephone Company | - | X | X | - |
| 1961 | New York Telephone | - | X | X | - |

# EXECUTIVE SUMMARY

| Year | Source | TP | Adjoining | Text Abstract | Source Image |
|---|---|---|---|---|---|
| 1956 | New York Telephone | - | X | X | - |
| 1949 | New York Telephone | - | X | X | - |
| 1940 | New York Telephone | - | X | X | - |
| 1931 | Manhattan and Bronx Directory Publishing Company Residential Directory | - | X | X | - |
| 1927 | New York Telephone | - | X | X | - |

# EXECUTIVE SUMMARY

## SELECTED ADDRESSES

The following addresses were selected by the client, for EDR to research. An "X" indicates where information was identified.

| *Address* | *Type* | *Findings* |
|---|---|---|
| 500 Hutchinson River Parkway | Client Entered | |
| 492 Hutchinson River Pkwy | Client Entered | |
| 525 Hutchinson River Pkwy | Client Entered | |
| 555 Hutchinson River Pkwy | Client Entered | |
| 545 Brush Ave | Client Entered | |
| 550 Brush Ave | Client Entered | |
| 650 Brush Ave | Client Entered | |
| 699 Brush Ave | Client Entered | |
| 3 Schley Ave | Client Entered | |
| 1 Schley Ave | Client Entered | |

# FINDINGS

## TARGET PROPERTY INFORMATION

### ADDRESS

450 Hutchinson River Parkway
Bronx, NY 10465

### FINDINGS DETAIL

Target Property research detail.

# FINDINGS

## ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

## BRUSH AVE

**500 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | ARKAY ASSOCIATES INC | New York Telephone |
| | BCD MASONRY INC | New York Telephone |
| | DECON MECHANICAL CONTRACTORS | New York Telephone |
| | DECON PLUMBING INC | New York Telephone |
| | JMM MASON INC | New York Telephone |

**509 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | KOFSKY IRA J | New York Telephone |
| 1976 | SULLIVAN WM L | New York Telephone Company |
| 1971 | SULLIVAN WM L | New York Telephone |

**510 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | FABRICAS PEIXE CORP | New York Telephone |
| | SALVATI FOODS PRODS INC | New York Telephone |

**515 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | MILLER MARY | New York Telephone |
| 1983 | ELSASSEI CHAS J | New York Telephone |
| 1976 | ELSASSER CHAS J | New York Telephone Company |
| 1971 | ELSASSER CHAS J | New York Telephone |
| 1965 | ELSASSER CHAS J | New York Telephone Company |

**529 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | BARKER JOHN | New York Telephone |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1993 | MARTIN J | New York Telephone |
| 1976 | DYNAMIC PAINTG & DECRATG CORP | New York Telephone Company |
| | EAST COAST PAINTING CORP | New York Telephone Company |
| 1965 | JENSEN E WM | New York Telephone Company |

**531 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | ASCENZO & SONS INC | New York Telephone Company |
| 1971 | ASCENZO & SONS INC | New York Telephone |

**535 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1965 | ASCENZO & SONS INC | New York Telephone Company |

**536 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1965 | WHITESTONE REALTY CORP | New York Telephone Company |

**550 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | SPIELBERG L & SONS INC | New York Telephone |
| 1983 | SPIELBERG L & SONS INC | New York Telephone |
| 1976 | SPIELBERG L & SONS INC | New York Telephone Company |
| 1971 | SISTO & DIMAIO INC | New York Telephone |
| | SPIELBERG L & SONS INC | New York Telephone |

**666 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | BIG APPLE WRECKING CORP | New York Telephone |

**680 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | CLEARY ANNA MRS | New York Telephone Company |
| 1971 | CLEARY ANNA MRS | New York Telephone |
| 1965 | CLEARY ANNA MRS | New York Telephone Company |

# FINDINGS

**682 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | MURPHY EDWARD V | New York Telephone |
| 1976 | MURPHY EDWARD R | New York Telephone Company |
| | MURPHY MAUREEN | New York Telephone Company |
| 1971 | MURPHY EILEEN V | New York Telephone |
| 1965 | MAC INTYRE ROBT W | New York Telephone Company |

## BRUSH AVE

**500 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CABLE VISION OF NYC | EDR Digital Archive |
| 2010 | MATELL CONTRACTING CO INC | Cole Information |
| 2005 | Matell Contracting Co Inc | Hill-Donnelly Information Services |
| | ANDREW C KATZ & ASSOCIATES | Cole Information |
| 2000 | MATELL CONTRNG CO | Cole Information |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |
| | R & R MECHANICAL INCORPORATED | Cole Information |
| | MATELL CONTRACTING COMPANY INCORPORATED | Cole Information |
| 1995 | DECON PLUMBING INC | Cole Information |
| | MATELL CONTRACTING CO INC | Cole Information |
| | DECON MECHANICAL CONTRACTORS | Cole Information |
| | R & R MECHANICAL INC | Cole Information |
| 1992 | DECON PLUMBING INC | Cole Information |
| | BCD MASONRY INC | Cole Information |
| | JMM MASON INC | Cole Information |
| | ARKAY ASSOCIATES INC | Cole Information |
| | DECON MECHANICAL CONTRACTORS | Cole Information |
| | MITTLEMAN, PHILIP A, ATTY | Cole Information |

**501 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | JOSE NUNEZ | Cole Information |

# FINDINGS

**504 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | h Carey L P A | Hill-Donnelly Information Services |
| 2000 | CAREY LP | Cole Information |
| | CAREY LP | Cole Information |
| 1995 | CARE 4 | Cole Information |

**509 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MICHAEL PEREZ | EDR Digital Archive |
| | ROBERT HERNANDEZ | EDR Digital Archive |
| 2017 | ROBERT HERNANDEZ | Cole Information |
| | DESIRE PEREZ | Cole Information |
| 2014 | TUPAC HERNANDEZ | Cole Information |
| | DESIRE PEREZ | Cole Information |
| 2010 | ANN DELGADO | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | Mercado Crystal V | Hill-Donnelly Information Services |
| 2000 | DAVID MERCADO | Cole Information |
| | RENE MERCADO | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |

**510 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | NCL | Hill-Donnelly Information Services |
| 1995 | FABRICAS PEIXE CORP | Cole Information |
| 1992 | SALVATI FOODS PRODS INC | Cole Information |
| | FABRICAS PEIXE CORP | Cole Information |

**515 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LET ME BUILD LLC | EDR Digital Archive |
| | JAMES MILLER | EDR Digital Archive |
| | DREW ROUBLICK | EDR Digital Archive |
| | JOANNE MILLER | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | DAISY RODRIGUEZ | EDR Digital Archive |
| 2014 | PAUL MILLER | Cole Information |
| 2010 | J MILLER | Cole Information |
| 2005 | PAUL MILLER | Cole Information |
| | Miller Paul | Hill-Donnelly Information Services |
| | Miller Paul | Hill-Donnelly Information Services |
| | Miller Paul Aa | Hill-Donnelly Information Services |
| | Rodriguez Daisy A | Hill-Donnelly Information Services |
| 2000 | KELLY KERNWI | Cole Information |
| | J E MILLER | Cole Information |
| | MARY MILLER | Cole Information |
| | VINCENT POWERS | Cole Information |
| | JOANNE MILLER | Cole Information |
| | KELLY KERWIN | Cole Information |
| 1993 | MILLER Mary | New York Telephone |
| 1992 | MILLER, MARY | Cole Information |
| 1940 | Elsasser G | New York Telephone |
| 1931 | Elasser Gustave fireman | Manhattan and Bronx Directory Publishing Company Residential Directory |

**517 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | JOANNE MILLER | Cole Information |

**528 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1940 | Ritch Sidney C | New York Telephone |
| 1927 | Ritch Sidney C r | New York Telephone |

**529 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHN WEINHEIMER | EDR Digital Archive |
| | ANTHONY MEDICI | EDR Digital Archive |
| | PETER BONIFIGLIO | EDR Digital Archive |
| 2005 | Barker J A | Hill-Donnelly Information Services |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2005 | Martin J AA | Hill-Donnelly Information Services |
| 2000 | J BARKER | Cole Information |
| | J MARTIN | Cole Information |
| 1993 | BARKER John | New York Telephone |
| | MARTIN J | New York Telephone |
| 1992 | BARKER, JOHN | Cole Information |
| | MARTIN, J | Cole Information |

**530 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1940 | Miller Chas H | New York Telephone |

**531 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2000 | OCCUPANT UNKNOWN | Cole Information |
| 1927 | Van Bakel P r | New York Telephone |

**545 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | UPS CUSTOMER CTR | EDR Digital Archive |
| 2005 | UNITED PARCEL SERVICE | Cole Information |

**550 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | D & J INDUSTRIES | EDR Digital Archive |
| | MCG CONSTRUCTION | EDR Digital Archive |
| | WHITESTONE ELECTRIC | EDR Digital Archive |
| | BUTLER FLEET | EDR Digital Archive |
| | LIBERTY MECHANICAL CONTRACTORS | EDR Digital Archive |
| 2017 | BUTLER FLEET | Cole Information |
| | MANAGEMENT IMPORT EXPORT LLC | Cole Information |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |
| | D&J INDUSTRIES | Cole Information |
| 2014 | MANAGEMENT IMPORT EXPORT LLC | Cole Information |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | BUTLER FLEET | Cole Information |
| | D&J INDUSTRIES | Cole Information |
| 2010 | BUTLER FLEET SVC | Cole Information |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |
| | MICHAEL CONTILLO | Cole Information |
| 2005 | Liberty Mechanical Contractors | Hill-Donnelly Information Services |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |
| | TOWER PROPERTY MANAGEMENT CO | Cole Information |
| | DECON STORAGE LLC | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| 2000 | LIBERTY MECHI | Cole Information |
| | R & R MACHI INC | Cole Information |
| | KEVIN TAYLOR | Cole Information |
| 1995 | SPIELBERG L & SONS INC | Cole Information |
| 1992 | SPIELBERG L & SONS INC | Cole Information |

**552 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1931 | Hawlett Geo | Manhattan and Bronx Directory Publishing Company Residential Directory |

**630 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1927 | Miller C H r | New York Telephone |

**650 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | WJD BEVERAGE INC | EDR Digital Archive |
| | BROOK BEVERAGE | EDR Digital Archive |
| | J WILD BEVERAGE CORP | EDR Digital Archive |
| | PEPSI BOTTLING GROUP | EDR Digital Archive |
| 2017 | BUHRE BEVERAGE DISTRIBUTING | Cole Information |
| | J WILD BEVERAGE CORP | Cole Information |
| | PEPSI COLA BOTTLING CO OF NY | Cole Information |
| | PEPSICO | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | BROOK BEVERAGE | Cole Information |
| 2014 | BUHRE BEVERAGE DISTRIBUTING | Cole Information |
| | J WILD BEVERAGE CORPORATION | Cole Information |
| | WEST SIDE BEVERAGE INCORPORATED | Cole Information |
| | PEPSICO | Cole Information |
| | BROOK BEVERAGE | Cole Information |
| | WJD BEVERAGE INCORPORATED | Cole Information |
| 2010 | PEPSI BOTTLING GROUP | Cole Information |
| | BUHRE BEVERAGE DISTRIBUTING | Cole Information |
| | BROOK BEVERAGE | Cole Information |
| | WJD BEVERAGE INC | Cole Information |
| | J WILD BEVERAGE CORP | Cole Information |
| | PEPSICOLA CO | Cole Information |

**680 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RAFAEL CARABALLO | EDR Digital Archive |
| | BROOKE CARABALLO | EDR Digital Archive |
| 2017 | RAFAEL CARABALLO | Cole Information |
| 2014 | ISAAC OCASIO | Cole Information |
| 2010 | JOSE OCASIO | Cole Information |
| 2005 | H Ocasio Jose AA | Hill-Donnelly Information Services |
| | JOSE OCASIO | Cole Information |
| 2000 | JOSE VELEZ | Cole Information |
| | JOSE VELEZ | Cole Information |
| 1992 | VELEZ, JOSE | Cole Information |
| 1931 | Cleary Wm | Manhattan and Bronx Directory Publishing Company Residential Directory |

**682 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | DENIS PINO | Cole Information |
| 2014 | DENIS PINO | Cole Information |
| 2010 | DENNIS PINO | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2005 | H Carrero S A Aa | Hill-Donnelly Information Services |
| | SALVADOR CARRERO | Cole Information |
| 1992 | RIVERA, JOSE | Cole Information |

**699 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | H 0 Penn Machinery Co | Hill-Donnelly Information Services |
| 2000 | CTRPLLR LFT TRCKS | Cole Information Services |
| | H O PENN MACHY CO | Cole Information Services |
| | H O PENN MACHY CO | Cole Information Services |
| | PENCO IND DIV H | Cole Information Services |
| 1993 | CATERPILLAR LIFT TRUCKS | New York Telephone |
| | H O PENN MACHINERY | New York Telephone |
| | H O PENN MACHINERY CO INC | New York Telephone |
| | PENCO INDUSTRIAL DIV OF H O PENN MACHINERY CO INC | New York Telephone |
| 1983 | HO PENN MACHINERY CO INC | New York Telephone |
| | PENN H O MACHINERY CO INC | New York Telephone |

## BRUSH AVE FRNT 1

**550 BRUSH AVE FRNT 1**

| Year | Uses | Source |
|---|---|---|
| 2020 | MICHAEL CONTILLO | EDR Digital Archive |
| | AMANDA CONTILLO | EDR Digital Archive |

## BRUSH AVE FRNT 2

**550 BRUSH AVE FRNT 2**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOSEPH DEGLOMINI | EDR Digital Archive |

## EMERSON AVE

**196 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | HICKSON GLENN | New York Telephone |

# FINDINGS

**198 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | DELVALLE RICHARD | New York Telephone |
| 1983 | CALANO WALTER | New York Telephone |
| 1976 | CALANO WALTER | New York Telephone Company |

**200 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | GALLO PASQUALE | New York Telephone |
| 1983 | GALLO PASQUALE | New York Telephone |
| | NEFF MARTIN | New York Telephone |
| 1976 | ANASTASIO NEIL | New York Telephone Company |
| | GALLO PASQUALE | New York Telephone Company |
| 1971 | ANASTASIO NELI | New York Telephone |
| | GALLO PASQUALE | New York Telephone |

**204 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | ALOISIO VITO | New York Telephone |
| | CODISPOTI SUSAN | New York Telephone |

**232 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | PERSAUD STEVE | New York Telephone |

**236 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | CRISCUOLO LORRAINE | New York Telephone Company |

**238 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | CAMPANELLI JOSEPH J | New York Telephone |
| | LEVANTIS V | New York Telephone |
| 1983 | HEFFERAN GERARD V | New York Telephone |
| 1976 | HEFFERAN GERARD V | New York Telephone Company |
| | MOLINARI MARY P | New York Telephone Company |

# FINDINGS

**244 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | TAKIS THOS | New York Telephone |
| | TRACZ JOHN | New York Telephone |
| 1983 | FRAHER D A | New York Telephone |
| | RUIZ FRANK | New York Telephone |
| | TAKIS THOS | New York Telephone |
| 1976 | HORGAN KENNETH F | New York Telephone Company |
| | TAKIS THOS | New York Telephone Company |

**250 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | GUIDO A | New York Telephone |

**258 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | RASMUSSEN L M | New York Telephone |
| 1983 | RASMUSSEN L M | New York Telephone |
| 1976 | RASMUSSEN WM A | New York Telephone Company |

**264 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | DEVINE D | New York Telephone |
| 1983 | PFUND ERWIN SR | New York Telephone |
| 1976 | PFUND ERWIN SR | New York Telephone Company |
| 1971 | PFUND ERWIN P JR | New York Telephone |

**266 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | BAPTIST PAT | New York Telephone Company |

**272 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | SAVINO DONALD | New York Telephone |
| 1976 | HAYES M | New York Telephone Company |
| 1971 | HAYES M | New York Telephone |

# FINDINGS

**274 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | FERRARI S | New York Telephone |
| 1983 | FERRARI S | New York Telephone |
| 1976 | FERRARI S | New York Telephone Company |

**276 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | A-STEVENS SEWER & DRAIN CLNG | New York Telephone |

**278 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | MALTESE JOHN F | New York Telephone |
| 1976 | MALTESE JOHN F | New York Telephone Company |

## EMERSON AVE

**196 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ESWILDA HERNANDEZ | EDR Digital Archive |
| 2017 | ESWILDA HERNANDEZ | Cole Information |
| 2014 | DANIEL PIROZZI | Cole Information |
| 2010 | DANIEL PIROZZI | Cole Information |
| 2005 | NCL | Hill-Donnelly Information Services |
| | JOANNE OHARE | Cole Information |
| 2000 | J DOHERTY | Cole Information |
| | J DOHERTY | Cole Information |
| 1993 | PIROZZI FRANK | New York Telephone |
| 1992 | PIROZZI, FRANK | Cole Information |
| 1983 | PIROZZI FRANK | New York Telephone |
| 1976 | PIROZZI FRANK | New York Telephone Company |
| 1971 | HARTMANN RAYMOND D | New York Telephone |
| | PIROZZI FRANK | New York Telephone |
| 1965 | HARTMANN RAYMOND D | New York Telephone Company |
| | PIROZZI FRANK | New York Telephone Company |
| 1961 | HASTMANN RAYMOND D | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1961 | PIROZZI FRANK | New York Telephone |
| 1931 | Carney Theo | Manhattan and Bronx Directory Publishing Company Residential Directory |

**198 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MICHAEL DIAZ | EDR Digital Archive |
| | VALLE DEL VALLE | EDR Digital Archive |
| | IVIS BONES | EDR Digital Archive |
| | BERNARDO DEL VALLE | EDR Digital Archive |
| | YVETTE FOY | EDR Digital Archive |
| | IVIS DIAZ | EDR Digital Archive |
| | RUDOLPH GADSON | EDR Digital Archive |
| 2017 | DALE WILLIAMS | Cole Information |
| 2014 | RUDOLPH GADSON | Cole Information |
| 2010 | MELVIN LANGLEY | Cole Information |
| 2005 | Langley M | Hill-Donnelly Information Services |
| | Williams Dale | Hill-Donnelly Information Services |
| | MELVIN LANGLEY | Cole Information |
| 2000 | OCCUPANT UNKNOWN | Cole Information |
| 1993 | DELVALLE Richard | New York Telephone |
| 1992 | DELVALLE, RICHARD | Cole Information |
| 1971 | ATTIS STEPHEN E JR | New York Telephone |
| | MORRIS TERENCE | New York Telephone |
| 1965 | TRUNCALI F J | New York Telephone Company |
| 1961 | MARTZ JOS M | New York Telephone |
| | TRUNCALI F J | New York Telephone |
| 1931 | Keller Walter | Manhattan and Bronx Directory Publishing Company Residential Directory |
| | Schineller Edw | Manhattan and Bronx Directory Publishing Company Residential Directory |

**200 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LUCECITA GUEVARA | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | FRANCISCO GUEVARA | EDR Digital Archive |
| 2017 | ROSALYNN MEJIA | Cole Information |
| 2010 | MARILYN MANSOUR | Cole Information |
| | FRANCISCO GUEVARA | Cole Information |
| | MARILYN COSTA | Cole Information |
| 2005 | FRANCISCO GUEVARA | Cole Information |
| | H Gallo S F Aa | Hill-Donnelly Information Services |
| 2000 | APARTMENTS | Cole Information |
| | MARIO CARO | Cole Information |
| | MAUREEN HUSTON | Cole Information |
| | PASQUAL GALLO | Cole Information |
| | ELLEN CHADWICK | Cole Information |
| 1993 | GALLO Pasquale | New York Telephone |
| 1992 | GALLO, PASQUALE | Cole Information |

**201 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2000 | MARIO CARO | Cole Information |
| | PASQUALE GALLO | Cole Information |

**202 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JULIO RODRIGUEZ | EDR Digital Archive |
| | JENNIE FLORES | EDR Digital Archive |
| | MICHELLE FLORES | EDR Digital Archive |
| 2017 | MICHELLE FLORES | Cole Information |
| 2014 | JENNIE FLORES | Cole Information |
| 2010 | JULIO RODRIGUEZ | Cole Information |
| 2005 | EDUARDO LOPEZ | Cole Information |
| | H Lopez Eduardo A | Hill-Donnelly Information Services |
| 2000 | EDUARDO LOPEZ | Cole Information |
| | EDUARDO LOPEZ | Cole Information |

# FINDINGS

**204 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ASHEEK ALLI | EDR Digital Archive |
| | ANTHONY NAPOLEONIS | EDR Digital Archive |
| | BIBI ALLI | EDR Digital Archive |
| | SHABANA ALLI-ARJUNE | EDR Digital Archive |
| | MARIA NAPOLEONIS | EDR Digital Archive |
| | RAMDEW ARJUNE | EDR Digital Archive |
| | LUZ NAPOLEONIS | EDR Digital Archive |
| 2017 | ASHEEK ALLI | Cole Information |
| | JAY JUNE | Cole Information |
| | SHABANA ARJUNE | Cole Information |
| | MIRIAM RODRIGUEZ | Cole Information |
| 2014 | ASHEEK ALLI | Cole Information |
| | JAY KHAN | Cole Information |
| | DAMARIS PEREZ | Cole Information |
| | JAY JUNE | Cole Information |
| | SHABANA ARJUNE | Cole Information |
| | MIRIAM RODRIGUEZ | Cole Information |
| 2010 | ASHEEK ALLI | Cole Information |
| | SHABANA ARJUNE | Cole Information |
| | RAVI RAMPERSAD | Cole Information |
| 2005 | VICTOR RODRIGUEZ | Cole Information |
| | H Rodriguez Victor A | Hill-Donnelly Information Services |
| 2000 | VICTOR RODRIGUEZ | Cole Information |
| | VICTOR RODRIGUEZ | Cole Information |
| 1976 | CODISPOTI GUIDO | New York Telephone Company |
| 1971 | CODISPOTI GUIDO | New York Telephone |

**230 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SHAYAN TAMAYO | EDR Digital Archive |
| | LINDA FRANCESCHINI | EDR Digital Archive |
| | NIKIELLA ESCAIERA | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | DAMARIS GARCIA | EDR Digital Archive |
| 2017 | SHAYAN TAMAYO | Cole Information |
| 2014 | SHAYAN TAMAYO | Cole Information |
| | DAMARIS GARCIA | Cole Information |
| 2010 | DAMARIS GARCIA | Cole Information |
| 2005 | M SANCHEZ | Cole Information |
| | GARCIA DEMARIS | Cole Information |
| | DAMARIS GARCIA | Cole Information |
| | 232 NCL | Hill-Donnelly Information Services |
| 2000 | OCCUPANT UNKNOWN | Cole Information |

**232 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | FREDDY ROSARIO | EDR Digital Archive |
| | ANDREW DIGIUGNO | EDR Digital Archive |
| | ANGELICA CASTANOS | EDR Digital Archive |
| 2017 | BERNETTA WALKER | Cole Information |
| | ANDREW DIGIUGNO | Cole Information |
| | ANGELICA CASTANOS | Cole Information |
| | JESSICA JOHNSON | Cole Information |
| | JAMES POLITE | Cole Information |
| 2014 | BERNETTA WALKER | Cole Information |
| | DIGIUGNO ANDREW | Cole Information |
| | ANDREW DIGIUGNO | Cole Information |
| | ANGELICA CASTANOS | Cole Information |
| | JAMES POLITE | Cole Information |
| | JESSICA JOHNSON | Cole Information |
| 2010 | ANDREW DIGIUGNO | Cole Information |
| | GIEZI DELEON | Cole Information |
| 2005 | ANDREW DIGIUGNO | Cole Information |
| | GIEZI DELEON | Cole Information |
| | AYANNA TREASURE | Cole Information |
| 2000 | OCCUPANT UNKNOWN | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1993 | PERSAUD Steve | New York Telephone |
| 1992 | PERSAUD, STEVE | Cole Information |

**236 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | HUMERA ALI | EDR Digital Archive |
| | BIANCA ELIO | EDR Digital Archive |
| | TABINDA RIASAT | EDR Digital Archive |
| | RAJA RIASAT | EDR Digital Archive |
| 2017 | HUMERA ALI | Cole Information |
| | VINCENT ELIO | Cole Information |
| | RAJA RIASAT | Cole Information |
| | SOBIA PARVEEN | Cole Information |
| 2014 | HUMERA ALI | Cole Information |
| | VINCENT ELIO | Cole Information |
| | CHRISTOPHER WHITE | Cole Information |
| | ANN FISS | Cole Information |
| 2010 | ANN FISS | Cole Information |
| | CHRISTOPHER WHITE | Cole Information |
| | ANNETTE DELARA | Cole Information |
| | VINCENT CRISCUOLO | Cole Information |
| 2005 | Buxton William R V | Hill-Donnelly Information Services |
| | Crisuolo L AA | Hill-Donnelly Information Services |
| 2000 | L CRISUOLO 98 863-8115 | Cole Information |
| | L CRISUOLO | Cole Information |

**238 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SABRINA CALDERON | EDR Digital Archive |
| | DANNY MENDEZ | EDR Digital Archive |
| | JAY DANNY | EDR Digital Archive |
| | ELIZABETH GORDILLS | EDR Digital Archive |
| 2017 | LOUIS CARDELLO | Cole Information |
| | SABRINA CALDERON | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | SABRINA CALDERON | Cole Information |
| | JAY DANNY | Cole Information |
| 2010 | DANNY MENDEZ | Cole Information |
| 2005 | DANNY MENDEZ | Cole Information |
| | ELIZABETH GORDILLS | Cole Information |
| | Gordills E v | Hill-Donnelly Information Services |
| 2000 | VICTOR BETANCOURT | Cole Information |
| | VICTOR BETANCOURT | Cole Information |
| 1993 | CAMPANELLI Joseph J | New York Telephone |
| | LEVANTIS V | New York Telephone |
| 1992 | CAMPANELLI, JOSEPH J | Cole Information |

**239 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2000 | OCCUPANT UNKNOWN | Cole Information |

**244 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SYLVIA TAKIS | EDR Digital Archive |
| | THOMAS TAKIS | EDR Digital Archive |
| | THEODORE TAKIS | EDR Digital Archive |
| 2017 | THOMAS TAKIS | Cole Information |
| 2014 | THOMAS TAKIS | Cole Information |
| 2010 | THOMAS TAKIS | Cole Information |
| 2005 | ASSET LINK LLC | Cole Information |
| | THOMAS TAKIS | Cole Information |
| | H Takides Ted A | Hill-Donnelly Information Services |
| | Takis Thomas AV | Hill-Donnelly Information Services |
| 2000 | TED TAKIDES | Cole Information |
| | THOMAS TAKIS | Cole Information |
| | TED TAKIDES | Cole Information |
| | THOMAS TAKIS | Cole Information |
| 1993 | TAKIS Thos | New York Telephone |
| | TAKO Michael % 364 9564 | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1993 | TRACZ John | New York Telephone |
| 1992 | TAKIS, THOS | Cole Information |
| | TRACZ, JOHN | Cole Information |
| 1971 | LAFFERTY RONALD | New York Telephone |
| 1965 | LAFFERTY LOUIS J | New York Telephone Company |
| 1961 | LAFFERTY LOUIS J | New York Telephone |

**245 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1931 | Farrell Patk | Manhattan and Bronx Directory Publishing Company Residential Directory |

**250 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOSEPH RAMOS | EDR Digital Archive |
| | ANTONIO RAMOS | EDR Digital Archive |
| 2017 | ANGEL WILSON | Cole Information |
| 2014 | DENISE GOMEZ-RAMOS | Cole Information |
| | RAMOS ANTONIO | Cole Information |
| | ANA VAZQUEZ | Cole Information |
| | ANDRE ROBINSON | Cole Information |
| | MARCUS ROSARIO | Cole Information |
| 2010 | ANTONIO RAMOS | Cole Information |
| | ANA VAZQUEZ | Cole Information |
| 2005 | ANTONIO RAMOS | Cole Information |
| | H Ramos A G AA | Hill-Donnelly Information Services |
| 2000 | W G HONEGGER JR | Cole Information |
| | W HONEGGER | Cole Information |
| 1993 | GUIDO A | New York Telephone |
| 1992 | GUIDO, A | Cole Information |

**252 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ANDREW MORALES | EDR Digital Archive |
| | GUY MULLER | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | ANTHONY GENADIO | EDR Digital Archive |
| | CAROL TRIASSI | EDR Digital Archive |
| | MINOO TAVAZOI | EDR Digital Archive |
| 2017 | VIRGINIA PEARCE | Cole Information |
| 2014 | PEARCE VIRGINIA | Cole Information |
| | VIRGINIA PEARCE | Cole Information |
| | ANTHONY GENADIO | Cole Information |
| | DOMENICA GUIDO | Cole Information |
| 2010 | DOMEN PEARCE | Cole Information |
| | ANTHONY GENADIO | Cole Information |
| | DOMENICA GUIDO | Cole Information |
| 2005 | DOMEN PEARCE | Cole Information |
| | h Pearce V AV | Hill-Donnelly Information Services |
| 2000 | CECILIA GONZALEZ | Cole Information |
| | CECILIA GONZALEZ | Cole Information |

**258 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MARIEL QUILES | EDR Digital Archive |
| | QUILES ELADIO | EDR Digital Archive |
| | BRANDON QUILES | EDR Digital Archive |
| | CHRISTOPHER QUILES | EDR Digital Archive |
| 2017 | ELADIO QUILES | Cole Information |
| 2014 | ELADIO QUILES | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| 2005 | HIRAM COLON | Cole Information |
| | H Colon H A | Hill-Donnelly Information Services |
| 2000 | HIRAM COLON | Cole Information |
| 1993 | RASMUSSEN L M | New York Telephone |
| 1992 | RASMUSSEN, L M | Cole Information |
| 1971 | PFUND WM | New York Telephone |
| 1965 | PFUND WM | New York Telephone Company |
| 1961 | PFUND WM | New York Telephone |

# FINDINGS

**264 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LYNN DEVINE | EDR Digital Archive |
| | DENNIS DEVINE | EDR Digital Archive |
| 2014 | DEVINE DENNIS | Cole Information |
| 2010 | DENNIS DEVINE | Cole Information |
| 2005 | KAREN BASMUSSEN | Cole Information |
| | DENNIS DEVINE | Cole Information |
| | KAREN RASMUSSEN | Cole Information |
| | Devine D A | Hill-Donnelly Information Services |
| 2000 | D DEVINE | Cole Information |
| | DEVINE DENNIS | Cole Information |
| | DENNIS DEVINE | Cole Information |
| 1993 | DEVINE D | New York Telephone |
| 1992 | DEVINE, D | Cole Information |
| 1965 | PFUND ERWIN | New York Telephone Company |
| 1961 | PFUND ERWIN | New York Telephone |

**266 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JULES HAMILTON | EDR Digital Archive |
| | LOREEN WALKER | EDR Digital Archive |
| | MARIE HAMILTON | EDR Digital Archive |
| | KYLE HAMILTON | EDR Digital Archive |
| 2017 | MARIE BROWN-HAMILTON | Cole Information |
| | LOREEN WALKER | Cole Information |
| 2014 | JULES HAMILTON | Cole Information |
| | ICILDA HISLOP | Cole Information |
| | LOREEN WALKER | Cole Information |
| 2010 | VICTOR GONZALEZ | Cole Information |
| | JULES HAMILTON | Cole Information |
| | I HISLOP | Cole Information |
| | LOREEN WALKER | Cole Information |
| | MARIE BROWN | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2005 | LOREEN WALKER | Cole Information |
| | Walker Loreen | Hill-Donnelly Information Services |
| 2000 | LAURIE STEWART | Cole Information |
| | LAURIE STEWART | Cole Information |
| 1971 | DUFFY M E | New York Telephone |
| 1965 | FALCIANO THOS L | New York Telephone Company |
| | GAMBOL ROY | New York Telephone Company |
| 1961 | FALCIANO VICTORIA MRS | New York Telephone |
| 1931 | Camerino Wm | Manhattan and Bronx Directory Publishing Company Residential Directory |
| 1927 | Camerino E L r | New York Telephone |

**268 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MARCO LOPEZ | EDR Digital Archive |
| | JOSEPH HERNANDEZ | EDR Digital Archive |
| | MARTHA LOPEZ | EDR Digital Archive |
| | CHRISTOPHER LOPEZ | EDR Digital Archive |
| | KARLA LAGUNA | EDR Digital Archive |
| | LIZZETTE RAMOS | EDR Digital Archive |
| 2017 | MARCO LOPEZ | Cole Information |
| 2014 | MARCO LOPEZ | Cole Information |
| | VICTOR CRAIG | Cole Information |
| | KARLA LAGUNA | Cole Information |
| 2010 | GABRIEL DELGADO | Cole Information |
| | MARCO LOPEZ | Cole Information |
| | KARLA LAGUNA | Cole Information |
| 2005 | RAFAEL CASIANO | Cole Information |
| | MADELINE RIOPEDRE | Cole Information |
| | NCL | Hill-Donnelly Information Services |
| 2000 | H MERCADO JR | Cole Information |
| | H MERCADO | Cole Information |
| | L RAMOS | Cole Information |

# FINDINGS

**270 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RAYMOND CLEMENTZ | EDR Digital Archive |
| | FRANK MATOS | EDR Digital Archive |
| 2017 | RAYMOND CLEMENTZ | Cole Information |
| 2014 | RAYMOND CLEMENTZ | Cole Information |
| 2010 | CARLOS GONZALEZ | Cole Information |
| | FRANK MATOS | Cole Information |
| 2005 | OLGA SHAVEZ | Cole Information |
| | LAWRENCE MATOS | Cole Information |
| | h Gonzalez Carlos v | Hill-Donnelly Information Services |
| 2000 | OLGA SHAVEZ | Cole Information |
| | PETER TORRES | Cole Information |
| | PETER TORRES | Cole Information |
| | OLGA SHAVEZ | Cole Information |

**272 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | DONALD SAVINO | EDR Digital Archive |
| | GRETA CARLUCCI | EDR Digital Archive |
| 2017 | DONALD SAVINO | Cole Information |
| 2014 | DONALD SAVINO | Cole Information |
| 2010 | DONALD SAVINO | Cole Information |
| 2005 | JOHN FRANZ | Cole Information |
| | h Savino Donald AO | Hill-Donnelly Information Services |
| 2000 | GRETA CARLUCCI | Cole Information |
| | GRETA CARLUCCI | Cole Information |
| 1993 | SAVINO Donald | New York Telephone |
| 1992 | SAVINO, DONALD | Cole Information |
| 1965 | HAYES JOS M | New York Telephone Company |
| 1961 | COMERFORD THOS J JR | New York Telephone |

**274 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ENILZA BATISTA | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | RICARDO COLON | EDR Digital Archive |
| | MARTHA LOPEZ | EDR Digital Archive |
| | MARCO LOPEZ | EDR Digital Archive |
| | CHRISTINA LAPIERRE | EDR Digital Archive |
| 2017 | RICARDO COLON | Cole Information |
| 2014 | MARCO LOPEZ | Cole Information |
| 2010 | MARCO LOPEZ | Cole Information |
| 2005 | MARCO LOPEZ | Cole Information |
| | Lopez M L | Hill-Donnelly Information Services |
| 1993 | FERRARI S | New York Telephone |
| 1992 | FERRARI, S | Cole Information |
| 1971 | FERRARI STELLA MRS | New York Telephone |
| 1965 | FERRARI STELLA MRS | New York Telephone Company |
| 1961 | BRAZAITIS PETER J | New York Telephone |
| | FERRARI STELLA MRS | New York Telephone |

**276 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHRISTINA ANNUNZIATA | EDR Digital Archive |
| | FRANCINE PESCE | EDR Digital Archive |
| | DAMARIS RAMIREZ | EDR Digital Archive |
| | FRANCINE ANNUNZIATA | EDR Digital Archive |
| | DOMINIC ANNUNZIATA | EDR Digital Archive |
| 2017 | DOMINIC ANNUNZIATA | Cole Information |
| 2014 | FRAN ANNUNZIATA | Cole Information |
| 2010 | FRAN ANNUNZIATA | Cole Information |
| 2005 | Annunziata Fran A | Hill-Donnelly Information Services |
| | Pesce Gerard 3 AA | Hill-Donnelly Information Services |
| | FRAN ANNUNZIATA | Cole Information |
| 2000 | EVELYN PESCE | Cole Information |
| | FRAN ANNUNZIATA | Cole Information |
| 1995 | A-STEVENS SEWER & DRAIN CLNG | Cole Information |
| 1993 | PESCE GERARD J | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1992 | A-STEVENS SEWER & DRAIN CLNG | Cole Information |
| | PESCE, GERARD J | Cole Information |
| 1983 | PESCE GERARD J | New York Telephone |
| 1976 | PESCE GERARD J | New York Telephone Company |
| 1971 | PESCE GERARD J | New York Telephone |
| 1965 | PESCE GERARD J | New York Telephone Company |
| 1961 | PESCE GERARD J | New York Telephone |

**278 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | HAWA LAMIN | EDR Digital Archive |
| | MARIE HILL | EDR Digital Archive |
| | MARK HILL | EDR Digital Archive |
| | MAGLENSIE MOTLEY | EDR Digital Archive |
| | MIYA HILL | EDR Digital Archive |
| 2017 | MIYA HILL | Cole Information |
| 2014 | MIYA HILL | Cole Information |
| 2010 | MARIE SAINTHILL | Cole Information |
| 2005 | St Hill Marie AA | Hill-Donnelly Information Services |
| | 1562 WHITE PLAINES RD INC | Cole Information |
| | JAMES HILL | Cole Information |
| 2000 | JAMES HILL | Cole Information |
| | JAMES HILL | Cole Information |
| 1992 | MALTESE, IDA | Cole Information |
| 1965 | HICKSON JONN | New York Telephone Company |
| 1961 | HICKSON JOHN | New York Telephone |

## HARDING AVE

**2576 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MARY SAVAGE | EDR Digital Archive |
| | DAVID SAVAGE | EDR Digital Archive |
| | MARGARET DALY | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | DAVID SAVAGE | Cole Information |
| 2014 | DAVID SAVAGE | Cole Information |
| 2010 | DAVID SAVAGE | Cole Information |
| 2000 | MARCIA MEYER | Cole Information |
| | DAVID SAVAGE | Cole Information |
| 1992 | MEYER, RICHD C | Cole Information |
| | LEGATO, JOSEPH | Cole Information |

**2577 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | BARBARA NOVELLINO | EDR Digital Archive |
| | PATRICIA JONAP | EDR Digital Archive |
| 2017 | BARBARA NOVELLINO | Cole Information |
| 2014 | RICHARD ANDERSON | Cole Information |
| 2010 | RICHARD ANDERSON | Cole Information |
| 2005 | RICHARD ANDERSON | Cole Information |
| 2000 | RICHARD ANDERSON | Cole Information |
| 1992 | ANDERSON, GUSTAVE M | Cole Information |

**2578 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | FEONIA JAMES-JONES | EDR Digital Archive |
| | JAMES-JONES FEONIA | EDR Digital Archive |
| 2017 | MARLON JONES | Cole Information |
| 2014 | MARLON JONES | Cole Information |
| 2005 | WILLIAM ORTIZ | Cole Information |
| 2000 | WILLIAM ORTIZ | Cole Information |

**2579 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ELSA SEGUNDO | EDR Digital Archive |
| | CARLOS AQUINO | EDR Digital Archive |
| | CHRISTOPHER BARBOSA | EDR Digital Archive |
| | ANGELA AQUINO | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | CHRIS BARBOSA | Cole Information |
| 2014 | ELSA SEGUNDO | Cole Information |
| | EDITH LOPEZ | Cole Information |
| 2010 | ELSA SEGUNDO | Cole Information |
| | EDITH LOPEZ | Cole Information |
| 2005 | ANTHONY DELGADO | Cole Information |
| | ANTHONY DIAZ | Cole Information |
| 2000 | MARY LILLIS | Cole Information |

**2580 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | VICTORIA ALVARADO | EDR Digital Archive |
| | LINDA ALVARADO | EDR Digital Archive |
| | JAMES ALVARADO | EDR Digital Archive |
| 2017 | JAMES ALVARADO | Cole Information |
| 2014 | JAMES ALVARADO | Cole Information |
| 2010 | JAMES ALVARADO | Cole Information |
| 2005 | JAMES ALVARADO | Cole Information |
| 2000 | CAROL HILL | Cole Information |

**2581 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | BRUNILDA FALCON | EDR Digital Archive |
| 2017 | BRUNILDA FALCON | Cole Information |
| 2014 | ANTHONY MONITTO | Cole Information |
| 2010 | ANTHONY MONITTO | Cole Information |
| 2005 | ANTHONY MONITTO | Cole Information |
| 2000 | MARIA MONITTO | Cole Information |

**2582 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ERIC COLEMAN | EDR Digital Archive |
| 2017 | COLEMAN ERIC | Cole Information |
| 2014 | OCCUPANT UNKNOWN | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| 2000 | THOMAS DOERR | Cole Information |
| 1992 | DOERR, THOMAS G | Cole Information |

**2583 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | EDMUND MCCORMACK | EDR Digital Archive |
| | FRANCIS DOYLE | EDR Digital Archive |
| | NATALIE ROMAN | EDR Digital Archive |
| 2017 | DOMINGO TORRES | Cole Information |
| 2014 | DOYLE FRANCIS | Cole Information |
| 2010 | FRANCIS DOYLE | Cole Information |
| 2005 | FRANCIS DOYLE | Cole Information |
| 2000 | FRANCIS DOYLE | Cole Information |
| 1992 | LOMBARDO, PAUL | Cole Information |

**2584 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CRYSTAL LOPEZ | EDR Digital Archive |
| | CHRISTOPHER GONZALEZ | EDR Digital Archive |
| | OMAR CRUZ | EDR Digital Archive |
| 2017 | MARIVEL SALCEDO | Cole Information |
| 2014 | SUZANNE GONZALEZ | Cole Information |
| 2010 | SUZANNE GONZALEZ | Cole Information |
| 2005 | BELEN GONZALEZ | Cole Information |
| 2000 | MARIO COLON | Cole Information |

**2585 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CLARA ROSADO | EDR Digital Archive |
| | DIANA CLEMENTI | EDR Digital Archive |
| | FAUSTO HENRIQUEZ | EDR Digital Archive |
| 2014 | DIANA CLEMENTI | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | DIANA GRIFFORD | Cole Information |
| 2010 | PATRICK BIASE | Cole Information |
| | DIANA CLEMENTI | Cole Information |
| | DIANA GRIFFORD | Cole Information |
| 2005 | DAVID PETILLO | Cole Information |
| | DIANA GIFFORD | Cole Information |
| | DIANA CLEMENTI | Cole Information |
| | DIANA GRIFFORD | Cole Information |
| 1992 | GIFFORD, MICHAEL | Cole Information |

**2586 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | STEVEN MUHAMMAD | EDR Digital Archive |
| | GISELLA QUIJIJE | EDR Digital Archive |
| | RITA MUHAMMAD | EDR Digital Archive |
| 2017 | STEVEN MUHAMMAD | Cole Information |
| | GISELLA QUIJIJE | Cole Information |
| | MARIA SERRANO | Cole Information |

**2587 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LUCIANO PEDRO | EDR Digital Archive |
| | JOSEFINA MOLINA | EDR Digital Archive |
| | SILVERIO APREA | EDR Digital Archive |
| 2017 | AGUSTINO APREA | Cole Information |
| | JOSEFINA MOLINA | Cole Information |
| 2014 | SILVERIO APREA | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| | SILVERIO APREA | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | MICHAEL KOSINENKO | Cole Information |
| 2000 | A APREA | Cole Information |
| 1992 | KOSINENKO, F | Cole Information |
| | APREA, AGUSTINO | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 1992 | APREA, SILVERIO | Cole Information |

**2589 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RAYMOND MIURA | EDR Digital Archive |
| | MAUREEN GRECO | EDR Digital Archive |
| | ANTHONY GRECO | EDR Digital Archive |
| | WILLIAM GRECO | EDR Digital Archive |
| 2017 | RAY MIURA | Cole Information |
| | WILLIAM GRECO | Cole Information |
| 2014 | WILLIAM GRECO | Cole Information |
| 2010 | PATRICIA GRECO | Cole Information |
| | MAUREEN GREGO | Cole Information |
| | SCOTT BABIAK | Cole Information |
| 2005 | PATRICIA GRECO | Cole Information |
| | RICHARD SCHMIDT | Cole Information |
| | SCOTT BABIAK | Cole Information |

## HOSMAR AVE

**277 HOSMAR AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | DE ROSE JOHN | New York Telephone |

## HOSMER AVE

**237 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | PICCININNI MARIE | New York Telephone |
| 1983 | PICCININNI MARIE | New York Telephone |
| 1976 | FERRARI V | New York Telephone Company |
| | PICCININNI MARIE | New York Telephone Company |
| 1971 | JUSITS JOS | New York Telephone |
| 1965 | JUSITS JOS | New York Telephone Company |

# FINDINGS

**245 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | GERRETS HENRY C | New York Telephone |
| 1965 | GERRETS HENRY C | New York Telephone Company |

**246 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1993 | MEURER MARTIN | New York Telephone |
| 1983 | CARRIQUE CONSTANTINO | New York Telephone |
| | MEURER MARTIN | New York Telephone |
| 1976 | MEURER MARTIN | New York Telephone Company |
| 1971 | MEURER MARTIN | New York Telephone |
| 1965 | MEURER MARTIN | New York Telephone Company |
| | ROJAS E L | New York Telephone Company |

**277 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1993 | DEROSE JOHN | New York Telephone |
| 1976 | BAUER ANITA M | New York Telephone Company |
| 1971 | BAUER ANITA M | New York Telephone |
| 1965 | BAUER ANITA M | New York Telephone Company |

**278 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1976 | DE ROSE JOHN | New York Telephone Company |
| 1971 | GRIFFIN GERALD | New York Telephone |
| 1965 | HORAN EUGENE V | New York Telephone Company |

## HOSMER AVE

**237 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 2005 | h Piccininni Marie AA | Hill-Donnelly Information Services |
| 2000 | DOLORES CORRADO | Cole Information |
| 1993 | PICCININNI Marie | New York Telephone |

# FINDINGS

**240 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ANTONIO GARCIA | EDR Digital Archive |
| | MARIA TORRES | EDR Digital Archive |
| | ERIC GARCIA | EDR Digital Archive |
| 2017 | ANTONIO GARCIA | Cole Information |
| | NELIDA RUIZ | Cole Information |
| | MARIA TORRES | Cole Information |
| 2014 | TORRES MARIA | Cole Information |
| | EDDIE ARENAS | Cole Information |
| | MARIA TORRES | Cole Information |
| | ANGEL CHAVEZ | Cole Information |
| | MARIE SMITH | Cole Information |
| 2010 | ORNAN CORCINO | Cole Information |
| | MARIA TORRES | Cole Information |
| 2005 | Corcino Oman v YO | Hill-Donnelly Information Services |

**245 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOACHIM RILEY | EDR Digital Archive |
| | ELBA RILEY | EDR Digital Archive |
| 2014 | JOSEPH RILEY | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| 2005 | H Coppinger R J Sr A | Hill-Donnelly Information Services |
| 2000 | RAYMOND COPPINGER | Cole Information |

**246 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2014 | LINDA CICALE | Cole Information |
| 2010 | LINDA CICALE | Cole Information |
| 2005 | NCL | Hill-Donnelly Information Services |
| 2000 | LUCIEN CHOUINARD | Cole Information |
| 1993 | MEURER Martin | New York Telephone |
| 1992 | MEURER, MARTIN | Cole Information |
| 1940 | Meurer Martin | New York Telephone |

# FINDINGS

**248 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | WEI LIN | EDR Digital Archive |
| | ASHLEY PAGE | EDR Digital Archive |
| | SABRINA PADILLA | EDR Digital Archive |
| 2017 | CHRISITNE GIFF | Cole Information |
| | NORBERTO HIERRO | Cole Information |
| | ZHOU LIN | Cole Information |
| 2014 | CHRISITNE GIFF | Cole Information |
| | JING LIN | Cole Information |
| 2010 | CHEN LEI | Cole Information |
| | ANDREW FELDMAN | Cole Information |
| | JING LIN | Cole Information |
| 2005 | JING LIN | Cole Information |

**250 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | BELKIS PEREZ | EDR Digital Archive |
| | DALILA PEREZ | EDR Digital Archive |
| 2017 | BELKIS PEREZ | Cole Information |
| 2014 | BIANCA MALDONADO | Cole Information |
| | BELKIS PEREZ | Cole Information |
| 2010 | BELKIS PEREZ | Cole Information |
| 2005 | BELKIS PEREZ | Cole Information |

**251 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SAJIT TAXI INC | EDR Digital Archive |
| | SYED SHAMSUZZAMAN | EDR Digital Archive |
| | FARAH SHAMSUZZAMAN | EDR Digital Archive |
| | ANGELA SALAZAR | EDR Digital Archive |
| 2017 | ANGELA SALAZAR | Cole Information |
| 2014 | SYED SHAMSUZZAMAN | Cole Information |
| | ANGELA SALAZAR | Cole Information |
| 2010 | ANGELA DURAN | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | SYED SHAMSUZZAMAN | Cole Information |
| 2005 | JASHIM WORLDWIDE | Cole Information |
| | SYED SHAMSUZZAMAN | Cole Information |
| | JASHIM AHMED | Cole Information |
| | Ahmed Jashim v | Hill-Donnelly Information Services |
| | Jashim Waorldw ide | Hill-Donnelly Information Services |
| | Shamsuzzaman Syed A | Hill-Donnelly Information Services |
| 2000 | SYED SHAMSUZZAMAN | Cole Information |

**252 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ATOLIA MCFARLANE | EDR Digital Archive |
| | MIRTHA MALDONADO | EDR Digital Archive |
| | MEI ZHU | EDR Digital Archive |
| | FANG MEI | EDR Digital Archive |
| | LEI CHEN | EDR Digital Archive |
| 2017 | CUIFEN DONG | Cole Information |
| 2014 | KATHERINE THATCHER | Cole Information |
| 2010 | FANG MEI | Cole Information |
| 2005 | MEI ZHU | Cole Information |
| | h Zhu Mel Fang v | Hill-Donnelly Information Services |

**253 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | DEBORAH FELDMAN | EDR Digital Archive |
| | CHENG CHUEN | EDR Digital Archive |
| | PARISSA SUAREZ | EDR Digital Archive |
| | JOHN CHENG | EDR Digital Archive |
| 2017 | MELISSA GONZALEZ | Cole Information |
| | PARISSA SUAREZ | Cole Information |
| 2014 | MELISSA GONZALEZ | Cole Information |
| | LIEN NGUYEN | Cole Information |
| | CAROLINE BRANCATO | Cole Information |
| | ALFRED ROMAN | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | CAROLINE BRANCATO | Cole Information |
| | MICHAEL HADSHIAN | Cole Information |
| | BRUCE FELDMAN | Cole Information |
| 2005 | CAROLINE BRANCATO | Cole Information |
| | C BRANCTO | Cole Information |
| | ABE MASSA | Cole Information |
| | h Massa Barbara A A | Hill-Donnelly Information Services |
| 2000 | CHRIS VERINI | Cole Information |
| | MICHAEL HADSHIAN | Cole Information |

**254 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | VICTOR GARCIA | EDR Digital Archive |
| | IRENE YUSIM | EDR Digital Archive |
| | STACY GARCIA | EDR Digital Archive |
| | KAREN CHEDDESINGH | EDR Digital Archive |
| | SALVATORE CAPALBO | EDR Digital Archive |
| | MERCEDEZ WILLIAMS | EDR Digital Archive |
| | DELANO WILLIAMS | EDR Digital Archive |
| | FELICIANO RAMIREZ | EDR Digital Archive |
| 2017 | LINDA GARCIA | Cole Information |
| | ROBERT GRIFFIN | Cole Information |
| 2014 | ROBERT GRIFFIN | Cole Information |
| | FELICIANO RAMIREZ | Cole Information |
| 2010 | IRENE YUSIM | Cole Information |
| | ANGEL SOSA | Cole Information |
| 2005 | IRENE YUSIM | Cole Information |
| | SALVATORE CAPALBO | Cole Information |
| | STEVEN ZABSKI | Cole Information |
| | NCL | Hill-Donnelly Information Services |

**255 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | HYACINTH SIMPSON | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | ERROL ANGELL | EDR Digital Archive |
| | CHRISTINA DECLET | EDR Digital Archive |
| | RICHARD REID | EDR Digital Archive |
| 2017 | HYACINTH SIMPSON | Cole Information |
| | JOANNE RIVERA | Cole Information |
| | CHRISTINA DECLET | Cole Information |
| | DOMINIQUE ANGELL | Cole Information |
| 2014 | HYACINTH SIMPSON | Cole Information |
| | DIEGO DEJESUS | Cole Information |
| | PEDRO MARTINEZ | Cole Information |
| | CHRISTINA DECLET | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| 2010 | AHMED MOSTAQUE | Cole Information |
| | HYACINTH SIMPSON | Cole Information |
| | DIEGO DEJESUS | Cole Information |
| | ERNIE OBRIEN | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| | SIMPSON HYACINTH | Cole Information |
| 2005 | AHMED MOSTAQUE | Cole Information |
| | ISABEL MENDEZ | Cole Information |
| | MOHAMMAD AHMED | Cole Information |
| | MASTAQUE AHRIED | Cole Information |
| | Rugs D vo | Hill-Donnelly Information Services |

**256 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ASANTE BRIGHT | EDR Digital Archive |
| | MICHAEL BRIGHT-ASANT | EDR Digital Archive |
| | MARQUISHA MCBEAN | EDR Digital Archive |
| | PATRICK HILL | EDR Digital Archive |
| 2017 | MICHAEL ASANTE | Cole Information |
| | PATRICK HILL | Cole Information |
| 2014 | MICHAEL ASANTE | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2014 | ANGELA JARVIS | Cole Information |
| 2010 | SHAWN JARVIS | Cole Information |
| 2005 | WHEELS PLUS INC | Cole Information |
| | RICKA BLAKE | Cole Information |
| | SHAWN JARVIS | Cole Information |
| | ANGELA SORIANO | Cole Information |
| | Wheels Plus Inc 1 R | Hill-Donnelly Information Services |

**257 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ECO HOME IMPROVEMENT LLC | EDR Digital Archive |
| | JASMIN CLARKE | EDR Digital Archive |
| | DAVID CLARKE | EDR Digital Archive |
| 2017 | BRIAN GRANADOS | Cole Information |
| | CLARKE JASMIN | Cole Information |
| | ANTHONY COLASANTI | Cole Information |
| | RODNEY ROJAS | Cole Information |
| | DAVID HOWARD | Cole Information |
| 2014 | JASMINE GRANADOS | Cole Information |
| | CLARKE JASMIN | Cole Information |
| 2010 | JASMINE GRANADOS | Cole Information |
| | DAVID HOWARD | Cole Information |
| 2005 | JASMIN HOWARD | Cole Information |
| | MICHELLE GOODE | Cole Information |
| | JASMIN CLARKE | Cole Information |
| | NADINE DECOSTA | Cole Information |
| | H Clarke Jasmin v& | Hill-Donnelly Information Services |
| 2000 | DAVID CLARKE | Cole Information |

**258 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | GARCIA ZAIDA | EDR Digital Archive |
| | WILLIAM ROMAN | EDR Digital Archive |
| | LUIS SANTIAGO | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | LUIS SANTIAGO | Cole Information |
| 2014 | GARCIA ZAIDA | Cole Information |
| | JASMIN GALLOWAY | Cole Information |
| | ZAIDA GARCIA | Cole Information |
| | LUIS SANTIAGO | Cole Information |
| 2010 | GARCIA ZAIDA | Cole Information |
| | ZAIDA GARCIA | Cole Information |
| | LUIS SANTIAGO | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| 2005 | GARCIA ZAIDA | Cole Information |
| | JASMIN GALLOWAY | Cole Information |
| | ZAIDA GARCIA | Cole Information |
| | LUIS SANTIAGO | Cole Information |
| | SOULEYMANE TRAORE | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| | H Garcia ZY A | Hill-Donnelly Information Services |

**259 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MILADY LOPEZ | EDR Digital Archive |
| | RUBEN RAHMAN | EDR Digital Archive |
| | FERDOUSI RAHMAN | EDR Digital Archive |
| | IVAN RAHMAN | EDR Digital Archive |
| | ANWARUL AZIM | EDR Digital Archive |
| | MATIUR RAHMAN | EDR Digital Archive |
| 2017 | VICTOR DICKSON | Cole Information |
| | MILADY LOPEZ | Cole Information |
| | TAMARA VASQUEZ | Cole Information |
| 2014 | VICTOR DICKSON | Cole Information |
| | MILADY LOPEZ | Cole Information |
| | QAZI AHMED | Cole Information |
| 2010 | MILADY LOPEZ | Cole Information |
| | ANWARA BEGUM | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | SAMIRA AHMED | Cole Information |
| 2005 | MILADY LOPEZ | Cole Information |
| | ANWARA BEGUM | Cole Information |
| | ANWARUL AZIM | Cole Information |
| | RAHMAN MATIUR | Cole Information |
| | Azim Anwarul v | Hill-Donnelly Information Services |
| | Begum Anwara v | Hill-Donnelly Information Services |
| | Lopez Milady v | Hill-Donnelly Information Services |

**260 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RONALD MANNIELLO | EDR Digital Archive |
| | LISA CORREALE | EDR Digital Archive |
| | ANTHONY CORREALE | EDR Digital Archive |
| | CAROLINA MOREIRA | EDR Digital Archive |
| | TONI RAGUSA | EDR Digital Archive |
| 2017 | RONALD MANNIELLO | Cole Information |
| | JOSEPH RAGUSA | Cole Information |
| | ANTHONY CORREALE | Cole Information |
| | CAROLINA MOREIRA | Cole Information |
| 2014 | RAGUSA JOSEPH | Cole Information |
| | JOSEPH RAGUSA | Cole Information |
| | ANTHONY CORREALE | Cole Information |
| | CAROLINA MOREIRA | Cole Information |
| 2010 | JOSEPH RAGUSA | Cole Information |
| 2005 | JOSEPH RAGUSA | Cole Information |
| | Ragusa Joseph | Hill-Donnelly Information Services |
| | H Ragusa Joseph A | Hill-Donnelly Information Services |

**261 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | LOURDES DIAZ | Cole Information |
| 2014 | CARLOS VELEZ | Cole Information |
| | F MODESTO | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2014 | MODESTO MERCADO | Cole Information |
| 2010 | CARLOS VELEZ | Cole Information |
| | MODESTO MERCADO | Cole Information |
| 2005 | MODESTO MERCADO | Cole Information |
| 2000 | GILBERT FLORES | Cole Information |

**262 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JESSICA MALDONADO | EDR Digital Archive |
| | DARLENE HUERTAS | EDR Digital Archive |
| | DAYMOND NOBLE | EDR Digital Archive |
| | RAMON MALDONADO | EDR Digital Archive |
| | CARMEN HUERTAS | EDR Digital Archive |
| | JUAN DEJESUS | EDR Digital Archive |
| 2017 | DARLENE HUERTAS | Cole Information |
| | DAYMOND NOBLE | Cole Information |
| | RAYMON MALDONADO | Cole Information |
| | JUAN DEJESUS | Cole Information |
| 2014 | DARLENE HUERTAS | Cole Information |
| | DAYMOND NOBLE | Cole Information |
| | RAYMON MALDONADO | Cole Information |
| 2010 | ERIC COLEMAN | Cole Information |
| 2005 | DARLENE HUERTAS | Cole Information |
| | h Ma Tdonado Raymon v | Hill-Donnelly Information Services |

**263 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | YOLANDA MENDEZ | EDR Digital Archive |
| | MELISSA MENDEZ | EDR Digital Archive |
| 2014 | MARIANO GONZALEZ | Cole Information |
| 2005 | MARGOT GONZALEZ | Cole Information |
| | MYRNA MENDEZ | Cole Information |
| 2000 | MELISSA MENDEZ | Cole Information |

# FINDINGS

**264 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | EDWIN HERNANDEZ | EDR Digital Archive |
| 2017 | BASSEY ASANG | Cole Information |
| | JONAH UBONG | Cole Information |
| | UBONG JONAH | Cole Information |
| | LETICIA SANCHEZ | Cole Information |
| 2014 | IVETTE SANTIAGO | Cole Information |
| | MARCOS SANCHEZ | Cole Information |
| | ROBERT SERRONO | Cole Information |
| | GEORGE SINGELAKIS | Cole Information |
| 2010 | MARROS SANCHEZ | Cole Information |
| 2005 | MARROS SANCHEZ | Cole Information |
| | H Sanchez Leticia A | Hill-Donnelly Information Services |

**265 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | DESIREE CHAVIER | EDR Digital Archive |
| | DENISE CHAVIER | EDR Digital Archive |
| | CONSTANCE HILL | EDR Digital Archive |
| | MARIA CHAVIER | EDR Digital Archive |
| 2017 | DENISE CHAVIER | Cole Information |
| 2014 | DENISE CHAVIER | Cole Information |
| 2010 | MARIA CHAVIER | Cole Information |
| 2005 | MARIA CHAVIER | Cole Information |
| | Chavier D A | Hill-Donnelly Information Services |

**266 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ALBERTO MALDONADO | EDR Digital Archive |
| | CHAVEZ GILBERT | EDR Digital Archive |
| | ROSE CHAVEZ | EDR Digital Archive |
| | JADELING CHAVEZ | EDR Digital Archive |
| | CESAR TELLO | EDR Digital Archive |
| | MARLINE CHAVEZ | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | CHRISTIAN VALERO | Cole Information |
| | GILBERT CHAVEZ | Cole Information |
| | FATEMA ZOHORA | Cole Information |
| 2014 | ELBA GARNIER | Cole Information |
| | ELBA MARRERO | Cole Information |
| | GILBERT CHAVEZ | Cole Information |
| | CHAVEZ GILBERT | Cole Information |
| | GILBERTO CHAVEZ | Cole Information |
| | JACQUELINE DUGGINS | Cole Information |
| | YESENIA RIVERA | Cole Information |
| | FATEMA ZOHORA | Cole Information |
| 2010 | GILBERT CHAVEZ | Cole Information |
| | CHAVEZ GILBERT | Cole Information |
| | JACQUELINE DUGGINS | Cole Information |
| | FATEMA ZOHORA | Cole Information |
| | YESENIA RIVERA | Cole Information |
| 2005 | GILBERT CHAVEZ | Cole Information |
| | CHAVEZ GILBERT | Cole Information |
| | YESENIA RIVERA | Cole Information |
| | Rivera Yesenia YO | Hill-Donnelly Information Services |

**267 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | PALOMA FIGUEROA | EDR Digital Archive |
| | BIANCA FIGUEROA | EDR Digital Archive |
| | REYNALDO CHEVER | EDR Digital Archive |
| | REY CHEVERE | EDR Digital Archive |
| | CARLOTA CHEVERE | EDR Digital Archive |
| 2017 | JAIDEN MOORE | Cole Information |
| 2014 | CHEVERE REYNALDO | Cole Information |
| | REYNALDO CHEVERE | Cole Information |
| 2010 | BIANCA FIGUEROA | Cole Information |
| | REYNALDO CHEVERE | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2005 | ROBERT SAVAGE | Cole Information |
| | LEANDRO VELEZ | Cole Information |
| | DIANA DIAZ | Cole Information |
| | REYNALDO CHEVERE | Cole Information |
| | NCL | Hill-Donnelly Information Services |
| 2000 | NELLIE MOLINARES | Cole Information |

**268 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | KHAN WILLIAMS | EDR Digital Archive |
| | DAVID AFRAM | EDR Digital Archive |
| | DOROTHY ABBAN | EDR Digital Archive |
| | GODFRED AFRAM | EDR Digital Archive |
| | ALTHEA YOUNG | EDR Digital Archive |
| | JOSE JARAMILLO | EDR Digital Archive |
| 2017 | PHILLIE DIAZ | Cole Information |
| | LINDA MOLINA | Cole Information |
| | ALTHEA YOUNG | Cole Information |
| | CHEYENNE AFRAM | Cole Information |
| 2014 | ANGELES RODRIGUEZ | Cole Information |
| | DANNY MALDONATO | Cole Information |
| | PHILLIE DIAZ | Cole Information |
| | LINDA MOLINA | Cole Information |
| | DOROTHY ABBAN | Cole Information |
| | ALTHEA YOUNG | Cole Information |
| | C BENNETT | Cole Information |
| | FERNANDO ROMERO | Cole Information |
| 2010 | DANNY MALDONATO | Cole Information |
| | LINDA MOLINA | Cole Information |
| | JUAN LI | Cole Information |
| | GODFRED AFRAM | Cole Information |
| | INDIRA RODRIGUEZ | Cole Information |
| | FERNANDO ROMERO | Cole Information |

# FINDINGS

**269 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CARMEN TORRES | EDR Digital Archive |
| | DANIEL NIEVES | EDR Digital Archive |
| | JONATHAN NIEVES | EDR Digital Archive |
| 2017 | CARMEN TORRES | Cole Information |
| | NIEVES EUFEMIO | Cole Information |
| | JORGE FLORES | Cole Information |
| | JULIA SERRANO | Cole Information |
| 2014 | ROSA FLORES | Cole Information |
| | JUAN NUNEZ | Cole Information |
| | CARMEN TORRES | Cole Information |
| | JULIA SERRANO | Cole Information |
| 2010 | EUFEMIO NIEVES | Cole Information |
| | MELISSA BONTZOLAKES | Cole Information |
| | LIONEL HAMILTON | Cole Information |
| | ROBERT DELGADO | Cole Information |
| 2005 | YOLANDA MENDEZ | Cole Information |
| | EUFEMIO NIEVES | Cole Information |
| | MELISSA BONTZOLAKES | Cole Information |
| | ANTONIO ARROYO | Cole Information |
| | Bontzolakes Melissa v | Hill-Donnelly Information Services |
| | Nieves Eufemio Av | Hill-Donnelly Information Services |
| 2000 | EUFEMIO NIEVES | Cole Information |
| | JUAN CELAYA | Cole Information |
| | BEATRIZ CHAVEZ | Cole Information |

**270 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | IVELISSE ROMERO | EDR Digital Archive |
| | ILEINI ROMERO | EDR Digital Archive |
| | FERNANDO ROMERO | EDR Digital Archive |
| 2017 | FERNANDO ROMERO | Cole Information |
| | LUCAS HERNANDEZ | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | MARIA COLON | Cole Information |
| | FERNANDO ROMERO | Cole Information |
| 2010 | CESAR NATANIEL | Cole Information |
| | FERNANDO ROMERO | Cole Information |
| 2005 | FERNANDO ROMERO | Cole Information |

**271 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LOUISE PILLA | EDR Digital Archive |
| | JOHN PILLA | EDR Digital Archive |
| | GABRIELLE PILLA | EDR Digital Archive |
| 2017 | JOHN PILLA | Cole Information |
| 2014 | MICHAEL PILLA | Cole Information |
| 2010 | MICHAEL PILLA | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | H Pilla Michael | Hill-Donnelly Information Services |
| 2000 | MICHAEL PILLA | Cole Information |

**277 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | THOMASINA DEROSE | EDR Digital Archive |
| | JOHN DEROSE | EDR Digital Archive |
| | DE JOHN | EDR Digital Archive |
| 2017 | RICHARD WOLNER | Cole Information |
| 2014 | JOHN DEROSE | Cole Information |
| 2010 | JOHN DEROSE | Cole Information |
| 2005 | JOHN DEROSE | Cole Information |
| | H Derose J PA as | Hill-Donnelly Information Services |
| 1993 | DEROSE John | New York Telephone |
| 1992 | DEROSE, JOHN | Cole Information |

**278 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ADELSO RAMIREZ | EDR Digital Archive |

| Year | Uses | Source |
|---|---|---|
| 2020 | GLORIA QUINONES | EDR Digital Archive |
| | GLORIA ASENJO | EDR Digital Archive |
| 2017 | LIDIA FERRANDO | Cole Information |
| | GLORIA QUINONES | Cole Information |
| 2014 | LIDIA FERRANDO | Cole Information |
| 2010 | LIDIA FERRANDO | Cole Information |
| 2005 | FRANK COCCA | Cole Information |
| | H Cocca F G A | Hill-Donnelly Information Services |

**295 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2014 | ANDRIETTE HOLMES | Cole Information |
| 2010 | ANDRIETTE HOLMES | Cole Information |

## HOSMER AVE # 2

**248 HOSMER AVE # 2**

| Year | Uses | Source |
|---|---|---|
| 2020 | JING LIN | EDR Digital Archive |
| | ZHOU LIN | EDR Digital Archive |

## HOSMER AVE # A

**256 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | GINA ASIEDU | EDR Digital Archive |

**257 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | SHARON ROHAN | EDR Digital Archive |

**258 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | JEANETTE SANTIAGO | EDR Digital Archive |

**259 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | ANWARA BEGUM | EDR Digital Archive |
| | ALEXANDER AGYARE | EDR Digital Archive |
| | TAMARA VASQUEZ | EDR Digital Archive |

**269 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | EUFEMIO NIEVES | EDR Digital Archive |

## HOSMER AVE # B

**259 HOSMER AVE # B**

| Year | Uses | Source |
|---|---|---|
| 2020 | IVORY COLES | EDR Digital Archive |
| | MILADY DICKSON | EDR Digital Archive |
| | VICTOR DICKSON | EDR Digital Archive |

**261 HOSMER AVE # B**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHANNIE MERCADO | EDR Digital Archive |
| | EDDY MARCANO | EDR Digital Archive |
| | CATHERINE MERCADO | EDR Digital Archive |
| | MODESTO MERCADO | EDR Digital Archive |
| | ANNETTE MERCADO | EDR Digital Archive |

## HUTCHINSON RIVER PKWY

**400 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2000 | JOYLENE ROWE | Cole Information |

**420 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2014 | GARY SCHOFFNER | Cole Information |
| | KOLU WILLETTE | Cole Information |
| 2010 | KOLU WILLETTE | Cole Information |

# FINDINGS

**460 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2000 | PAUL SCHATZ | Cole Information |

**500 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2014 | LAWS CONSTRUCTION CORPORATION | Cole Information |
| 2005 | LAWS CONSTRUCTION CORP | Cole Information |

**553 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2017 | AHERN PAINTING | Cole Information |
| 2014 | APPLIED PROJECTS COMPANY INCORPORATE | Cole Information |

**555 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2020 | SHANIA NURSE | EDR Digital Archive |
| | KOVANE BOGAN | EDR Digital Archive |
| | ALEXIA MITCHELL | EDR Digital Archive |
| | JULIO RIVERA | EDR Digital Archive |
| | MARIA ZAPATA | EDR Digital Archive |
| | ANGELINA PARRA | EDR Digital Archive |
| | MONNETTE FRANKLIN | EDR Digital Archive |
| | KARINA AVILA | EDR Digital Archive |
| | MARQUIS MOSS | EDR Digital Archive |
| | RONALD FERNANDEZ | EDR Digital Archive |
| | KEYASHA SHABAZZ | EDR Digital Archive |
| | HEMRAJIE RAMHARRACK | EDR Digital Archive |
| | MONA RICHARDS | EDR Digital Archive |
| 2017 | BASIC HOUSING INC | Cole Information |
| | UNICAR UNICAR | Cole Information |
| | CAPRI WHITESTONE MOTEL | Cole Information |
| 2014 | CAPRI WHITESTONE HOTEL | Cole Information |
| | WHITESTONE BRONX MOTEL | Cole Information |
| 2010 | SAMMYS GOURMET | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | CAPRI WHITESTONE MOTEL | Cole Information |
| 2000 | CAPRI WHITESTONE MOTEL | Cole Information |
| | B & S LUNCHEONETTE CORPORATION | Cole Information |
| | BRONX WHITESTONE MOTEL | Cole Information |
| | CAPRI WHITESTONE MOTEL | Cole Information |

**700 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2017 | TRUMP FERRY POINT LLC | Cole Information |
| | TRUMP NATIONAL GOLF CLUB | Cole Information |
| 2014 | TRUMP FERRY POINT LLC | Cole Information |

## HUTCHINSON RIVER PKY

**500 HUTCHINSON RIVER PKY**

| Year | Uses | Source |
|---|---|---|
| 2020 | TRUMP GOLF LINKS FERRY POINT | EDR Digital Archive |
| 2005 | Gannett Fleming Inc 1 P | Hill-Donnelly Information Services |
| | Laws Construction Corp | Hill-Donnelly Information Services |

**553 HUTCHINSON RIVER PKY**

| Year | Uses | Source |
|---|---|---|
| 2020 | AHERN PAINTING | EDR Digital Archive |

**555 HUTCHINSON RIVER PKY**

| Year | Uses | Source |
|---|---|---|
| 2020 | BASIC HOUSING INC | EDR Digital Archive |
| | ATM | EDR Digital Archive |
| 2005 | B & S Luncheonette Corp | Hill-Donnelly Information Services |
| | Greenman Pederson | Hill-Donnelly Information Services |
| | Greenman Pederson | Hill-Donnelly Information Services |
| 2000 | B & S LNCHNTT CORP | Cole Information |
| | CAPRI WHTSTN MTL | Cole Information |
| | KISKA DVLPRS INC | Cole Information |
| | WHTSTN BRONX MTL | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 1995 | B & S LUNCHEONETTE CORP | Cole Information |
| | WHITESTONE BRONX MOTEL | Cole Information |
| | CAPRI WHITESTONE MOTEL | Cole Information |
| 1992 | B & S LUNCHEONETTE CORP | Cole Information |
| | WHITESTONE BRONX MOTEL | Cole Information |
| | CAPRI WHITESTONE MOTEL | Cole Information |

## HUTCHNSNRIVER PKY

**620 HUTCHNSNRIVER PKY**

| Year | Uses | Source |
|---|---|---|
| 1965 | YOUNG SAML H POST AMER LEGION<br>1530 HUTCHNSN RIV PKWY | New York Telephone Company |

## JAY PL

**2471 JAY PL**

| Year | Uses | Source |
|---|---|---|
| 1931 | Gustanson Nils | Manhattan and Bronx Directory Publishing Company Residential Directory |
| | Rella Steph | Manhattan and Bronx Directory Publishing Company Residential Directory |
| 1927 | Quinn J Mrs r | New York Telephone |

**2478 JAY PL**

| Year | Uses | Source |
|---|---|---|
| 1931 | Hattrick John | Manhattan and Bronx Directory Publishing Company Residential Directory |
| | Hattrick Vincent | Manhattan and Bronx Directory Publishing Company Residential Directory |
| 1927 | Hattrick John r | New York Telephone |

**2483 JAY PL**

| Year | Uses | Source |
|---|---|---|
| 1931 | Johnson Emil | Manhattan and Bronx Directory Publishing Company Residential Directory |
| 1927 | Johnson Fred r | New York Telephone |

# FINDINGS

## LACOMBE AVE

**2303 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | SCIACOVELLI PHYLLIS | New York Telephone |

**2311 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | DALIMONTE CAMILLO | New York Telephone |
| 1983 | D ALIMONTE CAMILLO | New York Telephone |
| 1976 | D ALIMONTE CAMILLN | New York Telephone Company |
| 1971 | D ALIMONTE CAMILLO | New York Telephone |
| 1965 | HUTTON ELIZ H MRS | New York Telephone Company |

**2375 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | RIVERA MARTE | New York Telephone |

## LACOMBE AVE

**0 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | Tract 36005:20 odd s | Hill-Donnelly Information Services |
| | Tract 36005:2 even s | Hill-Donnelly Information Services |

**2311 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MELANIE DALIMONTE | EDR Digital Archive |
| | JAMES CORDERO | EDR Digital Archive |
| | NICOLE DALIMONTE | EDR Digital Archive |
| | DORIS DALIMONTE | EDR Digital Archive |
| 2017 | MELANIE ALIMONTE | Cole Information |
| 2014 | DORIS DALIMONTE | Cole Information |
| 2005 | H Dalimonte Camillo AV | Hill-Donnelly Information Services |
| | Sako T v | Hill-Donnelly Information Services |
| 2000 | CAMILLO DALIMONTE | Cole Information |
| | CAMILLO DALIMONTE | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 1993 | DALIMONTE Camillo | New York Telephone |
| 1992 | D'ALIMONTE, CAMILLO | Cole Information |

**2325 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 2014 | BETTY MCCOY | Cole Information |

## MILES AVE

**2576 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LISA ROMAN-VASILAKOS | EDR Digital Archive |
| | MINERVA RIVERA | EDR Digital Archive |
| | JOSE CANDELARIA | EDR Digital Archive |
| | EDWIN RODRIGUEZ | EDR Digital Archive |
| 2017 | LISA ROMANVASILKOS | Cole Information |
| | LINDA FRANCESCHINI | Cole Information |
| | EDWIN RODRIGUEZ | Cole Information |
| 2014 | LISA ROMAN-VASILAKOS | Cole Information |
| | JOSE CANDELARIA | Cole Information |
| 2010 | TOM MEYERS | Cole Information |
| | JOSE CANDELARIA | Cole Information |
| 2005 | ROSA MIRANDA | Cole Information |
| | JOAQUIN MELENDEZ | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| | JULISSA SUERO | Cole Information |
| | EDWIN RODRIGUES | Cole Information |
| | EDWIN RODRIGUEZ | Cole Information |
| | AMANDA MATHEWSON | Cole Information |
| | H Rodriguez EL A | Hill-Donnelly Information Services |
| | Tract 36005:110 odd s | Hill-Donnelly Information Services |
| | Tract 36005:132 even s | Hill-Donnelly Information Services |

# FINDINGS

**2578 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHARLENE ESPONDA | EDR Digital Archive |
| | ERIC OCASIO | EDR Digital Archive |
| | TANIA RUIZ | EDR Digital Archive |
| | SAMANTHA COLON | EDR Digital Archive |
| 2017 | NOHELY SUAREZ | Cole Information |
| | TANIA RUIZ | Cole Information |
| 2014 | JOHN LEWIN | Cole Information |
| | EDWIN RODRIGUEZ | Cole Information |
| | CHRISTOPHER LANDESTOY | Cole Information |
| | LUCINDA ATILES | Cole Information |
| | TANIA RUIZ | Cole Information |
| 2010 | EDWIN RODRIGUEZ | Cole Information |
| | CHARLENE ESPONDA | Cole Information |
| | JULIO JOHN | Cole Information |
| | WENDY SANTOS | Cole Information |
| | LUCINDA GARCIA | Cole Information |
| | DANYELLE COLON | Cole Information |
| 2005 | G FERNANDEZ | Cole Information |
| | CHARLENE ESPONDA | Cole Information |
| | Esponda Chardene v | Hill-Donnelly Information Services |
| | Rodriguez Edwin v | Hill-Donnelly Information Services |

**2580 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CARLLENI CESPEDES | EDR Digital Archive |
| | MARIA MORALES | EDR Digital Archive |
| | ALFREDO MARTINEZ | EDR Digital Archive |
| | JASON SCOTT | EDR Digital Archive |
| | AMINATA BAH | EDR Digital Archive |
| | AMPARO CESPEDES | EDR Digital Archive |
| 2017 | MARIA MORLAES | Cole Information |
| | AMARIS GARCIA | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | JASON SCOTT | Cole Information |
| 2014 | AMANDA BROWNTATE | Cole Information |
| | MARIA MORLAES | Cole Information |
| | AMARIS GARCIA | Cole Information |
| | DAVID LICON | Cole Information |
| | JASON SCOTT | Cole Information |
| 2010 | VICTORIA HERNANDEZ | Cole Information |
| | DESTINY ATILES | Cole Information |
| | AMARIS GARCIA | Cole Information |
| | ELAINE PETRIZZI | Cole Information |
| | JASON SCOTT | Cole Information |
| | KENIA RAMOS | Cole Information |
| | DAVID LICON | Cole Information |
| | BOVI DELLE | Cole Information |
| 2005 | JOANNE PICCININNI | Cole Information |
| | MADELINE GIACCHETTO | Cole Information |
| | ELAINE PETRIZZI | Cole Information |
| | KENIA RAMOS | Cole Information |
| | Glacchetto M v | Hill-Donnelly Information Services |
| | Ramos Kenia v | Hill-Donnelly Information Services |

**2582 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHN LEWIN | EDR Digital Archive |
| | LETISHA COHEN | EDR Digital Archive |
| | PRESTON CHAPLIN | EDR Digital Archive |
| | PRESTASIA COHEN | EDR Digital Archive |
| | MAGDA PEREZ | EDR Digital Archive |
| | CASSANDRA COHEN | EDR Digital Archive |
| | AUTUMN RICHARDSON | EDR Digital Archive |
| | ANTHONY NAZARIO | EDR Digital Archive |
| 2017 | LETISHA COHEN | Cole Information |
| 2014 | JUDITH TAYLOR | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | SAMARA LEBRON | Cole Information |
| 2010 | JOHN LEWIN | Cole Information |
| 2005 | VICTOR FAUSTO | Cole Information |
| | MAURO PICCININNI | Cole Information |
| | CARRIE GREENE | Cole Information |
| | PICCININNI MAURO | Cole Information |
| | 2584 NCL | Hill-Donnelly Information Services |

**2584 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | THOMAS ASANTE | EDR Digital Archive |
| | SONIA VELEZ | EDR Digital Archive |
| | NADINE PEDROSO | EDR Digital Archive |
| | GONZALO CORRIDORI | EDR Digital Archive |
| | ESTHER OBIRI | EDR Digital Archive |
| | JEROME PEDROSO | EDR Digital Archive |
| 2017 | THOMAS ASANTE | Cole Information |
| | DAVID FELLI | Cole Information |
| | JOYCE COLLIER | Cole Information |
| | TOMAS BATISTA | Cole Information |
| 2014 | JOYCE COLLIER | Cole Information |
| | CHRISTIN LOPEZ | Cole Information |
| 2010 | DAVID FELLI | Cole Information |
| | JOYCE COLLIER | Cole Information |
| | LEONARD PEDROSO | Cole Information |
| 2005 | JOYCE COLLIER | Cole Information |
| | DONALD DELLEBOVI | Cole Information |

**2585 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2010 | MAGDA PEREZ | Cole Information |
| 2005 | MAGDA PEREZ | Cole Information |

# FINDINGS

**2586 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JULIEN STEWART | EDR Digital Archive |
| | KYLE EDWARD | EDR Digital Archive |
| | KASSIE MARAJAH | EDR Digital Archive |
| | RON EDWIN | EDR Digital Archive |
| | JULIET DESOUZA | EDR Digital Archive |
| | ASHELY VEGA | EDR Digital Archive |
| 2017 | JULIEN STEWART | Cole Information |
| | STEWART HENRY | Cole Information |
| | JULIET DESOUZA | Cole Information |
| | BEE STARR | Cole Information |
| 2014 | JULIEN STEWART | Cole Information |
| | STEWART HENRY | Cole Information |
| | JULIET DESOUZA | Cole Information |
| 2010 | JULIEN STEWART | Cole Information |
| 2005 | J JASMINE | Cole Information |
| | h Jasmine J | Hill-Donnelly Information Services |

**2588 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOSE QUINTERO | EDR Digital Archive |
| | SANTIAGO ZABALA | EDR Digital Archive |
| | XIOMARA ZABALA | EDR Digital Archive |
| | VICTOR PINALES | EDR Digital Archive |
| 2017 | JULIO SANTOS | Cole Information |
| | MAYORIS PRESBOT | Cole Information |
| 2014 | BILLY MORALES | Cole Information |
| | GENEVA ORTIZ | Cole Information |
| | LAYDA NEGRIN | Cole Information |
| | MAYORIS PRESBOT | Cole Information |
| 2010 | ROSA CUEVAS | Cole Information |
| | ZABALA SANTIAGO | Cole Information |
| | SANTIAGO ZABALA | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2005 | LAYDA NEGRIN | Cole Information |
| | h Negnrin Layda v | Hill-Donnelly Information Services |

**2590 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | YOLANDA FONTANEZ | EDR Digital Archive |
| | CHANTEL RODRIGUEZ | EDR Digital Archive |
| | KHALIL SIKANDER | EDR Digital Archive |
| | ANGEL MUNIZ | EDR Digital Archive |
| 2017 | YOLANDA FONTANEZ | Cole Information |
| | CHANTEL RODRIGUEZ | Cole Information |
| | ABNER MUNIZ | Cole Information |
| | GEORGE LAMB | Cole Information |
| 2014 | YOLANDA FONTANEZ | Cole Information |
| | CHANTEL RODRIGUEZ | Cole Information |
| | GEORGE LAMB | Cole Information |
| 2010 | JUSTO MENDEZ | Cole Information |
| 2005 | ROBERT CANATORE | Cole Information |
| | JUSTO MENDEZ | Cole Information |
| | ROBERT CANTATORE | Cole Information |
| | H Cantatore R | Hill-Donnelly Information Services |

**2600 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | GREGORY PASSALACQUA | EDR Digital Archive |
| | JULIAN PASSALACQUA | EDR Digital Archive |
| | ALONIA WHITE | EDR Digital Archive |
| | SARAH PASBALAQUA | EDR Digital Archive |
| | NADINE PASSALACQUA | EDR Digital Archive |
| 2017 | GREGORY PASSALACQUA | Cole Information |
| | JULIAN PASSALACQUA | Cole Information |
| 2014 | GREGORY PASSALACQUA | Cole Information |
| | DAVID SALA | Cole Information |
| 2010 | FREDRICK RENODE | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | D SALA | Cole Information |
| 2005 | GREGORY PASSALACQUA | Cole Information |
| | JOSEPH ROCCHIO | Cole Information |

**2602 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | STANFORD JONES | EDR Digital Archive |
| | SHENIQUE JONES | EDR Digital Archive |
| | TERRELL SKINNER | EDR Digital Archive |
| | MICHAEL JONES | EDR Digital Archive |
| | ANIKA RICHARDSON | EDR Digital Archive |
| 2017 | MICHAEL JONES | Cole Information |
| 2014 | MIG INTERNATIONAL | Cole Information |
| | Z STANFORD | Cole Information |
| | MICHAEL JONES | Cole Information |
| 2010 | STANFORD JONES | Cole Information |
| | Z STANFORD | Cole Information |
| | ANIKA RICHARDSON | Cole Information |
| 2005 | STANFORD JONES | Cole Information |
| | Z STANFORD | Cole Information |
| | GEORGE LAMB | Cole Information |
| | h Lamb George AV | Hill-Donnelly Information Services |

**2604 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | GOLAM RAHMAN | EDR Digital Archive |
| | NAZIFA RAHMAN | EDR Digital Archive |
| | NIXA ROSADO | EDR Digital Archive |
| | G RAHMAN | EDR Digital Archive |
| | REYNALDO ROSADO | EDR Digital Archive |
| 2017 | GOLAM RAHMAN | Cole Information |
| | RAHMAN GOLAM | Cole Information |
| | ROBERT ROSADO | Cole Information |
| 2014 | GOLAM RAHMAN | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | RAHMAN GOLAM | Cole Information |
| 2010 | E BONILLA | Cole Information |
| | GOLAM RAHMAN | Cole Information |
| | RAHMAN GOLAM | Cole Information |
| 2005 | E BONILLA | Cole Information |
| | GOLAM RAHMAN | Cole Information |
| | RAHMAN GOLAM | Cole Information |
| | Bonilla E v | Hill-Donnelly Information Services |
| | Rahman Gulam AO | Hill-Donnelly Information Services |

**2606 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | AMANDA LLOYD | EDR Digital Archive |
| | AMERICO NARDIS | EDR Digital Archive |
| | CHASTIDY MATEO | EDR Digital Archive |
| | NICKOLA FRANCIS | EDR Digital Archive |
| | MARTIN CONTRERAS | EDR Digital Archive |
| | DEBBIE FRANCIS | EDR Digital Archive |
| 2017 | LOAY ALZADEN | Cole Information |
| | SEAN ALBINO | Cole Information |
| | AMERICO NARDIS | Cole Information |
| | FRED LANDO | Cole Information |
| | DEBBIE FRANCIS | Cole Information |
| 2014 | SEAN ALBINO | Cole Information |
| | AMERICO NARDIS | Cole Information |
| | DOLORES HAMES | Cole Information |
| | FRED LANDO | Cole Information |
| | DAWNETTE MCNEIL | Cole Information |
| | NICHOLAS BORSANI | Cole Information |
| 2010 | DOLORES HAMES | Cole Information |
| | DAWNETTE MCNEIL | Cole Information |
| 2005 | DAWNETTE MCNEIL | Cole Information |
| | Mcneil Dawnette | Hill-Donnelly Information Services |

# FINDINGS

**2608 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MERGING MARKETS REALTY CORP | EDR Digital Archive |
| | TAHEERAH MAHDI | EDR Digital Archive |
| | MICHELLE RODRIGUEZ | EDR Digital Archive |
| | S RODRIGUEZ | EDR Digital Archive |
| | SONIA RODRIGUEZ | EDR Digital Archive |
| | SANTIAGO VAZQUEZ | EDR Digital Archive |
| | SHEILA RODRIGUEZ | EDR Digital Archive |
| | CELSA VAZQUEZ | EDR Digital Archive |
| 2017 | TAHEERAH MAHDI | Cole Information |
| | SHIELA RODRIGUEZ | Cole Information |
| | ALFONSO RODRIGUEZ | Cole Information |
| 2014 | MICHELLE NOEMI | Cole Information |
| | ALFONSO RODRIGUEZ | Cole Information |
| 2005 | NATIONAL URBAN REALTORS ASCTN | Cole Information |
| | MERGING MARKETS REALTY CORP | Cole Information |
| | ALFONSO RODRIGUEZ | Cole Information |
| | Cruz A v | Hill-Donnelly Information Services |

**2610 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | DEBORAH CORDERO | EDR Digital Archive |
| | ALFONSO AMELIO | EDR Digital Archive |
| | ADDVOA AMANKWAAH | EDR Digital Archive |
| | JOSEPH CORDERO | EDR Digital Archive |
| | JESSE ODUARAN | EDR Digital Archive |
| 2017 | DEBORAH CORDERO | Cole Information |
| | ERICKA BELLO | Cole Information |
| 2014 | ARLENE OLIVARES | Cole Information |
| | ADAOBI EZE | Cole Information |
| | EDDIE OYOLA | Cole Information |
| 2010 | STEPHANIE PAEZ | Cole Information |
| | ALFONSO AMELIO | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2005 | MAGNUM MEDIA GROUP INC | Cole Information |
| | MICHAEL ALLEN | Cole Information |
| | ALFONSO AMELIO | Cole Information |
| | JESSE ODUARAN | Cole Information |
| | Allen Michael v | Hill-Donnelly Information Services |
| | Oduaran Jesse v | Hill-Donnelly Information Services |
| 1961 | KRUPP JOHN G | New York Telephone |

**2612 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SARA PIERCE | EDR Digital Archive |
| | NIESHA SOLLA | EDR Digital Archive |
| | HAROLD ROSENBAUM | EDR Digital Archive |
| | BRENDA PORTELA | EDR Digital Archive |
| | RALPH DIXON | EDR Digital Archive |
| | JOSHUA ROSENBAUM | EDR Digital Archive |
| 2017 | JOSEPH OBRIEN | Cole Information |
| | CRISEL CALPOTURA | Cole Information |
| | BRENDA PORTELA | Cole Information |
| 2014 | CATHERINE CALPOTURA | Cole Information |
| | JOSEPH OBRIEN | Cole Information |
| | MICHAEL PAGAN | Cole Information |
| 2010 | CRISEL CALPOTURA | Cole Information |
| | HAROLD ROSENBAUM | Cole Information |
| 2005 | KRISTI GOURDINE | Cole Information |
| | Gourdine Kristi v | Hill-Donnelly Information Services |

**2614 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | IRMA ORTIZ | EDR Digital Archive |
| | BRENDA ORTIZ | EDR Digital Archive |
| 2017 | IRMA ORTIZ | Cole Information |
| 2014 | CRUZ ORTIZ | Cole Information |
| 2010 | JOSE ORTIZ | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2005 | JOSE ORTIZ | Cole Information |

## SCHLEY AVE

**2604 SCHLEY AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | WILKERSON CHILDRES B | New York Telephone |

**2616 SCHLEY AVE**

| Year | Uses | Source |
|---|---|---|
| 1971 | MALAVE MARIA | New York Telephone |

## SCHLY AVE

**2604 SCHLY AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | WILKERSON Childres B | New York Telephone |

## YZNAGA PL

**520 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1993 | SHAW ELIZABETH | New York Telephone |
| 1976 | ROBINSON RUTH | New York Telephone Company |
| | ROBINSON RUTH | New York Telephone Company |
| 1971 | DEMARCO JOSEPH | New York Telephone |
| 1965 | BOEHM VALENTINE | New York Telephone Company |

**525 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1983 | MURRAY I | New York Telephone |

**526 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1993 | ARNTSEN JOHN R | New York Telephone |
| 1983 | ARNTSEN JOHN R | New York Telephone |
| 1976 | ARNTSEN JOHN R | New York Telephone Company |

| Year | Uses | Source |
|---|---|---|
| 1971 | ARNTSEN JOHN R | New York Telephone |
| 1965 | ARSTSEN JOHN R | New York Telephone Company |

**527 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1976 | JONES JOHN W | New York Telephone Company |
| 1971 | PESCE NELLIE MRS | New York Telephone |
| 1965 | PESCE FRANK A | New York Telephone Company |

**534 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1983 | FIORE A | New York Telephone |
| 1976 | FIORE A | New York Telephone Company |
| 1971 | FIORE A | New York Telephone |
| 1965 | FIORE A | New York Telephone Company |

**536 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1983 | FIORE DOMINICK | New York Telephone |
| 1976 | FIORE DOMINICK | New York Telephone Company |
| 1971 | FIORE DAMINICK | New York Telephone |
| 1965 | FIORE DOMINICK | New York Telephone Company |

**641 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1983 | REGINA JOHN | New York Telephone |
| 1976 | REGINA JOHN | New York Telephone Company |
| 1971 | REGINA JOHN | New York Telephone |
| 1965 | REGINA JOHN | New York Telephone Company |

## YZNAGA PL

**520 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2020 | CLIFFCO LI INC | EDR Digital Archive |
| | FERRY POINT INDUSTRIES | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | FERRY POINT INDUSTRIES | Cole Information |
| | CLIFFCO II INC | Cole Information |
| 2014 | FERRY POINT INDUSTRIES | Cole Information |
| | CLIFFCO II INCORPORATED | Cole Information |
| 2010 | CJB EQUIPMENT RENTAL CORP | Cole Information |
| | C F | Cole Information |
| 1993 | SHAW Elizabeth | New York Telephone |
| 1992 | SHAW, ELIZABETH | Cole Information |
| 1940 | Baxter Mary A | New York Telephone |
| | Mc Evily Gloria Mrs | New York Telephone |

**525 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2017 | TIJUANA MURRAY | Cole Information |
| 2014 | TIJUANA MURRAY | Cole Information |
| 2010 | JEANNINE FERRANDI | Cole Information |
| 2005 | TERRY MURRAY | Cole Information |
| | H Murray I AA | Hill-Donnelly Information Services |
| 2000 | I MURRAY | Cole Information |
| | IDA MURRAY | Cole Information |
| 1992 | MURRAY, I | Cole Information |
| 1940 | Mulvihill Susan J | New York Telephone |
| 1931 | Mulvihill Chris H R | Manhattan and Bronx Directory Publishing Company Residential Directory |

**526 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2005 | 534 536 NCL | Hill-Donnelly Information Services |
| 2000 | JOHN R ARMTSEN | Cole Information |
| | JOHN ARNTSEN | Cole Information |
| 1993 | ARNTSEN John R | New York Telephone |
| 1992 | ARNTSEN, JOHN R | Cole Information |
| 1931 | Hoffman Raymond | Manhattan and Bronx Directory Publishing Company Residential Directory |

**527 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2005 | CLIFFORD FERRANDI | Cole Information |
| 2000 | C FERRANDI | Cole Information |

**530 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1940 | Bader M | New York Telephone |

**534 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2005 | NESTOR PINO | Cole Information |
| 2000 | A RORE | Cole Information |
| | ANGELO FIORE | Cole Information |
| 1992 | FIORE, A | Cole Information |

**536 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2005 | FRANK SALAMONE | Cole Information |
| 2000 | CANNADY SORTS SVCS | Cole Information |
| | G B C REALTY CORP | Cole Information |
| | PHASE I ASSOC INC | Cole Information |
| | D FIORE | Cole Information |
| | DOMENICK FIORE | Cole Information |
| | DONNA FIORE | Cole Information |
| 1992 | FIORE, D | Cole Information |
| 1940 | Baxter Walter C | New York Telephone |

**570 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2000 | EXPLO POWDER INC | Cole Information |

**641 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1992 | REGINA, JOHN | Cole Information |
| 1940 | Meichner Wm | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1931 | Meichner Wm | Manhattan and Bronx Directory Publishing Company Residential Directory |

## YZNAGA STREET PL

**520 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | BOEHM VALENTINE | New York Telephone |

**526 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | SIMMONDS JOSEPHINE E MRS | New York Telephone |

**527 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | PESCE FRANK A | New York Telephone |

**534 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | FIORE A | New York Telephone |

**536 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | FIORE DOMINICK | New York Telephone |

**641 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | REGINA JOHN | New York Telephone |

## ZEREGA AVE

**430 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | NASSETTA JOS | New York Telephone Company |
| 1971 | NASSETTA JOS | New York Telephone |
| 1965 | NASSETTA JOS | New York Telephone Company |

**432 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | DEFIORE SAM | New York Telephone |
| 1976 | DEFIORE SAM | New York Telephone Company |
| 1971 | DEFIORE SAM | New York Telephone |
| | MASCIA MARY MRS | New York Telephone |
| | MURPHY JOS G | New York Telephone |
| 1965 | DEFIORE SAM | New York Telephone Company |
| | HARDEN HAZEL | New York Telephone Company |
| | MASCIAN TONY | New York Telephone Company |

**450 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | COTT CORP | New York Telephone Company |
| | IDEAL DISTRIBTRS | New York Telephone Company |
| 1971 | COTT CORP | New York Telephone |
| | IDEAL DISTRIBTRS | New York Telephone |
| 1965 | COTT CORP | New York Telephone Company |
| | IDEAL DISTRIBTRS | New York Telephone Company |

**455 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | HINES GEO | New York Telephone |
| 1976 | GERENA JOSE | New York Telephone Company |
| 1971 | GERENA JOSE | New York Telephone |
| | HINES GEO | New York Telephone |
| 1965 | HINES GEO | New York Telephone Company |
| | HOY CHAS A | New York Telephone Company |

**489 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1965 | REIMER HAROLD JR | New York Telephone Company |

**500 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1971 | DELBALSO CONST CORP | New York Telephone |

## ZEREGA AVE

**420 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | HUDSON RSS SRVCS | Cole Information |
| 2014 | HUDSON RSS SRVCS | Cole Information |
| 1993 | MIGOYA CONSTR CORP | New York Telephone |
| 1992 | MIGOYA CONSTR CORP | Cole Information |

**426 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JO-LO BUS CO | EDR Digital Archive |

**427 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RAHEEM ROSS | EDR Digital Archive |
| | CIARRA BLASINI | EDR Digital Archive |
| | JEFFREY SCHWARTZ | EDR Digital Archive |
| 2017 | RAHEEM ROSS | Cole Information |
| | HERMAN GARMENT | Cole Information |
| | JOHNNY BLASINI | Cole Information |
| 2014 | OCCUPANT UNKNOWN | Cole Information |
| | MAILYN OCASIO-GOYTIA | Cole Information |
| | PRENTIS PRICHETT | Cole Information |
| | OLGA GOYTIA | Cole Information |
| | JOHNNY BLASINI | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | HECTOR CAMARA | Cole Information |
| | ELLIOT LOCICERO | Cole Information |
| | EVARISTO HERNANDEZ | Cole Information |
| | JEFFREY SCHWARTZ | Cole Information |

**428 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | LOGAN REALTY | Cole Information |

# FINDINGS

**429 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHASTITY HAMILTON | EDR Digital Archive |
| | JANI ELLIS | EDR Digital Archive |
| | MILTON SILVERA | EDR Digital Archive |
| | GEORGE LETT | EDR Digital Archive |
| | YVETTE ROSAS | EDR Digital Archive |
| | NICOLA HOUDHAN | EDR Digital Archive |
| 2017 | JORGE ELLIS | Cole Information |
| | YVETTE ROSAS | Cole Information |
| | CHASTITY CRUZ | Cole Information |
| | NICOLA HOUDHAN | Cole Information |
| | TAIF DAVIS | Cole Information |
| 2014 | MILTON SILVERA | Cole Information |
| | JORGE ELLIS | Cole Information |
| | YVETTE ROSAS | Cole Information |
| | TAIF DAVIS | Cole Information |
| | NICOLA HOUDHAN | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| | GEORGE LETT | Cole Information |
| | MILTON SILVERA | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | RAYLYN OCASIO | Cole Information |
| | MILTON SILVERA | Cole Information |
| | TAIF DAVIS | Cole Information |

**430 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2000 | SONIA COGLITORE | Cole Information |
| 1956 | BUBEL WM | New York Telephone |
| 1949 | BRIDGE VIEW BOAT HAULAGE CO | New York Telephone |
| | WHITE CAPS BOATS CO | New York Telephone |

# FINDINGS

**431 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHARLES FALCOM | EDR Digital Archive |
| | JULIUS LEWIS | EDR Digital Archive |
| | ODETTE MCCARTNEY | EDR Digital Archive |
| | MILZA NIETO | EDR Digital Archive |
| | JAMES LOGAN | EDR Digital Archive |
| | CARLOS TORRENS | EDR Digital Archive |
| | MATTIE LIBURD | EDR Digital Archive |
| | DILIA TRAVIESO | EDR Digital Archive |
| 2017 | JULIUS LEWIS | Cole Information |
| | MATTIE LIBURD | Cole Information |
| | JONATAN MOTA | Cole Information |
| 2014 | L ODETTE | Cole Information |
| | BRITTANY MARTINEZ | Cole Information |
| | JOHNNY BLASINI | Cole Information |
| | MATTIE LIBURD | Cole Information |
| 2010 | L ODETTE | Cole Information |
| | JOHNNY BLASINI | Cole Information |
| | MATTIE LIBURD | Cole Information |
| 2005 | MILZA AULLA | Cole Information |
| 1992 | FRANQUI, LORRAINE C | Cole Information |

**432 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MANUEL DOMENECH | EDR Digital Archive |
| | BELKIS DOMENECH | EDR Digital Archive |
| | ADIRIAN BANNISTER | EDR Digital Archive |
| | RAFAEL MALDONADO | EDR Digital Archive |
| 2017 | ELSY VALESQUEZ | Cole Information |
| | BELKIS DOMENECH | Cole Information |
| 2014 | MANUEL DOMENECH | Cole Information |
| | ELSY VALESQUEZ | Cole Information |
| | D CORA | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | RAFAEL MALDONADO | Cole Information |
| 2010 | LOGAN BUS CO INC | Cole Information |
| | GRANDPAS & BOBBYS BUS CO | Cole Information |
| | GINA DIAZ | Cole Information |
| 2005 | CAROLE GALLINA | Cole Information |
| | PATRICIA LANGERT | Cole Information |
| | Gallina Carol A | Hill-Donnelly Information Services |
| 2000 | RAILROAD MAINTENANCE CORPORATION | Cole Information |
| | KLOSK MICHAEL J ATTORNEY | Cole Information |
| 1995 | RAILROAD MAINTENANCE CORP | Cole Information |
| | KLOSK, MICHAEL J, ATTY | Cole Information |
| | RAILROAD MAINTNCE CORP | Cole Information |
| | LAWRENCE CONTRACTORS LTD | Cole Information |
| 1993 | KLOSK MICHAEL J ATTY | New York Telephone |
| | LAWRENCE CONTRACTORS LTD | New York Telephone |
| | RAILROAD MAINTENANCE CORP | New York Telephone |
| | RAILROAD MAINTNCE CORP | New York Telephone |
| | TPK CONSTR | New York Telephone |
| | DE FIORE ROSE | New York Telephone |
| | DE FIORE Rose | New York Telephone |
| 1992 | RAILROAD MAINTENANCE CORP | Cole Information |
| | KLOSK, MICHAEL J, ATTY | Cole Information |
| | RAILROAD MAINTNCE CORP | Cole Information |
| | LAWRENCE CONTRACTORS LTD | Cole Information |
| | TPK CONSTR | Cole Information |
| | DE FIORE, ROSE | Cole Information |
| 1983 | LAWRENCE CONTRACTORS LTD | New York Telephone |
| | LAWRENCE CONTRACTORS LTD | New York Telephone |
| | RAILROAD MAINTENANCE CORP | New York Telephone |
| 1976 | LAWRENCE CONTRACTORS LTD | New York Telephone Company |
| | RAILR0D MAINTENANCE CORP | New York Telephone Company |
| 1961 | SEATON SIDNEY W | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1956 | AL S MARINE SALES & SVCE | New York Telephone |
| | BORNEMANN RITA MRS | New York Telephone |

**433 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | NIJA LESLIE | EDR Digital Archive |
| | JESSIE SCOTT | EDR Digital Archive |
| | RUEBEN ORTIZ | EDR Digital Archive |
| | LINDA CASTANON | EDR Digital Archive |
| | PHILLIP GUBISH | EDR Digital Archive |
| | EYITEMI OGHOGHO | EDR Digital Archive |
| | TAHMID CHOUDHURY | EDR Digital Archive |
| | DEJON PILLMAN | EDR Digital Archive |
| | YESENIA SCALICE | EDR Digital Archive |
| | TEANETTE WEAVER | EDR Digital Archive |
| | CHANTAL CASTANON | EDR Digital Archive |
| | JESSICA LOPEZ | EDR Digital Archive |
| | LINDA MALDONADO | EDR Digital Archive |
| | FARHANA CHOUDHURY | EDR Digital Archive |
| | MICHAEL WEAVER | EDR Digital Archive |
| | YESENIA RODRIGUEZ | EDR Digital Archive |
| | STIRTON PATTERSON | EDR Digital Archive |
| 2017 | JESSIE SCOTT | Cole Information |
| | CARL CASTANON | Cole Information |
| | SEAN PATTERSON | Cole Information |
| | CLARIBEL REYNOSO | Cole Information |
| | EDDY MARTE | Cole Information |
| | JESSIE SCALICE | Cole Information |
| | FARHANA CHOUDHURY | Cole Information |
| 2014 | JOSEPHINE LANDESTOY | Cole Information |
| | RUEBEN ORTIZ | Cole Information |
| | CARL CASTANON | Cole Information |
| | CLARIBEL REYNOSO | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | ZAMAL AHMED | Cole Information |
| | ORLANDO RIVERA | Cole Information |
| | SOLANGE VELEZ | Cole Information |
| 2010 | CHANTAL CASTANON | Cole Information |
| | MOKBUL CHOUDHURY | Cole Information |
| | ANGELA VELEZ | Cole Information |
| 2005 | JOSEPHINE LANDESTOY | Cole Information |
| | IRBIA FONSECA | Cole Information |
| | GRACIALINA VELEZ | Cole Information |
| | JACK SCALICE | Cole Information |

**435 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JEFFREY SCHWARTZ | EDR Digital Archive |
| 2017 | ISABEL HERNANDEZ | Cole Information |
| | FREDY GUERRERO | Cole Information |
| 2014 | OCCUPANT UNKNOWN | Cole Information |
| | JENNIFER MATOS | Cole Information |
| | ISABEL HERNANDEZ | Cole Information |
| | FREDY GUERRERO | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| | AVROM GOLD | Cole Information |
| | ORIN HENDRICKS | Cole Information |
| | ISABEL HERNANDEZ | Cole Information |
| | EMMANUELA GIALLEGO | Cole Information |
| 2005 | MICHAEL LIBURD | Cole Information |
| | ORIN HENDRICKS | Cole Information |
| | ISABEL HERNANDEZ | Cole Information |
| | JEFFREY SCHWARTZ | Cole Information |
| | Liburd Mattle v | Hill-Donnelly Information Services |
| | Ortiz Carmen v | Hill-Donnelly Information Services |

# FINDINGS

**437 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | AMANDA SAXON | EDR Digital Archive |
| | JOHN DERAFFELE | EDR Digital Archive |
| | JENNIFER GUZMAN | EDR Digital Archive |
| | YOLANDA SASTRE | EDR Digital Archive |
| 2017 | ISRAEL GUZMAN | Cole Information |
| | WILFREDO TORRES | Cole Information |
| | DANIELLE KUVERUA | Cole Information |
| | CHAYENNE THOMPSON | Cole Information |
| 2014 | MARIBEL GONELL | Cole Information |
| | CRUZ MILLAN | Cole Information |
| 2010 | FRANCISCO MACIAS | Cole Information |
| | R BOWMAN | Cole Information |
| | NGURIMUJE UANINI | Cole Information |
| | AMANDA SAXON | Cole Information |
| | JOHN DERAFFELE | Cole Information |
| 2005 | R BOWMAN | Cole Information |
| | NGERIMO MIEZE | Cole Information |
| | Bowman R v V | Hill-Donnelly Information Services |

**439 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHN DERAFFELE | EDR Digital Archive |
| | AMBA FRALIN | EDR Digital Archive |
| | MELANIE MALERO | EDR Digital Archive |
| | CHERYL VANNOY | EDR Digital Archive |
| 2017 | ANDREW LEBRON | Cole Information |
| | JOHN DERAFFELE | Cole Information |
| | DORIS WHITE | Cole Information |
| | PETER CONSTANTINO | Cole Information |
| | CECILLE WALLACE | Cole Information |
| | ZUALMY DISLA | Cole Information |
| | NICOLE WHITE | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2014 | ANDREW LEBRON | Cole Information |
| | JOHN DERAFFELE | Cole Information |
| | A BLOUNT | Cole Information |
| | AVROM GOLD | Cole Information |
| | JACK WHITE | Cole Information |
| | PETER CONSTANTINO | Cole Information |
| | TARA HOWARD | Cole Information |
| | CECILLE WALLACE | Cole Information |
| 2010 | LINDA CLINKSSCALES | Cole Information |
| | JACK WHITE | Cole Information |
| | PETER CONSTANTINO | Cole Information |
| 2005 | LINDA CLINKSSCALES | Cole Information |
| | JACK WHITE | Cole Information |
| | Blount Eveyin v | Hill-Donnelly Information Services |
| | Clinkscales Linda Av | Hill-Donnelly Information Services |
| | White Jack A | Hill-Donnelly Information Services |

**450 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ATM | EDR Digital Archive |
| | GVC LI | EDR Digital Archive |
| | GBC | EDR Digital Archive |
| | GVC LTD | EDR Digital Archive |
| | GVC | EDR Digital Archive |
| | MICHAEL LAVALLIE | EDR Digital Archive |
| | NIKITA LAVALLIE | EDR Digital Archive |
| | GERRI LAVALLIE | EDR Digital Archive |
| 2017 | GVC LTD | Cole Information |
| | G V C | Cole Information |
| | GVC II | Cole Information |
| 2014 | G V C | Cole Information |
| | GVC II | Cole Information |
| 2010 | GBC LTD | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | GVC II | Cole Information |
| 2005 | GBC | Hill-Donnelly Information Services |
| | GBC LTD | Hill-Donnelly Information Services |
| | Lavalle Micheal | Hill-Donnelly Information Services |
| | GVC | Cole Information |
| | Q T MINIBUS OF THE BRONX | Cole Information |
| 2000 | QT MINI BUS OF THE BRONX | Cole Information |
| | GVC | Cole Information |
| 1995 | CRYSTAL CHEMICAL CORP | Cole Information |
| 1993 | BASF CORP | New York Telephone |
| 1992 | BASF CORP | Cole Information |
| 1983 | LIMBACHR PAINT & COLOR WORKS INC | New York Telephone |

**455 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | NCL | Hill-Donnelly Information Services |
| | Tract 36005:102 N/A | Hill-Donnelly Information Services |
| 2000 | JORGE CRUZ | Cole Information |
| 1993 | CRUZ WENDELL | New York Telephone |
| | CRUZ Wendell | New York Telephone |
| 1992 | CRUZ, WENDELL | Cole Information |
| 1956 | CONTE LOUIS | New York Telephone |
| | FRANCO CARMELO | New York Telephone |

**487 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2010 | HOUSES ZEREGA | Cole Information |
| 2005 | HOUSES ZEREGA | Cole Information |

**489 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1956 | CONVERTINO MICHL | New York Telephone |
| | PERROTTI PAT | New York Telephone |
| 1940 | Lynch J | New York Telephone |

# FINDINGS

**492 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1940 | Reimer Harold | New York Telephone |

**493 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1956 | SACKS CELIA MRS GROCRY | New York Telephone |

**500 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | VERIZON | Cole Information |
| 1961 | DEL BALSO CONST CORP | New York Telephone |
| | DELPHI CONST CO INC | New York Telephone |
| 1956 | DEL BALSO CONST CORP | New York Telephone |
| | DELPHI CONST CO INC | New York Telephone |
| 1949 | DEL BALSA CONST CORP | New York Telephone |
| 1940 | Del Balso Asphalt Corp | New York Telephone |
| | Del Balso Constr Corp | New York Telephone |

**501 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2014 | KEL MAR DESIGNS INCORPORATED | Cole Information |
| | KE MAR DESIGNS INCORPORATED | Cole Information |

**507 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1956 | FAUST JOS L | New York Telephone |

**530 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | GVC I | Cole Information |
| | GVC | Cole Information |
| 2014 | GVC I | Cole Information |
| | GVC | Cole Information |
| 2010 | GVC | Cole Information |
| | GVC LTD | Cole Information |

# FINDINGS

**535 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | NY ROAD RUNNERS CLUB | EDR Digital Archive |

**537 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2010 | JASON LAGUNA | Cole Information |
| 2005 | JASON LAGUNA | Cole Information |

**570 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | EXPLO POWDER INC | Cole Information |
| 2014 | EXPLO POWDER INCORPORATED | Cole Information |
| 2005 | EXPLO POWDER INC | Cole Information |
| 2000 | EXPLO POWDER INCORPORATED | Cole Information |
| 1995 | EXPLO POWDER INC | Cole Information |
| 1992 | EXPLO INC | Cole Information |
| | VINOCON INC | Cole Information |

**493A ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | CO-OP SECURITY L | New York Telephone |

## ZEREGA AVE # 3

**431 ZEREGA AVE # 3**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHNNY BLASINI | EDR Digital Archive |

**435 ZEREGA AVE # 3**

| Year | Uses | Source |
|---|---|---|
| 2020 | MICHAEL LIBURD | EDR Digital Archive |

## ZEREGA AVE # A

**433 ZEREGA AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | MOKBUL CHOUDHURY | EDR Digital Archive |

# FINDINGS

**435 ZEREGA AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | ISABEL HERNANDEZ | EDR Digital Archive |

## ZEREGA AVE # B

**429 ZEREGA AVE # B**

| Year | Uses | Source |
|---|---|---|
| 2020 | KEICY RODRIGUEZ | EDR Digital Archive |

## ZEREGA AVE # C

**429 ZEREGA AVE # C**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHASTITY CRUZ | EDR Digital Archive |

**435 ZEREGA AVE # C**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHANNA INFANTE | EDR Digital Archive |

**437 ZEREGA AVE # C**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHAYENNE THOMPSON | EDR Digital Archive |
| | TIFFANY THOMPSON | EDR Digital Archive |

## ZERESA AVE

**500 ZERESA AVE**

| Year | Uses | Source |
|---|---|---|
| 1965 | DEL BALSO CONST CORP | New York Telephone Company |

# FINDINGS

## ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 0 LACOMBE AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 1 Schley Ave | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1927 |
| 196 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 200 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 200 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 201 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 202 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 202 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 202 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 202 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 202 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 202 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 204 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 230 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 230 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 230 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 230 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 230 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 230 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2303 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2311 LACOMBE AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 232 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 2325 LACOMBE AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 256 HOSMER AVE # A | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 2578 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2578 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2578 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2578 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2578 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2578 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2579 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2579 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2579 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2579 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2579 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2579 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 HOSMER AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 HOSMER AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 HOSMER AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 HOSMER AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 HOSMER AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 258 HOSMER AVE # A | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| Address Researched | Address Not Identified in Research Source |
|---|---|
| 2580 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2580 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2581 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2581 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2581 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2581 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2581 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2581 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| Address Researched | Address Not Identified in Research Source |
|---|---|
| 2582 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2582 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2583 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2583 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2583 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2583 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2583 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2583 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2583 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2584 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| Address Researched | Address Not Identified in Research Source |
|---|---|
| 2584 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2585 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2585 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2585 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2585 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2585 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2585 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2585 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2586 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2586 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2586 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2586 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2586 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2586 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2586 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2587 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2587 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2587 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2587 HARDING AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2587 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2587 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2587 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 2588 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2588 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2588 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2588 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2588 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2589 HARDING AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2589 HARDING AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2589 HARDING AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2589 HARDING AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2589 HARDING AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE # A | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE # B | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2590 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2590 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2590 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2590 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2590 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 260 HOSMER AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 260 HOSMER AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 260 HOSMER AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 260 HOSMER AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 260 HOSMER AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 SCHLEY AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 SCHLY AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 2606 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2606 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2606 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2606 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2606 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2608 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2608 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2608 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2608 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE # B | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2610 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2610 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2610 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2610 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2610 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2610 MILES AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 2612 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 2612 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2612 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2612 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2612 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2614 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2614 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 429 ZEREGA AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 429 ZEREGA AVE # B | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 429 ZEREGA AVE # C | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 430 ZEREGA AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 460 HUTCHINSON RIVER PKWY | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 489 ZEREGAAVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1931, 1927 |
| 492 Hutchinson River Pkwy | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 500 Hutchinson River Parkway | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 500 HUTCHINSON RIVER PKWY | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 520 YZNAGA STREET PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 525 Hutchinson River Pkwy | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 525 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 525 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1931, 1927 |
| 525 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1927 |
| 525 YZNAGA PL | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| 526 YZNAGA STREET PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 527 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 527 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 527 YZNAGA STREET PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |

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| Address Researched | Address Not Identified in Research Source |
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| 530 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1931, 1927 |
| 530 ZEREGA AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 530 ZEREGA AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 530 ZEREGA AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 534 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 534 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 534 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| Address Researched | Address Not Identified in Research Source |
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| 534 YZNAGA PL | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 534 YZNAGA STREET PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 535 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 535 ZEREGA AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 536 YZNAGA PL | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 536 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 536 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 536 YZNAGA STREET PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 537 ZEREGA AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 537 ZEREGA AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 545 BRUSH AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 545 BRUSH AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 545 Brush Ave | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 550 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 550 BRUSH AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 Brush Ave | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE FRNT 1 | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 550 BRUSH AVE FRNT 2 | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 552 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1927 |
| 553 HUTCHINSON RIVER PKWY | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 553 HUTCHINSON RIVER PKWY | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 553 HUTCHINSON RIVER PKY | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 555 HUTCHINSON RIVER PKWY | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 555 HUTCHINSON RIVER PKWY | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 555 HUTCHINSON RIVER PKWY | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| Address Researched | Address Not Identified in Research Source |
|---|---|
| 555 Hutchinson River Pkwy | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 555 HUTCHINSON RIVER PKWY | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 555 HUTCHINSON RIVER PKWY | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 555 HUTCHINSON RIVER PKY | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 570 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 570 ZEREGA AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 570 ZEREGA AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 620 HUTCHNSNRIVER PKY | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 630 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931 |
| 641 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 641 YZNAGA PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 641 YZNAGA STREET PL | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 650 BRUSH AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 650 BRUSH AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 680 BRUSH AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 699 Brush Ave | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 699 BRUSH AVE | 2020, 2017, 2014, 2010, 1995, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 700 HUTCHINSON RIVER PKWY | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 700 HUTCHINSON RIVER PKWY | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

## TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 450 Hutchinson River Parkway | 2020, 2017, 2014, 2010, 2005, 1995, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

**Proposed Ballys Casino - Ring Road**

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.11

July 30, 2024

# The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

07/30/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.11

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

***Search Results:***

| Year | Scale | Details | Source |
|---|---|---|---|
| 2019 | 1"=500' | Flight Year: 2019 | USDA/NAIP |
| 2015 | 1"=500' | Flight Year: 2015 | USDA/NAIP |
| 2011 | 1"=500' | Flight Year: 2011 | USDA/NAIP |
| 2006 | 1"=500' | Flight Year: 2006 | USDA/NAIP |
| 1994 | 1"=500' | Acquisition Date: April 08, 1994 | USGS/DOQQ |
| 1985 | 1"=500' | Flight Date: March 16, 1985 | USDA |
| 1980 | 1"=500' | Flight Date: July 25, 1980 | NOAA |
| 1974 | 1"=500' | Flight Date: September 15, 1974 | NOAA |
| 1966 | 1"=500' | Flight Date: February 23, 1966 | USGS |
| 1962 | 1"=500' | Flight Date: January 16, 1962 | EDR Proprietary Aerial Viewpoint |
| 1954 | 1"=500' | Flight Date: January 08, 1954 | USGS |
| 1951 | 1"=500' | Flight Date: April 20, 1951 | EDR Proprietary Aerial Viewpoint |
| 1924 | 1"=500' | Flight Date: July 01, 1924 | FAIR |

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YEAR: 2015

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INQUIRY #: 7720624.11

YEAR: 2011

= 500'

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INQUIRY #: 7720624.11

YEAR: 2006

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YEAR: 1994

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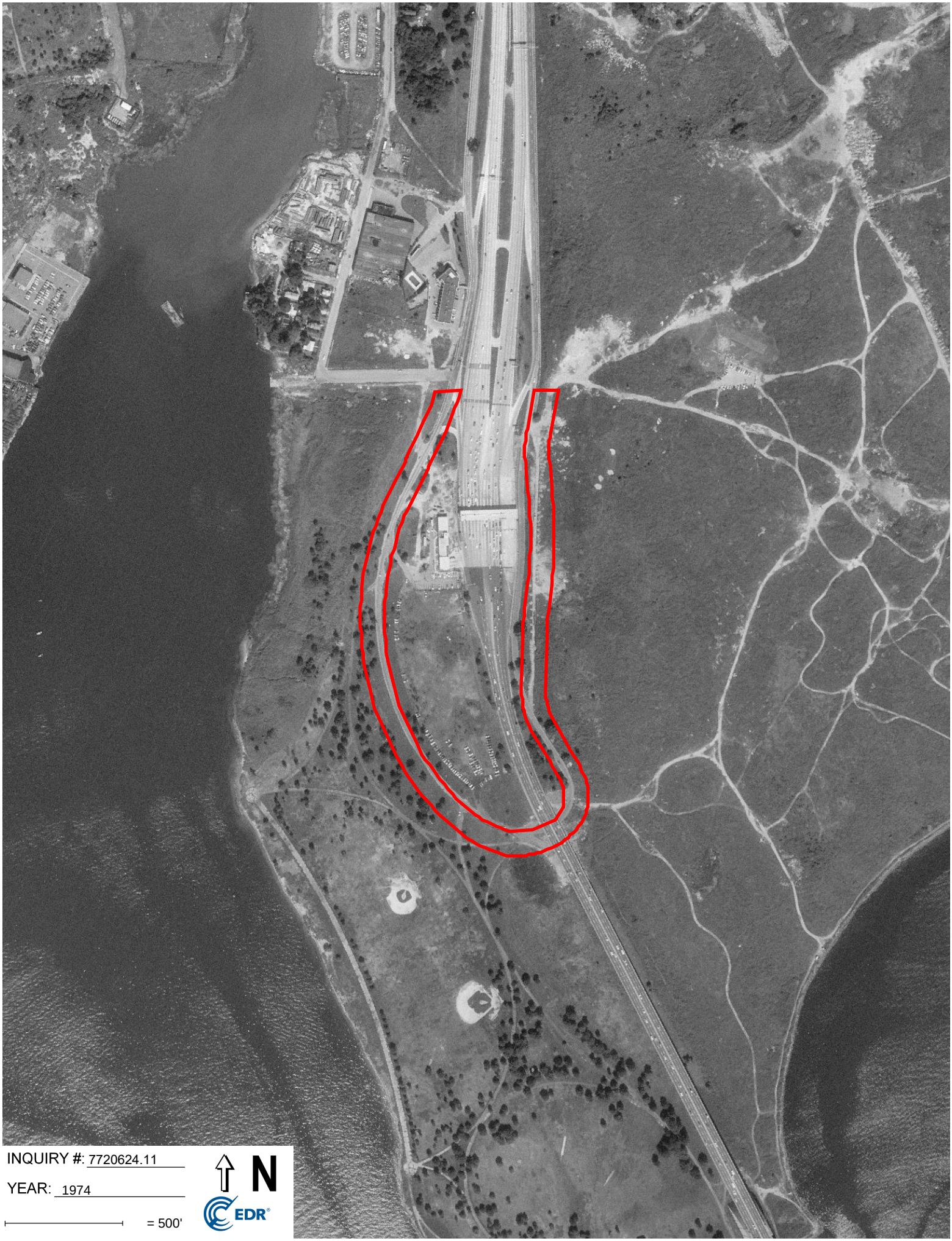

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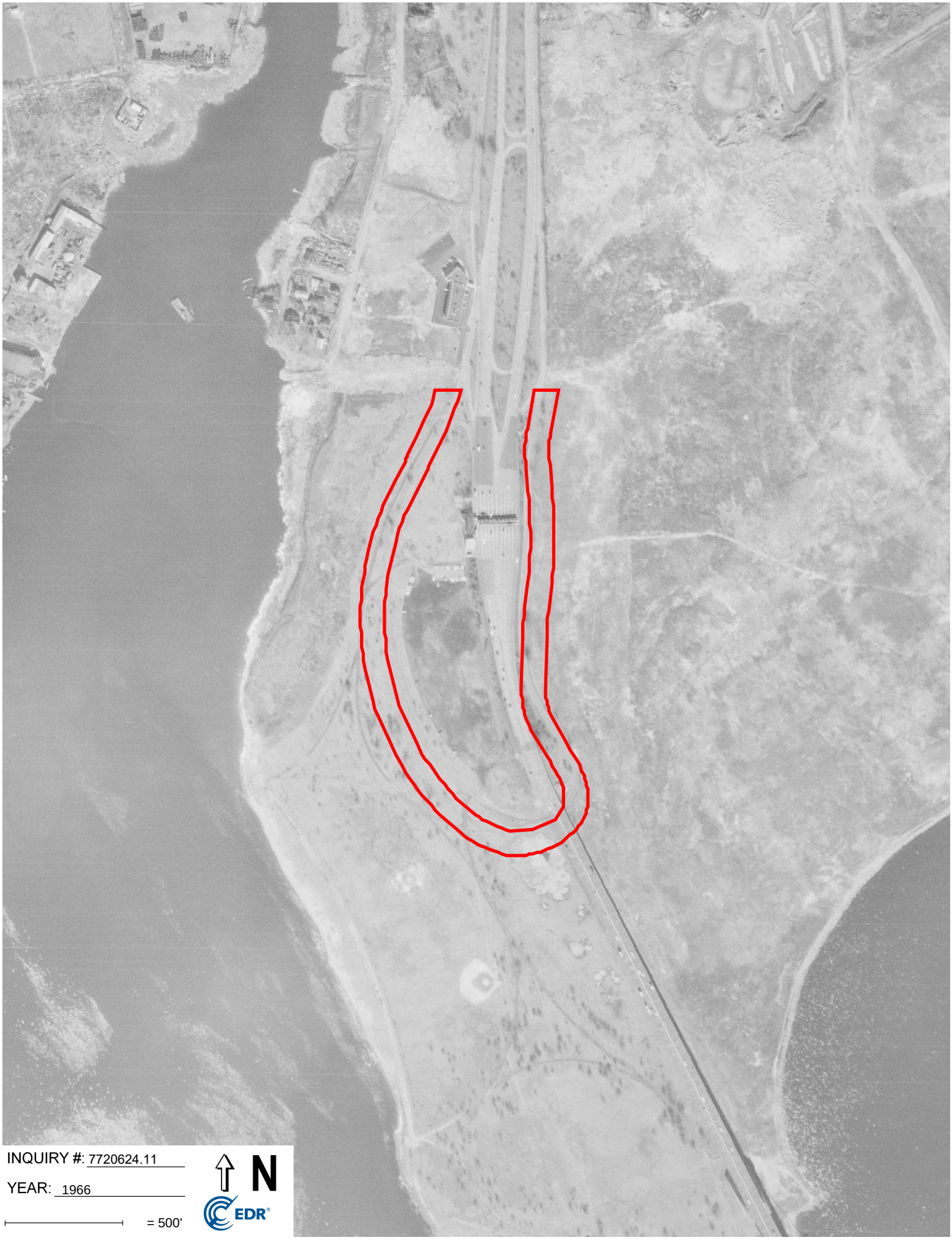

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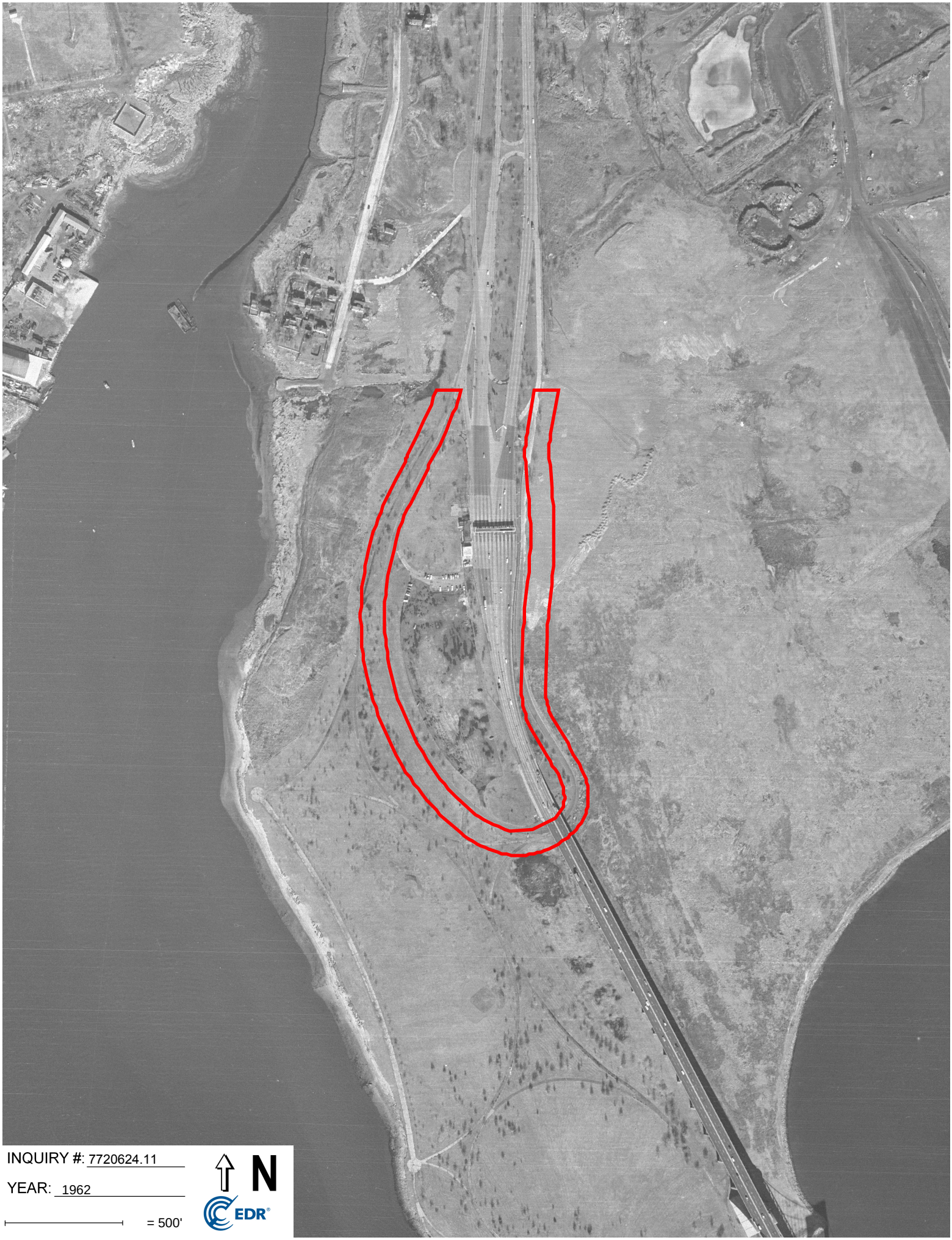

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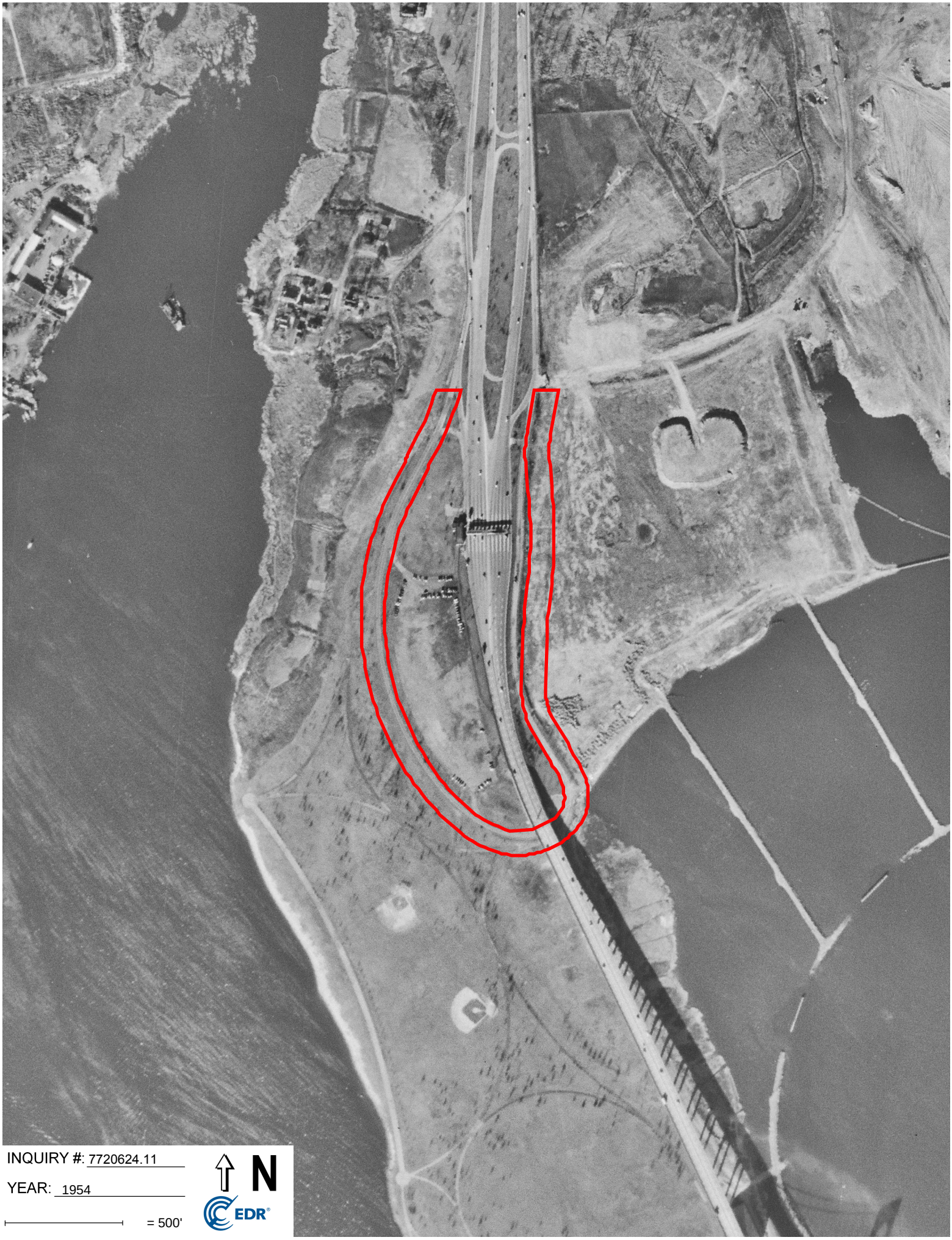

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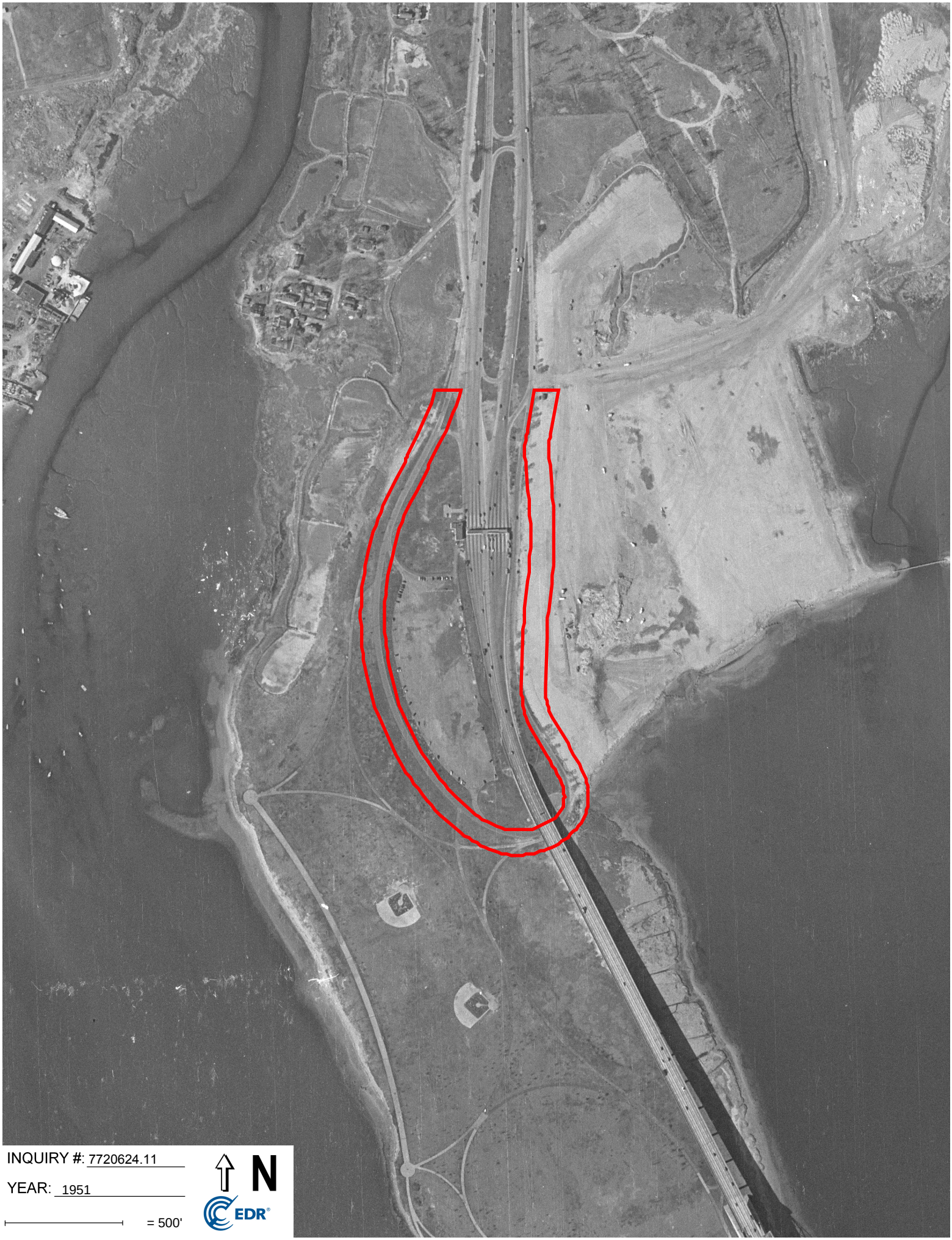

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= 500'

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INQUIRY #: 7720624.11

YEAR: 1924

= 500'

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EDR

# Appendix G Resumes of Environmental Professionals

# BRIAN GOCHENAUR, QEP

## ASSOCIATE PRINCIPAL

## ENVIRONMENTAL SCIENTIST

Mr. Gochenaur is an environmental project manager with 20 years of experience in environmental due diligence, site investigation and remediation, fuel oil storage tank investigation and removal, soil vapor intrusion assessments, in-situ remedial technology, spill closure, vapor barrier and sub-slab depressurization system design and construction, emergency response, environmental and geotechnical site investigations, and health and safety monitoring. He has extensive experience with the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup, Voluntary Cleanup and Spill Programs and New York City Department of Environmental Protection (NYCDEP) "E" Designated and New York City Voluntary Cleanup Program (BCP) sites. His areas of expertise include Phase I Environmental Site Assessments, Phase II Site Investigations, and environmental consulting and oversight on large scale construction projects.



**EDUCATION**

B.S., Environmental Science
University of Florida

**PROFESSIONAL REGISTRATION**

Qualified Environmental Professional (QEP) certified by the Institute of Professional Environmental Practice

40-Hour OSHA (HAZWOPER)

**SELECTED PROJECTS**

- 440 Washington Street, E-Designated services, New York, NY
- 3514 Surf Avenue, Tall Residential and Retail Building, Brooklyn, NY
- ARO 242 West 53, Tall Residential Building, New York, NY
- NY Aquarium Shark Exhibit, Soil Characterization and Excavation Oversight, Coney Island Neighborhood, Brooklyn, NY
- 60 West Street, Site Investigation and Redevelopment, Brooklyn, NY
- 535 4th Avenue, BCP Auto Repair Cleanup and Redevelopment, Brooklyn, NY
- 1525 Bedford Avenue, BCP Gas Station Cleanup and Redevelopment, Brooklyn, NY
- 220 Eleventh Avenue, Residential Building, New York, NY
- 432 Rodney Street, Residential Building, Brooklyn, NY
- 563 Sackett Street, Brooklyn, NY
- 362 West 125th Street, Residential Building, New York, NY
- Bedford Armory Redevelopment, Brooklyn, NY
- 268 West Street, BCP Redevelopment of Former Commercial and Industrial Site, New York, NY
- 110 125th Street, Soil Excavation and Remediation, New York, NY
- Former Roseland Ballroom Redevelopment, Soil Characterization and Excavation Oversight, New York, NY
- 42 Crosby Street, "E" Designated Site Investigation and Remediation, New York, NY
- New York School Construction Authority, Various Locations, In-House Environmental Consulting, Five Boroughs of New York City
- EZ Serve Portfolio, GE Capital, Various Phase II Site Investigations, FL, GA, LA, and MS
- Beth Elohim Child Daycare Center, Lead Based Paint Abatement, Brooklyn, NY
- Price Battery, Environmental Protection Agency (EPA) Lead Fallout Superfund Site, Hamburg, PA

- Clark Portfolio, GE Capital, Various Phase II Locations, MI, IL, ID, and OH
- Tops Plaza Portfolio, Prudential Real Estate Investors, Various Phase II Locations, NY
- Cingular Wireless Portfolio, Cingular Wireless, Various Locations Phase I and II Locations, WA
- Queens Center Mall Expansion, Remedial Oversight, Elmhurst, NY
- Soka Gakkai International-USA, Cultural Center, Brooklyn, NY
- 1752 Shore Parkway, Environmental Remediation, Brooklyn, NY
- Bedford Union Armory, NYS Brownfield Cleanup Program, Brooklyn, NY
- NYCEDC Manhattan Greenway – Harlem River, New York, NY
- 445 Gerard Avenue, Residential Building, Bronx, NY
- Towne Gardens North, Residential Building, Buffalo, NY

# LAMEES ESMAIL, EIT

## PROJECT ENGINEER

## ENVIRONMENTAL ENGINEERING

Ms. Esmail is a civil and environmental engineer with four years of experience supporting environmental oversight and remediation projects in New York City. She has performed environmental field work including preparing daily inspection reports, photo documentation of work, and reviewing contractor submittals. She currently performs site research, manages field oversight, reviews/approves contractor submittals, prepares reports, and is involved with remedial design, implementation and project management.

Prior to joining Langan, Ms. Esmail gained three years of experience supporting environmental permitting and erosion and sedimentation control primarily for linear overhead transmission line projects. Types of permits included state land disturbance approvals and Army Corps of Engineers Section 10 Pre-Construction Notifications. Ms. Esmail also has experience aiding with the siting of new substation properties, using ArcGIS and AutoCAD to compile data for potential sites.



**EDUCATION**

B.S., Civil Engineering (Environmental Concentration)
George Washington University

**PROFESSIONAL REGISTRATION**

Engineer in Training (EIT) in NC

**SELECTED PROJECTS**

- Con Edison Partial Replacement of 345KV Feeders M51 & M52 Feasibility Study, New York, NY
- 220 Eleventh Avenue, Hudson Arts Building, New York, NY
- 50 Hudson Yards, Supertall Office Building, New York, NY
- 215 North 10th Street, Brooklyn, NY
- 320 West 135th Street, New York, NY
- 163 Varick Street, New York, NY
- 39 West 23rd Street, New York, NY
- 1 Huron Street, Brooklyn, NY
- Bedford Armory, Brooklyn, NY
- 1607 Surf Avenue, Brooklyn, NY
- 414 Gerard Avenue, Bronx, NY
- 445 Gerard Avenue, Bronx, NY
- 326-350 Rockaway Avenue, Brooklyn, NY
- 197-201 Canal Street, Staten Island, NY
- 475 Bay Street, Staten Island, NY
- Astoria Steel, Queens, NY
- 99 Hudson Boulevard, New York, NY
- 4650 Broadway, New York, NY
- 12-57 57th Street, Brooklyn, NY
- 805-825 Atlantic Avenue, Brooklyn, NY
- Various Phase I Environmental Site Assessments (ESAs) in NYC

## SELECTED PUBLICATIONS, REPORTS, AND PRESENTATIONS

Esmail, L., “Transmission Line Erosion Control and Construction Specifications”, Duke Energy Progress Transmission Erosion and Sedimentation Control Seminar, Raleigh, NC, November 2016.

# KAITLYN GIOIA

## SENIOR STAFF SCIENTIST

## ENVIRONMENTAL ENGINEERING

Ms. Gioia is an Environmental Scientist with the New York City team. Ms. Gioia graduated in 2016 from Adelphi University with a B.A. in Environmental Studies. Ms. Gioia's experiences include project management, leading field work, exposure to an assortment of environmental pollutants, remedial action procedures, & Phase I and Phase II Environmental Assessments. Ms. Gioia has performed Asbestos Hazard and Emergency Response Act (AHERA) inspections and evaluations in schools and State Pollutant Discharge Elimination System (SPDES) sampling for power plants and commercial facilities.



### SELECTED PROJECTS

- 80-100 Flatbush Avenue, Brooklyn, NY
- 250 Water Street, New York, NY
- 35-01 & 35-09 Northern Boulevard, Long Island City, NY
- 23-15 44th Road, Long Island City, NY
- South Randalls Due Diligence, New York, NY
- 595-647 Smith Street, Brooklyn, NY
- Willets Point Redevelopment, Flushing, NY
- President Street Properties, Brooklyn, NY
- 475 Bay Street, Staten Island, NY
- Confidential Project, Queens, NY
- 137 Kings Highway, Brooklyn, NY
- 111 Willow Avenue, Bronx, NY
- 560 Degraw Street, Brooklyn, NY
- 122 Fifth Avenue, New York, NY
- Insurance Claim Oversight, White Plains, NY*
- Subrogation Potential Investigation, Lindenhurst, NY*
- Brookhaven National Lab, Brookhaven, NY*
- Far Rockaway Vault Sampling, Far Rockaway, NY*
- East Islip School District AHERA Inspection, East Islip, NY*
- UPRS SPDES Sampling, Uniondale, NY*
- 550 Stewart Avenue Phase I and II, Garden City, NY*
- Riverhead to Canal Cable Expansion, Riverhead, NY*
- Noise Dosimetry Study, Queens, NY*
- School District Lead in Water Sampling, Yonkers, Kings Park, and Baldwin, NY*
- Potable Water Sampling, New York, NY*
- DCF Remediation Oversight, Malverne, West Hempstead, and Port Washington, NY*
- AOP Pilot Testing, Garden City Park, Franklin Square, and Port Washington, NY*

### EDUCATION

B.A., Environmental Studies
Adelphi University

### PROFESSIONAL REGISTRATION

OSHA 40-Hour

OSHA10-Hour

NYS Department of Labor, Asbestos Inspector License

USEPA Lead Based Paint Inspector License

NYSDEC Class A/B Operator of Underground Storage Tank Systems

NYSDEC 4-Hour Erosion and Sediment Control Contractor Training 2021

**Projects represent experience with a previous firm*

## SELECTED PUBLICATIONS, REPORTS, AND PRESENTATIONS

"Fecundity and Embryonic Development of Spiny Dogfish in the Northwest Atlantic Ocean" Transactions of the American Fisheries Society 2019.

Dutton J., Fisher NS., Gioia KA., Madigan DJ., "Tissue Distribution of Mercury in Female Spiny Dogfish (Squalus Acanthias)" Society of Environmental Toxicology and Chemistry South-Central Regional Meeting 2016, Fort Worth, TX.

Dutton J., Fisher NS., Gioia KA., Madigan DJ., "Maternal Transfer of Mercury in Spiny Dogfish" 12th International Congress on The Biology of Fish 2016, San Marcos, TX.

Dutton J., Fisher NS., Gioia KA., Madigan DJ., "Mercury Bioaccumulation and Maternal Transfer in Spiny Dogfish (Squalus Acanthias)" 33rd Annual Meeting of The American Elasmobranch Society/Joint Meeting of Ichthyologists and Herpetologists 2017, Austin, TX.

# E-6

Bally's Bronx
Phase II ESI Work Plan for Ring Road
*Prepared by: Langan Engineering*

LANGAN

# PHASE II ENVIRONMENTAL SITE INVESTIGATION WORK PLAN

# for

# PROPOSED BALLY'S CASINO - RING ROAD at FERRY POINT PARK Bronx, New York 10465

***Prepared for:***

**Bally's Corporation**
**100 Westminster Street**
**Providence, Rhode Island 02903**

***Prepared by:***

**Langan Engineering, Environmental, Surveying,**
**Landscape Architecture and Geology, D.P.C.**
**360 West 31st Street, 8th Floor**
**New York, New York 10001**

LANGAN

**September 12, 2024**
**170773001**

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## 1. INTRODUCTION

This Phase II Environmental Site Investigation (ESI) Work Plan has been developed for a section of the Hutchinson River Parkway, referred to as Ring Road, located within Ferry Point Park, Bronx, New York (the "site"). The following work scope has been developed to evaluate the recognized environmental conditions (REC) identified during the Phase I Environmental Site Assessment (ESA) and to satisfy the New York City Department of Environmental Protection (NYCDEP) requirements for a Phase II ESI Work Plan outlined in the 2021 City Environmental Quality Review (CEQR) Technical Manual.

## 2. SITE LOCATION, CURRENT USE, AND PROPOSED DEVELOPMENT PLAN

The site is an approximately 9.85-acre, U-shaped section of Ferry Point Park, that primarily serves as a park thoroughfare and public recreation space and is identified on the New York City Bronx Borough Tax Map as part of Block 5622, Lot 1. The site is improved with an uninterrupted, circular roadway, referred to as Ring Road. Ring Road is a one-lane, one-way, asphalt-paved roadway and is bordered on either side by concrete curbing, metal guardrails, and grass shoulders. The remainder of the site includes vegetated areas and footpaths associated with Ferry Point Park. The section of Ring Road comprising the site totals about 1 mile.

The site is bound by Schley Avenue, the Hutchinson River Parkway, and service roads to the north; Bally's Golf Links at Ferry Point golf course to the east; Ferry Point Park and the Bronx-Whitestone Bridge to the south; and Ferry Point Park to the west. Between the western and eastern legs of the U-shape formed by the site lies public parking areas for Ferry Point Park and the Bronx-Whitestone Bridge Metropolitan Transit Authority (MTA) Building. A site location map is provided as Figure 1.

Improvements to the site, including widening of Ring Road are contemplated by Bally's Corporation LLC (Bally's) as part of the proposed development of a gaming facility. The site encompasses the total area of proposed roadway improvements, which includes park land extending between about 40 and 60 feet beyond the current extents of Ring Road. Excavation depths to facilitate widening of Ring Road are expected to extend from 1 to 5 feet below grade surface (bgs). Groundwater is tidally influenced and estimated between 2 and 20 feet bgs. Groundwater flow direction is generally to the west-southwest, towards Westchester Creek and the East River. The proposed conceptual development plans are included as Appendix A.

## 3. PHASE I ENVIRONMENTAL SITE ASSESSMENT SUMMARY

The following recognized environmental conditions (RECs) were identified in the September 6, 2024, Phase I ESA prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C. (Langan):

*REC 1 – Current and Historical use of Adjoining and Surrounding Properties*

Historical adjoining and surrounding property use includes a municipal solid waste landfill (1950-1960s), a United Parcel Service (UPS) facility with petroleum and chemical bulk storage (1985 - present), and a MTA bridge support facility with petroleum bulk storage (1951 - present). Documented and undocumented spills or releases of petroleum products or hazardous substances associated with these properties may have adversely affected groundwater and/or soil vapor on the site.

*REC 2 – Non-Native Fill*

Non-native fill is expected to underly the site above native soil. Non-native fill in New York City may contain contaminants, particularly metals and semi-volatile organic compounds (SVOCs), at concentrations that exceed applicable state and/or federal standards. Non-native fill does not trigger a regulatory reporting requirement, but may require implementation of special soil handling, management, and off-site disposal procedures if disturbed during development of the site.

A copy of the Phase I ESA is included in Appendix B.

# 4. SUBSURFACE INVESTIGATION WORK SCOPE

## 4.1 Geophysical Survey

A geophysical survey will be performed to locate buried utilities and anomalies in the vicinity of the proposed sample locations.

## 4.2 Soil, Groundwater, and Soil Vapor Summary

An investigation of soil and groundwater will be performed to properly evaluate the site for potential environmental impacts from current and historic off-site uses. A proposed sampling location plan is included as Figure 2. The proposed sampling will further investigate the RECs and evaluate the presence and/or quality of non-native fill material, as well as provide general horizontal/vertical information across the site for development purposes. Sampling will be conducted in general accordance with the New York State Department of Environmental Conservation (NYSDEC) Technical Guidance for Site Investigation and Remediation DER-10 and the 2021 CEQR Technical Manual.

Forty-two soil borings (SB01 to SB42) will be installed across the site (one soil boring about every 100 linear feet). At a minimum, a total of 84 soil samples will be collected from the borings. Ten soil boring locations will be converted into temporary groundwater monitoring wells and ten groundwater samples will be collected. Conditions in the field may require adjustment of sampling locations. Each soil boring location will be accurately measured to fixed benchmarks (i.e., select property lines, adjacent structures, etc.).

There are currently no enclosed structures proposed for this development project; therefore, soil vapor sampling is not proposed for this investigation.

### 4.3 Soil Sampling

A licensed environmental driller will be retained to advance soil borings using a Geoprobe® drill rig. Field personnel will screen the soil samples during borehole advancement for organic vapors with a photo-ionization detector (PID) and evaluate visual and olfactory impacts prior to collecting environmental samples. All field work will be recorded in a field log. At a minimum, two soil samples will be collected from each soil boring (for a total of 84 soil samples) for laboratory analysis: a surface soil sample (from the 0-2 feet bgs interval), and a subsurface soil sample (from the two-foot interval beneath the proposed maximum excavation depth of 5 feet bgs). Discrete (grab) samples will be taken from the aforementioned sampling intervals. The subsurface soil samples may also serve as in-situ post-excavation soil samples for the remedial plan. A third soil sample may be collected if indications of impacts are identified (e.g., PID readings above background and/or visual and olfactory observations of a release).

### 4.4 Monitoring Well Installation and Groundwater Sampling

Ten one-inch diameter temporary groundwater monitoring wells will be installed. Ten representative groundwater samples will be collected using low-flow sampling techniques from each well with a peristaltic pump and dedicated tubing. Sampling will be conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for site Investigation and Remediation, dated May 2010, and Sampling Guidelines and Protocols, dated March 1991. Groundwater wells will be gauged with a water level meter to record a depth to groundwater reading (1/100 foot), and if necessary, an interface meter to determine the thickness of light non-aqueous phase liquid (LNAPL) or dense non-aqueous phase liquid (DNAPL).

### 4.5 Soil Vapor Sampling

There are currently no enclosed structures proposed as part of site development; therefore, soil vapor sampling is not proposed for this investigation. Should the design be modified to include enclosed structures, soil vapor sampling will be conducted in the proposed building location in accordance with the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006, and subsequent updates).

### 4.6 Sample Analysis

Soil and groundwater samples will be submitted to a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified laboratory for full analysis:

- Volatile organic compounds (VOCs) by EPA Method 8260;
- SVOCs by EPA Method 8270;

- Pesticides, herbicides, polychlorinated biphenyls (PCBs) by EPA Method 8081/8082; and
- Target Analyte List (TAL) metals by EPA Method 6010 and 7471.

All groundwater samples will be analyzed for both filtered (dissolved) and unfiltered (total) metals.

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and "fingerprint analysis" and any legally-required, regulatory reporting (i.e., NYSDEC spills hotline) will be completed.

Soil and groundwater samples collected from each well location will also be analyzed for NYSDEC-List Per- and polyfluoroalkyl Substances (PFAS) by EPA Method 1633. A proposed sample summary is provided as Table 1.

### 4.7 Quality Assurance/Quality Control Procedures

Quality assurance/quality control (QA/QC) procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures will be used (1) to document that samples are representative of actual conditions at the site and (2) identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process. QA/QC samples (field and trip blanks, duplicates, etc.) will be collected and analyzed at an ELAP certified laboratory.

### 4.8 Investigation Derived Waste

Soil cuttings may be disposed at the site within the borehole that generated them to within 6 inches of the surface unless:

- Free product or grossly contaminated soil are present in the cuttings
- The borehole has penetrated an aquitard, aquiclude or other confining layer; or extends significantly into bedrock
- Backfilling the borehole with cuttings will create a significant path for vertical movement of contaminants. Soil additives (bentonite) may be added to the cuttings to reduce permeability
- The soil cannot fit into the borehole.

Those soil cuttings needing to be managed on-site will be containerized in properly labeled New York State Department of Transportation (NYSDOT)-approved 55-gallon drums for future off-site disposal at a permitted facility. All boreholes which require drill cuttings disposal would ultimately

be filled with bentonite chips (hydrated) and asphalt/concrete capping. Disposable sampling equipment including, spoons, gloves, bags, paper towels, etc. that came in contact with environmental media will be double bagged and disposed as municipal trash as non-hazardous trash.

### 4.9 Reporting

A Phase II ESI Report will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative procedures and findings. Soil analytical results will be compared to the NYSDEC Part 375-6.8(a) Soil Cleanup Objectives and groundwater samples will be compared to the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (SGVs). The report will include an updated sampling plan, spider diagrams, analytical data tables for all reported constituent compounds (including non-detectable concentrations) and remedial recommendations, as warranted.

### 4.10 Investigation Health and Safety Plan

An Occupational Safety and Health Administration (OSHA) compliant Health and Safety Plan that meets all OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements will be implemented during the site work to protect worker safety. The Site Safety Coordinator will ensure full compliance of the Health and Safety Plan (HASP) in accordance with applicable health and safety laws and regulations. All field personnel involved in investigation activities will participate in training required under OSHA HAZWOPER 29 Code of Federal Regulations (CFR) 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Emergency telephone numbers will be posted at the site location before any work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; personal protection equipment (PPE) levels and other relevant safety topics including a highlighted route map to the nearest hospital/emergency room. Meetings will be documented in a logbook or specific form. Potential on-site chemicals of concern include VOCs, SVOCs, pesticides/PCBs, and metals. Information fact sheets and/or summary tables for each contaminant group are included in the HASP. A copy of this HASP is included as Appendix C and will be on-site during each sampling event.

# Figures




Notes:
1. Flushing, NY USGS Quadrangle Map Topographic basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online Copyright: © 2013 National Geographic Society, i-cubed.
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Project
**PROPOSED BALLY'S CASINO - RING ROAD AT FERRY POINT PARK**
BRONX NEW YORK

Figure Title
**SITE LOCATION MAP**

| Project No. | Figure |
|---|---|
| 170773001 | 1 |
| Date: 9/6/2024 | |
| Scale: 1" = 2,000 feet | |
| Drawn By: MG | |

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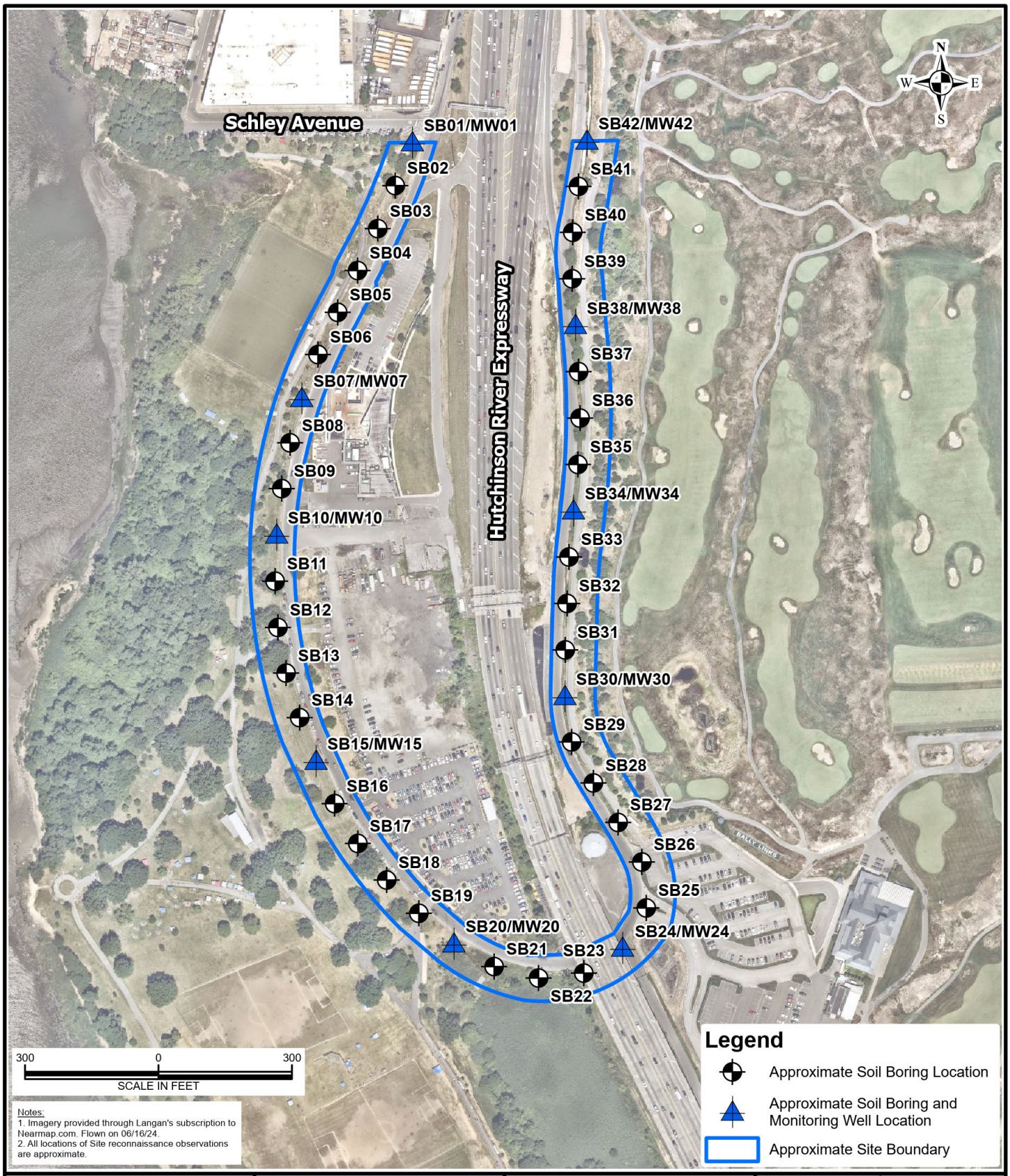



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Project
**PROPOSED BALLY'S CASINO - RING ROAD AT FERRY POINT PARK**
BRONX NEW YORK

Figure Title
**PROPOSED SAMPLE LOCATION PLAN**

| Project No. | Figure |
|---|---|
| 170773001 | 2 |
| Date: 9/9/2024 | |
| Scale: 1" = 300 feet | |
| Drawn By: MG | |

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Path: \\langan.com\data\NYC\data0\170773001\Project Data\ArcGIS\APRX\170773001\170773001.aprx

# Tables

**Table 1**
**Proposed Sample Summary**
**Subsurface Investigation Work Plan**
**Proposed Bally's Casino - Ring Road**
**at Ferry Point Park**
**Bronx, New York**
**Langan Project No. 170773001**

| No. | Sample Name | Type | Boring | Depth | Time | Date | Rationale | Depth[1] | Analysis |
|---|---|---|---|---|---|---|---|---|---|
| **SOIL** | | | | | | | | | |
| 1 | SB01_depth | Grab | SB01 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | Part 375-list of VOCs, SVOCs, PCBs, Pesticides/Herbicides, and TAL Metals<br><br>* Samples to be analyzed for PFAS |
| 2 | SB01_depth | | | | | | | maximum excavation depth | |
| 3 | SB02_depth | | SB02 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 4 | SB02_depth | | | | | | | maximum excavation depth | |
| 5 | SB03_depth | | SB03 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 6 | SB03_depth | | | | | | | maximum excavation depth | |
| 7 | SB04_depth | | SB04 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 8 | SB04_depth | | | | | | | maximum excavation depth | |
| 9 | SB05_depth | | SB05 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 10 | SB05_depth | | | | | | | maximum excavation depth | |
| 11 | SB06_depth | | SB06 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 12 | SB06_depth | | | | | | | maximum excavation depth | |
| 13 | SB07_depth | | SB07 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 14 | SB07_depth | | | | | | | maximum excavation depth | |
| 15 | SB08_depth | | SB08 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 16 | SB08_depth | | | | | | | maximum excavation depth | |
| 17 | SB09_depth | | SB09 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 18 | SB09_depth | | | | | | | maximum excavation depth | |
| 19 | SB10_depth | | SB10 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 20 | SB10_depth | | | | | | | maximum excavation depth | |
| 21 | SB11_depth | | SB11 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 22 | SB11_depth | | | | | | | maximum excavation depth | |
| 23 | SB12_depth | | SB12 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 24 | SB12_depth | | | | | | | maximum excavation depth | |
| 25 | SB13_depth | | SB13 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 26 | SB13_depth | | | | | | | maximum excavation depth | |
| 27 | SB14_depth | | SB14 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 28 | SB14_depth | | | | | | | maximum excavation depth | |
| 29 | SB15_depth | | SB15 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 30 | SB15_depth | | | | | | | maximum excavation depth | |
| 31 | SB16_depth | | SB16 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 32 | SB16_depth | | | | | | | maximum excavation depth | |
| 33 | SB17_depth | | SB17 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 34 | SB17_depth | | | | | | | maximum excavation depth | |
| 35 | SB18_depth | | SB18 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 36 | SB18_depth | | | | | | | maximum excavation depth | |
| 37 | SB19_depth | | SB19 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 38 | SB19_depth | | | | | | | maximum excavation depth | |
| 39 | SB20_depth | | SB20 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 40 | SB20_depth | | | | | | | maximum excavation depth | |
| 41 | SB21_depth | | SB21 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 42 | SB21_depth | | | | | | | maximum excavation depth | |
| 43 | SB22_depth | | SB22 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 44 | SB22_depth | | | | | | | maximum excavation depth | |
| 45 | SB23_depth | | SB23 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 46 | SB23_depth | | | | | | | maximum excavation depth | |
| 47 | SB24_depth | | SB24 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 48 | SB24_depth | | | | | | | maximum excavation depth | |
| 49 | SB25_depth | | SB25 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 50 | SB25_depth | | | | | | | maximum excavation depth | |
| 51 | SB26_depth | | SB26 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 52 | SB26_depth | | | | | | | maximum excavation depth | |
| 53 | SB27_depth | | SB27 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 54 | SB27_depth | | | | | | | maximum excavation depth | |
| 55 | SB28_depth | | SB28 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 56 | SB28_depth | | | | | | | maximum excavation depth | |
| 57 | SB29_depth | | SB29 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 58 | SB29_depth | | | | | | | maximum excavation depth | |
| 59 | SB30_depth | | SB30 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 60 | SB30_depth | | | | | | | maximum excavation depth | |
| 61 | SB31_depth | | SB31 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 62 | SB31_depth | | | | | | | maximum excavation depth | |
| 63 | SB32_depth | | SB32 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 64 | SB32_depth | | | | | | | maximum excavation depth | |
| 65 | SB33_depth | | SB33 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 66 | SB33_depth | | | | | | | maximum excavation depth | |
| 67 | SB34_depth | | SB34 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 68 | SB34_depth | | | | | | | maximum excavation depth | |
| 69 | SB35_depth | | SB35 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 70 | SB35_depth | | | | | | | maximum excavation depth | |
| 71 | SB36_depth | | SB36 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 72 | SB36_depth | | | | | | | maximum excavation depth | |
| 73 | SB37_depth | | SB37 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 74 | SB37_depth | | | | | | | maximum excavation depth | |
| 75 | SB38_depth | | SB38 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 76 | SB38_depth | | | | | | | maximum excavation depth | |
| 77 | SB39_depth | | SB39 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 78 | SB39_depth | | | | | | | maximum excavation depth | |
| 79 | SB40_depth | | SB40 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 80 | SB40_depth | | | | | | | maximum excavation depth | |
| 81 | SB41_depth | | SB41 | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 82 | SB41_depth | | | | | | | maximum excavation depth | |
| 83 | SB42_depth | | SB42 * | | | | Investigate RECs 1 & 2 | upper 2 feet of historic fill | |
| 84 | SB42_depth | | | | | | | maximum excavation depth | |

**Table 1**
**Proposed Sample Summary**
**Subsurface Investigation Work Plan**
**Proposed Bally's Casino - Ring Road**
**at Ferry Point Park**
**Bronx, New York**
**Langan Project No. 170773001**

| No. | Sample Name | Type | Boring | Depth | Time | Date | Rationale | Depth[1] | Analysis |
|---|---|---|---|---|---|---|---|---|---|
| **SOIL** | | | | | | | | | |
| 85 | SBDUP01_date * | Duplicate | TBD | | | | QA/QC | TBD | Part 375-list of VOCs, SVOCs, PCBs, Pesticides/Herbicides, and TAL Metals<br><br>* Samples to be analyzed for PFAS |
| 86 | SBDUP02_date | | | | | | | | |
| 87 | SBDUP03_date | | | | | | | | |
| 88 | SBDUP04_date | | | | | | | | |
| 89 | SBDUP05_date | | | | | | | | |
| NA | MS/MSD-SS01_date * | MS/MSD | | | | | | | |
| | MS/MSD-SS02_date | | | | | | | | |
| | MS/MSD-SS03_date | | | | | | | | |
| | MS/MSD-SS04_date | | | | | | | | |
| | MS/MSD-SS05_date | | | | | | | | |
| | SBFB01_date | Field Blank | NA | | | | | NA | |
| | SBFB02_date | | | | | | | | |
| | SBFB03_date | | | | | | | | |
| | SBFB04_date | | | | | | | | |
| | SBFB05_date | | | | | | | | |
| | SBTB01_date | Trip Blank | NA | | | | | NA | Part 375 VOCs |
| | SBTB02_date | Trip Blank | | | | | | | |
| | SBTB03_date | Trip Blank | | | | | | | |
| | SBTB04_date | Trip Blank | | | | | | | |
| | SBTB05_date | Trip Blank | | | | | | | |
| | PFAS_SBFB01_date | PFAS Field Blank | NA | | | | | NA | PFAS |
| | PFAS_SBFB02_date | | | | | | | | |
| | PFAS_SBFB03_date | | | | | | | | |
| | PFAS_SBFB04_date | | | | | | | | |
| | PFAS_SBFB05_date | | | | | | | | |
| **GROUNDWATER** | | | | | | | | | |
| **No.** | **Sample Name** | **Type** | **Boring** | **Depth** | **Time** | **Date** | **Rationale** | **Depth[1]** | **Analysis** |
| 1 | MW01_date | Grab | MW01 | | | | Investigate REC 1 & 2 | center of water column | Part 375-list of VOCs, SVOCs, PCBs, Pesticides/Herbicides, Dissolved and Total Metals, PFAS<br><br>* will not be analyzed for PFAS |
| 2 | MW07_date | | MW07 | | | | | center of water column | |
| 3 | MW10_date | | MW10 | | | | | center of water column | |
| 4 | MW15_date | | MW15 | | | | | center of water column | |
| 5 | MW20_date | | MW20 | | | | | center of water column | |
| 6 | MW24_date | | MW24 | | | | | center of water column | |
| 7 | MW30_date | | MW30 | | | | | center of water column | |
| 8 | MW34_date | | MW34 | | | | | center of water column | |
| 9 | MW38_date | | MW38 | | | | | center of water column | |
| 10 | MW42_date | | MW42 | | | | | center of water column | |
| 11 | GWDUP01_date | Duplicate | TBD | | | | QA/QC | TBD | |
| NA | MS/MSD-GW01_date | MS/MSD | | | | | | | |
| | GWFB01_date * | Field Blank | NA | | | | | NA | |
| | PFAS_GWFB01_date | PFAS Field Blank | | | | | | | PFAS |
| | GWTB01_date | Trip Blank | | | | | | | Part 375 VOCs |
| | GWTB02_date | Trip Blank | | | | | | | |
| | GWTB03_date | Trip Blank | | | | | | | |

**Areas of Concern (AOCs):**
REC 1 - Current and Historical use of Adjoining and Surrounging Properties
REC 2 - Non-native Fill

**Notes:**
1. Sample depth intervals will be determined in the field.
2. Soil samples to be analyzed for New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (6 NYCRR) Part 375-list compounds.
3. If field evidence of contamination is noted (e.g., photoionization detector readings above background, staining, odor), a third sample will be collected within the observed impacts.
4. Two soil samples collected from every fifth boring and one groundwater sample will be analyzed for PFAS
5. TBD = to be determined (in the field)
6. VOC = volatile organic compound
7. SVOC = semivolatile organic compound
8. PCB = polychlorinated biphenyl
9. TCL = Target Compound List
10. TAL = Target Analyte List
11. QA/QC = quality assurance/quality control
12. NA = not applicable
13. REC = recognized environmental condition
14. PFAS = Per- and Polyfluoroalkyl Substances

# Appendix A Proposed Development Plans




LANGAN

PROJECT NO. 170773001

**LANGAN**

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
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New York, NY 10001

T: 212.479.5400 F: 212.479.5444 www.langan.com

Project

# BALLY'S NEW YORK FERRY POINT

**BLOCK No. 5622, PART OF LOT No. 1**
**BOROUGH OF BRONX**
**CITY OF NEW YORK**

**BRONX COUNTY** **NEW YORK**

Drawing Title

## SKETCH

| | |
|---|---|
| Project No. **170773001** | Drawing No. **SK106** |
| Date **06/28/2024** | |
| Drawn By **TOT, AA** | |
| Checked By **TOC** | Sheet 1 of 1 |

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CITY OF NEW YORK, BOROUGH OF THE BRONX
OFFICE OF THE PRESIDENT
TOPOGRAPHICAL BUREAU

# MAP NO. XXXX

SHOWING

## THE ESTABLISHMENT

OF

## "RING ROAD"

AND

## THE ELIMINATION

OF

## PARKLAND

WITHIN AN AREA GENERALLY BOUNDED BY:

SCHLEY AVENUE

AND

## THE ADJUSTMENT OF GRADES AND BLOCK DIMENSIONS NECESSITATED THEREBY

DATED: JUNE 21, 2024

XXXX, P.E.
CHIEF ENGINEER
TOPOGRAPHICAL BUREAU
BOROUGH OF THE BRONX

XXXX, P.E.
CONSULTING ENGINEER
BOROUGH OF THE BRONX

VANESSA L. GIBSON
PRESIDENT
BOROUGH OF THE BRONX

### NOTE

- INDICATES STREET LINE HERETOFORE ESTABLISHED AND HEREBY RETAINED.
- INDICATES STREET LINE HEREBY ESTABLISHED.
- INDICATES EXTENSION LINE SHOWN FOR TIE-IN DIMENSIONS.
- 228.00 — INDICATES DIMENSION HEREBY ESTABLISHED.
- 17.0 — INDICATES ELEVATION HEREBY ESTABLISHED.
- 1820 — INDICATES THE BRONX TAX BLOCK NUMBER.
- P.C. — INDICATES POINT OF CURVATURE.
- P.T. — INDICATES POINT OF TANGENCY.
- 75' — INDICATES TIE-IN DISTANCE TO AN ELEVATION HERETOFORE ESTABLISHED AND HEREBY RETAINED.
- 75' — INDICATES TIE-IN DISTANCE TO AN ELEVATION HEREBY ESTABLISHED.
- PARK — INDICATES PARK HERETOFORE ESTABLISHED AND HEREBY RETAINED.
- INDICATES PARK HERETOFORE ESTABLISHED AND HEREBY ELIMINATED.

ELEVATIONS APPLY TO CENTERLINE OF THE STREETS UNLESS OTHERWISE INDICATED.
ELEVATIONS REFER TO THE DATUM OF THE BOROUGH OF THE BRONX, WHICH IS 2.725 FEET ABOVE THE N.G.S. DATUM AT SANDY HOOK, NEW JERSEY.

*I, _____, SECRETARY OF THE CITY PLANNING COMMISSION, DO HEREBY CERTIFY THAT THIS MAP IS ONE OF _____SIMILAR MAPS APPROVED BY THE CITY PLANNING COMMISSION ON THE ___ DAY OF _____, 20___ (CALENDAR NO. ____) AND SUBSEQUENTLY APPROVED BY THE CITY COUNCIL ON _____ ( RES. NO. _____) AND THAT THESE MAPS WERE FILED ON THE DATE OF THIS CERTIFICATION AND WILL TAKE EFFECT ON THE FOLLOWING DAY.*

*DATE: NEW YORK: _____*

*SECRETARY, CITY PLANNING COMMISSION*

ENGLISH SCALE: 1 INCH = 80 FEET

0 80 160 240 360

0 9.6 28.8 48.0 67.2

METRIC SCALE: 1 CM = 9.60 METERS (31.496 FEET)

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BOROUGH PRESIDENT OF THE BRONX

PREPARED BY:
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New York, NY 10001
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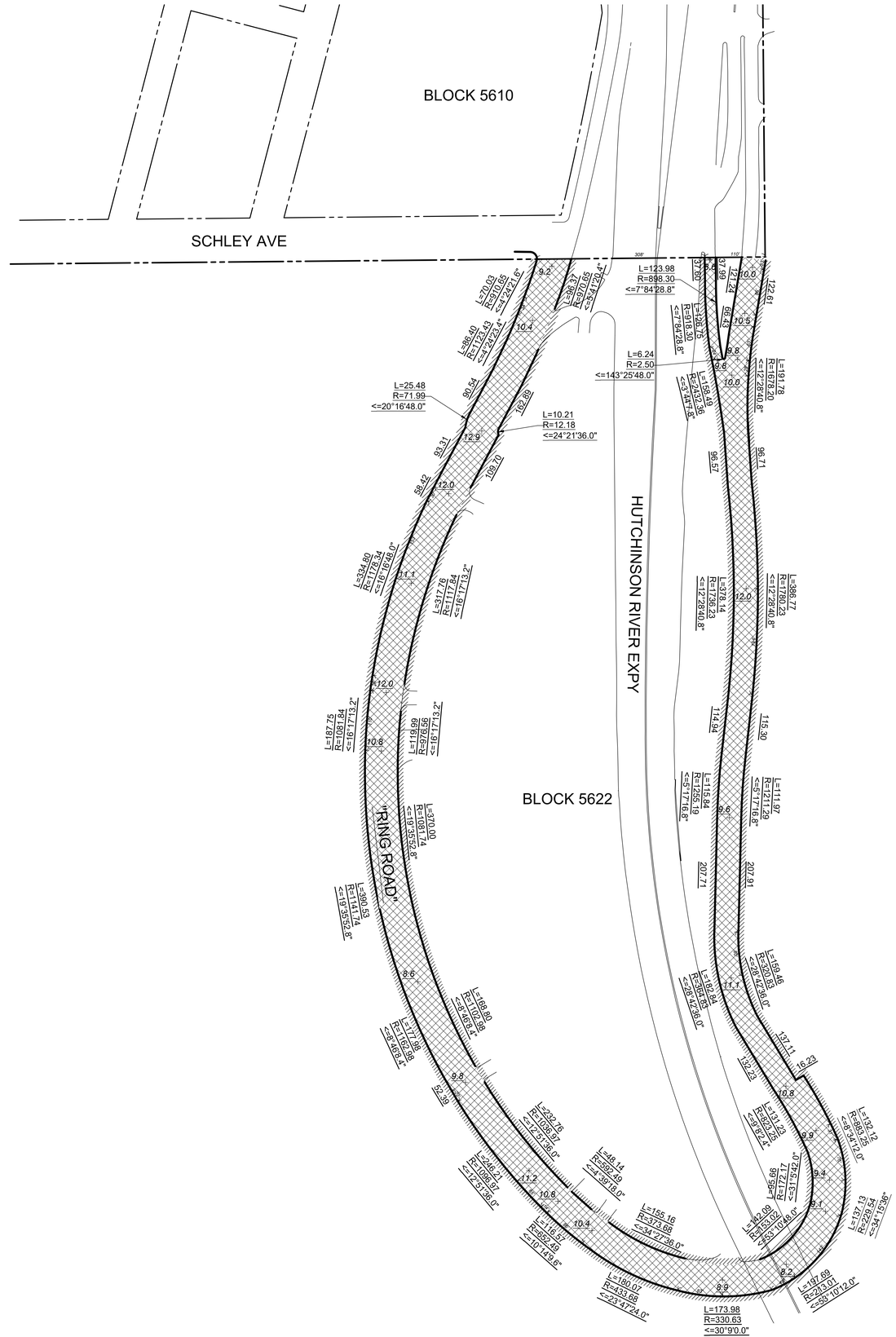
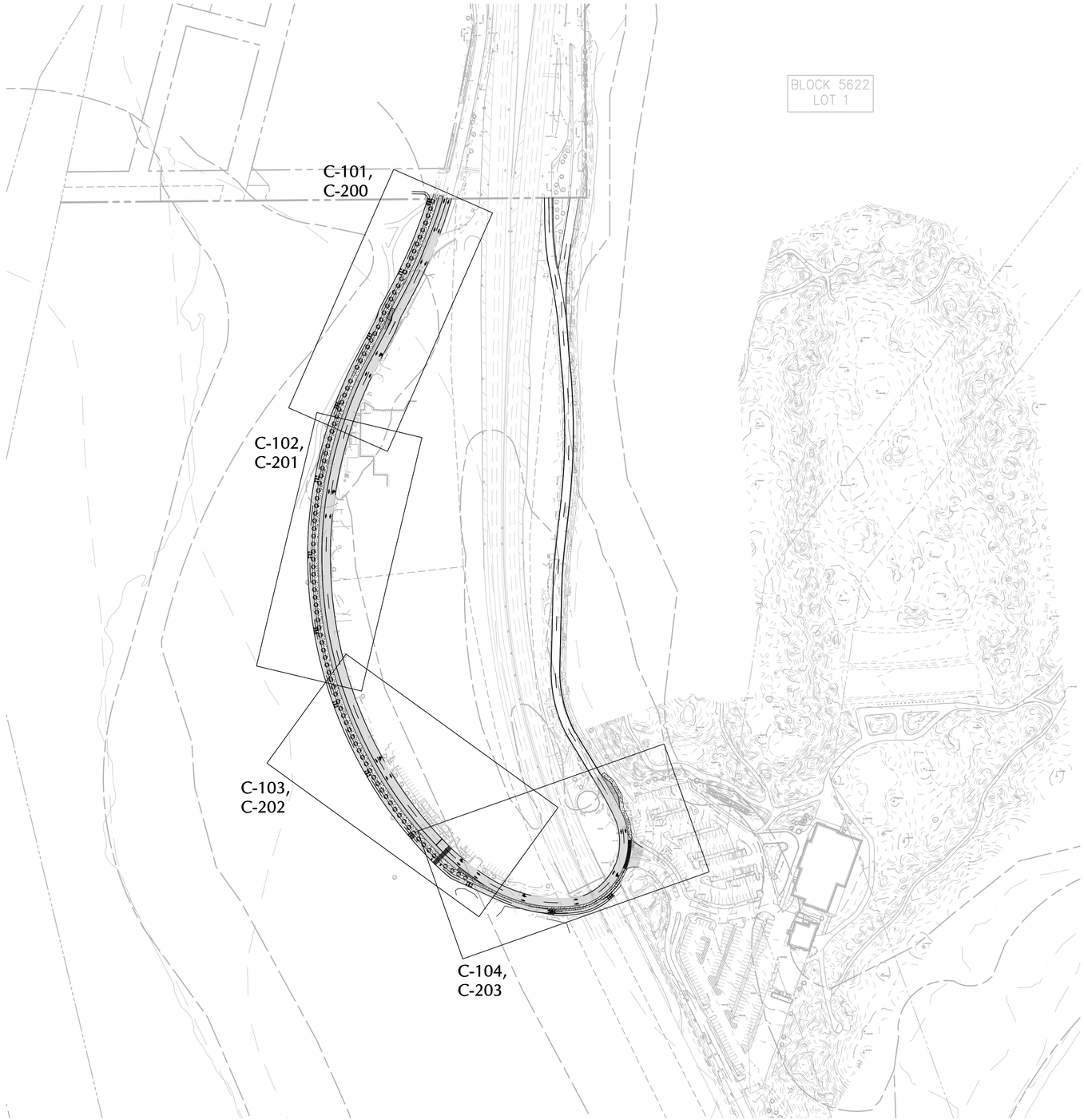
REFERENCE MAPS






**KEY MAP**
SCALE: 1" = 150'

150 0 75 150
SCALE IN FEET

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Project
BALLY'S NEW YORK
FERRY POINT
BRONX COUNTY NEW YORK

Drawing Title
KEY MAP

Project No. 170773001
Date 8/2/2024
Drawn By AW
Checked By MH

Drawing No. C-100
Sheet 1 of 9

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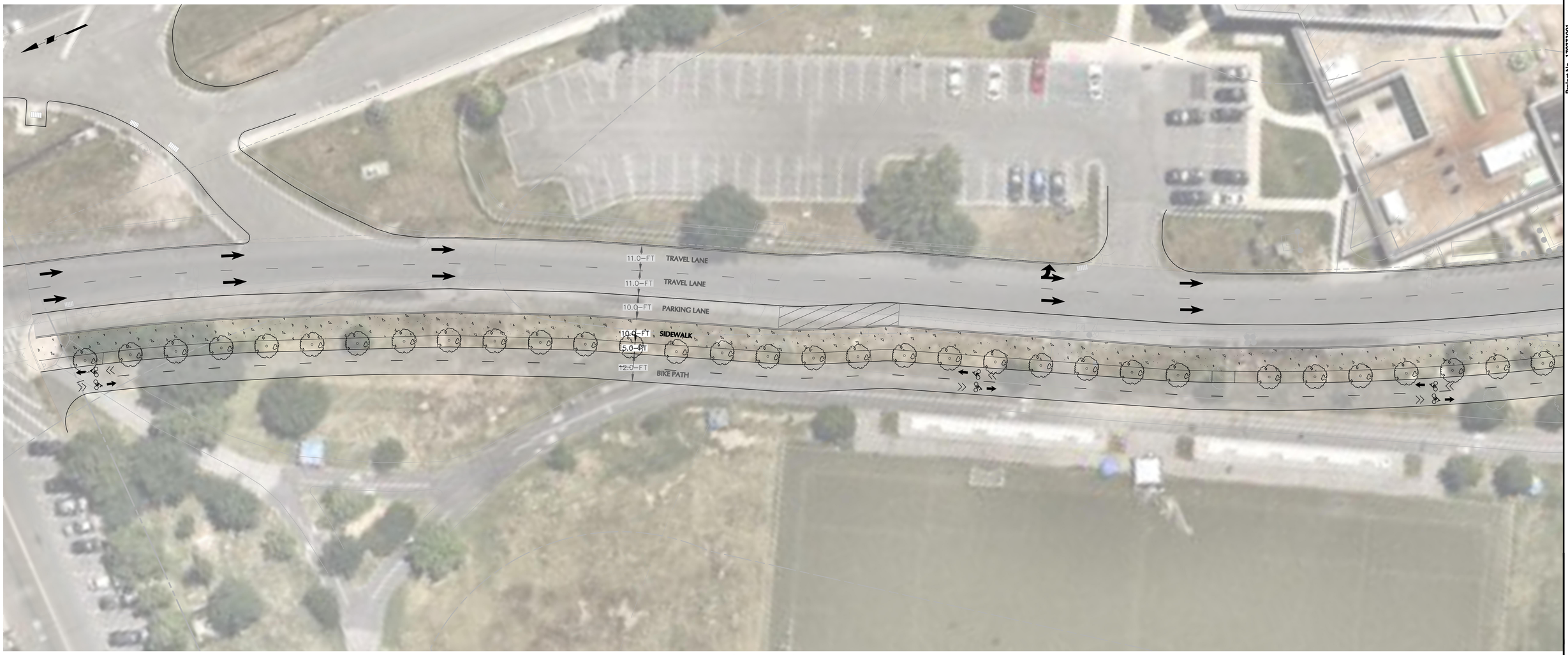


## CONCEPTUAL SITE PLAN

**SCALE: 1" = 20'**

20 0 5 10 20

SCALE IN FEET

NOTES:

1. TOPOGRAPHIC INFORMATION TAKEN FROM AN ACTUAL SURVEY TITLED "TOPOGRAPHIC SURVEY" FOR BALLY'S NEW YORK FERRY POINT, PERFORMED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C., DATED 03/31/2023.
2. APPROXIMATE SITE BOUNDARY TAKEN FROM DRAWING TITLED "SKETCH" FOR BALLY'S NEW YORK FERRY POINT BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY DATED 11/30/2023.
3. PROPOSED BUILDING AND SITE INFORMATION SHOWN HEREON IS FROM FILES ELECTRONICALLY RECEIVED FROM HKS ON 12/21/2023.

70 0 35 70

SCALE IN FEET

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|---|---|
| Project | BALLY'S NEW YORK FERRY POINT |
| BRONX COUNTY | NEW YORK |
| Drawing Title | CONCEPTUAL SITE PLAN |
| Project No. | 170773001 |
| Date | 8/2/2024 |
| Drawn By | AW |
| Checked By | MH |
| Drawing No. | C-101 |
| Sheet | 2 of 9 |

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Project No. 170773001




## CONCEPTUAL SITE PLAN

SCALE: 1" = 20'

20 0 5 10 20

SCALE IN FEET

NOTES:

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## CONCEPTUAL SITE PLAN
SCALE: 1" = 20'

20 0 5 10 20
SCALE IN FEET

NOTES:

1. TOPOGRAPHIC INFORMATION TAKEN FROM AN ACTUAL SURVEY TITLED "TOPOGRAPHIC SURVEY" FOR BALLY'S NEW YORK FERRY POINT, PERFORMED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C., DATED 03/31/2023.
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Project: BALLY'S NEW YORK FERRY POINT
BRONX COUNTY NEW YORK

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Checked By MH

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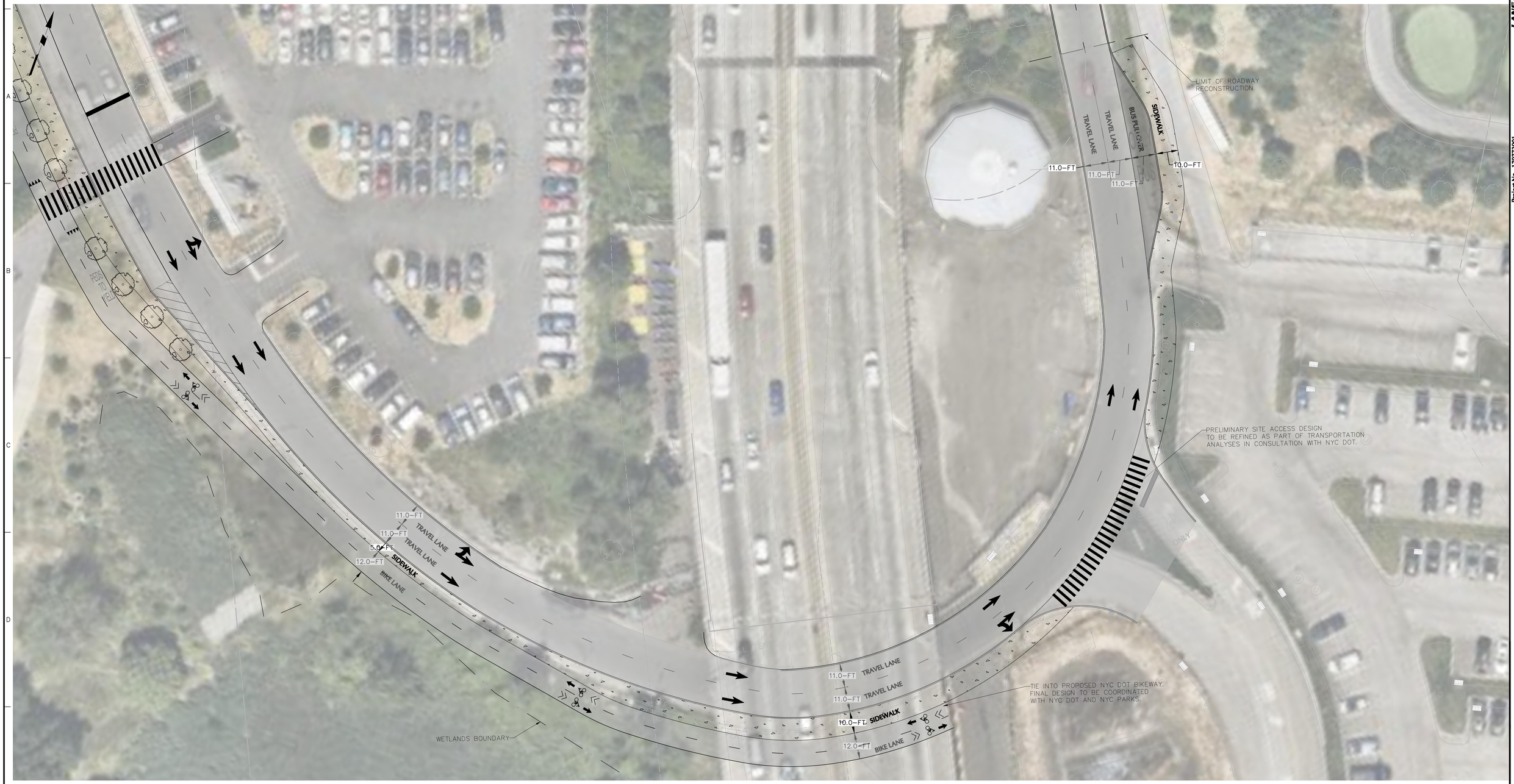
Project No. 170773001




## CONCEPTUAL SITE PLAN

SCALE: 1" = 20'

20 0 5 10 20
SCALE IN FEET

NOTES:

1. TOPOGRAPHIC INFORMATION TAKEN FROM AN ACTUAL SURVEY TITLED "TOPOGRAPHIC SURVEY" FOR BALLY'S NEW YORK FERRY POINT, PERFORMED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C., DATED 03/31/2023.
2. APPROXIMATE SITE BOUNDARY TAKEN FROM DRAWING TITLED "SKETCH" FOR BALLY'S NEW YORK FERRY POINT BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY DATED 11/30/2023.
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| Drawing Title | CONCEPTUAL SITE PLAN |
| Project No. | 170773001 |
| Date | 8/2/2024 |
| Drawn By | AW |
| Checked By | MH |
| Drawing No. | C-104 |
| Sheet | 5 of 9 |

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## Appendix B Phase I Environmental Site Assessment

## (Included as Separate Document)

# Appendix C Site Reconnaissance Checklist and Photographs

LANGAN

**PHASE I ESA SITE RECONNAISSANCE CHECKLIST**

**GENERAL INFORMATION**

Langan personnel: Kaitlyn Gioia
Date of site reconnaissance: August 9, 2024
Business name / subject property occupant: Ferry Point Park – Ring Road
Full subject property address: 450 Hutchinson River Parkway, Bronx, NY
Weather conditions: ~80°F - Rainy

| Features, Activities, Uses, and Conditions | Identified/Observed? | | Report Section(s) |
|---|---|---|---|
| **General Subject Property Setting** | **Yes** | **No** | |
| Current use(s) of the subject property | ☒ | ☐ | 2.0 |
| Past use(s) of the subject property | ☐ | ☒ | 3.1 |
| Current use(s) of adjoining properties | ☒ | ☐ | 4.1 |
| Past use(s) of adjoining properties | ☐ | ☒ | 4.2 |
| Current or past uses in the surrounding area | ☒ | ☐ | 4.1 and 4.2 |
| Geologic, hydrogeologic, hydrologic, and topographic conditions | ☒ | ☐ | 2.2 |
| Structures and other improvements at the subject property | ☒ | ☐ | 2.3 |
| Roads | ☒ | ☐ | 2.3 |
| Potable water supply/source for the subject property | ☒ | ☐ | 2.4 |
| Sewage disposal system for the subject property | ☐ | ☒ | 2.4 |

| **Interior/Exterior Features** | **At Interior?** | | **At Exterior?** | | **Report Section(s) (if yes)** |
|---|---|---|---|---|---|
| | **Yes** | **No** | **Yes** | **No** | |
| Hazardous substances and petroleum products in connection with identified uses | ☐ | ☒ | ☐ | ☒ | 2.5 |
| Storage tanks | ☐ | ☒ | ☐ | ☒ | 2.5.1 and 2.5.2 |
| Strong, pungent, or noxious odors and their sources | ☐ | ☒ | ☐ | ☒ | 2.6 |
| Standing surface water and pools or sumps containing liquids likely to be hazardous substances or petroleum products | ☐ | ☒ | ☐ | ☒ | 2.5 |
| Drums, totes, and intermediate bulk containers | ☐ | ☒ | ☐ | ☒ | 2.5.3 |
| Hazardous substance and petroleum product containers not in connection with identified uses | ☐ | ☒ | ☐ | ☒ | 2.5.4 |
| Unidentified substance containers | ☐ | ☒ | ☐ | ☒ | 2.5.4 |
| PCB-containing items | ☐ | ☒ | ☐ | ☒ | 2.5.4 |
| Heating/cooling | ☐ | ☒ | ☐ | ☒ | 2.4 |
| Stains or corrosion on floors, walls, or ceilings | ☐ | ☒ | ☐ | ☒ | 2.5 and 2.7 |
| Drains and sumps | ☐ | ☒ | ☒ | ☐ | 2.8 |
| Pits, ponds, or lagoons | ☐ | ☒ | ☐ | ☒ | 2.2.3 |
| Stained soil or pavement | ☐ | ☒ | ☐ | ☒ | 2.5 and 2.7 |
| Stressed vegetation | ☐ | ☒ | ☐ | ☒ | 2.9 |
| Solid waste | ☐ | ☒ | ☐ | ☒ | 2.7 |
| Water/wastewater | ☐ | ☒ | ☐ | ☒ | 2.8 and 2.9 |
| Wells | ☐ | ☒ | ☐ | ☒ | 2.2.3 |
| Septic systems or cesspools | ☐ | ☒ | ☐ | ☒ | 2.8 |

LANGAN

# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 1 |

**Direction Photo Taken:**

South

**Description:**

Entrance to subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 2 |

**Direction Photo Taken:**

Northeast

**Description:**

Pedestrian walkways and guardrails throughout the subject property.



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 3 |

**Direction Photo Taken:**

Southeast

**Description:**

General view of the western leg of the subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 4 |

**Direction Photo Taken:**

East

**Description:**

Pedestrian walkway and adjoining parking field for Ferry Point Park.



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 5 |

**Direction Photo Taken:**

Northeast

**Description:**

Representative view of hydrants located throughout the subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 6 |

**Direction Photo Taken:**

Northeast

**Description:**

General view of the eastern leg of the subject property.



LANGAN

# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 7 |

**Direction Photo Taken:**

South

**Description:**

Exit from the subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 8 |

**Direction Photo Taken:**

Northeast

**Description:**

Representative view of drainage structures and NYCDEP infrastructure throughout the subject property.



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 9 |

**Direction Photo Taken:**

Southeast, down

**Description:**

Representative view of 1-inch-diameter holes adjacent to the metal guardrail throughout the eastern leg of the subject property.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 10 |

**Direction Photo Taken:**

East

**Description:**

Adjoining Bronx-Whitestone Bridge and parking field for Ferry Point Park.



LANGAN

# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 11 |

**Direction Photo Taken:**

Northeast

**Description:**

Adjoining Con Edison structures.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 12 |

**Direction Photo Taken:**

Northwest

**Description:**

Adjoining Interstate 678.



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 13 |

**Direction Photo Taken:**

East

**Description:**

Adjoining parking field for Ferry Point Park.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 14 |

**Direction Photo Taken:**

West

**Description:**

Bronx-Whitestone Bridge MTA Building



| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 15 |

**Direction Photo Taken:**

Southeast

**Description:**

Alternate view of Bronx-Whitestone Bridge MTA Building.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 16 |

**Direction Photo Taken:**

Northwest

**Description:**

Adjoining athletic field.



LANGAN

# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 17 |

**Direction Photo Taken:**

West

**Description:**

Adjoining commercial warehouse and parking lot.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 18 |

**Direction Photo Taken:**

Northeast

**Description:**

Adjoining toll plaza for the Bronx-Whitestone Bridge.



LANGAN

# Site Reconnaissance Photographs

| Client Name: | Subject Property Location: | Project No. |
|---|---|---|
| Bally's Corporation | Hutchinson River Parkway, Bronx, NY | 170773001 |

| Date | Photo No. |
|---|---|
| 8/9/2024 | 19 |

**Direction Photo Taken:**

East

**Description:**

Adjoining Bally's Golf Links at Ferry Point.



| Date | Photo No. |
|---|---|
| 8/9/2024 | 20 |

**Direction Photo Taken:**

East

**Description:**

Adjoining Ferry Point Park.



# Appendix D User Provided Information

Docusign Envelope ID: 3CE5B05B-9955-4E49-BEED-0490AFAA772C

Clear Form

# ASTM E1527-21 User Questionnaire

*Please complete the below form and return to Langan.*

Providing the following information (if available) to the environmental professional (Langan) is one of the requirements to qualify for one of the Landowner Liability Protections (LLP) offered under CERCLA. Missing or incomplete information for questions 1 through 6 could result in a determination that "all appropriate inquiry" is not complete. Additional information should be provided for "Yes" answers where relevant.

## General Information

**User/Client Names:** Bally's Golf Links at Ferry Point

**Reason for the Phase I ESA:** New Gaming Resort Development

**Type of property:** Casino Hotel

**Type of property transaction (e.g. sale, purchase, exchange):** New Zoning

**Subject property address (provide documentation of subject property boundary):**
500 Hutchinson River Parkway Bronx, New York 10465

**Site Contact and Contact Information:** Brian Crowell General Manager

**Relying Party(ies):**

## Required Information

**(1.) Environmental liens that are filed or recorded against the subject property (40 CFR 312.25).**

Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the subject property under federal, tribal, state or local law?

Yes ○ No ◉

**(2.) Activity and use limitations that are in place on the subject property or that have been filed or recorded against the subject property (40 CFR 312.26(a)(1)(v) and (vi)).**

Did a search of recorded land title records (or judicial records where appropriate) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the subject property and/or have been filed or recorded against the subject property under federal, tribal, state or local law?

Yes ○ No ◉

**(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).**

Do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes ◉ No ○

**(4.) Relationship of the purchase price to the fair market value of the subject property if it were not contaminated (40 CFR 312.29).**

Does the purchase price being paid for this subject property reasonably reflect the fair market value of the subject property?

Yes ◉ No ○

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the subject property?

Yes ○ No ◉

Docusign Envelope ID: 3CE5B05B-9955-4E49-BEED-0490AFAA772C

**(5.) Commonly known or reasonably ascertainable information about the subject property (40 CFR 312.30).**

| | Yes | No |
|---|---|---|
| Are you aware of commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases? | ◉ | ○ |
| For example, | Yes | No |
| (a.) Do you know the past uses of the subject property? | ◉ | ○ |
| (b.) Do you know of specific chemicals that are present or once were present at the subject property? | ○ | ◉ |
| (c.) Do you know of spills or other chemical releases that have taken place at the subject property? | ○ | ◉ |
| (d.) Do you know of any environmental cleanups that have taken place at the subject property? | ○ | ◉ |

**(6.) The degree of obviousness of the presence or likely presence of contamination at the subject property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).**

| | Yes | No |
|---|---|---|
| Based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of releases at the subject property? | ○ | ◉ |
| Do you have knowledge or experience with the subject property that may be pertinent to the environmental professional (for example, copies of any available prior environmental site assessment reports, documents, correspondence, etc., concerning the property and its environmental condition)? | ◉ | ○ |

**(7.) Proceedings Involving the Subject Property Questions (Section 10.9 of ASTM E1527-21 and Section 10.10 of ASTM E2247-16)**

| Do you know of: | Yes | No |
|---|---|---|
| (a.) Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the subject property? | ○ | ◉ |
| (b.) Any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, at, or from the subject property? | ○ | ◉ |
| (c) Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? | ○ | ◉ |

**Signature**

It is understood that the information presented in this form is an integral part of the Phase I ESA process and that Langan will evaluate and rely on this information in the development of the final Phase I ESA report.

Completed By: Mark Schlang

DocuSigned by: Mark Schlang 50B69DB17FE048C...

Print/Type Name:

Title: Vice President of Architecture

Company: Bally's Corporation

Relationship to Client/User: Employee

Date: 8/16/24

LANGAN

## ASTM PRACTICE E 1527-13:
## OWNER/OPERATOR/SITE-MANAGER QUESTIONNAIRE

Please complete the below form and return to
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.

**Project Location/Address:** Ferry Point Golf Course
500 Hutchinson River Parkway, Bronx, NY 10465

### ASTM E-1527-13, Section 10.9

| | Yes | No |
|---|---|---|
| Do you know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property? | ☐ | ☒ |
| Do you know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property? | ☐ | ☒ |
| Do you know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? | ☐ | ☒ |

### ASTM E-1527-13, Section 10.8

Are you aware if any of the documents listed below exists and if so, whether copies can and will be provided to the Consultant performing the ESA?

| | Unaware | Document Exists | Copy will be provided |
|---|---|---|---|
| Environmental site assessment reports | ☐ | ☐ | ☒ |
| Environmental compliance audit reports | ☐ | ☐ | ☒ |
| Environmental permits (such as solid waste disposal permits, hazardous waste disposal permits, NPDES permits, wastewater permits, underground injection permits) | ☐ | ☐ | ☒ |
| Registrations for underground and aboveground storage tanks | ☐ | ☒ | ☐ |
| Material safety data sheets | ☐ | ☐ | ☒ |
| Community-right-to-know plan | ☒ | ☐ | ☐ |
| Safety plans; preparedness and prevention plans; spill prevention, countermeasure and control plans, facility response plans, etc. | ☐ | ☐ | ☒ |

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| | Unaware | Document Exists | Copy will be provided |
|---|---|---|---|
| Reports regarding hydrogeologic conditions on the property or surrounding area | ☐ | ☐ | ☒ |
| Notices or other correspondence from any governmental agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property | ☒ | ☐ | ☐ |
| Hazardous waste generator notices or reports | ☐ | ☒ | ☐ |
| Geotechnical studies | ☐ | ☐ | ☒ |
| Risk Assessments | ☒ | ☐ | ☐ |
| Recorded Activity and Use Limitations | ☐ | ☐ | ☒ |
| Environmental Cleanup Reports | ☐ | ☐ | ☒ |

Do you have contact information for the prior owner of the property? **Yes** ☐ **No** ☒
If yes, please provide information below:

Prior Owner's Name _____

Contact person _____

Address _____

_____

Telephone _____

Do you have contact information for the prior occupant of the property? **Yes** ☐ **No** ☒
If yes, please provide information below:

Prior Occupant's Name _____

Contact person _____

Address _____

_____

Telephone _____

Do you have information on the prior facility manager of the property? **Yes** ☐ **No** ☒
If yes, please provide information below:

LANGAN

Prior Facility Manager's Name _____

Contact person _____

Address _____

_____

Telephone _____

**This form was completed by:**

Property Owner ☒ Operator ☐ Key Site Manager ☐ User ☐ EP ☐

Name: Kay Zias, Director of ERU, NYC Department of Parks and Recreation

Address: 117-2 Roosevelt Avenue, Flushing, NY 11368

_____

Signature: Kay Zias Date: 8/29/2024

# Appendix E Environmental Database Report

**Proposed Ballys Casino - Ring Road**
450 Hutchinson River Parkway
Bronx, NY 10465

Inquiry Number: 7720624.2s
July 29, 2024

# The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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**GEOCHECK ADDENDUM**

| | |
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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

450 HUTCHINSON RIVER PARKWAY
BRONX, NY 10465

### COORDINATES

| | |
|---|---|
| Latitude (North): | 40.8136930 - 40° 48' 49.29'' |
| Longitude (West): | 73.8358030 - 73° 50' 8.89'' |
| Universal Tranverse Mercator: | Zone 18 |
| UTM X (Meters): | 598189.6 |
| UTM Y (Meters): | 4518516.0 |
| Elevation: | 16 ft. above sea level |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 14115946 FLUSHING, NY |
| Version Date: | 2019 |

### AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Portions of Photo from: | 20190809 |
| Source: | USDA |

# MAPPED SITES SUMMARY

Target Property Address:
450 HUTCHINSON RIVER PARKWAY
BRONX, NY 10465

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| 1 | | 450 HUTCHINSON RVR P | NY NYC LAND USE | | TP |
| A2 | FERRY POINT PARK REC | 500 HUTCHINSON RIVER | NY SPDES | Lower | 1 ft. |
| A3 | NYSDOT BIN 55211229 | 1 HUTCHINSON RIVER P | FINDS | Lower | 1 ft. |
| A4 | MANHOLE 15002 | 80 N HUTCHINSON RIVE | NY Spills | Higher | 1 ft. |
| A5 | MTA BRIDGES & TUNNEL | BRONX-WHITESTONE BRI | RCRA-SQG, E MANIFEST, NJ MANIFEST | Lower | 1 ft. |
| A6 | NYCP&R - FERRY POINT | 500 HUTCHINSON PARKW | FINDS, ECHO | Lower | 1 ft. |
| A7 | FERRY POINT PARK GOL | 500 HUTCHINSON RIVER | FINDS, ECHO | Lower | 1 ft. |
| A8 | NYCP&R - FERRY POINT | | PFAS ECHO | Lower | 1 ft. |
| A9 | BRONX WHITESTONE BRI | 1 HUTCHINSON RIVER P | NY Spills | Lower | 1 ft. |
| 10 | CON EDISON TRANSFORM | 530 HUTCHINSON RIVER | NY Spills | Higher | 1 ft. |
| A11 | NYC PARKS-FERRY POIN | 500 HUTCHINSON RIVER | FINDS, ECHO | Lower | 1 ft. |
| A12 | BRONX WHITESTONE BRI | 1 HUTCHINSON RIVER P | UST FINDER RELEASE | Lower | 1 ft. |
| A13 | FERRY POINT PARK GOL | 500 HUTCHINSON RIVER | NY Spills | Lower | 1 ft. |
| A14 | NYC PARKS-FERRY POIN | | PFAS ECHO | Lower | 1 ft. |
| B15 | WHITESTONE BRIDGE - | WHITESTONE BR | NY LTANKS | Lower | 109, 0.021, NNW |
| B16 | WHITESTONE BRIDGE | TOLL PLAZA | NY Spills | Lower | 109, 0.021, NNW |
| 17 | CABLEVISION | 500-510 BRUSH AVENUE | NY AST | Lower | 279, 0.053, NNW |
| C18 | CON EDISON | 555 HUTCHINSON RIVER | RCRA NonGen / NLR | Lower | 418, 0.079, NNW |
| C19 | VAULT #2232 | 555 HUTCHINSON RIVER | NY AST, NY Spills | Lower | 418, 0.079, NNW |
| D20 | BRONX WHITESTONE BRI | ONE HUTCHINSON RIVER | NY UST | Lower | 434, 0.082, NW |
| D21 | BRONX WHITESTONE BRI | ONE HUTCHINSON RIVER | NY AST | Lower | 434, 0.082, NW |
| E22 | MTA BRIDGES & TUNNEL | 1 HUTCHINSON RIVER P | NY LTANKS, NY Spills, NY MANIFEST | Higher | 597, 0.113, ESE |
| E23 | FARRY POINT PARK | WHITSTONE BRIDGE | NY Spills | Higher | 597, 0.113, ESE |
| F24 | LIBERTY MECHANICAL/C | 550 BRUSH AVENUE | NY TANKS, NY NYC LAND USE | Lower | 601, 0.114, NNW |
| 25 | FERRY POINT PARK GOL | 700 HUTCHINSON RIVER | NY AST | Lower | 639, 0.121, North |
| E26 | MTA BRIDGE BIN 55211 | 1 HUTCHINSON RIVER P | RCRA-LQG, E MANIFEST, PA MANIFEST, NJ MANIFEST | Higher | 679, 0.129, East |
| F27 | 545 BRUSH AVE/BX/U.P | 545 BRUSH AVENUE | NY LTANKS | Lower | 694, 0.131, NNW |
| 28 | FERRY POINT PARK | 10 HUTCHINSON ROVER | NY SWF/LF, NY ILI | Lower | 728, 0.138, SSW |
| F29 | UNITED PARCEL SERVIC | BRUSH AVE | RCRA-SQG, NY CBS AST, E MANIFEST, NY MANIFEST, NJ... | Lower | 779, 0.148, NNW |
| F30 | UPS-BRUSH AVENUE | 545 BRUSH AVE | NY TANKS, NY SPDES | Lower | 779, 0.148, NNW |
| F31 | UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NY UST | Lower | 779, 0.148, NNW |
| F32 | UPS | 545 BRUSH AVE | NY LTANKS, NY CBS, NY Spills | Lower | 779, 0.148, NNW |
| F33 | UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NY AST | Lower | 779, 0.148, NNW |
| F34 | UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NY AST | Lower | 779, 0.148, NNW |
| F35 | UNITED PARCEL SERVIC | 545 BRUSH AVENUE | UST FINDER | Lower | 779, 0.148, NNW |
| 36 | N Y BRUSH LLC | 650 BRUSH AVE | RCRA-LQG, NY MANIFEST | Lower | 1083, 0.205, NNW |
| 37 | H.O. PENN MACHINERY | 699 BRUSH AVE | NY LTANKS, NY TANKS, NY Spills, NY SPDES | Lower | 1664, 0.315, NNW |
| G38 | VERIZON NEW YORK INC | 500 ZEREGA AVENUE | NY LTANKS, NY TANKS, NY NYC LAND USE | Lower | 1672, 0.317, NW |
| G39 | 500 ZEREGA AVENUE | 500 ZEREGA AVENUE | UST FINDER RELEASE | Lower | 1672, 0.317, NW |

# MAPPED SITES SUMMARY

Target Property Address:
450 HUTCHINSON RIVER PARKWAY
BRONX, NY 10465

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| 40 | NYCDOS FERRY POINT P | 44 BEAVER ST - 6TH F | NY SWF/LF | Higher | 1757, 0.333, South |
| 41 | RAILROAD MAINTENANCE | 432 ZEREGA AVENUE | NY SWF/LF, NY NYC LAND USE | Lower | 1784, 0.338, WNW |
| 42 | BLOCK 3579, LOT 1 | BLOCK 3579, LOT 1 | NY VCP | Lower | 1906, 0.361, NNW |
| 43 | RANDALL AVE AND ZERE | HAVMEYER AVE, RANDEL | NY SWF/LF, NY ILI | Higher | 1982, 0.375, NW |
| 44 | EASTERN ECOLOGY COMP | 665-637 ZEREGA AVE | NY SWF/LF, NY ILI | Lower | 2063, 0.391, NNW |
| 45 | EARTH BANK COMPANY I | 748 BRUSH AVENUE | NY SWF/LF, NY NYC LAND USE | Higher | 2155, 0.408, North |
| 46 | AAA THROGGS NECK | | FUDS | Higher | 4255, 0.806, East |

# EXECUTIVE SUMMARY

**TARGET PROPERTY SEARCH RESULTS**

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

| Site | Database(s) | EPA ID |
|---|---|---|
| 450 HUTCHINSON RVR P<br>450 HUTCHINSON RVR P<br>BRONX, NY 10465 | NY NYC LAND USE | N/A |

**DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal NPL (Superfund) sites***

NPL ---- National Priority List
Proposed NPL ---- Proposed National Priority List Sites
NPL LIENS ---- Federal Superfund Liens

***Lists of Federal Delisted NPL sites***

Delisted NPL ---- National Priority List Deletions

***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY ---- Federal Facility Site Information listing
SEMS ---- Superfund Enterprise Management System

***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE ---- Superfund Enterprise Management System Archive

***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS ---- Corrective Action Report

***Lists of Federal RCRA TSD facilities***

RCRA-TSDF ---- RCRA - Treatment, Storage and Disposal

***Lists of Federal RCRA generators***

RCRA-VSQG ---- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

# EXECUTIVE SUMMARY

***Federal institutional controls / engineering controls registries***

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

***Federal ERNS list***

ERNS ---------- Emergency Response Notification System

***Lists of state- and tribal hazardous waste facilities***

NY SHWS ---------- Inactive Hazardous Waste Disposal Sites in New York State

***Lists of state and tribal leaking storage tanks***

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
NY HIST LTANKS ---------- Listing of Leaking Storage Tanks

***Lists of state and tribal registered storage tanks***

FEMA UST ---------- Underground Storage Tank Listing
NY CBS UST ---------- Chemical Bulk Storage Database
NY MOSF UST ---------- Major Oil Storage Facilities Database
NY MOSF ---------- Major Oil Storage Facility Site Listing
NY MOSF AST ---------- Major Oil Storage Facilities Database
INDIAN UST ---------- Underground Storage Tanks on Indian Land

***State and tribal institutional control / engineering control registries***

NY RES DECL ---------- Restrictive Declarations Listing
NY ENG CONTROLS ---------- Registry of Engineering Controls
NY INST CONTROL ---------- Registry of Institutional Controls

***Lists of state and tribal voluntary cleanup sites***

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

***Lists of state and tribal brownfield sites***

NY BROWNFIELDS ---------- Brownfields Site List
NY ERP ---------- Environmental Restoration Program Listing

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS ---------- A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

NY SWRCY ---------- Registered Recycling Facility List
NY SWTIRE ---------- Registered Waste Tire Storage & Facility List

INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
ODI ---- Open Dump Inventory
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---- Open Dumps on Indian Land

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL ---- Delisted National Clandestine Laboratory Register
NY DEL SHWS ---- Delisted Registry Sites
US CDL ---- National Clandestine Laboratory Register

***Local Lists of Registered Storage Tanks***

NY HIST UST ---- Historical Petroleum Bulk Storage Database
NY HIST AST ---- Historical Petroleum Bulk Storage Database

***Local Land Records***

NY LIENS ---- Spill Liens Information
LIENS 2 ---- CERCLA Lien Information

***Records of Emergency Release Reports***

HMIRS ---- Hazardous Materials Information Reporting System
NY Hist Spills ---- SPILLS Database
NY SPILLS 90 ---- SPILLS 90 data from FirstSearch
NY SPILLS 80 ---- SPILLS 80 data from FirstSearch

***Other Ascertainable Records***

DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations

FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
MINES MRDS ---- Mineral Resources Data System
UXO ---- Unexploded Ordnance Sites
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
PFAS NPL ---- Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ---- Federal Sites PFAS Information
PFAS TSCA ---- PFAS Manufacture and Imports Information
PFAS TRIS ---- List of PFAS Added to the TRI
PFAS RCRA MANIFEST ---- PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR ---- PFAS Contamination Site Location Listing
PFAS WQP ---- Ambient Environmental Sampling for PFAS
PFAS NPDES ---- Clean Water Act Discharge Monitoring Information
PFAS PROJECT ---- NORTHEASTERN UNIVERSITY PFAS PROJECT
PFAS ECHO FIRE TRAIN ---- Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT ---- All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC ---- Aqueous Foam Related Incidents Listing
BIOSOLIDS ---- ICIS-NPDES Biosolids Facility Data
NY PFAS ---- PFAS Contamination Site Location Listing
NY AIRS ---- Air Emissions Data
NY COAL ASH ---- Coal Ash Disposal Site Listing
NY DRYCLEANERS ---- Registered Drycleaners
NY E DESIGNATION ---- E DESIGNATION SITE LISTING
NY Financial Assurance ---- Financial Assurance Information Listing
NY HSWDS ---- Hazardous Substance Waste Disposal Site Inventory
NY LEAD ---- Lead-based Paint Testing Results
NY VAPOR REOPENED ---- Vapor Intrusion Legacy Site List
NY UIC ---- Underground Injection Control Wells
NY COOLING TOWERS ---- Registered Cooling Towers
NY MGP ---- Manufactured Gas Plants Listing
NY NYC OER ---- OER Cleanup Sites Listing

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP ---- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---- EDR Exclusive Historical Cleaners

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

NY RGA HWS ---- Recovered Government Archive State Hazardous Waste Facilities List
NY RGA LF ---- Recovered Government Archive Solid Waste Facilities List

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

# EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal RCRA generators***

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 06/03/2024 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGE BIN 55211***<br>EPA ID:: NYD982796377 | ***1 HUTCHINSON RIVER P*** | ***E 1/8 - 1/4 (0.129 mi.)*** | ***E26*** | ***96*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***N Y BRUSH LLC***<br>EPA ID:: NYR000140368 | ***650 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.205 mi.)*** | ***36*** | ***191*** |

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/03/2024 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL***<br>EPA ID:: NYR000154260 | ***BRONX-WHITESTONE BRI*** | ***0 - 1/8 (0.000 mi.)*** | ***A5*** | ***13*** |
| ***UNITED PARCEL SERVIC***<br>EPA ID:: NYD986900728 | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |

# EXECUTIVE SUMMARY

***Lists of state and tribal landfills and solid waste disposal facilities***

NY SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the  list.

A review of the NY SWF/LF list, as provided by EDR, and dated 03/25/2024 has revealed that there are 6 NY SWF/LF sites within approximately  0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| NYCDOS FERRY POINT P | 44 BEAVER ST - 6TH F | S 1/4 - 1/2 (0.333 mi.) | 40 | 211 |
| ***RANDALL AVE AND ZERE*** | ***HAVMEYER AVE, RANDEL*** | ***NW 1/4 - 1/2 (0.375 mi.)*** | ***43*** | ***215*** |
| ***EARTH BANK COMPANY I*** | ***748 BRUSH AVENUE*** | ***N 1/4 - 1/2 (0.408 mi.)*** | ***45*** | ***218*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***FERRY POINT PARK*** | ***10 HUTCHINSON ROVER*** | ***SSW 1/8 - 1/4 (0.138 mi.)*** | ***28*** | ***125*** |
| ***RAILROAD MAINTENANCE*** | ***432 ZEREGA AVENUE*** | ***WNW 1/4 - 1/2 (0.338 mi.)*** | ***41*** | ***212*** |
| ***EASTERN ECOLOGY COMP*** | ***665-637 ZEREGA AVE*** | ***NNW 1/4 - 1/2 (0.391 mi.)*** | ***44*** | ***216*** |

***Lists of state and tribal leaking storage tanks***

NY LTANKS: Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills

A review of the NY LTANKS list, as provided by EDR, and dated 05/06/2024 has revealed that there are 6 NY LTANKS sites within approximately  0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL*** | ***1 HUTCHINSON RIVER P*** | ***ESE 0 - 1/8 (0.113 mi.)*** | ***E22*** | ***56*** |
| Spill Date: 1994-09-19 | | | | |
| Spill Date: 1996-09-24 | | | | |
| Spill Number/Closed Date: 9408139 / 2003-11-06 | | | | |
| Spill Number/Closed Date: 9607895 / 2003-11-06 | | | | |
| Site ID: 249980 | | | | |
| Site ID: 249984 | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| WHITESTONE BRIDGE - | WHITESTONE BR | NNW 0 - 1/8 (0.021 mi.) | B15 | 34 |
| Spill Date: 1990-03-19 | | | | |
| Spill Number/Closed Date: 8912020 / 1990-03-19 | | | | |
| Site ID: 295754 | | | | |
| 545 BRUSH AVE/BX/U.P | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.131 mi.) | F27 | 124 |
| Spill Date: 1989-12-20 | | | | |
| Spill Number/Closed Date: 8909242 / 2003-02-27 | | | | |
| Site ID: 138397 | | | | |
| ***UPS*** | ***545 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F32*** | ***180*** |
| Spill Date: 1989-11-17 | | | | |
| Spill Number/Closed Date: 8908245 / 1992-09-30 | | | | |

Site ID: 212269

***H.O. PENN MACHINERY*** ***699 BRUSH AVE*** ***NNW 1/4 - 1/2 (0.315 mi.)*** ***37*** ***197***
Spill Date: 1992-04-20
Spill Date: 1997-01-08
Spill Number/Closed Date: 9200766 / 2003-03-07
Spill Number/Closed Date: 9612128 / 2006-12-13
Site ID: 186683
Site ID: 186684

***VERIZON NEW YORK INC*** ***500 ZEREGA AVENUE*** ***NW 1/4 - 1/2 (0.317 mi.)*** ***G38*** ***206***
Spill Date: 1987-08-11
Spill Number/Closed Date: 8703906 / 1996-08-06
Site ID: 270294

***Lists of state and tribal registered storage tanks***

NY UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the NY UST list, as provided by EDR, has revealed that there are 2 NY UST sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BRONX WHITESTONE BRI<br>Database: UST, Date of Government Version: 03/19/2024 | ONE HUTCHINSON RIVER | NW 0 - 1/8 (0.082 mi.) | D20 | 44 |
| UNITED PARCEL SERVIC<br>Database: UST, Date of Government Version: 03/19/2024 | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.148 mi.) | F31 | 175 |

NY CBS: These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

A review of the NY CBS list, as provided by EDR, and dated 03/19/2024 has revealed that there is 1 NY CBS site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***UPS***<br>Facility Status: Unregulated/Closed<br>CBS Number: 2-000341 | ***545 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F32*** | ***180*** |

NY AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database.

A review of the NY AST list, as provided by EDR, has revealed that there are 6 NY AST sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| CABLEVISION<br>Database: AST, Date of Government Version: 03/19/2024 | 500-510 BRUSH AVENUE | NNW 0 - 1/8 (0.053 mi.) | 17 | 36 |

Facility Id: 2-603460

| | | | | |
|---|---|---|---|---|
| ***VAULT #2232*** | ***555 HUTCHINSON RIVER*** | ***NNW 0 - 1/8 (0.079 mi.)*** | ***C19*** | ***41*** |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-062987 | | | | |
| BRONX WHITESTONE BRI | ONE HUTCHINSON RIVER | NW 0 - 1/8 (0.082 mi.) | D21 | 54 |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-481645 | | | | |
| FERRY POINT PARK GOL | 700 HUTCHINSON RIVER | N 0 - 1/8 (0.121 mi.) | 25 | 91 |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-611992 | | | | |
| UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.148 mi.) | F33 | 186 |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-000341 | | | | |
| UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.148 mi.) | F34 | 187 |
| Database: AST, Date of Government Version: 03/19/2024<br>Facility Id: 2-601299 | | | | |

NY CBS AST: Chemical Bulk Storage Database. Registration data collected as required by 6 NYCRR Part 596. It includes facilities storing hazardous substances listed in 6 NYCRR Part 597, in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size. Includes facilities registered (and closed) since effective date of CBS regulations (July 15, 1988) through the date request is processed.

A review of the NY CBS AST list, as provided by EDR, and dated 01/01/2002 has revealed that there is 1 NY CBS AST site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***UNITED PARCEL SERVIC*** | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |
| Facility Status: 1<br>Facility Status: 1<br>CBS Number: 2-000341 | | | | |

NY TANKS: This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

A review of the NY TANKS list, as provided by EDR, has revealed that there are 2 NY TANKS sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***LIBERTY MECHANICAL/C*** | ***550 BRUSH AVENUE*** | ***NNW 0 - 1/8 (0.114 mi.)*** | ***F24*** | ***89*** |
| Database: TANKS, Date of Government Version: 03/19/2024<br>Facility Id: 2-080799<br>Site Status: Active | | | | |
| ***UPS-BRUSH AVENUE*** | ***545 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F30*** | ***173*** |
| Database: TANKS, Date of Government Version: 03/19/2024<br>Facility Id: 2-258180<br>Site Status: Inactive | | | | |

# EXECUTIVE SUMMARY

***Lists of state and tribal voluntary cleanup sites***

NY VCP: Voluntary Cleanup Agreements. The voluntary remedial program uses private monies to get contaminated sites remediated to levels allowing for the sites' productive use. The program covers virtually any kind of site and contamination.

A review of the NY VCP list, as provided by EDR, has revealed that there is 1 NY VCP site within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BLOCK 3579, LOT 1 | BLOCK 3579, LOT 1 | NNW 1/4 - 1/2 (0.361 mi.) | 42 | 214 |
| Database: VCP, Date of Government Version: 02/06/2024 | | | | |
| Site Code: 58877 | | | | |

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Records of Emergency Release Reports***

NY Spills: Data collected on spills reported to NYSDEC. is required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

A review of the NY Spills list, as provided by EDR, and dated 05/06/2024 has revealed that there are 8 NY Spills sites within approximately 0.125 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| MANHOLE 15002 | 80 N HUTCHINSON RIVE | 0 - 1/8 (0.000 mi.) | A4 | 12 |
| Spill Number/Closed Date: 0805329 / 2008-09-16 | | | | |
| Site ID: 402409 | | | | |
| Spill Date: 2008-08-07 | | | | |
| CON EDISON TRANSFORM | 530 HUTCHINSON RIVER | 0 - 1/8 (0.000 mi.) | 10 | 27 |
| Spill Number/Closed Date: 1000322 / 2010-04-22 | | | | |
| Site ID: 431484 | | | | |
| Spill Date: 2010-04-08 | | | | |
| ***MTA BRIDGES & TUNNEL*** | ***1 HUTCHINSON RIVER P*** | ***ESE 0 - 1/8 (0.113 mi.)*** | ***E22*** | ***56*** |
| Spill Number/Closed Date: 0100477 / 2014-03-18 | | | | |
| Spill Number/Closed Date: 9201985 / 2011-11-16 | | | | |
| Spill Number/Closed Date: 9601373 / 2011-11-16 | | | | |
| Spill Number/Closed Date: 9801266 / 2014-03-18 | | | | |
| Spill Number/Closed Date: 9303540 / 2003-11-06 | | | | |
| **Additional key fields are available in the Map Findings section* | | | | |
| Site ID: 214399 | | | | |
| Site ID: 249978 | | | | |
| Site ID: 249983 | | | | |
| Site ID: 249985 | | | | |
| Site ID: 249979 | | | | |
| **Additional key fields are available in the Map Findings section* | | | | |
| Spill Date: 2001-04-12 | | | | |
| Spill Date: 1991-06-11 | | | | |
| Spill Date: 1996-04-26 | | | | |

Spill Date: 1998-04-24
Spill Date: 1993-06-17
**Additional key fields are available in the Map Findings section*

| | | | | |
|---|---|---|---|---|
| FARRY POINT PARK | WHITSTONE BRIDGE | ESE 0 - 1/8 (0.113 mi.) | E23 | 88 |
| Spill Number/Closed Date: 0012477 / 2003-06-09 | | | | |
| Site ID: 207749 | | | | |
| Spill Date: 2001-02-21 | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BRONX WHITESTONE BRI | 1 HUTCHINSON RIVER P | 0 - 1/8 (0.000 mi.) | A9 | 26 |
| Spill Number/Closed Date: 1109651 / 2012-01-18 | | | | |
| Site ID: 457431 | | | | |
| Spill Date: 2011-11-02 | | | | |
| FERRY POINT PARK GOL | 500 HUTCHINSON RIVER | 0 - 1/8 (0.000 mi.) | A13 | 31 |
| Spill Number/Closed Date: 0913675 / 2010-03-25 | | | | |
| Site ID: 426631 | | | | |
| Spill Date: 2010-01-10 | | | | |
| WHITESTONE BRIDGE | TOLL PLAZA | NNW 0 - 1/8 (0.021 mi.) | B16 | 35 |
| Spill Number/Closed Date: 0011525 / 2001-06-01 | | | | |
| Site ID: 100434 | | | | |
| Spill Date: 2001-01-25 | | | | |
| ***VAULT #2232*** | ***555 HUTCHINSON RIVER*** | ***NNW 0 - 1/8 (0.079 mi.)*** | ***C19*** | ***41*** |
| Spill Number/Closed Date: 0813834 / 2009-06-08 | | | | |
| Site ID: 411543 | | | | |
| Spill Date: 2009-03-23 | | | | |

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/03/2024 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| CON EDISON | 555 HUTCHINSON RIVER | NNW 0 - 1/8 (0.079 mi.) | C18 | 39 |
| EPA ID:: NYP004164521 | | | | |

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/30/2024 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| AAA THROGGS NECK | | E 1/2 - 1 (0.806 mi.) | 46 | 220 |

# EXECUTIVE SUMMARY

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 02/09/2024 has revealed that there are 4 FINDS sites within approximately 0.001 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| NYSDOT BIN 55211229<br>Registry ID:: 110070754377 | 1 HUTCHINSON RIVER P | 0 - 1/8 (0.000 mi.) | A3 | 11 |
| ***NYCP&R - FERRY POINT***<br>Registry ID:: 110039573832 | ***500 HUTCHINSON PARKW*** | ***0 - 1/8 (0.000 mi.)*** | ***A6*** | ***23*** |
| ***FERRY POINT PARK GOL***<br>Registry ID:: 110019713684 | ***500 HUTCHINSON RIVER*** | ***0 - 1/8 (0.000 mi.)*** | ***A7*** | ***24*** |
| ***NYC PARKS-FERRY POIN***<br>Registry ID:: 110019835188 | ***500 HUTCHINSON RIVER*** | ***0 - 1/8 (0.000 mi.)*** | ***A11*** | ***28*** |

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 06/23/2024 has revealed that there are 3 ECHO sites within approximately 0.001 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***NYCP&R - FERRY POINT***<br>Registry ID: 110039573832 | ***500 HUTCHINSON PARKW*** | ***0 - 1/8 (0.000 mi.)*** | ***A6*** | ***23*** |
| ***FERRY POINT PARK GOL***<br>Registry ID: 110019713684 | ***500 HUTCHINSON RIVER*** | ***0 - 1/8 (0.000 mi.)*** | ***A7*** | ***24*** |
| ***NYC PARKS-FERRY POIN***<br>Registry ID: 110019835188 | ***500 HUTCHINSON RIVER*** | ***0 - 1/8 (0.000 mi.)*** | ***A11*** | ***28*** |

PFAS ECHO: Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

A review of the PFAS ECHO list, as provided by EDR, and dated 07/01/2024 has revealed that there are 2 PFAS ECHO sites within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| NYCP&R - FERRY POINT | | 0 - 1/8 (0.000 mi.) | A8 | 24 |
| NYC PARKS-FERRY POIN | | 0 - 1/8 (0.000 mi.) | A14 | 32 |

# EXECUTIVE SUMMARY

UST FINDER: EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

A review of the UST FINDER list, as provided by EDR, and dated 06/08/2023 has revealed that there is 1 UST FINDER site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| UNITED PARCEL SERVIC | 545 BRUSH AVENUE | NNW 1/8 - 1/4 (0.148 mi.) | F35 | 190 |

UST FINDER RELEASE: US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

A review of the UST FINDER RELEASE list, as provided by EDR, and dated 06/08/2023 has revealed that there are 2 UST FINDER RELEASE sites within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BRONX WHITESTONE BRI | 1 HUTCHINSON RIVER P | 0 - 1/8 (0.000 mi.) | A12 | 29 |
| 500 ZEREGA AVENUE | 500 ZEREGA AVENUE | NW 1/4 - 1/2 (0.317 mi.) | G39 | 210 |

E MANIFEST: EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

A review of the E MANIFEST list, as provided by EDR, and dated 07/24/2023 has revealed that there are 3 E MANIFEST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGE BIN 55211*** | ***1 HUTCHINSON RIVER P*** | ***E 1/8 - 1/4 (0.129 mi.)*** | ***E26*** | ***96*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL*** | ***BRONX-WHITESTONE BRI*** | ***0 - 1/8 (0.000 mi.)*** | ***A5*** | ***13*** |
| ***UNITED PARCEL SERVIC*** | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 12/31/2019 has revealed that there are 3 NY MANIFEST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL*** EPA ID: NYR000154260 | ***1 HUTCHINSON RIVER P*** | ***ESE 0 - 1/8 (0.113 mi.)*** | ***E22*** | ***56*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***UNITED PARCEL SERVIC*** | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |

EPA ID: NYD986900728

| | | | | |
|---|---|---|---|---|
| ***N Y BRUSH LLC*** | ***650 BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.205 mi.)*** | ***36*** | ***191*** |
| EPA ID: NYR000140368 | | | | |

PA MANIFEST: Hazardous waste manifest information.

A review of the PA MANIFEST list, as provided by EDR, and dated 06/30/2018 has revealed that there is 1 PA MANIFEST site within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGE BIN 55211*** | ***1 HUTCHINSON RIVER P*** | ***E 1/8 - 1/4 (0.129 mi.)*** | ***E26*** | ***96*** |
| Generator EPA Id: NYD982796377 | | | | |

NJ MANIFEST: Hazardous waste manifest information.

A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2018 has revealed that there are 3 NJ MANIFEST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGE BIN 55211*** | ***1 HUTCHINSON RIVER P*** | ***E 1/8 - 1/4 (0.129 mi.)*** | ***E26*** | ***96*** |
| EPA Id: NYD982796377 | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MTA BRIDGES & TUNNEL*** | ***BRONX-WHITESTONE BRI*** | ***0 - 1/8 (0.000 mi.)*** | ***A5*** | ***13*** |
| EPA Id: NYR000154260 | | | | |
| ***UNITED PARCEL SERVIC*** | ***BRUSH AVE*** | ***NNW 1/8 - 1/4 (0.148 mi.)*** | ***F29*** | ***127*** |
| EPA Id: NYD986900728 | | | | |

NY SPDES: New York State has a state program which has been approved by the United States Environmental Protection Agency for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. Under New York State law the program is known as the State Pollutant Discharge Elimination System (SPDES) and is broader in scope than that required by the Clean Water Act in that it controls point source discharges to groundwaters as well as surface waters.

A review of the NY SPDES list, as provided by EDR, and dated 01/12/2024 has revealed that there is 1 NY SPDES site within approximately 0.001 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| FERRY POINT PARK REC | 500 HUTCHINSON RIVER | 0 - 1/8 (0.000 mi.) | A2 | 10 |
| Permit Number: NYR10D547 | | | | |

# EXECUTIVE SUMMARY

NY ILI: A solid waste site priority list of mitigation and remedial activities to address sites causing, or substantially contributing to, impairments of drinking water quality. Inactive solid waste disposal sites, primarily landfills, and their potential impact on New York?s drinking water resources from site-related contaminants, with a focus on emerging contaminants.

A review of the NY ILI list, as provided by EDR, and dated 01/30/2024 has revealed that there are 3 NY ILI sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| *RANDALL AVE AND ZERE* | *HAVMEYER AVE, RANDEL* | *NW 1/4 - 1/2 (0.375 mi.)* | *43* | *215* |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| *FERRY POINT PARK* | *10 HUTCHINSON ROVER* | *SSW 1/8 - 1/4 (0.138 mi.)* | *28* | *125* |
| *EASTERN ECOLOGY COMP* | *665-637 ZEREGA AVE* | *NNW 1/4 - 1/2 (0.391 mi.)* | *44* | *216* |

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

| Site Name | Database(s) |
|---|---|
| CE - ZEREGA AVE. STATION | NY SHWS |
| FORT SCHUYLER PARK AREA | NY SWF/LF, NY ILI |
| LB NORTHEAST | NY SWF/LF, NY ILI |
| BLOCK 5541, LOT 225 (BRUSH AVENUE | NY VCP |
| CE - ZEREGA AVE. STATION | NY VCP, NY MGP |

# OVERVIEW MAP - 7720624.2S




Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

County Boundary

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Proposed Ballys Casino - Ring Road | CLIENT: | Langan Engineering, Inc. |
| ADDRESS: | 450 Hutchinson River Parkway<br>Bronx NY 10465 | CONTACT: | Kaitlyn Gioia |
| LAT/LONG: | 40.813693 / 73.835803 | INQUIRY #: | 7720624.2s |
| | | DATE: | July 29, 2024 4:56 pm |

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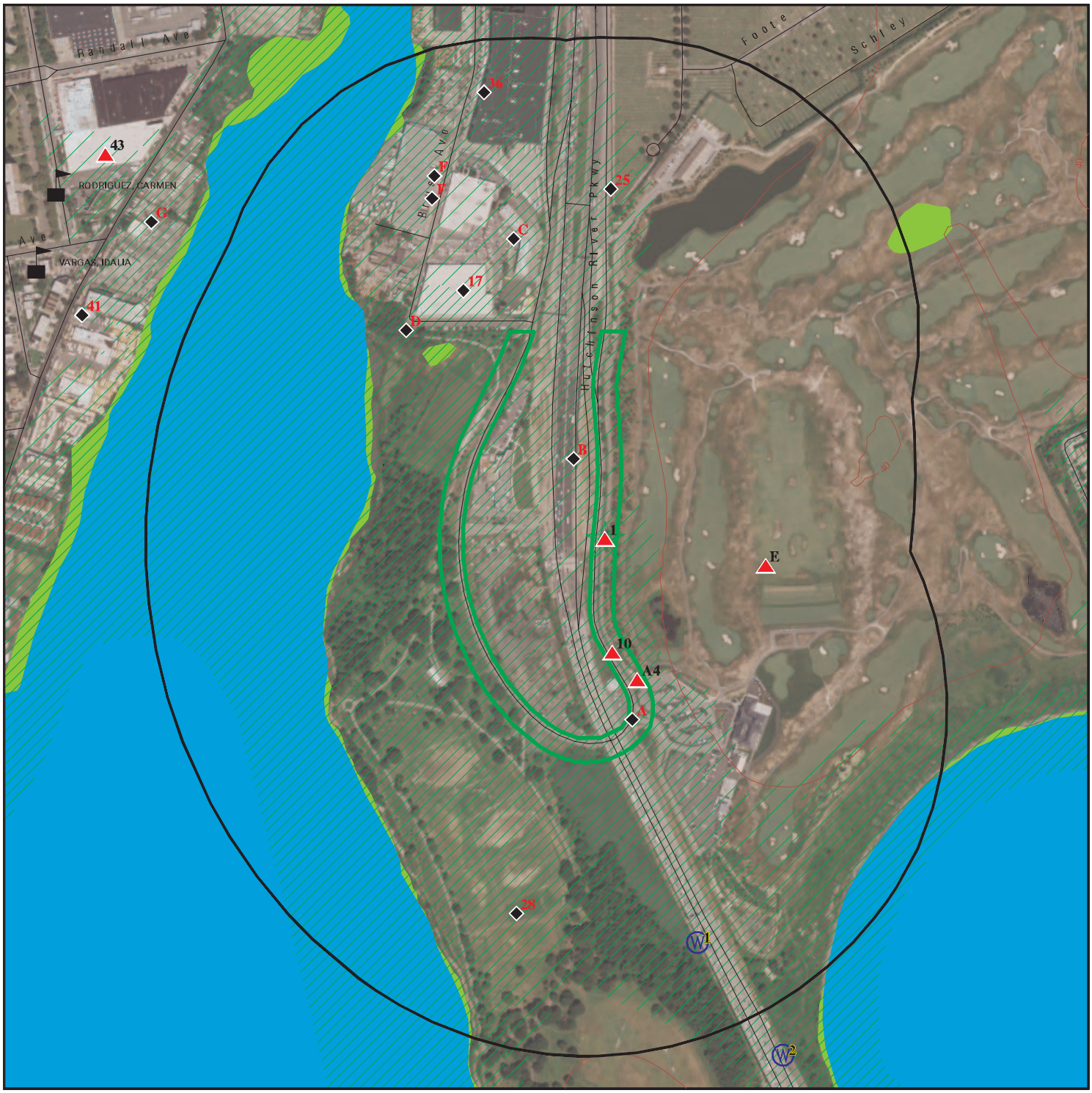
# DETAIL MAP - 7720624.2S




Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Proposed Ballys Casino - Ring Road | CLIENT: | Langan Engineering, Inc. |
| ADDRESS: | 450 Hutchinson River Parkway<br>Bronx NY 10465 | CONTACT: | Kaitlyn Gioia |
| LAT/LONG: | 40.813693 / 73.835803 | INQUIRY #: | 7720624.2s |
| | | DATE: | July 29, 2024 4:59 pm |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Lists of Federal NPL (Superfund) sites*** | | | | | | | | |
| NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal Delisted NPL sites*** | | | | | | | | |
| Delisted NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal sites subject to CERCLA removals and CERCLA orders*** | | | | | | | | |
| FEDERAL FACILITY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SEMS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal CERCLA sites with NFRAP*** | | | | | | | | |
| SEMS-ARCHIVE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA facilities undergoing Corrective Action*** | | | | | | | | |
| CORRACTS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal RCRA TSD facilities*** | | | | | | | | |
| RCRA-TSDF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA generators*** | | | | | | | | |
| RCRA-LQG | 0.250 | | 0 | 2 | NR | NR | NR | 2 |
| RCRA-SQG | 0.250 | | 1 | 1 | NR | NR | NR | 2 |
| RCRA-VSQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| LUCIS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Lists of state- and tribal hazardous waste facilities*** | | | | | | | | |
| NY SHWS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of state and tribal landfills and solid waste disposal facilities*** | | | | | | | | |
| NY SWF/LF | 0.500 | | 0 | 1 | 5 | NR | NR | 6 |
| ***Lists of state and tribal leaking storage tanks*** | | | | | | | | |
| INDIAN LUST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| NY LTANKS | 0.500 | | 2 | 2 | 2 | NR | NR | 6 |
| NY HIST LTANKS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal registered storage tanks*** | | | | | | | | |
| FEMA UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY UST | 0.250 | | 1 | 1 | NR | NR | NR | 2 |
| NY CBS UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY MOSF UST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY MOSF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY CBS | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| NY AST | 0.250 | | 4 | 2 | NR | NR | NR | 6 |
| NY CBS AST | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| NY MOSF AST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY TANKS | 0.250 | | 1 | 1 | NR | NR | NR | 2 |
| ***State and tribal institutional control / engineering control registries*** | | | | | | | | |
| NY RES DECL | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| NY ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY INST CONTROL | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal voluntary cleanup sites*** | | | | | | | | |
| NY VCP | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| INDIAN VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal brownfield sites*** | | | | | | | | |
| NY BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY ERP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| NY SWRCY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY SWTIRE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| IHS OPEN DUMPS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US HIST CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY DEL SHWS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| US CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Local Lists of Registered Storage Tanks*** | | | | | | | | |
| NY HIST UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| NY HIST AST | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| NY LIENS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| LIENS 2 | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY Spills | 0.125 | | 8 | NR | NR | NR | NR | 8 |
| NY Hist Spills | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| NY SPILLS 90 | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| NY SPILLS 80 | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA NonGen / NLR | 0.250 | | 1 | 0 | NR | NR | NR | 1 |
| FUDS | 1.000 | | 0 | 0 | 0 | 1 | NR | 1 |
| DOD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US FIN ASSUR | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| EPA WATCH LIST | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| 2020 COR ACTION | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| TSCA | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| TRIS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| SSTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ROD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| RMP | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RAATS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PRP | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PADS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ICIS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| FTTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MLTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| COAL ASH DOE | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| COAL ASH EPA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| PCB TRANSFORMER | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RADINFO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HIST FTTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| DOT OPS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| CONSENT | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN RESERV | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| FUSRAP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LEAD SMELTERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| US AIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| US MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ABANDONED MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| MINES MRDS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| FINDS | 0.001 | | 4 | NR | NR | NR | NR | 4 |
| ECHO | 0.001 | | 3 | NR | NR | NR | NR | 3 |
| UXO | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| DOCKET HWC | 0.001 | | 0 | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| FUELS PROGRAM | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPL | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS FEDERAL SITES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS TSCA | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS TRIS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS RCRA MANIFEST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ATSDR | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS WQP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPDES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS PROJECT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ECHO | 0.250 | | 2 | 0 | NR | NR | NR | 2 |
| PFAS ECHO FIRE TRAIN | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS PT 139 AIRPORT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AQUEOUS FOAM NRC | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| BIOSOLIDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| UST FINDER | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| UST FINDER RELEASE | 0.500 | | 1 | 0 | 1 | NR | NR | 2 |
| E MANIFEST | 0.250 | | 1 | 2 | NR | NR | NR | 3 |
| NY PFAS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY AIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY COAL ASH | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY DRYCLEANERS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NY E DESIGNATION | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| NY Financial Assurance | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY HSWDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY LEAD | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY MANIFEST | 0.250 | | 1 | 2 | NR | NR | NR | 3 |
| PA MANIFEST | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| NJ MANIFEST | 0.250 | | 1 | 2 | NR | NR | NR | 3 |
| NY SPDES | 0.001 | | 1 | NR | NR | NR | NR | 1 |
| NY VAPOR REOPENED | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| NY UIC | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY COOLING TOWERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NY MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NY NYC LAND USE | TP | 1 | NR | NR | NR | NR | NR | 1 |
| NY ILI | 0.500 | | 0 | 1 | 2 | NR | NR | 3 |
| NY NYC OER | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| **EDR HIGH RISK HISTORICAL RECORDS** | | | | | | | | |
| ***EDR Exclusive Records*** | | | | | | | | |
| EDR MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| EDR Hist Auto | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| EDR Hist Cleaner | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| **EDR RECOVERED GOVERNMENT ARCHIVES** | | | | | | | | |
| ***Exclusive Recovered Govt. Archives*** | | | | | | | | |
| NY RGA HWS | 0.001 | | 0 | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| NY RGA LF | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| - Totals -- | | 1 | 32 | 21 | 11 | 1 | 0 | 66 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

**1** **NY NYC LAND USE** **S131152834**
**Target Property** **450 HUTCHINSON RVR PKWY**
**BRONX, NY 10465** **N/A**

**Actual: 16 ft.**

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 450 HUTCHINSON RVR PKWY |
| City,State,Zip: | BRONX, NY 10465 |
| Latitude: | 40.8112977 |
| Longitude: | -73.8344543 |
| Type Of Ownership Code: | C |
| Owner Name: | NYC DEPARTMENT OF PARKS AND RECREATION |
| Borough: | BX |
| Tax Block: | 5622 |
| Tax Lot: | 1 |
| Community District: | 210 |
| Census Tract 2020: | 2011000 |
| Census Block 2020: | 20110001004 |
| Census Tract 2010: | 110 |
| Census Block 2010: | 1012 |
| School District: | 08 |
| City Council District: | 13 |
| Fire Company: | E072 |
| Police Precinct: | 45 |
| Health Center District: | 26 |
| Health Area: | 3220 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 10 |
| Sanitation Subsection: | 3C |
| Zoning District 1: | PARK: Areas designated as PARK, BALL FIELD, PLAYGROUND and PUBLIC SPACE in NYC Zoning Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | Q5: OUTDOOR RECREATION FACILITIES - Golf Course |
| Land Use Category: | Open Space & Outdoor Recreation |
| Number Of Easements: | 0 |
| Lot Area: | 4225328 |
| Total Building Floor Area: | 14681 |
| Commercial Floor Area: | 14681 |
| Residential Floor Area: | 0 |
| Office Floor Area: | 2150 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 0 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 0 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 11 |
| Number Of Floors: | 1.0000000 |
| Residential Units: | 0 |
| Total Units: | 2 |

**(Continued)** **S131152834**

| | |
|---|---|
| Lot Frontage: | 97.0000000 |
| Lot Depth: | 3400.0000000 |
| Building Frontage: | 65.5000000 |
| Building Depth: | 35.5000000 |
| Extension Code: | N |
| Proximity Code: | 0 |
| Irregular Lot Code: | Y |
| Lot Type: | 5 |
| Basement Type/Grade: | 0 |
| Assessed Land Value: | 40660411.00000 |
| Assessed Total Value: | 49656361.00000 |
| Exempt Total Value: | 49656361.00000 |
| Year Built: | 2014 |
| Year Altered 1: | 2010 |
| Year Altered 2: | 2017 |
| Historic District Name: | Not reported |
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.00000000000 |
| Maximum Allowable Residential Far: | 0.00000000000 |
| Maximum Allowable Commercial Far: | 0.00000000000 |
| Maximum Allowable Community Facility Far: | 0.00000000000 |
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2056220001.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0110 |
| X Coordinate: | 1030076 |
| Y Coordinate: | 234898 |
| Zoning Map #: | 7a |
| Zoning Map Code: | Y |
| Sanborn Map #: | 221 081 |
| Tax Map #: | 21809 |
| E-designation Number: | Not reported |
| Apportionment BBL: | Not reported |
| Apportionment Date: | Not reported |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | 1 |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | 1 |
| Version Number: | 24v1.1 |
| Changed By DCP: | t |

---

**A2** **FERRY POINT PARK RECREATIONAL FAC** **NY SPDES** **S123252664**
**500 HUTCHINSON RIVER PKWY** **N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 1 of 12 in cluster A**

**Relative:** SPDES:
**Lower**

**Actual:**
**13 ft.**

| | |
|---|---|
| Name: | Ferry Point Park Recreational Fac |
| Address: | 500 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY 10465 |
| Permit Number: | NYR10D547 |
| State-Region: | Not reported |
| Expiration Date: | Not reported |
| Current Major Minor Status: | Not reported |
| Primary Facility SIC Code: | Not reported |
| State Water Body Name: | Not reported |
| Limit Set Status Flag: | Not reported |

**FERRY POINT PARK RECREATIONAL FAC (Continued)** **S123252664**

| | |
|---|---|
| Total Actual Average Flow(MGD): | Not reported |
| Total App Design Flow(MGD): | Not reported |
| UDF1: | Not reported |
| Lat/Long: | 598455 / 4518240 |
| DMR Cognizant Official: | Not reported |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | Not reported |
| Non-Gov Permit Affiliation Type Desc: | Not reported |
| Non-Gov Permit Org Formal Name: | Not reported |
| Non-Gov Permit Street Address: | Not reported |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | Not reported |
| Non-Gov Permit State Code: | Not reported |
| Non-Gov Permit Zip Code: | Not reported |
| Non-Gov Facility Affiliation Type Desc: | Not reported |
| Non-Gov Facility Org Formal Name: | Not reported |
| Non-Gov Facility Street Address: | Not reported |
| Non-Gov Facility Supplemental Location: | Not reported |
| Non-Gov Facility City: | Not reported |
| Non-Gov Facility State Code: | Not reported |
| Non-Gov Facility Zip Code: | Not reported |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

---

**A3** **NYSDOT BIN 55211229 - BRONX WHITESTONE BRIDGE** **FINDS** **1026425532**
**1 HUTCHINSON RIVER PKWY** **N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 2 of 12 in cluster A**

**Relative:** FINDS:
**Lower** Registry ID: 110070754377

**Actual:**
**12 ft.** Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

All generators and treatment, storage, and disposal (TSD) facilities who handle hazardous waste are required to report to the EPA Administrator at least once every two years. The data collected is used to create the National Biennial Resource Conservation and Recovery Act (RCRA) Hazardous Waste Report. This data is processed within the RCRA Information (RCRAInfo) database

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**A4** **MANHOLE 15002** **NY Spills** **S109206979**
**80 N HUTCHINSON RIVER PKW** **N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Site 3 of 12 in cluster A**

**Relative: Higher**
**Actual: 17 ft.**

SPILLS:

| | |
|---|---|
| Name: | MANHOLE 15002 |
| Address: | 80 N HUTCHINSON RIVER PKW |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0805329 / 2008-09-16 |
| Facility ID: | 0805329 |
| Facility Type: | ER |
| DER Facility ID: | 351615 |
| Site ID: | 402409 |
| DEC Region: | 2 |
| Spill Cause: | Unknown |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2008-08-07 |
| Investigator: | RWAUSTIN |
| Referred To: | Not reported |
| Reported to Dept: | 2008-08-08 |
| CID: | 404 |
| Water Affected: | Not reported |
| Spill Source: | Institutional, Educational, Gov., Other |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | Not reported |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2008-08-08 |
| Spill Record Last Update: | 2008-09-16 |
| Spiller Name: | ERTSDESK |
| Spiller Company: | MANHOLE 15002 |
| Spiller Address: | 80 N HUTCHINSON RIVER PKW |
| Spiller Company: | 001 |
| Contact Name: | ERTSDESK |
| DEC Memo: | 09/19/08 - See eDocs for Con Ed report detailing cleanup and closure.<br>9/16/08 - Austin - oil<br>cleaned up - closed |
| Remarks: | unknown oil on 4000g of water; contained to a manhole; con ed 213035 |

All Materials:

| | |
|---|---|
| Site ID: | 402409 |
| Operable Unit ID: | 1159168 |
| Operable Unit: | 01 |
| Material ID: | 2150279 |
| Material Code: | 0066A |
| Material Name: | unknown petroleum |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 25.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Surface Water |
| Oxygenate: | Not reported |

**A5** **MTA BRIDGES & TUNNELS (BWB)** **RCRA-SQG 1010566779**
**BRONX-WHITESTONE BRIDGE** **E MANIFEST NYR000154260**
**< 1/8** **BRONX, NY 10465** **NJ MANIFEST**
**1 ft.**

**Site 4 of 12 in cluster A**

**Relative:** **Lower**
**Actual:** **11 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20071210 |
| Handler Name: | Whitestone Bridge Facility |
| Handler Address: | Hutchinson River Pkwy |
| Handler City,State,Zip: | BRONX, NY 10465-1857 |
| EPA ID: | NYR000154260 |
| Contact Name: | GEORGE BASSIL |
| Contact Address: | MTA BRGS & TUNLS R MOSES BLDG |
| Contact City,State,Zip: | NEW YORK, NY 10035-5199 |
| Contact Telephone: | 212-360-4165 |
| Contact Fax: | Not reported |
| Contact Email: | GBASSIL@MTABT.ORG |
| Contact Title: | Not reported |
| EPA Region: | 02 |
| Land Type: | State |
| Federal Waste Generator Description: | Small Quantity Generator |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Handler Activities |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | MTA BRGS & TUNLS R MOSES BLDG |
| Mailing City,State,Zip: | NEW YORK, NY 10035-5199 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20150414 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Hazardous Waste Summary:

| | |
|---|---|
| Waste Code: | D001 |
| Waste Description: | Ignitable Waste |
| Waste Code: | D008 |
| Waste Description: | Lead |
| Waste Code: | D018 |
| Waste Description: | Benzene |

Handler - Owner Operator:

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: | TRIBOROUGH BRIDGE & TUNNEL AUTH (TBTA) |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

Historic Generators:

| | |
|---|---|
| Receive Date: | 20071210 |
| Handler Name: | WHITESTONE BRIDGE FACILITY |
| Federal Waste Generator Description: | Small Quantity Generator |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20071211
Handler Name: WHITESTONE BRIDGE FACILITY
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 48849
NAICS Description: OTHER SUPPORT ACTIVITIES FOR ROAD TRANSPORTATION

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

E MANIFEST:
Manifest Tracking Number: 022176541JJK
Last Updated Date: 20210519
Shipped Date: 20210427
Received Date: 20210427
Manifest Status: Signed
Submission Type: DataImage5Copy
Origin Type: Service
Generator EPA ID: NYR000154260
Generator Name: Mta Bridges & Tunnels (Bwb)
Generator Mail Street Number: Not reported
Generator Mail Street 1: BRONX-WHITESTONE BRIDGE
Generator Mail Street 2: Not reported
Generator Mail City: BRONX
Generator Mail State: NY
Generator Mail Zip: 10465
Generator Location Street Number: Not reported
Generator Location Street 1: BRONX-WHITESTONE BRIDGE
Generator Location Street 2: Not reported
Generator Location City: BRONX
Generator Location Zip: 10465

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD002200046 |
| Designated Facility Name: | Cycle Chem, Inc. |
| Designated Facility Mail Street Number: | Not reported |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | 217 SOUTH FIRST STREET |
| Designated Facility Mail City: | ELIZABETH |
| Designated Facility Mail Zip: | 07206 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | Not reported |
| Designated Facility Location Street 1: | 217 SOUTH FIRST STREET |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | ELIZABETH |
| Designated Facility Location Zip: | 07206 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | Not reported |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

Federal Waste:

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Waste Line Number: | 1 |
| Federal Waste Code: | D001 |
| Federal Waste: | IGNITABLE WASTE |

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Waste Line Number: | 1 |
| Federal Waste Code: | D018 |
| Federal Waste: | BENZENE |

State Waste:

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Waste Line Number: | 1 |
| State Waste Code Owner: | NY |
| State Waste Code: | B |
| State Waste: | Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only |

Transporter:

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Transporter Line Number: | 1 |
| Transporter EPA ID: | NJD003812047 |
| Transporter Name: | Acv Environmental Services, Inc |

Waste Line:

| | |
|---|---|
| Manifest Tracking Number: | 022176541JJK |
| Waste Line Number: | 1 |
| U.S. DOT Hazardous Indicator: | Y |
| U.S. DOT ID Number: | UN2583 |
| U.S. DOT Description: | Rq, Un1993, Waste Flammable Liquids, N.O.S. (Gasoline, Diesel Fuel), 3 , Ii |
| Non-Hazardous Waste Description: | Not reported |
| Number of Containers: | 1 |
| Container Type Code: | DF |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Container Type Description: | Fiberboard or plastic drums, barrels, kegs |
| Waste Quantity: | 417 |
| Quantity Unit of Measure Code: | P |
| Quantity Unit of Measure Description: | Pounds |
| Waste Quantity, in Tons: | 0.2085 |
| Acute Waste Quantity, in Tons: | 0 |
| Non-Acute Waste Quantity, in Tons: | 0.2085 |
| Waste Quantity, in Kilograms: | 189.11575 |
| Acute Waste Quantity, in Kilograms: | 0 |
| Non-Acute Waste Quantity, in Kilorgrams: | 189.11575 |
| Management Method Code: | H061 |
| Management Method Description: | FUEL BLENDING |
| Waste Residue Indicator: | N |
| Quantity Discrepancy Indicator: | N |
| Waste Type Discrepancy Indicator: | N |
| Waste Density: | Not reported |
| Waste Density Unit of Measure Code: | Not reported |
| Waste Density Unit of Measure Description: | Not reported |
| Form Code: | Not reported |
| Form Code Description: | Not reported |
| Source Code: | Not reported |
| Source Code Description: | Not reported |
| Waste Minimization Code: | Not reported |
| Waste Minimization Code Description: | Not reported |
| Consent Number: | Not reported |
| EPA Waste Indicator: | Y |

NJ MANIFEST:

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Name: | WHITESTONE BRIDGE FACILITY |
| Address: | 1 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY 10465-1857 |
| County: | Not reported |
| Mailing Address: | MTA BRGS & TUNLS R MOSES BLDG |
| Mailing City,State,Zip: | NEW YORK, NY 10035-5199 |
| Telephone: | Not reported |
| Emergency Telephone: | Not reported |
| Contact: | GEORGE BASSIL |
| Comments: | Not reported |
| SIC Code: | Not reported |
| County: | NY005 |
| Municipal: | Not reported |
| Previous EPAID: | Not reported |
| Generator Flag: | Not reported |
| Transporter Flag: | Not reported |
| TSDF Flag: | Not reported |
| Name Change: | Not reported |
| Date Change: | Not reported |

Manifest Data:

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 003534721JJK |
| Date Shipped: | 5/4/2011 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | H141 |
| Quantity: | 55.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 010913928JJK |
| Date Shipped: | 11/4/2013 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 600.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 300.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 010913928JJK |
| Date Shipped: | 11/4/2013 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 600.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 300.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 010913928JJK |
| Date Shipped: | 11/4/2013 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 600.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 300.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 015626081JJK |
| Date Shipped: | 3/30/2016 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYR000154260 |
| Manifest Number: | 015626081JJK |
| Date Shipped: | 3/30/2016 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |

**MTA BRIDGES & TUNNELS (BWB) (Continued)** **1010566779**

| | |
|---|---|
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

---

**A6** **NYCP&R - FERRY POINT WATERFRONT PARK** **FINDS 1012241816**
**500 HUTCHINSON PARKWAY** **ECHO N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 5 of 12 in cluster A**

**Relative:** **Lower**

**Actual:** **14 ft.**

FINDS:
Registry ID: 110039573832

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
All generators and treatment, storage, and disposal (TSD) facilities who handle hazardous waste are required to report to the EPA Administrator at least once every two years. The data collected is used to create the National Biennial Resource Conservation and Recovery Act (RCRA) Hazardous Waste Report. This data is processed within the RCRA Information (RCRAInfo) database
The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1012241816 |
| Registry ID: | 110039573832 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110039573832 |
| Name: | NYCP&R - FERRY POINT WATERFRONT PARK |
| Address: | 500 HUTCHINSON PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |

**A7** **FERRY POINT PARK GOLF COURSE** **FINDS** **1007808831**
**500 HUTCHINSON RIVER PKWY** **ECHO** **N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 6 of 12 in cluster A**

**Relative:** **Lower**

**Actual:** **13 ft.**

FINDS:
Registry ID: 110019713684

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
The New York Department of Environmental Conservation Facility Information System (FIS) database houses all information about facilities that are regulated or of environmental interest to the state of New York.
The National Pollutant Discharge Elimination System (NPDES) module of the Integrated Compliance Information System (ICIS). Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1007808831 |
| Registry ID: | 110019713684 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110019713684 |
| Name: | FERRY POINT PARK GOLF COURSE |
| Address: | 500 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY 10465 |

---

**A8** **NYCP&R - FERRY POINT WATERFRONT PARK** **PFAS ECHO** **1027398622**
**N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Site 7 of 12 in cluster A**

**Relative:** **Lower**

**Actual:** **14 ft.**

PFAS ECHO:

| | |
|---|---|
| Name: | NYCP&R - FERRY POINT WATERFRONT PARK |
| Address: | Not reported |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.81146 |
| Longitude: | -73.83536 |
| Count: | 1 |
| County: | BRONX |
| Status: | Active |
| Region: | 02 |
| Industry: | Waste Management |
| ECHO Facility Report: | https://echo.epa.gov/detailed-facility-report?fid=110039573832 |
| Facility Percent Minority: | 77.092 |
| Facility Derived Tribes: | - |
| Facility Population: | 21838.56 |
| EPA Programs: | RCRA |
| Federal Facility: | No |
| Federal Agency: | - |
| Facility FIPS Code: | 36005 |
| Facility Indian Country Flag: | N |

**NYCP&R - FERRY POINT WATERFRONT PARK (Continued)** **1027398622**

| | |
|---|---|
| Facility Collection Method: | ADDRESS MATCHING-HOUSE NUMBER |
| Facility Derived HUC: | 02030102 |
| Facility Derived WBD: | 020301020105 |
| Facility Derived CD113: | 14 |
| Facility Derived CB2010: | 360050110001012 |
| Facility Major Flag: | - |
| Facility Active Flag: | Y |
| Facility Inspection Count: | 0 |
| Facility Date Last Inspection: | - |
| Facility Days Last Inspection: | - |
| Facility Informal Count: | 0 |
| Facility Date Last Informal Action: | - |
| Facility Formal Action Count: | 0 |
| Facility Date Last Formal Action: | - |
| Facility Total Penalties: | 0 |
| Facility Penalty Count: | - |
| Facility Date Last Penalty: | - |
| Facility Last Penalty AMT: | - |
| Facility QTRS With NC: | 0 |
| Facility Programs With SNC: | 0 |
| Facility Compliance Status: | No Violation Identified |
| Facility SNC Flag: | N |
| AIR Flag: | N |
| NPDES Flag: | N |
| SDWIS Flag: | N |
| RCRA Flag: | Y |
| TRI Flag: | N |
| GHG Flag: | N |
| AIR IDS: | - |
| CAA Permit Types: | - |
| CAA NAICS: | - |
| CAA SICS: | - |
| NPDES IDS: | - |
| CWA Permit Types: | - |
| CWA NAICS: | - |
| CWA SICS: | - |
| RCRA IDS: | NYR000168286 |
| RCRA Permit Types: | LQG |
| RCRA NAICS: | 562212 |
| SDWA IDS: | - |
| SDWA System Types: | - |
| SDWA Compliance Status: | - |
| SDWA SNC Flag: | N |
| TRI IDS: | - |
| TRI Releases Transfers: | - |
| TRI On Site Releases: | - |
| TRI Off Site Transfers: | - |
| TRI Reporter: | - |
| Facility IMP Water Flag: | - |
| EJSCREEN Flag US: | N |

EJSCREEN Report:

**A9** **BRONX WHITESTONE BRIDGE FACILITY** **NY Spills** **S111158225**
**1 HUTCHINSON RIVER PKWY** **N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Site 8 of 12 in cluster A**

**Relative:** SPILLS:
**Lower**

**Actual:**
**11 ft.**

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE FACILITY |
| Address: | 1 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 1109651 / 2012-01-18 |
| Facility ID: | 1109651 |
| Facility Type: | ER |
| DER Facility ID: | 411910 |
| Site ID: | 457431 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2011-11-02 |
| Investigator: | smsanges |
| Referred To: | Not reported |
| Reported to Dept: | 2011-11-02 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Institutional, Educational, Gov., Other |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2011-11-02 |
| Spill Record Last Update: | 2012-01-18 |
| Spiller Name: | PASHKO CAMAJ |
| Spiller Company: | MTA BRIDGES AND TUNNELS |
| Spiller Address: | 1 HUTCHINSON RIVER PKWY |
| Spiller Company: | 999 |
| Contact Name: | PASHKO CAMAJ |
| DEC Memo: | Sangesland spoke to Pashko from MTA. He said the site has a 1000 gal buried gasoline tank. Vapor recovery line was pitched the wrong way and gasoline condensed and eventually leaked out of the line into the pea gravel. Franklin Company has been hired to deal with the cleanup and repairs. 12/28/2011 Sangesland spoke to Martin Wozolowski at Liro Engineering. He said F & N did the work supervised by Liro Engineer. Vacuumed out the water from the tank/lines. Found staining in the pea gravel. Vac truck pulled out groundwater from the area around the tank. Removed 3 yards of contaminated pea gravel/stone. Then took 2 ground water samples. One sample was totally clean, the other had a single hit for Benzene. They will submit this report within the next couple of days and request closure. Report dated Jan 3, 2012 submitted by LiRo Engineers Inc. summarized all of this work. Minor Hit for Benzene. OK to close out. |

**BRONX WHITESTONE BRIDGE FACILITY (Continued)** **S111158225**

Remarks: from vapor recovery line from fill station - repairs and cleanup in progress

All Materials:

| | |
|---|---|
| Site ID: | 457431 |
| Operable Unit ID: | 1207557 |
| Operable Unit: | 01 |
| Material ID: | 2204834 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | Not reported |
| Units: | Not reported |
| Recovered: | Not reported |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

---

**10** **CON EDISON TRANSFORMER POLE 9572** **NY Spills** **S110307850**
**530 HUTCHINSON RIVER PARKWAY** **N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Relative:** **Higher**
**Actual:** **16 ft.**

SPILLS:

| | |
|---|---|
| Name: | CON EDISON TRANSFORMER POLE 9572 |
| Address: | 530 HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 1000322 / 2010-04-22 |
| Facility ID: | 1000322 |
| Facility Type: | ER |
| DER Facility ID: | 380458 |
| Site ID: | 431484 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2010-04-08 |
| Investigator: | RWAUSTIN |
| Referred To: | Not reported |
| Reported to Dept: | 2010-04-08 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2010-04-08 |
| Spill Record Last Update: | 2010-04-22 |
| Spiller Name: | Not reported |
| Spiller Company: | Not reported |
| Spiller Address: | Not reported |
| Spiller Company: | Not reported |
| Contact Name: | ERT |

**CON EDISON TRANSFORMER POLE 9572 (Continued)** **S110307850**

DEC Memo: 4/8/10-Vought-Duty desk officer. Called Con Ed ERT (212-580-8383) and spoke to Tony Delgado, 21 gallons on asphalt and 4 gallons on soil. No PCB concentrations on file and will be treated as 50-499. Transformer on public property. Endpoint samples will be collected upon determination of PCB concentrations or EPA Method 8100. Spill assigned to DEC Feroze as part of routine Con Ed portfolio review and possible closure. Vought received second call from and spoke to Con Ed Delagado and transformer installed in 1992 and had non-PCB dielectric fluid. Initial EMIS #220992 deleted from proxy and put into e-docs. 4/22/10 - Austin - Pole Transformer leak on soil and sidewalk, no other impacts- spill contained and cleaned up by Con Ed - see eDocs for more details - Spill closed - end

Remarks: unknown pcb's onto ashalt. Contained and clean up pending

All Materials:

| | |
|---|---|
| Site ID: | 431484 |
| Operable Unit ID: | 1182953 |
| Operable Unit: | 01 |
| Material ID: | 2177145 |
| Material Code: | 0541A |
| Material Name: | dielectric fluid |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 25.00 |
| Units: | G |
| Recovered: | Not reported |
| Resource Affected: | Soil, Impervious Surface |
| Oxygenate: | Not reported |

---

**A11** **NYC PARKS-FERRY POINT PARK** **FINDS 1016137063**
**500 HUTCHINSON RIVER PKWY** **ECHO N/A**
**< 1/8** **BRONX, NY 10465**
**1 ft.**

**Site 9 of 12 in cluster A**

**Relative: Lower**

FINDS:
Registry ID: 110019835188

**Actual: 13 ft.**

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
ICIS-Air (AIR) AIR is the modernization of the Air Facility System (AFS) into the Integrated Compliance Information System (ICIS). AIR contains enforcement, compliance, and permit data for stationary sources of air pollution regulated by the EPA, State, and Local air pollution agencies.
The New York Department of Environmental Conservation Facility Information System (FIS) database houses all information about facilities that are regulated or of environmental interest to the state of New York.
The Air Facility System (AFS) contains compliance and permit data for stationary sources of air pollution regulated by the EPA, state, and local air pollution agencies.

**NYC PARKS-FERRY POINT PARK (Continued)** **1016137063**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1016137063 |
| Registry ID: | 110019835188 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110019835188 |
| Name: | NYC PARKS-FERRY POINT PARK |
| Address: | 500 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY 10465 |

---

**A12** **BRONX WHITESTONE BRIDGE** **UST FINDER RELEASE** **1029062796**
**1 HUTCHINSON RIVER PKWY** **N/A**
**< 1/8** **BRONX, NY 0**
**1 ft.**

**Site 10 of 12 in cluster A**

**Relative:** **Lower**
**Actual:** **11 ft.**

UST FINDER RELEASE:

| | |
|---|---|
| Object ID: | 260443 |
| Facility ID: | NY177640 |
| Lust ID: | NY9408139 |
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY 0 |
| Address Match Type: | StreetAddress |
| Reported Date: | 1994/09/19 15:59:59+00 |
| Status: | No Further Action |
| Substance: | Not reported |
| Population within 1500ft: | 0 |
| Domestic Wells within 1500ft: | 0 |
| Land Use: | Developed, Medium Intensity |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |
| WHPA HUC12: | Not reported |
| Within 100yr Floodplain: | No |
| Tribe: | Not reported |
| EPA Region: | 2 |
| NFA Letter 1: | Not reported |
| NFA Letter 2: | Not reported |
| NFA Letter 3: | Not reported |
| NFA Letter 4: | Not reported |
| Closed With Residual Contaminate: | Not reported |
| Coordinate Source: | Geocode |
| X Coord: | -73.8356199999999 |
| Y Coord: | 40.8111200000001 |
| Latitude: | 40.81112 |
| Longitude: | -73.83562 |

| | |
|---|---|
| Object ID: | 260444 |
| Facility ID: | NY177640 |

**BRONX WHITESTONE BRIDGE (Continued)** **1029062796**

| | |
|---|---|
| Lust ID: | NY9607895 |
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY 0 |
| Address Match Type: | StreetAddress |
| Reported Date: | 1996/09/24 15:59:59+00 |
| Status: | No Further Action |
| Substance: | Not reported |
| Population within 1500ft: | 0 |
| Domestic Wells within 1500ft: | 0 |
| Land Use: | Developed, Medium Intensity |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |
| WHPA HUC12: | Not reported |
| Within 100yr Floodplain: | No |
| Tribe: | Not reported |
| EPA Region: | 2 |
| NFA Letter 1: | Not reported |
| NFA Letter 2: | Not reported |
| NFA Letter 3: | Not reported |
| NFA Letter 4: | Not reported |
| Closed With Residual Contaminate: | Not reported |
| Coordinate Source: | Geocode |
| X Coord: | -73.8356199999999 |
| Y Coord: | 40.8111200000001 |
| Latitude: | 40.81112 |
| Longitude: | -73.83562 |

| | |
|---|---|
| Object ID: | 260529 |
| Facility ID: | NY177640 |
| Lust ID: | NY100477 |
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY 0 |
| Address Match Type: | Not reported |
| Reported Date: | 2001/04/12 15:59:59+00 |
| Status: | No Further Action |
| Substance: | Not reported |
| Population within 1500ft: | 0 |
| Domestic Wells within 1500ft: | 0 |
| Land Use: | Non-Developed |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |

**BRONX WHITESTONE BRIDGE (Continued)** **1029062796**

| | |
|---|---|
| WHPA HUC12: | Not reported |
| Within 100yr Floodplain: | Yes |
| Tribe: | Not reported |
| EPA Region: | 2 |
| NFA Letter 1: | Not reported |
| NFA Letter 2: | Not reported |
| NFA Letter 3: | Not reported |
| NFA Letter 4: | Not reported |
| Closed With Residual Contaminate: | Not reported |
| Coordinate Source: | State |
| X Coord: | -73.8318 |
| Y Coord: | 40.8050000000001 |
| Latitude: | 40.805 |
| Longitude: | -73.8318 |

---

**A13** **FERRY POINT PARK GOLF COURSE** **NY Spills** **S110243664**
**500 HUTCHINSON RIVER PARKWAY** **N/A**
**< 1/8** **BRONX, NY**
**1 ft.**

**Site 11 of 12 in cluster A**

**Relative:** SPILLS:
**Lower**

| | |
|---|---|
| **Actual:** Name: | FERRY POINT PARK GOLF COURSE |
| **13 ft.** Address: | 500 HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0913675 / 2010-03-25 |
| Facility ID: | 0913675 |
| Facility Type: | ER |
| DER Facility ID: | 375501 |
| Site ID: | 426631 |
| DEC Region: | 2 |
| Spill Cause: | Other |
| Spill Class: | Not reported |
| SWIS: | 0301 |
| Spill Date: | 2010-01-10 |
| Investigator: | RVKETANI |
| Referred To: | Not reported |
| Reported to Dept: | 2010-03-25 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2010-03-25 |
| Spill Record Last Update: | 2010-03-25 |
| Spiller Name: | Not reported |
| Spiller Company: | FUEL OIL COMPANY |
| Spiller Address: | Not reported |
| Spiller Company: | 999 |
| Contact Name: | ROBERT GANTZER |
| DEC Memo: | 3/25/10 - Raphael Ketani. The spill happened on 1/10/10, but wasn't called in until today.<br>According to Robert Gantzer (347) 386-5695 of the NYC Parks |

**FERRY POINT PARK GOLF COURSE (Continued)** **S110243664**

Department, a generator was being filled with diesel and it overflowed onto the bare ground (see pictures in E-docs and report). The affected area was 10' by 20'. He said that Marc Redis of the DEC Div. of Solid Waste told him to clean it up. Mr. Redis was at the site because it's a Part 360 site. The cleanup was undertaken during January, but it wasn't discovered until sometime later (Mr. Gantzer didn't specify how much later) that there was more contamination below ground. So more digging took place. He said that they dug down one and a half feet to remove all of the contamination, and all of the contaminated soil was put into drums. I told Mr. Gantzer that, in the future, a spill has to be reported to the Spills Hotline within 2 hours of the occurrence. He said that he will report quickly next time. I spoke to Mr. Redis. He said that the Parks Department did dig out the area. As the contaminated soil has been remediated, I am closing the case. 3/25/10-Vought-Matter referred to Solid Waste who will supervise cleanup as per DEC Austin.

Remarks: CLEANUP DONE - MATERIAL IN DRUMS

All Materials:

| | |
|---|---|
| Site ID: | 426631 |
| Operable Unit ID: | 1182307 |
| Operable Unit: | 01 |
| Material ID: | 2176470 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 5.00 |
| Units: | G |
| Recovered: | Not reported |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

---

**A14** **NYC PARKS-FERRY POINT PARK** **PFAS ECHO** **1027398613** **N/A**

**< 1/8** **BRONX, NY**
**1 ft.**

**Site 12 of 12 in cluster A**

**Relative:** **Lower**
**Actual:** **14 ft.**

PFAS ECHO:

| | |
|---|---|
| Name: | NYC PARKS-FERRY POINT PARK |
| Address: | Not reported |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.81146 |
| Longitude: | -73.83536 |
| Count: | 1 |
| County: | BRONX |
| Status: | Inactive |
| Region: | 02 |
| Industry: | Waste Management |
| ECHO Facility Report: | https://echo.epa.gov/detailed-facility-report?fid=110019835188 |

**NYC PARKS-FERRY POINT PARK (Continued)** **1027398613**

| | |
|---|---|
| Facility Percent Minority: | 77.092 |
| Facility Derived Tribes: | - |
| Facility Population: | 21838.56 |
| EPA Programs: | CAA |
| Federal Facility: | No |
| Federal Agency: | - |
| Facility FIPS Code: | 36005 |
| Facility Indian Country Flag: | N |
| Facility Collection Method: | ADDRESS MATCHING-HOUSE NUMBER |
| Facility Derived HUC: | 02030102 |
| Facility Derived WBD: | 020301020105 |
| Facility Derived CD113: | 14 |
| Facility Derived CB2010: | 360050110001012 |
| Facility Major Flag: | - |
| Facility Active Flag: | - |
| Facility Inspection Count: | 0 |
| Facility Date Last Inspection: | - |
| Facility Days Last Inspection: | - |
| Facility Informal Count: | 0 |
| Facility Date Last Informal Action: | - |
| Facility Formal Action Count: | 0 |
| Facility Date Last Formal Action: | - |
| Facility Total Penalties: | 0 |
| Facility Penalty Count: | - |
| Facility Date Last Penalty: | - |
| Facility Last Penalty AMT: | - |
| Facility QTRS With NC: | 0 |
| Facility Programs With SNC: | 0 |
| Facility Compliance Status: | No Violation Identified |
| Facility SNC Flag: | N |
| AIR Flag: | Y |
| NPDES Flag: | N |
| SDWIS Flag: | N |
| RCRA Flag: | N |
| TRI Flag: | N |
| GHG Flag: | N |
| AIR IDS: | NY0000002600600014 |
| CAA Permit Types: | Minor Emissions |
| CAA NAICS: | 999999 |
| CAA SICS: | 4953 |
| NPDES IDS: | - |
| CWA Permit Types: | - |
| CWA NAICS: | - |
| CWA SICS: | - |
| RCRA IDS: | - |
| RCRA Permit Types: | - |
| RCRA NAICS: | - |
| SDWA IDS: | - |
| SDWA System Types: | - |
| SDWA Compliance Status: | - |
| SDWA SNC Flag: | N |
| TRI IDS: | - |
| TRI Releases Transfers: | - |
| TRI On Site Releases: | - |
| TRI Off Site Transfers: | - |
| TRI Reporter: | - |
| Facility IMP Water Flag: | - |

**NYC PARKS-FERRY POINT PARK (Continued)** **1027398613**

EJSCREEN Flag US: N

EJSCREEN Report:

---

**B15** **WHITESTONE BRIDGE - BX** **NY LTANKS** **S102671512**
**NNW** **WHITESTONE BR** **N/A**
**< 1/8** **BRONX (County), NY**
**0.021 mi.**
**109 ft.** **Site 1 of 2 in cluster B**

**Relative:** **Lower**

**Actual:** **15 ft.**

LTANKS:

| | |
|---|---|
| Name: | WHITESTONE BRIDGE - BX |
| Address: | WHITESTONE BR |
| City,State,Zip: | NY |
| Spill Number/Closed Date: | 8912020 / 1990-03-19 |
| Facility ID: | 8912020 |
| Site ID: | 295754 |
| Spill Date: | 1990-03-19 |
| Spill Cause: | Tank Overfill |
| Spill Source: | Commercial Vehicle |
| Spill Class: | Not reported |
| Cleanup Ceased: | 1990-03-19 |
| SWIS: | 0301 |
| Investigator: | TAYLOR |
| Referred To: | Not reported |
| Reported to Dept: | 1990-03-19 |
| CID: | Not reported |
| Water Affected: | EAST RIVER |
| Spill Notifier: | Federal Government |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | True |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1990-03-19 |
| Spill Record Last Update: | 1990-05-09 |
| Spiller Name: | Not reported |
| Spiller Company: | Not reported |
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 239341 |
| DEC Memo: | Not reported |
| Remarks: | COMMERCIAL VEHICLE PULLED OFF ROAD SPILLING OIL FROM SADDLE TK INTO DRAIN - NYFD HOSED SPILLAGE INTO ROADWAY DRAIN - NO RESPONSE FROM DEC NECESSARY. |

All Materials:

| | |
|---|---|
| Site ID: | 295754 |
| Operable Unit ID: | 937785 |
| Operable Unit: | 01 |
| Material ID: | 441502 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |

**WHITESTONE BRIDGE - BX (Continued)** **S102671512**

| | |
|---|---|
| Material FA: | Petroleum |
| Quantity: | 65.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

---

**B16** **WHITESTONE BRIDGE** **NY Spills** **S104952344**
**NNW** **TOLL PLAZA** **N/A**
**< 1/8** **BRONX, NY**
**0.021 mi.**
**109 ft.** **Site 2 of 2 in cluster B**

**Relative:** **Lower**
**Actual:** **15 ft.**

SPILLS:

| | |
|---|---|
| Name: | WHITESTONE BRIDGE |
| Address: | TOLL PLAZA |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0011525 / 2001-06-01 |
| Facility ID: | 0011525 |
| Facility Type: | ER |
| DER Facility ID: | 89172 |
| Site ID: | 100434 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2001-01-25 |
| Investigator: | KMFOLEY |
| Referred To: | Not reported |
| Reported to Dept: | 2001-01-25 |
| CID: | 205 |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2001-01-25 |
| Spill Record Last Update: | 2001-08-13 |
| Spiller Name: | SAME |
| Spiller Company: | CON ED |
| Spiller Address: | 4 IRVING PLACE |
| Spiller Company: | 001 |
| Contact Name: | CALLER |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was FOLEY CON ED E2MIS REPORT 1-25-01 1pt. of dielectric fluid spilled from switch in customer owned vault #2635 onto floor of vault. No environmental impact. Samples will be taken and tag placed. 1-25-01 Job closed out because it was opened on the wrong site. It should have been opened on the BEDS. The new incident # is 135220 on BxEDS. |
| Remarks: | VAULT 2635, HAS LEAK ON SWITCH. CON ED # 135216. |

**WHITESTONE BRIDGE (Continued)** **S104952344**

All Materials:
- Site ID: 100434
- Operable Unit ID: 833575
- Operable Unit: 01
- Material ID: 541834
- Material Code: 0541A
- Material Name: dielectric fluid
- Case No.: Not reported
- Material FA: Petroleum
- Quantity: 1.00
- Units: G
- Recovered: .00
- Resource Affected: Soil
- Oxygenate: Not reported

---

**17**
**NNW**
**< 1/8**
**0.053 mi.**
**279 ft.**

**CABLEVISION** **NY AST** **U003397186**
**500-510 BRUSH AVENUE** **N/A**
**BRONX, NY 10465**

**Relative:**
**Lower**

**Actual:**
**8 ft.**

AST:
- Name: CABLEVISION
- Address: 500-510 BRUSH AVENUE
- City,State,Zip: BRONX, NY 10465
- Region: STATE
- DEC Region: 2
- Site Status: Active
- Facility Id: 2-603460
- Program Type: PBS
- UTM X: 597921.36616
- UTM Y: 4519027.86794
- Expiration Date: 05/05/2028
- Site Type: Apartment Building/Office Building

Affiliation Records:
- Site Id: 25376
- Affiliation Type: Mail Contact
- Company Name: DE-CON REALTY COMPANY
- Contact Type: Not reported
- Contact Name: MICHAEL P. CONTILLO
- Address1: 550 BRUSH AVENUE
- Address2: Not reported
- City: BRONX
- State: NY
- Zip Code: 10465
- Country Code: 001
- Phone: (718) 490-1444
- EMail: Not reported
- Fax Number: Not reported
- Modified By: MFLEONAR
- Date Last Modified: 2018-03-07

- Site Id: 25376
- Affiliation Type: Facility Operator
- Company Name: CABLEVISION
- Contact Type: Not reported

**CABLEVISION (Continued)** **U003397186**

| | |
|---|---|
| Contact Name: | CABLEVISION |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 991-6000 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | MFLEONAR |
| Date Last Modified: | 2018-03-07 |

| | |
|---|---|
| Site Id: | 25376 |
| Affiliation Type: | Emergency Contact |
| Company Name: | 500 BRUSH LLC |
| Contact Type: | Not reported |
| Contact Name: | MICHAEL P. CONTILLO |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (516) 626-2418 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | MFLEONAR |
| Date Last Modified: | 2018-03-07 |

| | |
|---|---|
| Site Id: | 25376 |
| Affiliation Type: | Facility Owner |
| Company Name: | 500 BRUSH LLC |
| Contact Type: | OWNER |
| Contact Name: | MICHAEL P. CONTILLO |
| Address1: | 550 BRUSH AVENUE |
| Address2: | Not reported |
| City: | BRONX |
| State: | NY |
| Zip Code: | 10465 |
| Country Code: | 001 |
| Phone: | (718) 409-1444 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | MFLEONAR |
| Date Last Modified: | 2018-03-07 |

Tank Info:

| | |
|---|---|
| Tank Number: | 001 |
| Tank Id: | 54442 |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |

Equipment Records:

E01 - Piping Secondary Containment - Diking (AG only)

**CABLEVISION (Continued)** **U003397186**

C01 - Pipe Location - Aboveground
I05 - Overfill - Vent Whistle
A01 - Tank Internal Protection - Epoxy Liner
G03 - Tank Secondary Containment - Vault (w/o access)
H00 - Tank Leak Detection - None
L09 - Piping Leak Detection - Exempt Suction Piping
F00 - Pipe External Protection - None
J02 - Dispenser - Suction Dispenser
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
K00 - Spill Prevention - None

| | |
|---|---|
| Tank Location: | Aboveground - contact with soil.... Tank bottom rests on soil, allowing no visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | In Service |
| Pipe Model: | Not reported |
| Install Date: | 03/01/1989 |
| Capacity Gallons: | 3000 |
| Tightness Test Method: | - |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #2 fuel oil (on-site consumption) |
| Tank Number: | 002 |
| Tank Id: | 54443 |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |

Equipment Records:

A01 - Tank Internal Protection - Epoxy Liner
G03 - Tank Secondary Containment - Vault (w/o access)
H00 - Tank Leak Detection - None
L09 - Piping Leak Detection - Exempt Suction Piping
E01 - Piping Secondary Containment - Diking (AG only)
I05 - Overfill - Vent Whistle
C01 - Pipe Location - Aboveground
F00 - Pipe External Protection - None
J02 - Dispenser - Suction Dispenser
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
K00 - Spill Prevention - None

| | |
|---|---|
| Tank Location: | Aboveground - contact with soil.... Tank bottom rests on soil, allowing no visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | In Service |
| Pipe Model: | Not reported |
| Install Date: | 03/01/1989 |
| Capacity Gallons: | 3000 |
| Tightness Test Method: | - |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |

**CABLEVISION (Continued)** **U003397186**

| | |
|---|---|
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #2 fuel oil (on-site consumption) |

---

**C18** **CON EDISON** **RCRA NonGen / NLR** **1012185619**
**NNW** **555 HUTCHINSON RIVER PKWY** **NYP004164521**
**< 1/8** **BRONX, NY 10451**
**0.079 mi.**
**418 ft.** **Site 1 of 2 in cluster C**

**Relative:** **Lower**
**Actual:** **8 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20160601 |
| Handler Name: | Con Edison |
| Handler Address: | Hutchinson River Pkwy |
| Handler City,State,Zip: | BRONX, NY 10451 |
| EPA ID: | NYP004164521 |
| Contact Name: | DAVID DUKE |
| Contact Address: | Not reported |
| Contact City,State,Zip: | Not reported |
| Contact Telephone: | 917-559-8971 |
| Contact Fax: | Not reported |
| Contact Email: | Not reported |
| Contact Title: | Not reported |
| EPA Region: | 02 |
| Land Type: | Private |
| Federal Waste Generator Description: | Not a generator, verified |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Not reported |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | 4 IRVING PL, RM 828 |
| Mailing City,State,Zip: | NEW YORK, NY 10003 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |

**CON EDISON (Continued)** **1012185619**

| | |
|---|---|
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20160602 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Historic Generators:

| | |
|---|---|
| Receive Date: | 20090324 |
| Handler Name: CON EDISON | |
| Federal Waste Generator Description: | Conditionally Exempt Small Quantity Generator |
| State District Owner: | Not reported |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20160601 |
| Handler Name: CON EDISON | |
| Federal Waste Generator Description: | Not a generator, verified |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | Yes |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

List of NAICS Codes and Descriptions:

| | |
|---|---|
| NAICS Codes: | No NAICS Codes Found |

Facility Has Received Notices of Violations:

| | |
|---|---|
| Violations: | No Violations Found |

**CON EDISON (Continued)** **1012185619**

Evaluation Action Summary:
Evaluations: No Evaluations Found

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**C19** **VAULT #2232** **NY AST** **U003383789**
**NNW** **555 HUTCHINSON RIVER PKWY** **NY Spills** **N/A**
**< 1/8** **BRONX, NY**
**0.079 mi.**
**418 ft.** **Site 2 of 2 in cluster C**

**Relative:**
**Lower**

**Actual:**
**8 ft.**

AST:

| | |
|---|---|
| Name: | CAPRI WHITESTONE LLC |
| Address: | 555 HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Facility Id: | 2-062987 |
| Program Type: | PBS |
| UTM X: | 598079.55693 |
| UTM Y: | 4519027.24774 |
| Expiration Date: | 11/13/2024 |
| Site Type: | Apartment Building/Office Building |

Affiliation Records:

| | |
|---|---|
| Site Id: | 1219 |
| Affiliation Type: | Mail Contact |
| Company Name: | CAPRI WHITESTONE LLC |
| Contact Type: | Not reported |
| Contact Name: | DAVID AZMAN |
| Address1: | 325 EAST 104TH STREET |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10029 |
| Country Code: | 001 |
| Phone: | (212) 220-2569 |
| EMail: | DAZMAN@LIBERTY1GROUP.COM |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2019-10-07 |

| | |
|---|---|
| Site Id: | 1219 |
| Affiliation Type: | Facility Operator |
| Company Name: | 555 HUTCHINSON RIVER PARKWAY |
| Contact Type: | Not reported |
| Contact Name: | CAPRI WHITESTONE LLC |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 597-0600 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | ACDANIEL |
| Date Last Modified: | 2018-07-11 |

**VAULT #2232 (Continued)** **U003383789**

| | |
|---|---|
| Site Id: | 1219 |
| Affiliation Type: | Emergency Contact |
| Company Name: | CAPRI WHITESTONE LLC |
| Contact Type: | Not reported |
| Contact Name: | DAVID AZMAN |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (212) 220-2569 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | ACDANIEL |
| Date Last Modified: | 2018-07-11 |

| | |
|---|---|
| Site Id: | 1219 |
| Affiliation Type: | Facility Owner |
| Company Name: | CAPRI WHITESTONE LLC |
| Contact Type: | CAPRI WHITESTONE LLC MEMBER |
| Contact Name: | DAVID AZMAN |
| Address1: | 325 EAST 104TH STREET |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10029 |
| Country Code: | 001 |
| Phone: | (212) 996-6456 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | ACDANIEL |
| Date Last Modified: | 2018-07-11 |

Tank Info:

| | |
|---|---|
| Tank Number: | 001 |
| Tank Id: | 2261 |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |

Equipment Records:

H99 - Tank Leak Detection - Other
J02 - Dispenser - Suction Dispenser
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
K00 - Spill Prevention - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
I04 - Overfill - Product Level Gauge (A/G)
E00 - Piping Secondary Containment - None
G03 - Tank Secondary Containment - Vault (w/o access)
L09 - Piping Leak Detection - Exempt Suction Piping

Tank Location: Aboveground - contact with soil.... Tank bottom rests on soil, allowing no visual inspection.

**VAULT #2232 (Continued)** **U003383789**

| | |
|---|---|
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | In Service |
| Pipe Model: | Not reported |
| Install Date: | 06/20/1975 |
| Capacity Gallons: | 6000 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #2 fuel oil (on-site consumption) |

SPILLS:

| | |
|---|---|
| Name: | VAULT #2232 |
| Address: | 555 HUTCHINSON RIVER PKWY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0813834 / 2009-06-08 |
| Facility ID: | 0813834 |
| Facility Type: | ER |
| DER Facility ID: | 360753 |
| Site ID: | 411543 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2009-03-23 |
| Investigator: | RWAUSTIN |
| Referred To: | Not reported |
| Reported to Dept: | 2009-03-23 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2009-03-23 |
| Spill Record Last Update: | 2009-06-08 |
| Spiller Name: | ERT |
| Spiller Company: | CON ED |
| Spiller Address: | 555 HUTCHINSON RIVER PKWY |
| Spiller Company: | 999 |
| Contact Name: | ERT |
| DEC Memo: | 5/11/09 - Austin - EMIS reports that vault was cleaned and washed, with proper disposal for fluids - all within vault - close - end |
| Remarks: | CALLER STATES THAT DUE TO A BROKEN FEEDER ABOUT 5 GALLONS OF PRODUCT IS SPILLING TO THE VAULT. UNK IF IT CONTAINES PCBS CLEAN UP AND REPAIR PENDING. |

All Materials:

| | |
|---|---|
| Site ID: | 411543 |

**VAULT #2232 (Continued)** **U003383789**

| | |
|---|---|
| Operable Unit ID: | 1168016 |
| Operable Unit: | 01 |
| Material ID: | 2159633 |
| Material Code: | 0020A |
| Material Name: | transformer oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 5.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Not reported |
| Oxygenate: | Not reported |

---

**D20** **BRONX WHITESTONE BRIDGE** **NY UST** **U004062136**
**NW** **ONE HUTCHINSON RIVER PARKWAY** **N/A**
**< 1/8** **BRONX, NY 10465**
**0.082 mi.**
**434 ft.** **Site 1 of 2 in cluster D**

**Relative:** UST:
**Lower**

**Actual:**
**6 ft.**

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | ONE HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |
| Id/Status: | 2-481645 / Active |
| Program Type: | PBS |
| Region: | STATE |
| DEC Region: | 2 |
| Expiration Date: | 09/06/2025 |
| UTM X: | 597911.06250 |
| UTM Y: | 4519009.50000 |
| Site Type: | Other |

Affiliation Records:

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Mail Contact |
| Company Name: | MTA BRIDGES & TUNNELS (TBTA) |
| Contact Type: | Not reported |
| Contact Name: | PASHKO R. CAMAJ MGR. S&H COMPLIANCE |
| Address1: | SAFETY & HEALTH DEPT. |
| Address2: | ROBERT MOSES BLDG, ROOM 115 |
| City: | RANDALLS ISLAND |
| State: | NY |
| Zip Code: | 10035 |
| Country Code: | 001 |
| Phone: | (212) 360-3073 |
| EMail: | PCAMAJ@MTABT.ORG |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2020-09-03 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Facility Owner |
| Company Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Contact Type: | MANAGER |
| Contact Name: | GEORGE BASSIL |
| Address1: | 2 BROADWAY |
| Address2: | Not reported |

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

| | |
|---|---|
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10004 |
| Country Code: | 001 |
| Phone: | (212) 360-3073 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2020-09-03 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Emergency Contact |
| Company Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Contact Type: | Not reported |
| Contact Name: | PASHKO R. CAMAJ |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (212) 360-3073 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | NTFREEMA |
| Date Last Modified: | 2015-09-01 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Facility Operator |
| Company Name: | BRONX WHITESTONE BRIDGE |
| Contact Type: | Not reported |
| Contact Name: | GEORGE BASSIL |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 904-4304 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | AYLAGATI |
| Date Last Modified: | 2017-06-07 |

Tank Info:

| | |
|---|---|
| Tank Number: | 1 |
| Tank ID: | 65746 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 550 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 04/01/2001 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0009 |

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

Common Name of Substance: Gasoline

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
B00 - Tank External Protection - None
F00 - Pipe External Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron

Tank Number: 10
Tank ID: 65755
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 2000
Install Date: 03/01/1995
Date Tank Closed: 04/06/2009
Registered: True
Tank Location: Underground
Tank Type: Equivalent technology
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
F04 - Pipe External Protection - Fiberglass
H05 - Tank Leak Detection - In-Tank System (ATG)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
G04 - Tank Secondary Containment - Double-Walled (Underground)

Tank Number: 11
Tank ID: 65756

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

| | |
|---|---|
| Tank Status: | In Service |
| Material Name: | In Service |
| Capacity Gallons: | 20000 |
| Install Date: | 12/17/1999 |
| Date Tank Closed: | Not reported |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 2711 |
| Common Name of Substance: | Biodiesel (Heating, On-Site Consumption) |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
F04 - Pipe External Protection - Fiberglass
J02 - Dispenser - Suction Dispenser
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
C02 - Pipe Location - Underground/On-ground
E04 - Piping Secondary Containment - Double walled UG
H05 - Tank Leak Detection - In-Tank System (ATG)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)

| | |
|---|---|
| Tank Number: | 12 |
| Tank ID: | 65757 |
| Tank Status: | In Service |
| Material Name: | In Service |
| Capacity Gallons: | 1000 |
| Install Date: | 12/17/1999 |
| Date Tank Closed: | Not reported |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 0009 |
| Common Name of Substance: | Gasoline |
| Tightness Test Method: | 21 |
| Date Test: | 01/20/2012 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

E04 - Piping Secondary Containment - Double walled UG
K01 - Spill Prevention - Catch Basin

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

L09 - Piping Leak Detection - Exempt Suction Piping
I02 - Overfill - High Level Alarm
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
F04 - Pipe External Protection - Fiberglass
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
H05 - Tank Leak Detection - In-Tank System (ATG)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)

| | |
|---|---|
| Tank Number: | 13 |
| Tank ID: | 65758 |
| Tank Status: | In Service |
| Material Name: | In Service |
| Capacity Gallons: | 2500 |
| Install Date: | 12/17/1999 |
| Date Tank Closed: | Not reported |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 2710 |
| Common Name of Substance: | Biodiesel |
| Tightness Test Method: | 21 |
| Date Test: | 01/20/2012 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

L09 - Piping Leak Detection - Exempt Suction Piping
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
J02 - Dispenser - Suction Dispenser
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
C02 - Pipe Location - Underground/On-ground
F04 - Pipe External Protection - Fiberglass
E04 - Piping Secondary Containment - Double walled UG
H05 - Tank Leak Detection - In-Tank System (ATG)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)

| | |
|---|---|
| Tank Number: | 14 |
| Tank ID: | 65759 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 2500 |
| Install Date: | 06/01/1996 |
| Date Tank Closed: | 05/08/2006 |

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

| | |
|---|---|
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 0008 |
| Common Name of Substance: | Diesel |
| Tightness Test Method: | 21 |
| Date Test: | 08/07/2003 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

E04 - Piping Secondary Containment - Double walled UG
K01 - Spill Prevention - Catch Basin
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
J02 - Dispenser - Suction Dispenser
F04 - Pipe External Protection - Fiberglass
C02 - Pipe Location - Underground/On-ground
I02 - Overfill - High Level Alarm
B04 - Tank External Protection - Fiberglass
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
G04 - Tank Secondary Containment - Double-Walled (Underground)

| | |
|---|---|
| Tank Number: | 2 |
| Tank ID: | 65747 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 550 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 04/01/2001 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0009 |
| Common Name of Substance: | Gasoline |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

| | |
|---|---|
| Tank Number: | 3 |
| Tank ID: | 65748 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 3000 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 05/01/1998 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

F00 - Pipe External Protection - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None

| | |
|---|---|
| Tank Number: | 4 |
| Tank ID: | 65749 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 3000 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 04/04/1994 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

G00 - Tank Secondary Containment - None
B00 - Tank External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None

Tank Number: 5
Tank ID: 65750
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 550
Install Date: 01/01/1950
Date Tank Closed: 12/16/1993
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron

Tank Number: 6
Tank ID: 65751
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 550
Install Date: 01/01/1950
Date Tank Closed: 12/16/1993
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

Equipment Records:

F00 - Pipe External Protection - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None

| | |
|---|---|
| Tank Number: | 7 |
| Tank ID: | 65752 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 4000 |
| Install Date: | 12/01/1987 |
| Date Tank Closed: | 05/01/1998 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Equivalent technology |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

H00 - Tank Leak Detection - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
A00 - Tank Internal Protection - None
I04 - Overfill - Product Level Gauge (A/G)
D10 - Pipe Type - Copper

| | |
|---|---|
| Tank Number: | 8 |
| Tank ID: | 65753 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 550 |
| Install Date: | 12/01/1941 |
| Date Tank Closed: | 05/01/1996 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0008 |
| Common Name of Substance: | Diesel |

**BRONX WHITESTONE BRIDGE (Continued)** **U004062136**

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

H00 - Tank Leak Detection - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
B00 - Tank External Protection - None
F00 - Pipe External Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)

Tank Number: 9
Tank ID: 65754
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 550
Install Date: 12/01/1941
Date Tank Closed: 05/01/1996
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0008
Common Name of Substance: Diesel

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

B00 - Tank External Protection - None
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)

**D21**
**NW**
**< 1/8**
**0.082 mi.**
**434 ft.**

**BRONX WHITESTONE BRIDGE**
**ONE HUTCHINSON RIVER PARKWAY**
**BRONX, NY 10465**

**Site 2 of 2 in cluster D**

**NY AST** **A100293375**
**N/A**

**Relative:**
**Lower**

**Actual:**
**6 ft.**

AST:

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | ONE HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Facility Id: | 2-481645 |
| Program Type: | PBS |
| UTM X: | 597911.06250 |
| UTM Y: | 4519009.50000 |
| Expiration Date: | 09/06/2025 |
| Site Type: | Other |

Affiliation Records:

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Mail Contact |
| Company Name: | MTA BRIDGES & TUNNELS (TBTA) |
| Contact Type: | Not reported |
| Contact Name: | PASHKO R. CAMAJ MGR. S&H COMPLIANCE |
| Address1: | SAFETY & HEALTH DEPT. |
| Address2: | ROBERT MOSES BLDG, ROOM 115 |
| City: | RANDALLS ISLAND |
| State: | NY |
| Zip Code: | 10035 |
| Country Code: | 001 |
| Phone: | (212) 360-3073 |
| EMail: | PCAMAJ@MTABT.ORG |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2020-09-03 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Facility Owner |
| Company Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Contact Type: | MANAGER |
| Contact Name: | GEORGE BASSIL |
| Address1: | 2 BROADWAY |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10004 |
| Country Code: | 001 |
| Phone: | (212) 360-3073 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2020-09-03 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Emergency Contact |
| Company Name: | MTA BRIDGES AND TUNNELS (TBTA) |
| Contact Type: | Not reported |
| Contact Name: | PASHKO R. CAMAJ |

**BRONX WHITESTONE BRIDGE (Continued)** **A100293375**

| | |
|---|---|
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (212) 360-3073 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | NTFREEMA |
| Date Last Modified: | 2015-09-01 |

| | |
|---|---|
| Site Id: | 21547 |
| Affiliation Type: | Facility Operator |
| Company Name: | BRONX WHITESTONE BRIDGE |
| Contact Type: | Not reported |
| Contact Name: | GEORGE BASSIL |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 904-4304 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | AYLAGATI |
| Date Last Modified: | 2017-06-07 |

Tank Info:

| | |
|---|---|
| Tank Number: | 15 |
| Tank Id: | 209252 |
| Material Code: | 2711 |
| Common Name of Substance: | Biodiesel (Heating, On-Site Consumption) |

Equipment Records:

F00 - Pipe External Protection - None
K99 - Spill Prevention - Other
E01 - Piping Secondary Containment - Diking (AG only)
L00 - Piping Leak Detection - None
G01 - Tank Secondary Containment - Diking (Aboveground)
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)
J00 - Dispenser - None
C01 - Pipe Location - Aboveground

| | |
|---|---|
| Tank Location: | Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | In Service |
| Pipe Model: | Not reported |
| Install Date: | 12/17/1999 |
| Capacity Gallons: | 900 |

**BRONX WHITESTONE BRIDGE (Continued)** **A100293375**

| | |
|---|---|
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | diesel |

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**E22** **MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY** **NY LTANKS** **S102150368**
**ESE** **1 HUTCHINSON RIVER PKWY** **NY Spills** **N/A**
**< 1/8** **BRONX, NY 10465** **NY MANIFEST**
**0.113 mi.**
**597 ft.** **Site 1 of 3 in cluster E**

**Relative:**
**Higher**

**Actual:**
**32 ft.**

LTANKS:

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9408139 / 2003-11-06 |
| Facility ID: | 9408139 |
| Site ID: | 249980 |
| Spill Date: | 1994-09-19 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Class: | C3 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | JMROMMEL |
| Referred To: | Not reported |
| Reported to Dept: | 1994-09-19 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | True |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1994-10-28 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | TRIBOROUGH AUTHORITY |
| Spiller Address: | RANDALL'S ISLAND |
| Spiller County: | 001 |
| Spiller Contact: | ROBERT TOZZI |
| Spiller Phone: | (718) 904-4304 |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 177640 |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was ROMMEL This site was reassigned from Sigona to Rommel on 1/7/2004. This spill site investigation has been consolidated under Spill No. 9801266. |
| Remarks: | TTF WILL UNDERCOVER & ISOLATE, RETEST |

All TTF:

| | |
|---|---|
| Facility ID: | 9408139 |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Spill Number: | 9408139 |
| Spill Tank Test: | 1543152 |
| Site ID: | 249980 |
| Tank Number: | 001 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 01 |
| Test Method 2: | Petro-Tite/Petro Comp |
| Leak Rate: | -.11 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

| | |
|---|---|
| Facility ID: | 9408139 |
| Spill Number: | 9408139 |
| Spill Tank Test: | 1543153 |
| Site ID: | 249980 |
| Tank Number: | 002 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 01 |
| Test Method 2: | Petro-Tite/Petro Comp |
| Leak Rate: | -.11 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 249980 |
| Operable Unit ID: | 1005783 |
| Operable Unit: | 01 |
| Material ID: | 377581 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9607895 / 2003-11-06 |
| Facility ID: | 9607895 |
| Site ID: | 249984 |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Spill Date: | 1996-09-24 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Class: | B3 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | SIGONA |
| Referred To: | Not reported |
| Reported to Dept: | 1996-09-24 |
| CID: | 322 |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | True |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1996-09-24 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | BOBBIE ATHEY |
| Spiller Company: | MTA BRIDGES & TUNNLE |
| Spiller Address: | RANDALLS ISLAND |
| Spiller County: | 001 |
| Spiller Contact: | PAUL STEFANESCU |
| Spiller Phone: | (212) 360-2924 |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 177640 |
| DEC Memo: | Not reported |
| Remarks: | Tank Test Failure Tank No. 2 also tested - Leak rate -.106 they will uncover, isolate and retest |

All TTF:

| | |
|---|---|
| Facility ID: | 9607895 |
| Spill Number: | 9607895 |
| Spill Tank Test: | 1544776 |
| Site ID: | 249984 |
| Tank Number: | Not reported |
| Tank Size: | 0 |
| Material: | 0008 |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 01 |
| Test Method 2: | Petro-Tite/Petro Comp |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 249984 |
| Operable Unit ID: | 1038996 |
| Operable Unit: | 01 |
| Material ID: | 347151 |
| Material Code: | 0008 |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

SPILLS:

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0100477 / 2014-03-18 |
| Facility ID: | 0100477 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 214399 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 2001-04-12 |
| Investigator: | RVKETANI |
| Referred To: | 031814 CASE APPROVED FOR CLOSURE |
| Reported to Dept: | 2001-04-12 |
| CID: | 397 |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | True |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2001-04-12 |
| Spill Record Last Update: | 2014-03-18 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNELS |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | GEORGE BASIL |
| DEC Memo: | 10/18/05: This spill was originally closed by Anthony Sigona as part of a consolidation effort. The spill was reassigned to Tibbe. The investigation (approved by Sigona)that was performed was inadequate to identify the existance of contamination. The spill has been re-opened and further investigation is necessary. 11/12/10 - spill re-assigned from Tibbe to Joe O'Connell 11/16/11 - Raphael Ketani. I tried to contact Colleen Channer of the Triborough Bridge and Tunnel Authority (TBTA) (212) 878-1035, but I could only leave a message with her secretary. Her mailing address is: MTA Legal Department, 347 Madison Avenue, 9th Floor, NY, 10017. The |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

TBTA is part of the MTA.
11/17/11 - Raphael Ketani. I spoke to Ms. Channer. I told her that the DEC still had two open spill
cases, #0100477 and #9801266, and that we were seeking documentation for these cases. I told her
that the spills may involve tanks 1 to 4 on the west side of the northern approach to the bridge.
She said that she will look for the documentation and get back to me. 1/13/12 - Raphael Ketani. Ms.
Channer (212) 878-1035 called me. She said that she had found some documentation for cases #0100477
and #9801266. We went over the documents that she had and that the DEC had. Some were the same. I
told her that #0100477 was open because the consultant used the TCLP method to process the samples,
rather than methods 8260 and 8270, and because not enough samples were taken and no groundwater
samples were taken in the vicinity of tanks 1 and 2. I added that #9801266 was open because the
source of the free floating product that had entered a utility vault was never found. Tanks 3, 4,
and 7 had been removed in the nineteen nineties. However a full soil and groundwater investigation,
and transmission lines investigation for product had never been done. Ms. Channer asked that I send
the MTA a letter indicating the work that needs to be done and which documents the DEC still needs.
Her address is: Senior Environmental Counsel, MTA,347 Madison Avenue, 9th Floor, NY, 10017. 1/17/12
- Raphael Ketani. I sent a letter to Ms. Channer requesting that the MTA submit a work plan to
conduct a soil and groundwater investigation in the vicinity of the former locations of USTs #1 and
#2. I also put in the letter a request for a work plan to conduct an investigation of the former
vicinity of USTs #3, #4 and #7 (spill #9801266). 1/19/12 - Raphael Ketani. I was notified that
Peter Bass, Director of the Environmental Policy and Compliance group at the MTA, should also
receive a copy of the letter to Ms. Channer. So I sent the letter to him. His address is also 347
Madison Avenue. 1/30/12 - Raphael Ketani. Ms. Channer and the MTA environmental engineer, George
Bassil, called me today to request an extension for submitting the work plan as their consultant
was heavily involved with another MTA project and could not devote much attention to the Whitestone
Bridge projects. I granted the MTA a two month extension of the deadline for submitting the work
plan. This set a deadline of April 16. Mr. Bassil's contact information is: MTA, 2 Broadway, 23rd
Floor, NY, 10004, (646) 252-7020. 4/25/12 - Raphael Ketani. Today I received 4/16/12 Environmental
Site Investigation Work Plan from LiRo Engineers. I began my review. 5/15/12 - Raphael Ketani. I
finished my review of the ESIWP. LiRo proposed to perform 6 soil borings. Three in the vicinity of

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

the grave for the former tank #3 and its general spill area, and three in the vicinity of the grave
for the former tank #2 and its general spill area. Soil and groundwater samples will be collected.
The soil sample with the highest PID reading will be submitted for analysis and one groundwater
sample from each boring. Samples will be analyzed for STARS list VOCs by method 8260 and for STARS
list SVOCs by method 8270. The results will be compared to CP-51 standards. I disapproved the
ESIWP. First, the list of analytes to be tested should be the expanded lists for VOCs and SVOCs.
Secondly, there were not enough borings planned to properly cover each spill area. Lastly, the
areas affected by the spills need to be delineated. I drafted a disapproval letter for the review
of Hassan Hussein, EE III and head of the Hazardous Materials Unit. I set a deadline of June 22 for
the submission of a revised SIWP. Mr. Hussein approved the letter and it was sent out today.
5/18/12 - Raphael Ketani. Mr. Wesolowski of LiRo Engineering (718) 321-3136, ext 242 called me
today regarding my 5/15/12 response letter for the ESIWP. He said that the area of tanks 4 and 7
has a building over it. The building was constructed in 1998 after the tanks were removed. The
building is an office for their security group and there are many utilities under the floor.
Therefore, it would be very difficult to do any borings there. I told him that LiRo and the MTA
should go ahead and do the work for tanks 1 to 3 anyway. He said that this will be done, but he was
concerned about the request to do borings around tanks 4 and 7. I told him that horizontal borings
may be the only way to sample around the tank graves for these former tanks. I added that we need
some information in order to tell us whether elevated levels of contaminants are still at these
locations. I told him to go ahead with the work around the other tanks and to talk to the MTA and
see what can be done. He said that he will do this. With that, the conversation ended. 6/27/12 -
Raphael Ketani. Mr. Wesolowski sent me a response letter to the DEC ESIWP review letter dated
5/15/12. Attached to the LiRo Engineering response letter was a revised ESIWP dated 6/22/12. I
reviewed both documents. LiRo proposes to do many more borings around tanks #1, #2 and #3.
Additional borings around tanks #4 and #7 will be performed only if contamination appears to be
emanating from them. However, as these two tanks are under the building, the tone of the letter
suggested that the idea of boring around these tanks will be open for discussion. Mr. Wesolowski
also wrote that all environmental samples will be tested for the expanded lists of VOCs and SVOCs.
Also, drilling will proceed deeper than the 20 feet down that was

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

originally planned if
contamination is found at that level. Work will start within 60 days of the approval of the revised
ESIWP. I drafted a response letter approving the revised ESIWP and stating that indoor air PID
surveying should be done in the areas of the building which are above tanks #4 and #7. The letter
was submitted to Mr. Hussein for his approval. Mr. Hussein approved the letter and it was sent out.
8/3/12 - Raphael Ketani. Mr. Wesolowski sent me a letter dated 7/18/12. This letter was LiRo's
response to the DEC 6/7/12 letter approving the June 22 ESIWP. In the letter, Mr. Wesolowski
described the methodology for doing the indoor air sampling with the PID meter. Specifically, if
elevated readings are detected that are not attributed to materials stored in the building, then
air sampling will take place for 1 hour at each location of concern. If there are no elevated
detections, then air sampling will take place at a minimum of 8 sampling stations for a period of
30 minutes each using the PID meter. These 8 or more stations will be over the former locations of
USTs #4 and #7. I found the letter plan to be acceptable and submitted a draft letter to Mr.
Hussein for his review. The letter approved the methodology and also requested that the sampling
take place during a period when air exchange (due to people opening doors to rooms or ventilation)
is not taking place. I stated that this is in order to have stable conditions for the air sampling.
I also added that if the indoor air detections are above 500 ppb or 0.5 ppm, then the NYC DEP
Hotline should be contacted and a work plan must be submitted for a more extensive air
investigation. 8/7/12 - Raphael Ketani. Mr. Hussein approved the letter and it was sent out today.
11/17/12 - Raphael Ketani. I received the 11/13/12 Site Investigation Summary Report from Li Ro.
Soil borings, groundwater sampling and indoor air sampling were conducted on September 12, 13 and
17. Fourteen borings were performed down to 20 feet bgs. Temporary 1 inch monitoring wells were
installed. After the sampling was completed, the borings were filled in and the wells were
abandoned. Soil samples were recovered from LSB-01, 03, 04, 06 to 09, 13, and 15 to 17. Borings
could not be performed at LSB-02, 05, 10 to 12 and 14 due to refusal - it was believed that the
foundations were encountered at these locations. If no visual evidence or PID detections were
encountered in a boring, then soil samples were collected at the water table interface and at 20
feet bgs. The water table was encountered at 3 to 9 feet bgs. Flow was expected to be to the
southwest to the East River. The indoor air results were obtained by sampling at each station for

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

30 minutes, except for the entrance area which was sampled for 15 minutes. There were no
detections. Soil samples were collected from 5.5 feet to 20 feet below grade. The VOC results were
either non-detect or well below the CP-51 standards. The SVOC results were either non-detect, well
below the standards or just above the standards. For total results, the most contaminated soil
horizon at LSB-01 was at 7 feet bgs and LSB-03 was worst at 20 feet bgs. The groundwater samples
from LSB-01, LSB-03 and LSB-17 had 280 ppb, 260 ppb and 210 ppb of naphthalene, respectively. The
rest of the VOC results and the SVOC results were either non-detect or slightly above the GW
standards to two digits. From the data in the report, it appears that there is a source of
groundwater contamination. I drafted a letter to Mr. Bassil and to Mr. Wesolowski approving the
SISR and requesting that groundwater contamination delineation take place. The draft letter was
submitted to Mr. Hussein for his approval. 12/4/12 - Raphael Ketani. The letter was approved by Mr.
Hussein and was sent out with a deadline of January 4, 2013 for submission of a work plan for
delineating the groundwater contamination. 1/9/2013 - Raphael Ketani. I reviewed the LiRo 1/4/13
Supplemental Environmental Site Investigation Work Plan. LiRo plans to install 3 wells. One well
will be upgradient of LSB-17, one well will be downgradient of LSB-17 and one well will be
downgradient of locations LSB-1 and LSB-3. A maximum of 2 soil samples and 1 groundwater sample
will be taken from each proposed well location (MW-1 to MW-3). If no contamination is found at a
location, then one soil sample will be taken from just above the water table. The water table is
believed to be at about 8 feet bgs. I found the work plan to be acceptable and drafted a letter for
the review of Mr. Hussein approving the work plan and requesting that each well be surveyed and a
groundwater flow map be constructed. 1/11/13 - Raphael Ketani. Mr. Hussein approved the letter and
it was sent out today. 12/23/13 - Raphael Ketani. As there has been no correspondence from Martin
Wesolowski of LiRo Engineering (718) 321-3136, ext 242 regarding conducting the work that was
described in the 1/4/13 SESIWP, I sent an e-mail to Colleen Channer (legal division Triborough
Bridge and Tunnel Authority (TBTA) (212) 878-1035), Peter Bass (Director of Environmental Policy
and Compliance) and George Bassil (MTA environmental engineer (646) 252-7020) requesting that the
work start by February 3, 2014, or else the spill cases will be referred to the Office of General
Counsel for legal action. Later, Mr. Wesolowski responded by e-mail and stated that the TBTA was
obtaining the funding to do the approved work. The work is scheduled

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

to take place during early
January 2014. 1/7/14 - Raphael Ketani. Mr. Wesolowski sent me an e-mail stating that the agreed
upon work will take place on 1/21/14. 1/21/14 - Raphael Ketani. Mr. Wesolowski sent me an e-mail
stating that they had completed locating the utilities and doing the markouts for the 3 planned
wells. Due to the snowy weather, the actual work will not start until 1/23/14. 1/23/14 - Raphael
Ketani. Mr. Wesolowski sent me an e-mail stating that the wells were installed today and that
groundwater sampling will take place in two weeks. A report will be sent to the DEC in February
2014. 3/7/14 - Raphael Ketani. I reviewed the 3/6/14 LiRo Engineers, Inc. Supplemental
Environmental Site Investigation Report. The supplemental investigation took place in order to
further delineate the extent of the groundwater contamination at 3 specific locations. Borings SB-1
to SB-3 were installed on 1/23/14. None of the samples had odors or PID hits. These borings were
turned into wells MW-1 to MW-3 and developed on 1/29/14. The wells were sampled on 2/12/14. All of
the soil and groundwater samples were analyzed via methods 8260B and 8270C. The soil samples were
almost entirely non-detect for VOCs. The SVOC hits were also almost entirely non-detect with hits
that were well below the CP-51 unrestricted soil standards. The groundwater results for all of the
samples were almost entirely non-detect for the VOCs and the SVOCs. I sent an e-mail to Mr. Bassil
and Mr. Wesolowski stating that the Supplemental Environmental SIR had been approved, but the
Department was a little concerned about some past naphthalene results which had been from samples
taken from wells LSB-1, LSB-3 and LSB-17. Later, Mr. Wesolowski responded by e-mail that after the
September 2012 sampling event, these temporary wells had been removed. So no additional groundwater
samples could be taken. 3/18/14 - Raphael Ketani. The spill case was presented to Mr. Hussein for
closure. Mr. Hussein reviewed the data and determined that the spill case could be closed. Based
upon the documentation and the data in the case file, it has been determined that the oil spill has
been remediated and that any residual contamination is not a threat to the public or the
environment. Additionally, from the PID screening data, it has been determined that there are no
threats from the vapors of volatile chemicals in the MTA owned and maintained building. Therefore,
the spill case has been closed effective today.

Remarks: Petroleum Contaminated Soils reported as Gasoline was found during Tank Excataion work at the Site.

All Materials:
Site ID: 214399
Operable Unit ID: 839193

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Operable Unit: | 01 |
| Material ID: | 536184 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9201985 / 2011-11-16 |
| Facility ID: | 9201985 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249978 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1991-06-11 |
| Investigator: | RVKETANI |
| Referred To: | NEED FURTHER DOCUMENTATION |
| Reported to Dept: | 1992-01-13 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1992-05-20 |
| Spill Record Last Update: | 2011-11-17 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNEL |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | GEORGE BASIL |
| DEC Memo: | 09/04/07: Transferred from Sigona to Tibbe. Spill reopened due to lack of documentation of proper remediation of contamination identified around tanks 5&6, as well as 3, 4 and 7. 11/12/10 - spill re-assigned from Tibbe to Joe O'Connell 11/10/11 - Raphael Ketani. Kevin O'Connor of Action Remediation (516) 781-3000/cell (516) 236-7468 called regarding this spill case and cases #9601373, #9801266 and #0100477. He mentioned that an attempt was made to combine the 4 cases into one by the DEC, but this added to the confusion. The areas of concern are to the |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

west and to the east of the
north end approach to the Whitestone Bridge. He said that many years back, the tanks were taken
out, but the contaminated soil wasn't. I told him that there were almost no documents in the e-docs
and no case notes. He said that he would like to give the DEC all of the documents pertaining to
this site. I asked him to put them on disk. He said that he will. Mr. O'Connor said that he would
like to meet in person to discuss the site. I told him that would be fine. The PBS is #2-481645.
There are at least 6 tanks, according to some notes I saw. 11/16/11 - Raphael Ketani. A meeting
took place with Mr. O'Connor of Action Remediation and Tom O'Brien of Active Environmental
Techologies Inc. (609) 702-1500. Mr. O'Connor did most of the talking for the two consultants. He
explained that Action and Active were originally
sub-sub-sub-contractors for a very large
construction project to widen the northern approach to to the Whitestone Bridge. They were involved
in removing tanks and excavating contaminated soil. The work was done in two weeks. He said that
PBS case #2-481645 lists only four tanks that are still active. These are tank #11 (20,000 gal. UST
with biodiesel), tank #12 (1,000 gal. UST with gasoline), tank #13 (2,500 gal. UST with biodiesel)
and tank #15 (900 gal. UST with biodiesel). Mr. O'Connor added that their companies removed tanks
#10 (north part west side) and #5 and #6 (south part west side). However, tanks #8 and #9 on the
east side had already been removed. So all they did there was soil removal. Mr. O'Brien stated that
when they started digging, they discovered that the upper layer was made of cobbles and the rest
was native marsh clay. Lots of water came out of the layer of cobbles and this proved costly to
handle. The Triborough Bridge and Tunnel Authority refused to pay them for the cost of handling all
of the water from the cobble zone. So the remediation reports were never sent to the TBTA. Steel
sheet pilings were used to keep the holes open at all of the tank excavation locations. Soil end
point samples were taken by boring holes through the sheet piling. Mr. O'Brien showed me some
pictures of the work at the various locatoins. Mr. O'Connor had sent me e-mail pdf files containing
the soil analytical results, groundwater analytical results and some diagrams showing where the
samples had been taken. He also gave me copies of the manifests for the soil that was removed from
all of the locations. However, he said that the manifests were not in any particular order and were
for all of the excavation locations. Mr. O'Connor showed me PBS printouts for tanks #5 and #6. The
closure dates were 12/16/1993. He added that tank #10 was pulled by his company and it was a steel

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

tank with a fiberglass wrapping. It was in very good condition. After the meeting, I reviewed the
Long Island Analytical Labs 4/7/09 and 4/14/09 soil and groundwater analytical results reports.
They were almost entirely non-detect. The few hits that were present were almost entirely below
TAGM limits. I also reviewed the Action Remediation 5/6/09 Closeout Package for tank #10 (2,000
gal. UST in the northern part of the area on the west side) and the Action Remediation 6/1/09 soil
profile and sampling letter for all of the sampling locations. I also reviewed the manifests, other
documents and pictures concerning tanks #5, #6 and #10. Based upon my data in the documents in the
case file, I determined that the great majority of the contamination had been removed and that the
residual contamination was not a threat to the public or the environment. Also, as the groundwater
that had entered the site is part of the groundwater table that is under the landfill which is
Ferry Point Park, I determined that any impacts are not due conditions at the former tank removal
areas. So I closed the spill case. 11/17/11 - Raphael Ketani. I sent Mr. O'Connor and Mr. O'Brien a
spill closure letter for this spill case and case number 9601373.

Remarks: TWO 550'S (# 5 & 6) TAKEN OUT OF SERVICE & EMPTIED.

All Materials:

| | |
|---|---|
| Site ID: | 249978 |
| Operable Unit ID: | 969335 |
| Operable Unit: | 01 |
| Material ID: | 413265 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9601373 / 2011-11-16 |
| Facility ID: | 9601373 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249983 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1996-04-26 |
| Investigator: | RVKETANI |
| Referred To: | NEED FUIRTHER DOCUMENTATION. |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Reported to Dept: | 1996-04-26 |
| CID: | 257 |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1996-04-26 |
| Spill Record Last Update: | 2011-11-17 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNEL |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | GEORGE BASIL |
| DEC Memo: | 09-04-07: Transferred from Sigona to Tibbe. Spill reopened becuase of lack of documentation concerning proper remediation. 11/12/10 - spill re-assigned from Tibbe to Joe O'Connell 11/10/11 - Raphael Ketani. Kevin O'Connor of Action Remediation (516) 781-3000/cell (516) 236-7468 called regarding this spill case and cases #9201985, #9801266 and #0100477. He mentioned that an attempt was made to combine the 4 cases into one by the DEC, but this added to the confusion. The areas of concern are to the west and to the east of the north end approach to the Whitestone Bridge. He said that many years back, the tanks were taken out, but the contaminated soil wasn't. I told him that there were almost no documents in the e-docs and no case notes. He said that he would like to give the DEC all of the documents pertaining to this site. I asked him to put them on disk. He said that he will. Mr. O'Connor said that he would like to meet in person to discuss the site. I told him that would be fine. The PBS is #2-481645. There are at least 6 tanks, according to some notes I saw. 11/16/11 - Raphael Ketani. A meeting took place with Mr. O'Connor of Action Remediation and Tom O'Brien of Active Environmental Techologies Inc. (609) 702-1500. Mr. O'Connor did most of the talking for the two consultants. He explained that Action and Active were originally sub-sub-sub-contractors for a very large construction project to widen the northern approach to to the Whitestone Bridge. They were involved in removing tanks and excavating contaminated soil. The work was done in two weeks. He said that PBS case #2-481645 lists only four tanks that are still active. These are tank #11 (20,000 gal. UST with biodiesel), tank #12 (1,000 gal. UST with gasoline), tank #13 (2,500 gal. UST with biodiesel) and tank #15 (900 gal. UST with biodiesel). Mr. O'Connor added that their companies removed tanks #10 (north part west |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

side) and #5 and #6 (south
part west side). However, tanks #8 and #9 on the east side had already been removed. So all they
did there was soil removal. Mr. O'Brien stated that when they started digging, they discovered that
the upper layer was made of cobbles and the rest was native marsh clay. Lots of water came out of
the layer of cobbles and this proved costly to handle. The Triborough Bridge and Tunnel Authority
refused to pay them for the cost of handling all of the water from the cobble zone. So the
remediation reports were never sent to the TBTA. Steel sheet pilings were used to keep the holes
open at all of the tank excavation locations. Soil end point samples were taken by boring holes
through the sheet piling. Mr. O'Brien showed me some pictures of the work at the various locatoins.
Mr. O'Connor had sent me e-mail pdf files containing the soil analytical results, groundwater
analytical results and some diagrams showing where the samples had been taken. He also gave me
copies of the manifests for the soil that was removed from all of the locations. However, he said
that the manifests were not in any particular order and were for all of the excavation locations.
Mr. O'Connor showed me PBS printouts for tanks #8 and #9. The closure dates were 5/1/96. After the
meeting, I reviewed the Long Island Analytical Labs 4/16/09 and 4/17/09 soil analytical results
reports. They were almost entirely non-detect. The few hits that were present were almost entirely
below TAGM limits. I also reviewed the Action Remediation 6/1/09 soil profile and sampling letter
for all of the sampling locations. I also reviewed the manifests, other documents and pictures
concerning tanks #8 and #9. Based upon my data in the documents in the case file, I determined that
the great majority of the contamination had been removed and that the residual contamination was
not a threat to the public or the environment. Also, as the groundwater that had entered the site
is part of the groundwater table that is under the landfill which is Ferry Point Park, I determined
that any impacts are not due conditions at the former tank removal areas. So I closed the spill
case. 11/17/11 - Raphael Ketani. I sent Mr. O'Connor and Mr. O'Brien a spill closure letter for
this spill case and case number 9201985.

Remarks: Contaminated groundwater was discovered in the Tank Excavationcontaminated in a hole.

All Materials:

Site ID: 249983
Operable Unit ID: 1029026
Operable Unit: 01
Material ID: 351180
Material Code: 0008
Material Name: diesel

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9801266 / 2014-03-18 |
| Facility ID: | 9801266 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249985 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1998-04-24 |
| Investigator: | RVKETANI |
| Referred To: | 031814 SPILL CASE APPRVD FOR CLOSURE |
| Reported to Dept: | 1998-04-29 |
| CID: | 257 |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1998-04-29 |
| Spill Record Last Update: | 2014-03-18 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNEL |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | RAYMOND LO |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was ROMMEL This spill site investigation has been consolidated under Spill No. 9801266. A site investigation work plan was submitted to DEC for review and approval on November 7, 2003. Investigation was approved on 6/21/2004. The remaining spill case is under 9801266. DEC's comments regarding a proposed Work Plan for Site Investigation by BEM Systems, Inc., dated November 5, 2003. Based on the results of our site visit and PBS inspection on June 25, 2003, and evaluation of the proposal by BEM, the DEC accepts MTA Bridges and Tunnel's Work Plan to perform further investigatory actions to address any of the DEC's concerns related to the prior spill investigations for |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

this spill number referenced at
this site. MTA Bridges & Tunnels must now complete the implementation of the BEM's Work Plan
according to the proposed schedule 7/19/04 - AUSTIN - TRANSFERRED FROM SIGONA TO ROMMEL DUE TO THE
OTHER TBTA SITES BEING UNDER HER JURISDICTION - END 03/29/05: Transfer from Rommel to Tibbe.
11/12/10 - spill re-assigned from Tibbe to Joe O'Connell 11/16/11 - Raphael Ketani. I tried to
contact Colleen Channer of the Triborough Bridge and Tunnel Authority (TBTA) (212) 878-1035, but I
could only leave a message with her secretary. Her mailing address is: MTA Legal Department, 347
Madison Avenue, 9th Floor, NY, 10017. The TBTA is part of the MTA. 11/17/11 - Raphael Ketani. I
spoke to Ms. Channer. I told her that the DEC still had two open spill cases, #0100477 and
#9801266, and that we were seeking documentation for these cases. I told her that the spills may
involve tanks 1 to 4 on the west side of the northern approach to the bridge. She said that she
will look for the documentation and get back to me. 1/13/12 - Raphael Ketani. Ms. Channer (212)
878-1035 called me. She said that she had found some documentation for cases #0100477 and #9801266.
We went over the documents that she had and that the DEC had. Some were the same. I told her that
#0100477 was open because the consultant used the TCLP method to process the samples, rather than
methods 8260 and 8270, and because not enough samples were taken and no groundwater samples were
taken in the vicinity of tanks 1 and 2. I added that #9801266 was open because the source of the
free floating product that had entered a utility vault was never found. Tanks 3, 4, and 7 had been
removed in the nineteen nineties. However a full soil and groundwater investigation, and
transmission lines investigation for product had never been done. Ms. Channer asked that I send the
MTA a letter indicating the work that needs to be done and which documents the DEC still needs. Her
address is: Senior Environmental Counsel, MTA,347 Madison Avenue, 9th Floor, NY, 10017. 1/17/12 -
Raphael Ketani. I sent a letter to Ms. Channer requesting that the MTA submit a work plan to
conduct a soil and groundwater investigation in the vicinity of the former locations of USTs #3, #4
and #7. I also put in the letter a request for a work plan to conduct an investigation of the
former vicinity of USTs #1 and #2 (spill #0100477). 1/19/12 - Raphael Ketani. I was notified that
Peter Bass, Director of the Environmental Policy and Compliance group at the MTA, should also
receive a copy of the letter to Ms. Channer. So I sent the letter to him. His address is also 347
Madison Avenue. 1/30/12 - Raphael Ketani. Ms. Channer and the MTA environmental engineer, George

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Bassil, called me today to request an extension for submitting the work plan as their consultant
was heavily involved with another MTA project and could not devote much attention to the Whitestone
Bridge projects. I granted the MTA a two month extension of the deadline for submitting the work
plan. This set the deadline at April 16. Mr. Bassil's contact information is: MTA, 2 Broadway, 23rd
Floor, NY, 10004, (646) 252-7020. 4/25/12 - Raphael Ketani. Today I received 4/16/12 Environmental
Site Investigation Work Plan from LiRo Engineers. I began my review. 5/15/12 - Raphael Ketani. I
finished my review of the ESIWP. LiRo proposed to perform 6 soil borings. Three in the vicinity of
the grave for the former tank #3 and its general spill area, and three in the vicinity of the grave
for the former tank #2 and its general spill area. Soil and groundwater samples will be collected.
The soil sample with the highest PID reading will be submitted for analysis and one groundwater
sample from each boring. Samples will be analyzed for STARS list VOCs by method 8260 and for STARS
list SVOCs by method 8270. The results will be compared to CP-51 standards. I disapproved the
ESIWP. First, the list of analytes to be tested should be the expanded lists for VOCs and SVOCs.
Secondly, there were not enough borings planned to properly cover each spill area. Lastly, the
areas affected by the spills need to be delineated. I drafted a disapproval letter for the review
of Hassan Hussein, EE III and head of the Hazardous Materials Unit. I set a deadline of June 22 for
the submission of a revised SIWP. Mr. Hussein approved the letter and it was sent out today.
5/18/12 - Raphael Ketani. Mr. Wesolowski of LiRo Engineering (718) 321-3136, ext 242 called me
today regarding my 5/15/12 response letter for the ESIWP. He said that the area of tanks 4 and 7
has a building over it. The building was constructed in 1998 after the tanks were removed. The
building is an office for their security group and there are many utilities under the floor.
Therefore, it would be very difficult to do any borings there. I told him that LiRo and the MTA
should go ahead and do the work for tanks 1 to 3 anyway. He said that this will be done, but he was
concerned about the request to do borings around tanks 4 and 7. I told him that horizontal borings
may be the only way to sample around the tank graves for these former tanks. I added that we need
some information in order to tell us whether elevated levels of contaminants are still at these
locations. I told him to go ahead with the work around the other tanks and to talk to the MTA and
see what can be done. He said that he will do this. With that, the conversation ended. 6/27/12 -
Raphael Ketani. Mr. Wesolowski sent me a response letter to the DEC

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

ESIWP review letter dated
5/15/12. Attached to the LiRo Engineering response letter was a revised ESIWP dated 6/22/12. I
reviewed both documents. LiRo proposes to do many more borings around tanks #1, #2 and #3.
Additional borings around tanks #4 and #7 will be performed only if contamination appears to be
emanating from them. However, as these two tanks are under the building, the tone of the letter
suggested that the idea of boring around these tanks will be open for discussion. Mr. Wesolowski
also wrote that all environmental samples will be tested for the expanded lists of VOCs and SVOCs.
Also, drilling will proceed deeper than the 20 feet down that was originally planned if
contamination is found at that level. Work will start within 60 days of the approval of the revised
ESIWP. I drafted a response letter approving the revised ESIWP and stating that indoor air PID
surveying should be done in the areas of the building which are above tanks #4 and #7. The letter
was submitted to Mr. Hussein for his approval. Mr. Hussein approved the letter and it was sent out.
8/3/12 - Raphael Ketani. Mr. Wesolowski sent me a letter dated 7/18/12. This letter was LiRo's
response to the DEC 6/7/12 letter approving the June 22 ESIWP. In the letter, Mr. Wesolowski
described the methodology for doing the indoor air sampling with the PID meter. Specifically, if
elevated readings are detected that are not attributed to materials stored in the building, then
air sampling will take place for 1 hour at each location of concern. If there are no elevated
detections, then air sampling will take place at a minimum of 8 sampling stations for a period of
30 minutes each using the PID meter. These 8 or more stations will be over the former locations of
USTs #4 and #7. I found the letter plan to be acceptable and submitted a draft letter to Mr.
Hussein for his review. The letter approved the methodology and also requested that the sampling
take place during a period when air exchange (due to people opening doors to rooms or ventilation)
is not taking place. I stated that this is in order to have stable conditions for the air sampling.
I also added that if the indoor air detections are above 500 ppb or 0.5 ppm, then the NYC DEP
Hotline should be contacted and a work plan must be submitted for a more extensive air
investigation. 8/7/12 - Raphael Ketani. Mr. Hussein approved the letter and it was sent out today.
11/17/12 - Raphael Ketani. I received the 11/13/12 Site Investigation Summary Report from Li Ro.
Soil borings, groundwater sampling and indoor air sampling were conducted on September 12, 13 and
17. Fourteen borings were performed down to 20 feet bgs. Temporary 1 inch monitoring wells were

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

installed. After the sampling was completed, the borings were filled in and the wells were abandoned. Soil samples were recovered from LSB-01, 03, 04, 06 to 09, 13, and 15 to 17. Borings could not be performed at LSB-02, 05, 10 to 12 and 14 due to refusal - it was believed that the foundations were encountered at these locations. When no visual evidence or PID detections were encountered in a boring, then soil samples were collected at the water table interface and at 20 feet bgs. The water table was encountered at 3 to 9 feet bgs. Flow was expected to be to the southwest to the East River. The indoor air results were obtained by sampling at each station for 30 minutes, except for the entrance area which was sampled for 15 minutes. There were no detections. Soil samples were collected from 5.5 feet to 20 feet below grade. The VOC results were either non-detect or well below the CP-51 standards. The SVOC results were either non-detect, well below the standards or just above the standards. For total results, the most contaminated soil horizon at LSB-01 was at 7 feet bgs and LSB-03 was worst at 20 feet bgs. The groundwater samples from LSB-01, LSB-03 and LSB-17 had 280 ppb, 260 ppb and 210 ppb of naphthalene, respectively. The rest of the VOC results and the SVOC results were either non-detect or slightly above the GW standards to two digits. From the data in the report, it appears that there is a source of groundwater contamination. I drafted a letter to Mr. Bassil and to Mr. Wesolowski approving the SISR and requesting that groundwater contamination delineation take place. The draft letter was submitted to Mr. Hussein for his approval. 12/4/12 - Raphael Ketani. The letter was approved by Mr. Hussein and was sent out with a deadline of January 4, 2013 for submission of a work plan for delineating the groundwater contamination. 1/9/2013 - Raphael Ketani. I reviewed the LiRo 1/4/13 Supplemental Environmental Site Investigation Work Plan. LiRo plans to install 3 wells. One well will be upgradient of LSB-17, one well will be downgradient of LSB-17 and one well will be downgradient of locations LSB-1 and LSB-3. A maximum of 2 soil samples and 1 groundwater sample will be taken from each proposed well location (MW-1 to MW-3). If no contamination is found at a location, then one soil sample will be taken from just above the water table. The water table is believed to be at about 8 feet bgs. I found the work plan to be acceptable and drafted a letter for the review of Mr. Hussein approving the work plan and requesting that each well be surveyed and a groundwater flow map be constructed. 1/11/13 - Raphael Ketani. Mr. Hussein found the letter to be acceptable and it was sent out today. 12/23/13 - Raphael Ketani. As

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there has been no
correspondence from Martin Wesolowski of LiRo Engineering (718) 321-3136, ext 242 regarding
conducting the work that was described in the 1/4/13 SESIWP, I sent an e-mail to Colleen Channer
(legal division Triborough Bridge and Tunnel Authority (TBTA) (212) 878-1035), Peter Bass (Director
of Environmental Policy and Compliance) and George Bassil (MTA environmental engineer (646)
252-7020) requesting that the work start by February 3, 2014, or else the spill cases will be
referred to the Office of General Counsel for legal action. Later, Mr. Wesolowski responded by
e-mail and stated that the TBTA was obtaining the funding to do the approved work. The work is
scheduled to take place during early January 2014. 1/7/14 - Raphael Ketani. Mr. Wesolowski sent me
an e-mail stating that the agreed upon work will take place on 1/21/14. 1/21/14 - Raphael Ketani.
Mr. Wesolowski sent me an e-mail stating that they had completed locating the utilities and doing
the markouts for the 3 planned wells. Due to the snowy weather, the actual work will not start
until 1/23/14. 1/23/14 - Raphael Ketani. Mr. Wesolowski sent me an e-mail stating that the wells
were installed today and that groundwater sampling will take place in two weeks. A report will be
sent to the DEC in February 2014. 3/7/14 - Raphael Ketani. I reviewed the 3/6/14 LiRo Engineers,
Inc. Supplemental Environmental Site Investigation Report. The supplemental investigation took
place in order to further delineate the extent of the groundwater contamination at 3 specific
locations. Borings SB-1 to SB-3 were installed on 1/23/14. None of the samples had odors or PID
hits. These borings were turned into wells MW-1 to MW-3 and developed on 1/29/14. The wells were
sampled on 2/12/14. All of the soil and groundwater samples were analyzed via methods 8260B and
8270C. The soil samples were almost entirely non-detect for VOCs. The SVOC hits were also almost
entirely non-detect with hits that were well below the CP-51 unrestricted soil standards. The
groundwater results for all of the samples were almost entirely non-detect for the VOCs and the
SVOCs. I sent an e-mail to Mr. Bassil and Mr. Wesolowski stating that the Supplemental
Environmental SIR had been approved, but the Department was a little concerned about some past
naphthalene results which had been from samples taken from wells LSB-1, LSB-3 and LSB-17. Later,
Mr. Wesolowski responded by e-mail that after the September 2012 sampling event, these temporary
wells had been removed. So no additional groundwater samples could be taken. 3/18/14 - Raphael
Ketani. The spill case was presented to Mr. Hussein for closure. Mr. Hussein reviewed the data and

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

determined that the spill case could be closed. Based upon the documentation and the data in the
case file, it has been determined that the oil spill has been remediated and that any residual
contamination is not a threat to the public or the environment. Additionally, from the PID
screening data, it has been determined that there are no threats from the vapors of volatile
chemicals in the MTA owned and maintained building. Therefore, the spill case has been closed
effective today.

Remarks: DEC Sigona was performing a site inspection and contamination was found.

All Materials:

Site ID: 249985
Operable Unit ID: 1061927
Operable Unit: 01
Material ID: 323195
Material Code: 0001A
Material Name: #2 fuel oil
Case No.: Not reported
Material FA: Petroleum
Quantity: .00
Units: G
Recovered: .00
Resource Affected: Soil
Oxygenate: Not reported

Name: BRONX WHITESTONE BRIDGE
Address: 1 HUTCHINSON RIVER PKWAY
City,State,Zip: BRONX, NY
Spill Number/Closed Date: 9303540 / 2003-11-06
Facility ID: 9303540
Facility Type: ER
DER Facility ID: 177640
Site ID: 249979
DEC Region: 2
Spill Cause: Equipment Failure
Spill Class: B3
SWIS: 0301
Spill Date: 1993-06-17
Investigator: SIGONA
Referred To: Not reported
Reported to Dept: 1993-06-17
CID: Not reported
Water Affected: Not reported
Spill Source: Non Major Facility > 1,100 gal
Spill Notifier: Responsible Party
Cleanup Ceased: Not reported
Cleanup Meets Std: False
Last Inspection: Not reported
Recommended Penalty: False
UST Trust: False
Remediation Phase: 0
Date Entered In Computer: 1993-06-24
Spill Record Last Update: 2004-06-21

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| | |
|---|---|
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | TRIBOROUGH AUTHORITY |
| Spiller Address: | RANDALL'S ISLAND |
| Spiller Company: | 001 |
| Contact Name: | GEORGE BASIL |
| DEC Memo: | Not reported |
| Remarks: | WHILE THE TBTA WAS PERFORMING AN EXCAVATION FOR A NEW SEWER PIPE THEY FOUND PETROLEUM CONTAMINATED SOILS. |

All Materials:

| | |
|---|---|
| Site ID: | 249979 |
| Operable Unit ID: | 981958 |
| Operable Unit: | 01 |
| Material ID: | 397102 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9501417 / 2003-11-24 |
| Facility ID: | 9501417 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249981 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1995-05-03 |
| Investigator: | SIGONA |
| Referred To: | Not reported |
| Reported to Dept: | 1995-05-03 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1995-05-18 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNELS |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | Not reported |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

DEC Memo: Not reported
Remarks: LEAKING PIPE IN ABOVE GROUND TANK - SMALL AMOUNT WENT INTO SEWER - CONTAINED, CLEANUP CREW ON WAY.

All Materials:
Site ID: 249981
Operable Unit ID: 1012154
Operable Unit: 01
Material ID: 370025
Material Code: 0001A
Material Name: #2 fuel oil
Case No.: Not reported
Material FA: Petroleum
Quantity: 150.00
Units: G
Recovered: .00
Resource Affected: Sewer
Oxygenate: Not reported

Name: BRONX WHITESTONE BRIDGE
Address: 1 HUTCHINSON RIVER PKWAY
City,State,Zip: BRONX, NY
Spill Number/Closed Date: 9503672 / 1995-06-26
Facility ID: 9503672
Facility Type: ER
DER Facility ID: 177640
Site ID: 249982
DEC Region: 2
Spill Cause: Equipment Failure
Spill Class: B3
SWIS: 0301
Spill Date: 1995-06-26
Investigator: SIGONA
Referred To: Not reported
Reported to Dept: 1995-06-26
CID: Not reported
Water Affected: Not reported
Spill Source: Non Major Facility > 1,100 gal
Spill Notifier: Responsible Party
Cleanup Ceased: 1995-06-26
Cleanup Meets Std: False
Last Inspection: Not reported
Recommended Penalty: False
UST Trust: False
Remediation Phase: 0
Date Entered In Computer: 1995-07-18
Spill Record Last Update: 2004-06-21
Spiller Name: GEORGE BASIL
Spiller Company: MTA BRIDGES & TUNNELS
Spiller Address: RANDALLS ISLAND
Spiller Company: 001
Contact Name: Not reported
DEC Memo: Not reported
Remarks: DRIVER WAS FILLING A TANK & THE TANK GAUGE WAS BROKE - TANK OVERFLOWED SPILL TEAM WAS CALLED & RESPONDING

All Materials:

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Site ID: | 249982 |
| Operable Unit ID: | 1014900 |
| Operable Unit: | 01 |
| Material ID: | 365176 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 10.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9906022 / 1999-08-30 |
| Facility ID: | 9906022 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249986 |
| DEC Region: | 2 |
| Spill Cause: | Traffic Accident |
| Spill Class: | C3 |
| SWIS: | 0301 |
| Spill Date: | 1999-08-19 |
| Investigator: | SIGONA |
| Referred To: | Not reported |
| Reported to Dept: | 1999-08-19 |
| CID: | 389 |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | True |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1999-08-19 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | Not reported |
| Spiller Company: | WEBSTER TRUCKING |
| Spiller Address: | 1800 CORPORATE BLVD |
| Spiller Company: | 001 |
| Contact Name: | Not reported |
| DEC Memo: | Not reported |
| Remarks: | SPILL OCCURRED APPROX 2 HOURS AGO ON THE WHITESTONE BRIDGE IN QUEENS. CLEAN UP BY PENSKE AND TOWED TO ROCKAWAY QUEENS TERMINAL. |

All Materials:

| | |
|---|---|
| Site ID: | 249986 |
| Operable Unit ID: | 1080469 |
| Operable Unit: | 01 |
| Material ID: | 302297 |
| Material Code: | 0001A |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | BRONX WHITESTONE BRIDGE |
| Address: | 1 HUTCHINSON RIVER PKWAY |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 8807410 / 1992-12-04 |
| Facility ID: | 8807410 |
| Facility Type: | ER |
| DER Facility ID: | 177640 |
| Site ID: | 249977 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | A3 |
| SWIS: | 0301 |
| Spill Date: | 1988-12-07 |
| Investigator: | SIGONA |
| Referred To: | Not reported |
| Reported to Dept: | 1988-12-07 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Non Major Facility > 1,100 gal |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | 1992-12-04 |
| Cleanup Meets Std: | True |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1988-12-21 |
| Spill Record Last Update: | 2004-06-21 |
| Spiller Name: | GEORGE BASIL |
| Spiller Company: | MTA BRIDGES & TUNNELS |
| Spiller Address: | RANDALLS ISLAND |
| Spiller Company: | 001 |
| Contact Name: | Not reported |
| DEC Memo: | Not reported |
| Remarks: | TEMPCO - HEATING UNIT - LEAKS INTO BOOTHS CAUSING IRRITATION, VOMITING20 PEOPLE AFFECTED, WORKERS WON'T ASK FOR UNION DELEGATE. NOTIFIED NYSDOH, DOL, NYCDOH. |

All Materials:

| | |
|---|---|
| Site ID: | 249977 |
| Operable Unit ID: | 924079 |
| Operable Unit: | 01 |
| Material ID: | 455753 |
| Material Code: | 0028A |
| Material Name: | ethylene glycol |
| Case No.: | 00107211 |
| Material FA: | Hazardous Material |
| Quantity: | .00 |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

Units: G
Recovered: .00
Resource Affected: Air
Oxygenate: Not reported

NY MANIFEST:
EPA ID: NYR000154260
Country: USA
Name: MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY
Address: 1 HUTCHINSON RIVER PKWY
Address 2: Not reported
City,State,Zip: BRONX, NY 10465-1857
Zip 4: Not reported
Location Address 1: 1 HUTCHINSON RIVER PKWY
Location Address 2: Not reported
Location City,State,Zip: BRONX, NY 10465
Location Zip 4: Not reported
Facility Status: Not reported
Total Tanks: Not reported
Code: BP

Mailing:
Mailing Name: MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY
Mailing Contact: TBTA/MTA BRIDGES & TUNNELS
Mailing Address 1: 1 HUTCHINSON RIVER PKWY
Mailing Address 2: Not reported
Mailing City,State,Zip: BRONX, NY 10465
Mailing Zip 4: Not reported
Mailing Country: USA
Mailing Phone: 2124688454

Manifest Data:
Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NJ0000027193
Year: 2018
Trans2 State ID: Not reported
Generator Ship Date: 03/03/2014
Trans1 Recv Date: 03/03/2014
Trans2 Recv Date: Not reported
TSD Site Recv Date: 03/03/2014
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000154260
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID 1: NJD002200046
TSDF ID 2: Not reported
Manifest Tracking Number: 001053507GBF
Import Indicator: N
Export Indicator: N
Discr Quantity Indicator: N
Discr Type Indicator: N
Discr Residue Indicator: N
Discr Partial Reject Indicator: N
Discr Full Reject Indicator: N

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | BENZENE |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 55 |
| Units: | Gallons (liquids only) |
| Number of Containers: | 1 |
| Container Type: | Fiberboard or plastic drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJ0000027193 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 05/24/2011 |
| Trans1 Recv Date: | 05/24/2011 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 05/24/2011 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 003534721JJK |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | BENZENE |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 55 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NYR000134957 |
| Year: | 2018 |
| Trans2 State ID: | PAD982661381 |
| Generator Ship Date: | 07/31/2013 |
| Trans1 Recv Date: | 07/31/2013 |
| Trans2 Recv Date: | 08/09/2013 |
| TSD Site Recv Date: | 08/19/2013 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | PAD085690592 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 002835527FLE |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | LEAD |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 500 |
| Units: | Pounds |
| Number of Containers: | 2 |
| Container Type: | Metal drums, barrels, kegs |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

Handling Method: Treat
Specific Gravity: 1

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NJ0000027103
Year: 2018
Trans2 State ID: Not reported
Generator Ship Date: 03/30/2016
Trans1 Recv Date: 03/30/2016
Trans2 Recv Date: Not reported
TSD Site Recv Date: 03/30/2016
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000154260
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID 1: NJD002200046
TSDF ID 2: Not reported
Manifest Tracking Number: 015626081JJK
Import Indicator: N
Export Indicator: N
Discr Quantity Indicator: N
Discr Type Indicator: N
Discr Residue Indicator: N
Discr Partial Reject Indicator: N
Discr Full Reject Indicator: N
Manifest Ref Number: Not reported
Alt Facility RCRA ID: Not reported
Alt Facility Sign Date: Not reported
MGMT Method Type Code: H110
Waste Code a: LEAD
Waste Code b: Not reported
Waste Code c: Not reported
Waste Code e: Not reported
Waste Code f: Not reported
Waste Code g: Not reported
Waste Code 1: Not reported
Waste Code 2: Not reported
Waste Code 3: Not reported
Waste Code 4: Not reported
Waste Code 5: Not reported
Waste Code 6: Not reported
Quantity: 40
Units: Pounds
Number of Containers: 1
Container Type: Metal drums, barrels, kegs
Handling Method: Treat
Specific Gravity: 1

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NJ0000027103
Year: 2018
Trans2 State ID: Not reported
Generator Ship Date: 03/30/2016
Trans1 Recv Date: 03/30/2016

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 03/30/2016 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 015626081JJK |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | MERCURY |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 4500 |
| Units: | Pounds |
| Number of Containers: | 9 |
| Container Type: | Wooden boxes, cartons, cases |
| Handling Method: | Treat |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJ0000027193 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/04/2013 |
| Trans1 Recv Date: | 11/04/2013 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/04/2013 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 010913928JJK |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H110 |
| Waste Code a: | LEAD |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 300 |
| Units: | Pounds |
| Number of Containers: | 3 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJ0000027193 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/04/2013 |
| Trans1 Recv Date: | 11/04/2013 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/04/2013 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 010913928JJK |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| MGMT Method Type Code: | H110 |
| Waste Code a: | LEAD |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 60 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Fiberboard or plastic drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJ0000027193 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/04/2013 |
| Trans1 Recv Date: | 11/04/2013 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/04/2013 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYR000154260 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD002200046 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 010913928JJK |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | LEAD |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |

**MTA BRIDGES & TUNNELS WHITESTONE BRIDGE FACILITY (Continued)** **S102150368**

| | |
|---|---|
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 600 |
| Units: | Pounds |
| Number of Containers: | 6 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Treat |
| Specific Gravity: | 1 |

---

**E23** **FARRY POINT PARK** **NY Spills** **S104952961**
**ESE** **WHITSTONE BRIDGE** **N/A**
**< 1/8** **BRONX, NY**
**0.113 mi.**
**597 ft.** **Site 2 of 3 in cluster E**

**Relative:** **Higher**
**Actual:** **32 ft.**

SPILLS:

| | |
|---|---|
| Name: | FARRY POINT PARK |
| Address: | WHITSTONE BRIDGE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0012477 / 2003-06-09 |
| Facility ID: | 0012477 |
| Facility Type: | ER |
| DER Facility ID: | 172388 |
| Site ID: | 207749 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C3 |
| SWIS: | 0301 |
| Spill Date: | 2001-02-21 |
| Investigator: | SMSANGES |
| Referred To: | Not reported |
| Reported to Dept: | 2001-02-21 |
| CID: | 270 |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Affected Persons |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2001-02-21 |
| Spill Record Last Update: | 2003-06-09 |
| Spiller Name: | CAKLLER |
| Spiller Company: | FAIRWAYS INC |
| Spiller Address: | 115 STEVENS AV |
| Spiller Company: | 001 |
| Contact Name: | CALLER |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was SANGESLAND |
| Remarks: | line broke on vehicle. clean up in progress |

All Materials:

| | |
|---|---|
| Site ID: | 207749 |
| Operable Unit ID: | 834003 |

**FARRY POINT PARK (Continued)** **S104952961**

| | |
|---|---|
| Operable Unit: | 01 |
| Material ID: | 542742 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 4.00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

---

**F24** **LIBERTY MECHANICAL/CABLEVISION** **NY TANKS** **U001831844**
**NNW** **550 BRUSH AVENUE** **NY NYC LAND USE** **N/A**
**< 1/8** **BRONX, NY 10465**
**0.114 mi.**
**601 ft.** **Site 1 of 9 in cluster F**

**Relative:** **Lower**

**Actual:** **8 ft.**

TANKS:

| | |
|---|---|
| Name: | LIBERTY MECHANICAL/CABLEVISION |
| Address: | 550 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Facility Id: | 2-080799 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Program Type: | PBS |
| Expiration Date: | 03/26/2028 |
| UTM X: | 597964.87894 |
| UTM Y: | 4519189.11855 |

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 550 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Latitude: | 40.8176678 |
| Longitude: | -73.8380585 |
| Type Of Ownership Code: | Not reported |
| Owner Name: | 550 BRUSH LLC |
| Borough: | BX |
| Tax Block: | 5610 |
| Tax Lot: | 16 |
| Community District: | 210 |
| Census Tract 2020: | 2009000 |
| Census Block 2020: | 20090002019 |
| Census Tract 2010: | 90 |
| Census Block 2010: | 2014 |
| School District: | 08 |
| City Council District: | 13 |
| Fire Company: | E072 |
| Police Precinct: | 45 |
| Health Center District: | 26 |
| Health Area: | 3100 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 10 |
| Sanitation Subsection: | 3D |

**LIBERTY MECHANICAL/CABLEVISION (Continued)** **U001831844**

| | |
|---|---|
| Zoning District 1: | M1-1: Manufacturing Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | F1: FACTORY AND INDUSTRIAL BUILDINGS - Heavy Manufacturing - Fireproof |
| Land Use Category: | Industrial & Manufacturing |
| Number Of Easements: | 0 |
| Lot Area: | 106300 |
| Total Building Floor Area: | 47800 |
| Commercial Floor Area: | 47800 |
| Residential Floor Area: | 0 |
| Office Floor Area: | 1800 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 0 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 46000 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 2 |
| Number Of Floors: | 1.0000000 |
| Residential Units: | 0 |
| Total Units: | 2 |
| Lot Frontage: | 530.0000000 |
| Lot Depth: | 275.3300000 |
| Building Frontage: | 200.3300000 |
| Building Depth: | 200.0000000 |
| Extension Code: | N |
| Proximity Code: | 0 |
| Irregular Lot Code: | Y |
| Lot Type: | 3 |
| Basement Type/Grade: | 0 |
| Assessed Land Value: | 675000.00000 |
| Assessed Total Value: | 3496950.00000 |
| Exempt Total Value: | 0.00000 |
| Year Built: | 1962 |
| Year Altered 1: | 2015 |
| Year Altered 2: | 0 |
| Historic District Name: | Not reported |
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.45000000000 |
| Maximum Allowable Residential Far: | 0.00000000000 |
| Maximum Allowable Commercial Far: | 1.00000000000 |
| Maximum Allowable Community Facility Far: | 2.40000000000 |
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2056100016.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0090 |
| X Coordinate: | 1029074 |
| Y Coordinate: | 237217 |
| Zoning Map #: | 7a |

**LIBERTY MECHANICAL/CABLEVISION (Continued)** **U001831844**

| | |
|---|---|
| Zoning Map Code: | Not reported |
| Sanborn Map #: | 221 040 |
| Tax Map #: | 21809 |
| E-designation Number: | Not reported |
| Apportionment BBL: | Not reported |
| Apportionment Date: | Not reported |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | 1 |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | 1 |
| Version Number: | 24v1.1 |
| Changed By DCP: | Not reported |

---

**25**
**North**
**< 1/8**
**0.121 mi.**
**639 ft.**

**FERRY POINT PARK GOLF COURSE** **NY AST** **A100366170**
**700 HUTCHINSON RIVER PARKWAY** **N/A**
**BRONX, NY 10465**

**Relative:**
**Lower**

**Actual:**
**14 ft.**

AST:

| | |
|---|---|
| Name: | FERRY POINT PARK GOLF COURSE |
| Address: | 700 HUTCHINSON RIVER PARKWAY |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Facility Id: | 2-611992 |
| Program Type: | PBS |
| UTM X: | 598188.19739 |
| UTM Y: | 4519209.71831 |
| Expiration Date: | 02/15/2023 |
| Site Type: | Other |

Affiliation Records:

| | |
|---|---|
| Site Id: | 480083 |
| Affiliation Type: | Facility Owner |
| Company Name: | CITY OF NEW YORK, PARKS AND RECREATION |
| Contact Type: | GENERAL MANAGER |
| Contact Name: | BRIAN A. CROWEK |
| Address1: | 830 FIFTH AVENUE |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10021 |
| Country Code: | 001 |
| Phone: | (212) 410-8916 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-01-17 |

| | |
|---|---|
| Site Id: | 480083 |
| Affiliation Type: | Mail Contact |
| Company Name: | CITY OF NEW YORK, PARKS & RECREATION |
| Contact Type: | Not reported |
| Contact Name: | CYNTHIA LOPEZ |
| Address1: | CITYWIDE SERVICES COMPLEX |
| Address2: | 20 BRONX SHORE ROAD - RANDALLS ISLAND |
| City: | NEW YORK |

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

State: NY
Zip Code: 10035
Country Code: 001
Phone: (212) 410-8935
EMail: CYNTHIA.LOPEZ@PARKS.NYC.GOV
Fax Number: Not reported
Modified By: JSMACRI
Date Last Modified: 2023-01-17

Site Id: 480083
Affiliation Type: Emergency Contact
Company Name: CITY OF NEW YORK, PARKS AND RECREATION
Contact Type: Not reported
Contact Name: CYNTHIA LOPEZ
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (212) 410-8935
EMail: Not reported
Fax Number: Not reported
Modified By: ACDANIEL
Date Last Modified: 2023-01-13

Site Id: 480083
Affiliation Type: Facility Operator
Company Name: FERRY POINT GOLF COURSE
Contact Type: GENERAL MANAGER
Contact Name: BRIAN CROWELL
Address1: Not reported
Address2: Not reported
City: Not reported
State: NY
Zip Code: Not reported
Country Code: 001
Phone: (718) 414-1560
EMail: Not reported
Fax Number: Not reported
Modified By: ACDANIEL
Date Last Modified: 2023-01-13

Tank Info:

Tank Number: 001
Tank Id: 247593
Material Code: 2712
Common Name of Substance: Gasoline/Ethanol

Equipment Records:

G01 - Tank Secondary Containment - Diking (Aboveground)
J06 - Dispenser - Tank Mounted Dispenser
F00 - Pipe External Protection - None
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

L09 - Piping Leak Detection - Exempt Suction Piping
E00 - Piping Secondary Containment - None
C01 - Pipe Location - Aboveground
G12 - Tank Secondary Containment - Double-Walled (AG only)
I03 - Overfill - Automatic Shut-Off
D01 - Pipe Type - Steel/Carbon Steel/Iron
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating

Tank Location: Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection.
Tank Type: Steel Tank in Concrete
Tank Status: In Service
Pipe Model: Not reported
Install Date: 02/15/2013
Capacity Gallons: 1000
Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: JSMACRI
Last Modified: 01/17/2023
Material Name: gasoline/ethanol

Tank Number: 002
Tank Id: 247594
Material Code: 0008
Common Name of Substance: Diesel

Equipment Records:

F00 - Pipe External Protection - None
J06 - Dispenser - Tank Mounted Dispenser
E00 - Piping Secondary Containment - None
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
G12 - Tank Secondary Containment - Double-Walled (AG only)
C01 - Pipe Location - Aboveground
G01 - Tank Secondary Containment - Diking (Aboveground)
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
I01 - Overfill - Float Vent Valve
I03 - Overfill - Automatic Shut-Off

Tank Location: Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection.
Tank Type: Steel Tank in Concrete
Tank Status: In Service
Pipe Model: Not reported
Install Date: 02/15/2013
Capacity Gallons: 1000
Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

| | |
|---|---|
| Register: | True |
| Modified By: | JSMACRI |
| Last Modified: | 01/17/2023 |
| Material Name: | diesel |
| Tank Number: | 003 |
| Tank Id: | 248286 |
| Equipment Records: | |
| | J06 - Dispenser - Tank Mounted Dispenser |
| | F00 - Pipe External Protection - None |
| | B00 - Tank External Protection - None |
| | C00 - Pipe Location - No Piping |
| | K01 - Spill Prevention - Catch Basin |
| | E00 - Piping Secondary Containment - None |
| | L00 - Piping Leak Detection - None |
| | D00 - Pipe Type - No Piping |
| | H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G) |
| | I04 - Overfill - Product Level Gauge (A/G) |
| | G10 - Tank Secondary Containment - Impervious Underlayment |
| | A00 - Tank Internal Protection - None |
| Tank Location: | Aboveground - contact with impervious barrier... Tank bottom rests on impervious barrier, allowing visual indication of leaks. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - Removed |
| Pipe Model: | Not reported |
| Install Date: | 07/31/2012 |
| Capacity Gallons: | 500 |
| Tightness Test Method: | - |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 02/15/2013 |
| Register: | True |
| Modified By: | JSMACRI |
| Last Modified: | 01/17/2023 |
| Material Name: | diesel |
| Tank Number: | 004 |
| Tank Id: | 248287 |
| Equipment Records: | |
| | D00 - Pipe Type - No Piping |
| | H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G) |
| | L00 - Piping Leak Detection - None |
| | I04 - Overfill - Product Level Gauge (A/G) |
| | B00 - Tank External Protection - None |
| | C00 - Pipe Location - No Piping |
| | F00 - Pipe External Protection - None |
| | J06 - Dispenser - Tank Mounted Dispenser |
| | A00 - Tank Internal Protection - None |
| | G10 - Tank Secondary Containment - Impervious Underlayment |
| | E00 - Piping Secondary Containment - None |
| | K01 - Spill Prevention - Catch Basin |
| Tank Location: | Aboveground - contact with impervious barrier... Tank bottom rests on impervious barrier, allowing visual indication of leaks. |
| Tank Type: | Steel/Carbon Steel/Iron |

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

| | |
|---|---|
| Tank Status: | Closed - Removed |
| Pipe Model: | Not reported |
| Install Date: | Not reported |
| Capacity Gallons: | 500 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 04/11/2013 |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #4 fuel oil (resale/redistribute) |

| | |
|---|---|
| Tank Number: | 005 |
| Tank Id: | 248288 |

Equipment Records:

I04 - Overfill - Product Level Gauge (A/G)
D00 - Pipe Type - No Piping
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
L00 - Piping Leak Detection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
J06 - Dispenser - Tank Mounted Dispenser
E00 - Piping Secondary Containment - None
K01 - Spill Prevention - Catch Basin
A00 - Tank Internal Protection - None
G10 - Tank Secondary Containment - Impervious Underlayment

| | |
|---|---|
| Tank Location: | Aboveground - contact with impervious barrier... Tank bottom rests on impervious barrier, allowing visual indication of leaks. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - Removed |
| Pipe Model: | Not reported |
| Install Date: | Not reported |
| Capacity Gallons: | 500 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 04/11/2013 |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | #2 fuel oil (resale/redistribute) |

| | |
|---|---|
| Tank Number: | 006 |
| Tank Id: | 248289 |

Equipment Records:

K01 - Spill Prevention - Catch Basin
E00 - Piping Secondary Containment - None
I04 - Overfill - Product Level Gauge (A/G)
J06 - Dispenser - Tank Mounted Dispenser
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None

**FERRY POINT PARK GOLF COURSE (Continued)** **A100366170**

H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
L00 - Piping Leak Detection - None
D00 - Pipe Type - No Piping
G10 - Tank Secondary Containment - Impervious Underlayment
A00 - Tank Internal Protection - None

| | |
|---|---|
| Tank Location: | Aboveground - contact with impervious barrier... Tank bottom rests on impervious barrier, allowing visual indication of leaks. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - Removed |
| Pipe Model: | Not reported |
| Install Date: | Not reported |
| Capacity Gallons: | 500 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 04/11/2013 |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | gasoline |

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**E26** **MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE** **RCRA-LQG** **1000141522**
**East** **1 HUTCHINSON RIVER PKWY** **E MANIFEST** **NYD982796377**
**1/8-1/4** **BRONX, NY 10465** **PA MANIFEST**
**0.129 mi.** **NJ MANIFEST**
**679 ft.** **Site 3 of 3 in cluster E**

**Relative:** **Higher**
**Actual:** **36 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20180219 |
| Handler Name: | Mta Bridge Bin 55211229 - Bronx Whitestone Bridge |
| Handler Address: | Hutchinson River Pkwy |
| Handler City,State,Zip: | BRONX, NY 10465-1857 |
| EPA ID: | NYD982796377 |
| Contact Name: | PASHKO R CAMAJ |
| Contact Address: | ROBERT MOSES BLDG RM 115D |
| Contact City,State,Zip: | NEW YORK, NY 10035 |
| Contact Telephone: | 212-360-3073 |
| Contact Fax: | 315-454-4467 |
| Contact Email: | PCAMAJ@MTABT.ORG |
| Contact Title: | SR. DIRECTOR, S&H |
| EPA Region: | 02 |
| Land Type: | State |
| Federal Waste Generator Description: | Large Quantity Generator |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Handler Activities |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | ROBERT MOSES BLDG RM 115D |
| Mailing City,State,Zip: | NEW YORK, NY 10035 |
| Owner Name: | Mta-Bridges And Tunnels |
| Owner Type: | State |
| Operator Name: | Mta Bridges And Tunnels |
| Operator Type: | State |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20220406 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Biennial: List of Years
Year: 2017

Click Here for Biennial Reporting System Data:
Year: 2011

Click Here for Biennial Reporting System Data:
Year: 2009

Click Here for Biennial Reporting System Data:
Year: 2005

Click Here for Biennial Reporting System Data:
Year: 2003

Click Here for Biennial Reporting System Data:
Year: 2001

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:

| | |
|---|---|
| Waste Code: | D000 |
| Waste Description: | Not Defined |
| Waste Code: | D001 |
| Waste Description: | Ignitable Waste |
| Waste Code: | D002 |
| Waste Description: | Corrosive Waste |
| Waste Code: | D008 |
| Waste Description: | Lead |
| Waste Code: | D018 |
| Waste Description: | Benzene |
| Waste Code: | X001 |
| Waste Description: | Not Defined |

Handler - Owner Operator:

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: MTA BRIDGES & TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19390429 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | ROBERT MOSES BUILDING |
| Owner/Operator City,State,Zip: | NEW YORK, NY 10035-5199 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: MTA BRIDGES & TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 2 BROADWAY-23RD FLOOR |
| Owner/Operator City,State,Zip: | NEW YORK, NY 10004 |
| Owner/Operator Telephone: | 646-252-7046 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: TRIBOROUGH BRIDGE & TUNNEL AUTH (TBTA) | |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MTA BRIDGES & TUNNELS
Legal Status: State
Date Became Current: 19390429
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: MTA-BRDIGES AND TUNNELS
Legal Status: State
Date Became Current: 19510101
Date Ended Current: Not reported
Owner/Operator Address: ROBERT MOSES BLDG, ROOM 115 D
Owner/Operator City,State,Zip: NEW YORK, NY 10035
Owner/Operator Telephone: 212-360-3073
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MTA BRIDGES & TUNNELS (TBTA)
Legal Status: State
Date Became Current: 19500525
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MTA BRIDGES & TUNNELS
Legal Status: State
Date Became Current: 19390429
Date Ended Current: Not reported
Owner/Operator Address: R MOSES BLG
Owner/Operator City,State,Zip: NEW YORK, NY 10035-5199
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: MTA BRIDGES & TUNNELS
Legal Status: State
Date Became Current: 19390429
Date Ended Current: Not reported
Owner/Operator Address: R MOSES BLG

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Owner/Operator City,State,Zip: | NEW YORK, NY 10035-5199 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: MTA BRIDGES & TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19390429 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | R. MOSES BLG., RANDALL'S ISLAN |
| Owner/Operator City,State,Zip: | NEW YORK, NY 10035-5199 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: MTA BRIDGES & TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19500525 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: TRIBORO BRG & TUN AUTH | |
| Legal Status: | State |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | NOT REQUIRED |
| Owner/Operator City,State,Zip: | NOT REQUIRED, WY 99999 |
| Owner/Operator Telephone: | 212-555-1212 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: MTA BRIDGES AND TUNNELS | |
| Legal Status: | State |
| Date Became Current: | 19510101 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | ROBERT MOSES BUILDING, ROOM 11 |
| Owner/Operator City,State,Zip: | NEW YORK, NY 10035 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: MTA BRIDGES AND TUNNELS | |
| Legal Status: | State |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Date Became Current: 19510101
Date Ended Current: Not reported
Owner/Operator Address: ROBERT MOSES BLDG RM 11
Owner/Operator City,State,Zip: NEW YORK, NY 10035
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MTA BRIDGES & TUNNELS
Legal Status: State
Date Became Current: 19390429
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: MTA-BRIDGES AND TUNNELS
Legal Status: State
Date Became Current: 19510101
Date Ended Current: Not reported
Owner/Operator Address: ROBERT MOSES BLDG RM 115 D
Owner/Operator City,State,Zip: NEW YORK, NY 10035
Owner/Operator Telephone: 212-360-3073
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20100309
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20120305
Handler Name: NYSDOT BRONX WHITESTONE BRIDGE BIN # 55211229
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20180213
Handler Name: NYSDOT BIN 55211229 - BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 20060226
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20071210
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20180219
Handler Name: MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 19891004
Handler Name: TBTA - BRONX WHITESTONE BRIDGE

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20071211
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19920220
Handler Name: BX-WHISTONE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19940328
Handler Name: BRONX-WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19950327
Handler Name: BRONX-WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19980302
Handler Name: TBTA/BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20010101
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20020314
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Ny
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20040226
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Receive Date: 20060227
Handler Name: BRONX WHITESTONE BRIDGE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 485999
NAICS Description: ALL OTHER TRANSIT AND GROUND PASSENGER TRANSPORTATION

NAICS Code: 48849
NAICS Description: OTHER SUPPORT ACTIVITIES FOR ROAD TRANSPORTATION

Has the Facility Received Notices of Violations:
Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19970721
Actual Return to Compliance Date: 19970828
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19970821
Enforcement Identifier: 000
Date of Enforcement Action: 19970721
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: NY
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NYADS
Enforcement Responsible Sub-Organization: R2
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Final Count: | Not reported |
| Final Amount: | Not reported |
| | |
| Found Violation: | Yes |
| Agency Which Determined Violation: | EPA |
| Violation Short Description: | Generators - General |
| Date Violation was Determined: | 19960916 |
| Actual Return to Compliance Date: | 19971030 |
| Return to Compliance Qualifier: | Observed |
| Violation Responsible Agency: | EPA |
| Scheduled Compliance Date: | 19970219 |
| Enforcement Identifier: | 000 |
| Date of Enforcement Action: | 19970121 |
| Enforcement Responsible Agency: | EPA |
| Enforcement Docket Number: | Not reported |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |
| Disposition Status: | Not reported |
| Disposition Status Description: | Not reported |
| Consent/Final Order Sequence Number: | Not reported |
| Consent/Final Order Respondent Name: | Not reported |
| Consent/Final Order Lead Agency: | Not reported |
| Enforcement Type: | WRITTEN INFORMAL |
| Enforcement Responsible Person: | R2MH |
| Enforcement Responsible Sub-Organization: | RCB |
| SEP Sequence Number: | Not reported |
| SEP Expenditure Amount: | Not reported |
| SEP Scheduled Completion Date: | Not reported |
| SEP Actual Date: | Not reported |
| SEP Defaulted Date: | Not reported |
| SEP Type: | Not reported |
| SEP Type Description: | Not reported |
| Proposed Amount: | Not reported |
| Final Monetary Amount: | Not reported |
| Paid Amount: | Not reported |
| Final Count: | Not reported |
| Final Amount: | Not reported |
| | |
| Found Violation: | No |
| Agency Which Determined Violation: | Not reported |
| Violation Short Description: | Not reported |
| Date Violation was Determined: | Not reported |
| Actual Return to Compliance Date: | Not reported |
| Return to Compliance Qualifier: | Not reported |
| Violation Responsible Agency: | Not reported |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | Not reported |
| Date of Enforcement Action: | Not reported |
| Enforcement Responsible Agency: | Not reported |
| Enforcement Docket Number: | Not reported |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | Not reported |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 20090311
Actual Return to Compliance Date: 20090428
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 001
Date of Enforcement Action: 20090402
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NYACY
Enforcement Responsible Sub-Organization: R2
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 19970709
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: NYADS
Evaluation Responsible Sub-Organization: R2
Actual Return to Compliance Date: 19970828
Scheduled Compliance Date: 19970821
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19960916
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: R2MH
Evaluation Responsible Sub-Organization: RCB
Actual Return to Compliance Date: 19971030
Scheduled Compliance Date: 19970219
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20190702
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: NYSR
Evaluation Responsible Sub-Organization: R2
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20090311
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: NYACY
Evaluation Responsible Sub-Organization: R2
Actual Return to Compliance Date: 20090428
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

E MANIFEST:

| | |
|---|---|
| Manifest Tracking Number: | 015548666FLE |
| Last Updated Date: | 20210813 |
| Shipped Date: | 20210709 |
| Received Date: | 20210709 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD982796377 |
| Generator Name: | Triborough Br & Tunnel Auth Cont# Wbm-376 |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | WBM-376 BRONX WHITESTONE BR |
| Generator Mail Street 2: | Not reported |
| Generator Mail City: | QUEENS |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1857 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | 1 HUTCHINSON RIVER PKWY |
| Generator Location Street 2: | Not reported |
| Generator Location City: | BRONX |
| Generator Location Zip: | 10465 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD991291105 |
| Designated Facility Name: | Clean Earth Of North Jersey |
| Designated Facility Mail Street Number: | 105 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | JACOBUS AVE |
| Designated Facility Mail City: | KEARNY |
| Designated Facility Mail Zip: | 07032 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 105 |
| Designated Facility Location Street 1: | JACOBUS AVE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | KEARNY |
| Designated Facility Location Zip: | 07032 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | Not reported |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 017582348FLE |
| Last Updated Date: | 20220923 |
| Shipped Date: | 20220915 |
| Received Date: | 20220916 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD982796377 |
| Generator Name: | Mta Bridge Bin 55211229 - Bronx Whitestone Bridge |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRONX WHITESTONE BR |
| Generator Mail Street 2: | Not reported |
| Generator Mail City: | QUEENS |
| Generator Mail State: | NY |
| Generator Mail Zip: | 11357 |
| Generator Location Street Number: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Generator Location Street 1: | R1 HUTCHINSON RIVER PKWY |
| Generator Location Street 2: | Not reported |
| Generator Location City: | BRONX |
| Generator Location Zip: | 10465 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD991291105 |
| Designated Facility Name: | Clean Earth Of North Jersey |
| Designated Facility Mail Street Number: | 105 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | JACOBUS AVE |
| Designated Facility Mail City: | KEARNY |
| Designated Facility Mail Zip: | 07032 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 105 |
| Designated Facility Location Street 1: | JACOBUS AVE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | KEARNY |
| Designated Facility Location Zip: | 07032 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | Not reported |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

Federal Waste:

| | |
|---|---|
| Manifest Tracking Number: | 017582348FLE |
| Waste Line Number: | 1 |
| Federal Waste Code: | D008 |
| Federal Waste: | LEAD |

Transporter:

| | |
|---|---|
| Manifest Tracking Number: | 017582348FLE |
| Transporter Line Number: | 1 |
| Transporter EPA ID: | NJR986628162 |
| Transporter Name: | Iwt Transport, Inc. |

Waste Line:

| | |
|---|---|
| Manifest Tracking Number: | 017582348FLE |
| Waste Line Number: | 1 |
| U.S. DOT Hazardous Indicator: | Y |
| U.S. DOT ID Number: | NA3077 |
| U.S. DOT Description: | Na3077, Hazardous Waste, Solid N.O.S., 9, Pg Iii, Rq |
| Non-Hazardous Waste Description: | Not reported |
| Number of Containers: | 1 |
| Container Type Code: | DM |
| Container Type Description: | Metal drums, barrels, kegs |
| Waste Quantity: | 25 |
| Quantity Unit of Measure Code: | P |
| Quantity Unit of Measure Description: | Pounds |
| Waste Quantity, in Tons: | 0.0125 |
| Acute Waste Quantity, in Tons: | 0 |
| Non-Acute Waste Quantity, in Tons: | 0.0125 |
| Waste Quantity, in Kilograms: | 11.337875 |
| Acute Waste Quantity, in Kilograms: | 0 |
| Non-Acute Waste Quantity, in Kilorgrams: | 11.337875 |
| Management Method Code: | H110 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Management Method Description: | STABILIZATION |
| Waste Residue Indicator: | N |
| Quantity Discrepancy Indicator: | N |
| Waste Type Discrepancy Indicator: | N |
| Waste Density: | Not reported |
| Waste Density Unit of Measure Code: | Not reported |
| Waste Density Unit of Measure Description: | Not reported |
| Form Code: | Not reported |
| Form Code Description: | Not reported |
| Source Code: | Not reported |
| Source Code Description: | Not reported |
| Waste Minimization Code: | Not reported |
| Waste Minimization Code Description: | Not reported |
| Consent Number: | Not reported |
| EPA Waste Indicator: | Y |

PA MANIFEST:

| | |
|---|---|
| Name: | TBTA BRONX WHITESTONE BRIDGE |
| Address: | FERRY POINT PK |
| City,State,Zip: | BRONX, NY 10465 |
| Year: | 2005 |
| Manifest Number: | PAH190052 |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 05/02/2005 |
| Mailing Address: | RANDALLS ISLAND |
| Contact Name: | MIKE LEOTE |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | 05/06/2005 |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS |
| TSD Facility Address: | 2869 SANDSTONE DR |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 9 |
| Container Type: | DM |
| Waste Quantity: | 6300 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | PAD982661381 |
| Date TSP Sig: | 05/02/2005 |

| | |
|---|---|
| Year: | 2012 |
| Manifest Number: | 008770999JJK |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 03/01/2012 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | Not reported |
| TSD Date: | Not reported |
| TSD Facility Name: | Envirite of Pennsylvania Inc |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| TSD Facility Address: | 730 Vogelsong Rd |
| TSD Facility City: | York |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 2 |
| Container Type: | DM |
| Waste Quantity: | 325 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | PAD010154045 |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2010 |
| Manifest Number: | 000390295JJK |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 12/06/2010 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD010154045 |
| TSD Date: | Not reported |
| TSD Facility Name: | ENVIRITE OF PENNSYLVANIA INC |
| TSD Facility Address: | 730 VOGELSONG ROAD |
| TSD Facility City: | YORK |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 1 |
| Container Type: | CM |
| Waste Quantity: | 15 |
| Unit: | Y |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2010 |
| Manifest Number: | 003196917FLE |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 03/08/2010 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | Not reported |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS OF PA INC |
| TSD Facility Address: | 2869 SANDSTONE DRIVE |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 1 |
| Container Type: | DM |
| Waste Quantity: | 20 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2011 |
| Manifest Number: | 007637374JJK |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 03/09/2011 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD010154045 |
| TSD Date: | Not reported |
| TSD Facility Name: | ENVIRITE OF PENNSYLVANIA INC |
| TSD Facility Address: | 730 VOGELSONG ROAD |
| TSD Facility City: | YORK |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 5 |
| Container Type: | DM |
| Waste Quantity: | 1600 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2007 |
| Manifest Number: | 002131872JJK |
| Manifest Type: | Not reported |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 01/11/2007 |
| Mailing Address: | Not reported |
| Contact Name: | MIKE LEOTE |
| Contact Phone: | 212-360-2853 |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | Not reported |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS OF PA INC |
| TSD Facility Address: | 2869 SANDSTONE DRIVE |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | Not reported |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 1 |
| Container Type: | DM |
| Waste Quantity: | 100 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2006 |
| Manifest Number: | 002124737JJK |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 11/20/2006 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | Not reported |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | Not reported |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS OF PA INC |
| TSD Facility Address: | 2869 SANDSTONE DRIVE |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | 212-360-2853 |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 20 |
| Container Type: | DM |
| Waste Quantity: | 16000 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |
| | |
| Year: | 2006 |
| Manifest Number: | PAH290693 |
| Manifest Type: | T |
| Generator EPA ID: | NYD982796377 |
| Generator Date: | 07/26/2006 |
| Mailing Address: | Not reported |
| Contact Name: | Not reported |
| Contact Phone: | Not reported |
| TSD EPA ID: | PAD085690592 |
| TSD Date: | Not reported |
| TSD Facility Name: | REPUBLIC ENVIRONMENTAL SYSTEMS OF PA INC |
| TSD Facility Address: | 2869 SANDSTONE DRIVE |
| TSD Facility City: | HATFIELD |
| TSD Facility State: | PA |
| Facility Telephone: | 212-360-2853 |
| Page Number: | 1 |
| Line Number: | 1 |
| Waste Number: | D008 |
| Container Number: | 14 |
| Container Type: | DM |
| Waste Quantity: | 11200 |
| Unit: | P |
| Handling Code: | Not reported |
| TSP EPA ID: | Not reported |
| Date TSP Sig: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

NJ MANIFEST:

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Name: | TBTA-BRONX-WHITESTONE BRIDGE |
| Address: | FERRY POINT PARK |
| City,State,Zip: | BRONX, NY 10465 |
| County: | Not reported |
| Mailing Address: | 10 COLUMBUX CIR |
| Mailing City,State,Zip: | NEW YORK 10019 |
| Telephone: | 2124688454 |
| Emergency Telephone: | Not reported |
| Contact: | Not reported |
| Comments: | Not reported |
| SIC Code: | Not reported |
| County: | 00 |
| Municipal: | 00 |
| Previous EPAID: | Not reported |
| Generator Flag: | X |
| Transporter Flag: | Not reported |
| TSDF Flag: | Not reported |
| Name Change: | Not reported |
| Date Change: | 000000 |

Manifest Data:

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000457153WAS |
| Date Shipped: | 12/23/2011 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | H111 |
| Quantity: | 200.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000201007WAS |
| Date Shipped: | 11/11/2008 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 11/11/2008 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 11/12/2008 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Waste Code: | D008 |
| Hand Code: | H111 |
| Quantity: | 23100 |
| Unit: | P |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000892223JJK |
| Date Shipped: | 02/13/2009 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 02/13/2009 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 02/13/2009 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | H141 |
| Quantity: | 15 |
| Unit: | G |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | NJA5006929 |
| Date Shipped: | 03/03/2004 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 03/03/2004 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 03/03/2004 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | 03300425 |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000198563WAS |
| Date Shipped: | 07/31/2009 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 07/31/2009 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 07/31/2009 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | F003 |
| Hand Code: | H061 |
| Quantity: | 385 |
| Unit: | G |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000201195WAS |
| Date Shipped: | 03/04/2009 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 03/04/2009 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 03/04/2009 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | H111 |
| Quantity: | 2700 |
| Unit: | P |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 003536100JJK |
| Date Shipped: | 06/05/2009 |
| TSDF EPA ID: | NJD002200046 |
| Transporter EPA ID: | NJ0000027193 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 06/05/2009 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 06/05/2009 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | H061 |
| Quantity: | 55 |
| Unit: | G |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000196516WAS |
| Date Shipped: | 10/02/2008 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | 10/02/2008 |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | 10/03/2008 |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | N |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | F003 |
| Hand Code: | H061 |
| Quantity: | 275 |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

Unit: G

EPA ID: NYD982796377
Manifest Number: 009406226FLE
Date Shipped: 1/13/2017
TSDF EPA ID: NJD991291105
Transporter EPA ID: NJR986628162
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: Not reported
Date Trans2 Transported Waste: Not reported
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: Not reported
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: Not reported
Reason Load Was Rejected: Not reported

EPA ID: NYD982796377
Manifest Number: 009406257FLE
Date Shipped: 1/27/2017
TSDF EPA ID: NJD991291105
Transporter EPA ID: NJR986628162
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD982796377 |
| Manifest Number: | 000422445WAS |
| Date Shipped: | 8/23/2011 |
| TSDF EPA ID: | NJD991291105 |
| Transporter EPA ID: | NYD046765574 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |

**MTA BRIDGE BIN 55211229 - BRONX WHITESTONE BRIDGE (Continued)** **1000141522**

| | |
|---|---|
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D008 |
| Hand Code: | H111 |
| Quantity: | 200.00 |
| Unit: | Pounds |

Click this hyperlink while viewing on your computer to access
23 additional NJ MANIFEST: record(s) in the EDR Site Report.

---

**F27** **545 BRUSH AVE/BX/U.P.S** **NY LTANKS** **S100145768**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **NEW YORK CITY, NY**
**0.131 mi.**
**694 ft.** **Site 2 of 9 in cluster F**

**Relative:**
**Lower**

**Actual:**
**5 ft.**

LTANKS:

| | |
|---|---|
| Name: | 545 BRUSH AVE/BX/U.P.S |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | NEW YORK CITY, NY |
| Spill Number/Closed Date: | 8909242 / 2003-02-27 |
| Facility ID: | 8909242 |
| Site ID: | 138397 |
| Spill Date: | 1989-12-20 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | C4 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | TOMASELLO |
| Referred To: | Not reported |
| Reported to Dept: | 1989-12-20 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1990-01-24 |
| Spill Record Last Update: | 2004-02-09 |
| Spiller Name: | Not reported |
| Spiller Company: | Not reported |

**545 BRUSH AVE/BX/U.P.S (Continued)** **S100145768**

| | |
|---|---|
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 118343 |
| DEC Memo: | Not reported |
| Remarks: | 1K TANK FAILED TANK AUDITOR WITH LEAK RATE OF -0.971GPH, OWNER WILL ACCESS SITUATION, TANK MAY HAVE TO BE PULLED. |

All TTF:

| | |
|---|---|
| Facility ID: | 8909242 |
| Spill Number: | 8909242 |
| Spill Tank Test: | 1536600 |
| Site ID: | 138397 |
| Tank Number: | Not reported |
| Tank Size: | 0 |
| Material: | 0001 |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 00 |
| Test Method 2: | Unknown |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 138397 |
| Operable Unit ID: | 936424 |
| Operable Unit: | 01 |
| Material ID: | 442414 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | -1.00 |
| Units: | L |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

---

**28**
**SSW**
**1/8-1/4**
**0.138 mi.**
**728 ft.**

**FERRY POINT PARK** **NY SWF/LF** **S126022942**
**10 HUTCHINSON ROVER PKWY, PENINSULA PROJECTING INTO THE EAST** **NY ILI** **N/A**
**BRONX, NY**

**Relative:**
**Lower**

**Actual:**
**12 ft.**

SWF/LF:

| | |
|---|---|
| Name: | FERRY POINT PARK |
| Address: | 10 HUTCHINSON ROVER PKWY, PENINSULA PROJECTING INTO THE EAST RIVER ROUGHLY OPPOSITE TH |
| City,State,Zip: | BRONX, NY |
| Flag: | INACTIVE |
| Region Code: | 2 |

**FERRY POINT PARK (Continued)** **S126022942**

| | |
|---|---|
| Phone Number: | Not reported |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | MSW |
| Activity Number: | Not reported |
| Active: | Not reported |
| East Coordinate: | Not reported |
| North Coordinate: | Not reported |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | Not reported |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

ILI:

| | |
|---|---|
| Name: | FERRY POINT PARK |
| Address: | 10 HUTCHINSON ROVER PKWY, PENINSULA PROJECTING INTO THE EAST RIVER ROUGHLY OPPOSITE THE COLLEGE POINT AND MALBA NEIGHBORHOODS OF QUEEN |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.809072 |
| Longitude: | -73.837238 |
| Region: | 2 |
| SWID: | 03S01 |
| NY Inactive List: | Not reported |
| Inactive Reg Number: | Not reported |
| Alternative Facility Names: | Not reported |
| Removed: | Not reported |
| Why Removed: | Not reported |
| Location Accuracy: | Not reported |
| Date Of Last Inspection: | 15-Aug-18 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Authorization: | Not reported |
| Number: | Not reported |
| Issue Date: | Not reported |

**FERRY POINT PARK (Continued)** **S126022942**

| | |
|---|---|
| Expiration Date: | Not reported |
| Start Date: | 1945 |
| Stop Date: | 1965 |
| Landfill Type: | MSW |

---

**F29** **UNITED PARCEL SERVICE** **RCRA-SQG** **1000398442**
**NNW** **BRUSH AVE** **NY CBS AST** **NYD986900728**
**1/8-1/4** **BRONX, NY 10465** **E MANIFEST**
**0.148 mi.** **NY MANIFEST**
**779 ft.** **Site 3 of 9 in cluster F** **NJ MANIFEST**

**Relative:** **Lower**
**Actual:** **5 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20221221 |
| Handler Name: | United Parcel Service - Brush Avenue (Nybru) |
| Handler Address: | Brush Ave |
| Handler City,State,Zip: | BRONX, NY 10465 |
| EPA ID: | NYD986900728 |
| Contact Name: | MILLER PONTON |
| Contact Address: | OAK ST |
| Contact City,State,Zip: | UNIONDALE, NY 11553 |
| Contact Telephone: | 631-316-3854 |
| Contact Fax: | Not reported |
| Contact Email: | MPONTON@UPS.COM |
| Contact Title: | CORPORATE ENVIRONMENTAL COORDINATOR |
| EPA Region: | 02 |
| Land Type: | Private |
| Federal Waste Generator Description: | Small Quantity Generator |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Handler Activities |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | OAK ST |
| Mailing City,State,Zip: | UNIONDALE, NY 11553 |
| Owner Name: | 535 Brush Avenue Llc |
| Owner Type: | Private |
| Operator Name: | United Parcel Service |
| Operator Type: | Private |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20221223 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Hazardous Waste Summary:

| | |
|---|---|
| Waste Code: | D001 |
| Waste Description: | Ignitable Waste |
| Waste Code: | D002 |
| Waste Description: | Corrosive Waste |
| Waste Code: | D003 |
| Waste Description: | Reactive Waste |
| Waste Code: | D007 |
| Waste Description: | Chromium |
| Waste Code: | D011 |
| Waste Description: | Silver |
| Waste Code: | D018 |
| Waste Description: | Benzene |
| Waste Code: | D019 |
| Waste Description: | Carbon Tetrachloride |
| Waste Code: | D021 |
| Waste Description: | Chlorobenzene |
| Waste Code: | D026 |
| Waste Description: | Cresol |
| Waste Code: | D028 |
| Waste Description: | 1,2-Dichloroethane |
| Waste Code: | D035 |
| Waste Description: | Methyl Ethyl Ketone |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Waste Code: D039
Waste Description: Tetrachloroethylene

Waste Code: NONE
Waste Description: Not Defined

Waste Code: P075
Waste Description: Nicotine, & Salts (Or) Pyridine, 3-(1-Methyl-2-Pyrrolidinyl)-,(S)-, & Salts

Waste Code: U080
Waste Description: Methane, Dichloro- (Or) Methylene Chloride

Waste Code: U112
Waste Description: Acetic Acid, Ethyl Ester (I) (Or) Ethyl Acetate (I)

Waste Code: U122
Waste Description: Formaldehyde

Waste Code: U134
Waste Description: Hydrofluoric Acid (C,T) (Or) Hydrogen Fluoride (C,T)

Waste Code: U154
Waste Description: Methanol (I) (Or) Methyl Alcohol (I)

Waste Code: U162
Waste Description: 2-Propenoic Acid, 2-Methyl-, Methyl Ester (I,T) (Or) Methyl Methacrylate (I,T)

Waste Code: U213
Waste Description: Furan, Tetrahydro-(I) (Or) Tetrahydrofuran (I)

Waste Code: U220
Waste Description: Benzene, Methyl- (Or) Toluene

Waste Code: U239
Waste Description: Benzene, Dimethyl- (I,T) (Or) Xylene (I)

Waste Code: U240
Waste Description: 2,4-D, Salts & Esters (Or) Acetic Acid, (2,4-Dichlorophenoxy)-, Salts & Esters (Or) Dichlorophenoxyacetic Acid 2,4-D

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: EMANUL CIMINELLO JR
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: NOT REQUIRED
Owner/Operator City,State,Zip: NOT REQUIRED, WY 99999
Owner/Operator Telephone: 212-555-1212
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: EMANUL CIMINELLO JR

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | NOT REQUIRED |
| Owner/Operator City,State,Zip: | NOT REQUIRED, WY 99999 |
| Owner/Operator Telephone: | 212-555-1212 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: UNITED PARCEL SERVICE | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 55 GLENLAKE PKWY NE |
| Owner/Operator City,State,Zip: | ATLANTA, GA 30328 |
| Owner/Operator Telephone: | 551-255-6818 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | CEGOMEZ@UPS.COM |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: UNITED PARCEL SERVICE | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 55 GLENLAKE PKWY NE |
| Owner/Operator City,State,Zip: | ATLANTA, GA 30328 |
| Owner/Operator Telephone: | 631-316-3854 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | MPONTON@UPS.COM |
| | |
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: EMANUL CIMINELLO JR | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | NOT REQUIRED |
| Owner/Operator City,State,Zip: | NOT REQUIRED, WY 99999 |
| Owner/Operator Telephone: | 212-555-1212 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| | |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: 535 BRUSH AVENUE LLC | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 1208 WYATT STREET |
| Owner/Operator City,State,Zip: | BRONX, NY 10460 |
| Owner/Operator Telephone: | 718-828-7272 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: 535 BRUSH AVENUE LLC | |
| Legal Status: | Private |
| Date Became Current: | Not reported |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 1208 WYATT ST |
| Owner/Operator City,State,Zip: | BRONX, NY 10460 |
| Owner/Operator Telephone: | 718-828-7272 |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

Historic Generators:

| | |
|---|---|
| Receive Date: | 19950418 |
| Handler Name: UNITED PARCEL SERVICE | |
| Federal Waste Generator Description: | Conditionally Exempt Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20060101 |
| Handler Name: UNITED PARCEL SERVICE | |
| Federal Waste Generator Description: | Conditionally Exempt Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20070101 |
| Handler Name: UNITED PARCEL SERVICE | |
| Federal Waste Generator Description: | Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 19900517 |
| Handler Name: UNITED PARCEL SERVICE | |
| Federal Waste Generator Description: | Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20220324 |
| Handler Name: | UNITED PARCEL SERVICE - BRUSH AVENUE (NYBRU) |
| Federal Waste Generator Description: | Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | No |
| Electronic Manifest Broker: | No |

| | |
|---|---|
| Receive Date: | 20221221 |
| Handler Name: | UNITED PARCEL SERVICE - BRUSH AVENUE (NYBRU) |
| Federal Waste Generator Description: | Small Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | Yes |
| Non Storage Recycler Activity: | No |
| Electronic Manifest Broker: | No |

List of NAICS Codes and Descriptions:

| | |
|---|---|
| NAICS Code: | 492110 |
| NAICS Description: | COURIERS AND EXPRESS DELIVERY SERVICES |

Has the Facility Received Notices of Violations:

| | |
|---|---|
| Found Violation: | Yes |
| Agency Which Determined Violation: | EPA |
| Violation Short Description: | Generators - Pre-transport |
| Date Violation was Determined: | 20220215 |
| Actual Return to Compliance Date: | 20221019 |
| Return to Compliance Qualifier: | Documented |
| Violation Responsible Agency: | EPA |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | 999 |
| Date of Enforcement Action: | 20220928 |
| Enforcement Responsible Agency: | EPA |
| Enforcement Docket Number: | 06-2022-0942 |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:67
Consent/Final Order Respondent Name: Ups
Consent/Final Order Lead Agency: 0
Enforcement Type: MULTI SITE CA/FO
Enforcement Responsible Person: CAFO
Enforcement Responsible Sub-Organization: R06
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: EPA
Violation Short Description: LDR - General
Date Violation was Determined: 20220215
Actual Return to Compliance Date: 20221019
Return to Compliance Qualifier: Documented
Violation Responsible Agency: EPA
Scheduled Compliance Date: Not reported
Enforcement Identifier: 999
Date of Enforcement Action: 20220928
Enforcement Responsible Agency: EPA
Enforcement Docket Number: 06-2022-0942
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:67
Consent/Final Order Respondent Name: Ups
Consent/Final Order Lead Agency: 0
Enforcement Type: MULTI SITE CA/FO
Enforcement Responsible Person: CAFO
Enforcement Responsible Sub-Organization: R06
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Final Amount: | Not reported |
| | |
| Found Violation: | Yes |
| Agency Which Determined Violation: | EPA |
| Violation Short Description: | Generators - General |
| Date Violation was Determined: | 20220215 |
| Actual Return to Compliance Date: | 20221019 |
| Return to Compliance Qualifier: | Documented |
| Violation Responsible Agency: | EPA |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | 999 |
| Date of Enforcement Action: | 20220928 |
| Enforcement Responsible Agency: | EPA |
| Enforcement Docket Number: | 06-2022-0942 |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |
| Disposition Status: | Not reported |
| Disposition Status Description: | Not reported |
| Consent/Final Order Sequence Number: | 67 |
| Consent/Final Order Respondent Name: | Ups |
| Consent/Final Order Lead Agency: | 0 |
| Enforcement Type: | MULTI SITE CA/FO |
| Enforcement Responsible Person: | CAFO |
| Enforcement Responsible Sub-Organization: | R06 |
| SEP Sequence Number: | Not reported |
| SEP Expenditure Amount: | Not reported |
| SEP Scheduled Completion Date: | Not reported |
| SEP Actual Date: | Not reported |
| SEP Defaulted Date: | Not reported |
| SEP Type: | Not reported |
| SEP Type Description: | Not reported |
| Proposed Amount: | Not reported |
| Final Monetary Amount: | Not reported |
| Paid Amount: | Not reported |
| Final Count: | Not reported |
| Final Amount: | Not reported |
| | |
| Found Violation: | Yes |
| Agency Which Determined Violation: | EPA |
| Violation Short Description: | Generators - Manifest |
| Date Violation was Determined: | 20220215 |
| Actual Return to Compliance Date: | 20221019 |
| Return to Compliance Qualifier: | Documented |
| Violation Responsible Agency: | EPA |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | 999 |
| Date of Enforcement Action: | 20220928 |
| Enforcement Responsible Agency: | EPA |
| Enforcement Docket Number: | 06-2022-0942 |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:67
Consent/Final Order Respondent Name: Ups
Consent/Final Order Lead Agency: 0
Enforcement Type: MULTI SITE CA/FO
Enforcement Responsible Person: CAFO
Enforcement Responsible Sub-Organization: R06
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19930302
Actual Return to Compliance Date: 19930524
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19930526
Enforcement Identifier: 000
Date of Enforcement Action: 19930511
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: NY
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: NYADS
Enforcement Responsible Sub-Organization: R2
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Final Amount: | Not reported |
| | |
| Found Violation: | Yes |
| Agency Which Determined Violation: | State |
| Violation Short Description: | Generators - General |
| Date Violation was Determined: | 19930302 |
| Actual Return to Compliance Date: | 19930524 |
| Return to Compliance Qualifier: | Observed |
| Violation Responsible Agency: | State |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | 000 |
| Date of Enforcement Action: | 19930302 |
| Enforcement Responsible Agency: | State |
| Enforcement Docket Number: | Not reported |
| Enforcement Attorney: | NY |
| Corrective Action Component: | No |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |
| Disposition Status: | Not reported |
| Disposition Status Description: | Not reported |
| Consent/Final Order Sequence Number: | Not reported |
| Consent/Final Order Respondent Name: | Not reported |
| Consent/Final Order Lead Agency: | Not reported |
| Enforcement Type: | WRITTEN INFORMAL |
| Enforcement Responsible Person: | NYADS |
| Enforcement Responsible Sub-Organization: | R2 |
| SEP Sequence Number: | Not reported |
| SEP Expenditure Amount: | Not reported |
| SEP Scheduled Completion Date: | Not reported |
| SEP Actual Date: | Not reported |
| SEP Defaulted Date: | Not reported |
| SEP Type: | Not reported |
| SEP Type Description: | Not reported |
| Proposed Amount: | Not reported |
| Final Monetary Amount: | Not reported |
| Paid Amount: | Not reported |
| Final Count: | Not reported |
| Final Amount: | Not reported |
| | |
| Found Violation: | No |
| Agency Which Determined Violation: | Not reported |
| Violation Short Description: | Not reported |
| Date Violation was Determined: | Not reported |
| Actual Return to Compliance Date: | Not reported |
| Return to Compliance Qualifier: | Not reported |
| Violation Responsible Agency: | Not reported |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | Not reported |
| Date of Enforcement Action: | Not reported |
| Enforcement Responsible Agency: | Not reported |
| Enforcement Docket Number: | Not reported |
| Enforcement Attorney: | Not reported |
| Corrective Action Component: | Not reported |
| Appeal Initiated Date: | Not reported |
| Appeal Resolution Date: | Not reported |
| Disposition Status Date: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: EPA
Violation Short Description: Generators - Records/Reporting
Date Violation was Determined: 20220215
Actual Return to Compliance Date: 20221019
Return to Compliance Qualifier: Documented
Violation Responsible Agency: EPA
Scheduled Compliance Date: Not reported
Enforcement Identifier: 999
Date of Enforcement Action: 20220928
Enforcement Responsible Agency: EPA
Enforcement Docket Number: 06-2022-0942
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: 67
Consent/Final Order Respondent Name: Ups
Consent/Final Order Lead Agency: 0
Enforcement Type: MULTI SITE CA/FO
Enforcement Responsible Person: CAFO
Enforcement Responsible Sub-Organization: R06
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Final Amount: Not reported

Evaluation Action Summary:

Evaluation Date: 20220115
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: CAFO
Evaluation Responsible Sub-Organization: R06
Actual Return to Compliance Date: 20221019
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20220115
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: CAFO
Evaluation Responsible Sub-Organization: R06
Actual Return to Compliance Date: 20221019
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20220115
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: CAFO
Evaluation Responsible Sub-Organization: R06
Actual Return to Compliance Date: 20221019
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20220115
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: CAFO
Evaluation Responsible Sub-Organization: R06
Actual Return to Compliance Date: 20221019
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19930105
Evaluation Responsible Agency: State

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Found Violation: | Yes |
| Evaluation Type Description: | COMPLIANCE EVALUATION INSPECTION |
| Evaluation Responsible Person Identifier: | NYADS |
| Evaluation Responsible Sub-Organization: | R2 |
| Actual Return to Compliance Date: | 19930524 |
| Scheduled Compliance Date: | 19930526 |
| Date of Request: | Not reported |
| Date Response Received: | Not reported |
| Request Agency: | Not reported |
| Former Citation: | Not reported |

| | |
|---|---|
| Evaluation Date: | 19930105 |
| Evaluation Responsible Agency: | State |
| Found Violation: | Yes |
| Evaluation Type Description: | COMPLIANCE EVALUATION INSPECTION |
| Evaluation Responsible Person Identifier: | NYADS |
| Evaluation Responsible Sub-Organization: | R2 |
| Actual Return to Compliance Date: | 19930524 |
| Scheduled Compliance Date: | Not reported |
| Date of Request: | Not reported |
| Date Response Received: | Not reported |
| Request Agency: | Not reported |
| Former Citation: | Not reported |

| | |
|---|---|
| Evaluation Date: | 20100615 |
| Evaluation Responsible Agency: | State |
| Found Violation: | No |
| Evaluation Type Description: | COMPLIANCE EVALUATION INSPECTION |
| Evaluation Responsible Person Identifier: | NYACY |
| Evaluation Responsible Sub-Organization: | R2 |
| Actual Return to Compliance Date: | Not reported |
| Scheduled Compliance Date: | Not reported |
| Date of Request: | Not reported |
| Date Response Received: | Not reported |
| Request Agency: | Not reported |
| Former Citation: | Not reported |

| | |
|---|---|
| Evaluation Date: | 20220115 |
| Evaluation Responsible Agency: | EPA |
| Found Violation: | Yes |
| Evaluation Type Description: | NON-FINANCIAL RECORD REVIEW |
| Evaluation Responsible Person Identifier: | CAFO |
| Evaluation Responsible Sub-Organization: | R06 |
| Actual Return to Compliance Date: | 20221019 |
| Scheduled Compliance Date: | Not reported |
| Date of Request: | Not reported |
| Date Response Received: | Not reported |
| Request Agency: | Not reported |
| Former Citation: | Not reported |

CBS AST:

| | |
|---|---|
| CBS Number: | 2-000341 |
| ICS Number: | Not reported |
| PBS Number: | 2-601299 |
| MOSF Number: | Not reported |
| SPDES Number: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Facility Status: | IN SERVICE |
| Facility Type: | I |
| Telephone: | (718) 828-8014 |
| Facility Town: | NEW YORK CITY |
| Region: | STATE |
| Expiration Date: | 03/11/2004 |
| Total Capacity of All Active Tanks(gal): | 400 |
| Operator: | MARK MERCHANT |
| Emergency Contact: | PAUL VETRANO |
| Emergency Phone: | (718) 706-3121 |
| Owner Name: | UNITED PARCEL SERVICE |
| Owner Address: | 46-05 56 ROAD |
| Owner City,St,Zip: | MASPETH, NY 11378 |
| Owner Telephone: | (718) 706-3105 |
| Owner Type: | Corporate/Commercial |
| Owner Sub Type: | Not reported |
| Mail Name: | UNITED PARCEL SERVICE |
| Mail Contact Addr: | 46-05 56 ROAD |
| Mail Contact Addr2: | Not reported |
| Mail Contact Contact: | PLANT ENGINEERING |
| Mail Contact City,St,Zip: | MASPETH, NY 11378 |
| Mail Phone: | (718) 706-3105 |

| | |
|---|---|
| Tank Id: | 005D |
| CAS Number: | 107211 |
| Federal ID: | Not reported |
| Tank Status: | In Service |
| Install Date: | 09/95 |
| Tank Closed: | Not reported |
| Capacity (Gal): | 200 |
| Chemical: | Ethylene glycol |
| Tank Location: | Indoors, Belowground |
| Tank Type: | Steel/carbon steel |
| Total Tanks: | 2 |
| Tank Secret: | False |
| Tank Secondary Containment: | None |
| Tank Error Status: | No Missing Data |
| Date Entered: | 03/10/1998 |
| Certified Date: | 12/20/2001 |
| Substance: | Single Hazardous Substance on DEC List |
| Internal Protection: | None |
| External Protection: | None,Painted/Asphalt Coating |
| Pipe Location: | Aboveground |
| Pipe Type: | Steel/Iron |
| Pipe Internal: | None |
| Pipe External: | 00 |
| Pipe Flag: | 00 |
| Leak Detection: | 00 |
| Overfill Protection: | 04 |
| Haz Percent: | 50 |
| Last Test: | Not reported |
| Due Date: | Not reported |
| SWIS Code: | 6001 |
| Lat/Long: | Not reported |
| Is Updated: | False |
| Renew Date: | Not reported |
| Is It There: | False |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Delinquent: | False |
| Date Expired: | Not reported |
| Owner Mark: | 1 |
| Certificate Needs to be Printed: | False |
| Fiscal Amt for Registration Fee Correct: | True |
| Renewal Has Been Printed for Facility: | True |
| Pre-Printed Renewal App Last Printed: | 11/27/2001 |

| | |
|---|---|
| Tank Id: | 005C |
| CAS Number: | 107211 |
| Federal ID: | Not reported |
| Tank Status: | In Service |
| Install Date: | 09/95 |
| Tank Closed: | Not reported |
| Capacity (Gal): | 200 |
| Chemical: | Ethylene glycol |
| Tank Location: | Indoors, Belowground |
| Tank Type: | Steel/carbon steel |
| Total Tanks: | 2 |
| Tank Secret: | False |
| Tank Secondary Containment: | None |
| Tank Error Status: | No Missing Data |
| Date Entered: | 03/10/1998 |
| Certified Date: | 12/20/2001 |
| Substance: | Single Hazardous Substance on DEC List |
| Internal Protection: | None |
| External Protection: | None,Painted/Asphalt Coating |
| Pipe Location: | Aboveground |
| Pipe Type: | Steel/Iron |
| Pipe Internal: | None |
| Pipe External: | 00 |
| Pipe Flag: | 00 |
| Leak Detection: | 00 |
| Overfill Protection: | 04 |
| Haz Percent: | 50 |
| Last Test: | Not reported |
| Due Date: | Not reported |
| SWIS Code: | 6001 |
| Lat/Long: | Not reported |
| Is Updated: | False |
| Renew Date: | Not reported |
| Is It There: | False |
| Delinquent: | False |
| Date Expired: | Not reported |
| Owner Mark: | 1 |
| Certificate Needs to be Printed: | False |
| Fiscal Amt for Registration Fee Correct: | True |
| Renewal Has Been Printed for Facility: | True |
| Pre-Printed Renewal App Last Printed: | 11/27/2001 |

E MANIFEST:

| | |
|---|---|
| Manifest Tracking Number: | 001211496VES |
| Last Updated Date: | 20190228 |
| Shipped Date: | 20190219 |
| Received Date: | 20190220 |
| Manifest Status: | Signed |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | 1 EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | 1 EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |
| | |
| Manifest Tracking Number: | 001892719VES |
| Last Updated Date: | 20230103 |
| Shipped Date: | 20221213 |
| Received Date: | 20221216 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 002070694VES |
| Last Updated Date: | 20220103 |
| Shipped Date: | 20211208 |
| Received Date: | 20211210 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Manifest Tracking Number: | 001301805VES |
| Last Updated Date: | 20190627 |
| Shipped Date: | 20190617 |
| Received Date: | 20190619 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | 1 EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | 1 EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001307667VES |
| Last Updated Date: | 20210623 |
| Shipped Date: | 20210617 |
| Received Date: | 20210617 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001670332VES |
| Last Updated Date: | 20200316 |
| Shipped Date: | 20200303 |
| Received Date: | 20200304 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001670443VES |
| Last Updated Date: | 20200613 |
| Shipped Date: | 20200601 |
| Received Date: | 20200605 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001672071VES |
| Last Updated Date: | 20210106 |
| Shipped Date: | 20201210 |
| Received Date: | 20201214 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001672227VES |
| Last Updated Date: | 20210409 |
| Shipped Date: | 20210325 |
| Received Date: | 20210331 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001676379VES |
| Last Updated Date: | 20200925 |
| Shipped Date: | 20200921 |
| Received Date: | 20200923 |
| Manifest Status: | Signed |
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | Not reported |
| Designated Facility Mail Street 2: | EDEN LANE |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | EDEN LANE |
| Designated Facility Location Street 2: | Not reported |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS LLC |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

| | |
|---|---|
| Manifest Tracking Number: | 001982310VES |
| Last Updated Date: | 20220624 |
| Shipped Date: | 20220620 |
| Received Date: | 20220620 |
| Manifest Status: | Signed |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Submission Type: | DataImage5Copy |
| Origin Type: | Service |
| Generator EPA ID: | NYD986900728 |
| Generator Name: | United Parcel Service |
| Generator Mail Street Number: | Not reported |
| Generator Mail Street 1: | BRUSH AVE |
| Generator Mail Street 2: | 545 BRUSH AVE |
| Generator Mail City: | BRONX |
| Generator Mail State: | NY |
| Generator Mail Zip: | 10465-1852 |
| Generator Location Street Number: | Not reported |
| Generator Location Street 1: | BRUSH AVE |
| Generator Location Street 2: | 3 WAREHOUSE LN |
| Generator Location City: | ELMSFORD |
| Generator Location Zip: | 10465-1852 |
| Generator Location State: | NY |
| Generator Contact Company Name: | Not reported |
| Designated Facility EPA ID: | NJD980536593 |
| Designated Facility Name: | Not reported |
| Designated Facility Mail Street Number: | 1 |
| Designated Facility Mail Street 1: | 1 EDEN LANE |
| Designated Facility Mail Street 2: | L.L.C. |
| Designated Facility Mail City: | FLANDERS |
| Designated Facility Mail Zip: | 07836 |
| Designated Facility Mail State: | NJ |
| Designated Facility Location Street Number: | 1 |
| Designated Facility Location Street 1: | L.L.C. |
| Designated Facility Location Street 2: | 1 EDEN LANE |
| Designated Facility Location City: | FLANDERS |
| Designated Facility Location Zip: | 07836 |
| Designated Facility Location State: | NJ |
| Designated Facility Contact Company Name: | VEOLIA ES TECHNICAL SOLUTIONS |
| Manifest Residue Indicator: | N |
| Rejection Indicator: | N |

Federal Waste:

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 1 |
| Federal Waste Code: | D001 |
| Federal Waste: | IGNITABLE WASTE |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 1 |
| Federal Waste Code: | D018 |
| Federal Waste: | BENZENE |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 1 |
| Federal Waste Code: | D019 |
| Federal Waste: | CARBON TETRACHLORIDE |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 1 |
| Federal Waste Code: | D021 |
| Federal Waste: | CHLOROBENZENE |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Waste Line Number: 1
Federal Waste Code: D028
Federal Waste: 1,2-DICHLOROETHANE

Manifest Tracking Number: 001219427VES
Waste Line Number: 1
Federal Waste Code: D029
Federal Waste: 1,1-DICHLOROETHYLENE

Manifest Tracking Number: 001219427VES
Waste Line Number: 1
Federal Waste Code: D035
Federal Waste: METHYL ETHYL KETONE

Manifest Tracking Number: 001219427VES
Waste Line Number: 1
Federal Waste Code: D039
Federal Waste: TETRACHLOROETHYLENE

Manifest Tracking Number: 001219427VES
Waste Line Number: 1
Federal Waste Code: D040
Federal Waste: TRICHLORETHYLENE

Manifest Tracking Number: 001219427VES
Waste Line Number: 2
Federal Waste Code: D001
Federal Waste: IGNITABLE WASTE

Manifest Tracking Number: 001219427VES
Waste Line Number: 2
Federal Waste Code: U154
Federal Waste: METHANOL (I) (OR) METHYL ALCOHOL (I)

Manifest Tracking Number: 001219427VES
Waste Line Number: 3
Federal Waste Code: D001
Federal Waste: IGNITABLE WASTE

Manifest Tracking Number: 001219427VES
Waste Line Number: 3
Federal Waste Code: D018
Federal Waste: BENZENE

Manifest Tracking Number: 001219427VES
Waste Line Number: 4
Federal Waste Code: D001
Federal Waste: IGNITABLE WASTE

State Waste:
Manifest Tracking Number: 001219427VES
Waste Line Number: 1
State Waste Code Owner: NY
State Waste Code: B
State Waste: Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Manifest Tracking Number: 001219427VES
Waste Line Number: 2
State Waste Code Owner: NY
State Waste Code: B
State Waste: Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only

Manifest Tracking Number: 001219427VES
Waste Line Number: 3
State Waste Code Owner: NY
State Waste Code: B
State Waste: Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only

Manifest Tracking Number: 001219427VES
Waste Line Number: 4
State Waste Code Owner: NY
State Waste Code: B
State Waste: Incineration, heat recovery, burning. Waste management method code to be used on e-Manifest only

Transporter:
Manifest Tracking Number: 001219427VES
Transporter Line Number: 1
Transporter EPA ID: NJD080631369
Transporter Name: Veolia Es Technical Solutions

Waste Line:
Manifest Tracking Number: 001219427VES
Waste Line Number: 1
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1950
U.S. DOT Description: Un1950, Waste Aerosols, Flammable,(Each Not Exceeding 1l Capacity), 2.1, Rq (D001), Limited Quantity
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 140
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.07
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.07
Waste Quantity, in Kilograms: 63.492104
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 63.492104
Management Method Code: H141
Management Method Description: STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y

Manifest Tracking Number: 001219427VES
Waste Line Number: 2
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1993
U.S. DOT Description: Un1993, Waste Flammable Liquids, N.O.S., (Methanol), 3, Ii
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 120
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.06
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.06
Waste Quantity, in Kilograms: 54.4218
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 54.4218
Management Method Code: H141
Management Method Description: STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y

Manifest Tracking Number: 001219427VES
Waste Line Number: 3
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1203
U.S. DOT Description: Un1203, Waste Gasoline Mixture, 3, Ii, Rq (D001, D018)
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 290
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.145
Acute Waste Quantity, in Tons: 0

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Non-Acute Waste Quantity, in Tons: | 0.145 |
| Waste Quantity, in Kilograms: | 131.51935 |
| Acute Waste Quantity, in Kilograms: | 0 |
| Non-Acute Waste Quantity, in Kilorgrams: | 131.51935 |
| Management Method Code: | H141 |
| Management Method Description: | STORAGE, BULKING AND/OR TRANSFER OFF SITE |
| Waste Residue Indicator: | N |
| Quantity Discrepancy Indicator: | N |
| Waste Type Discrepancy Indicator: | N |
| Waste Density: | Not reported |
| Waste Density Unit of Measure Code: | Not reported |
| Waste Density Unit of Measure Description: | Not reported |
| Form Code: | Not reported |
| Form Code Description: | Not reported |
| Source Code: | Not reported |
| Source Code Description: | Not reported |
| Waste Minimization Code: | Not reported |
| Waste Minimization Code Description: | Not reported |
| Consent Number: | Not reported |
| EPA Waste Indicator: | Y |

| | |
|---|---|
| Manifest Tracking Number: | 001219427VES |
| Waste Line Number: | 4 |
| U.S. DOT Hazardous Indicator: | Y |
| U.S. DOT ID Number: | UN1479 |
| U.S. DOT Description: | Un1479, Waste Oxidizing Solid, N.O.S., (Hydrogen Peroxide, Water), 5.1, Ii |
| Non-Hazardous Waste Description: | Not reported |
| Number of Containers: | 1 |
| Container Type Code: | DM |
| Container Type Description: | Metal drums, barrels, kegs |
| Waste Quantity: | 57 |
| Quantity Unit of Measure Code: | P |
| Quantity Unit of Measure Description: | Pounds |
| Waste Quantity, in Tons: | 0.0285 |
| Acute Waste Quantity, in Tons: | 0 |
| Non-Acute Waste Quantity, in Tons: | 0.0285 |
| Waste Quantity, in Kilograms: | 25.850355 |
| Acute Waste Quantity, in Kilograms: | 0 |
| Non-Acute Waste Quantity, in Kilorgrams: | 25.850355 |
| Management Method Code: | H141 |
| Management Method Description: | STORAGE, BULKING AND/OR TRANSFER OFF SITE |
| Waste Residue Indicator: | N |
| Quantity Discrepancy Indicator: | N |
| Waste Type Discrepancy Indicator: | N |
| Waste Density: | Not reported |
| Waste Density Unit of Measure Code: | Not reported |
| Waste Density Unit of Measure Description: | Not reported |
| Form Code: | Not reported |
| Form Code Description: | Not reported |
| Source Code: | Not reported |
| Source Code Description: | Not reported |
| Waste Minimization Code: | Not reported |
| Waste Minimization Code Description: | Not reported |
| Consent Number: | Not reported |
| EPA Waste Indicator: | Y |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

Click this hyperlink while viewing on your computer to access
2 additional US EManifest: record(s) in the EDR Site Report.

NY MANIFEST:

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Country: | USA |
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVE |
| Address 2: | Not reported |
| City,State,Zip: | BRONX, NY 10465 |
| Zip 4: | Not reported |
| Location Address 1: | 545 BRUSH AVE |
| Location Address 2: | Not reported |
| Location City,State,Zip: | BRONX, NY 10465 |
| Location Zip 4: | Not reported |
| Facility Status: | Not reported |
| Total Tanks: | Not reported |
| Code: | BP |

Mailing:

| | |
|---|---|
| Mailing Name: | UNITED PARCEL SERVICE |
| Mailing Contact: | LEO EWERS |
| Mailing Address 1: | 545 BRUSH AVE |
| Mailing Address 2: | Not reported |
| Mailing City,State,Zip: | BRONX, NY 10465 |
| Mailing Zip 4: | Not reported |
| Mailing Country: | USA |
| Mailing Phone: | 2126316444 |

Manifest Data:

| | |
|---|---|
| Document ID: | NYC3363805 |
| Manifest Status: | Not reported |
| Trans1 State ID: | JU4819 |
| Year: | 1994 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 12/08/1994 |
| Trans1 Recv Date: | 12/08/1994 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 12/08/1994 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | ILD984908202 |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NYD980785760 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | Not reported |
| Import Indicator: | Not reported |
| Export Indicator: | Not reported |
| Discr Quantity Indicator: | Not reported |
| Discr Type Indicator: | Not reported |
| Discr Residue Indicator: | Not reported |
| Discr Partial Reject Indicator: | Not reported |
| Discr Full Reject Indicator: | Not reported |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| MGMT Method Type Code: | Not reported |
| Waste Code 1: | TETRACHLOROETHYLENE |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 00015 |
| Units: | Gallons (liquids only) |
| Number of Containers: | 001 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Recycle |
| Specific Gravity: | 01.00 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJD080631369 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/28/2017 |
| Trans1 Recv Date: | 11/28/2017 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/28/2017 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD980536593 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000063951VES |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | BENZENE |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 880 |
| Units: | Pounds |
| Number of Containers: | 2 |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJD080631369 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/28/2017 |
| Trans1 Recv Date: | 11/28/2017 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/28/2017 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD980536593 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000063951VES |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | BENZENE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 85 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJD080631369 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/15/2011 |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Trans1 Recv Date: | 11/15/2011 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/16/2011 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD980536593 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000348544VES |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | MERCURY |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 150 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Recycle |
| Specific Gravity: | 1 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | NJD080631369 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 11/15/2011 |
| Trans1 Recv Date: | 11/15/2011 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 11/16/2011 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NJD980536593 |
| TSDF ID 2: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Manifest Tracking Number: | 000348544VES |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H141 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 16 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 07/23/2010 |
| Trans1 Recv Date: | 07/23/2010 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 08/19/2010 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000340595WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 138 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 07/23/2010 |
| Trans1 Recv Date: | 07/23/2010 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 08/19/2010 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000340595WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | METHYL ETHYL KETONE |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 152 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |
| | |
| Document ID: | NYC3498783 |
| Manifest Status: | Not reported |
| Trans1 State ID: | JU4819 |
| Year: | 1995 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 03/07/1995 |
| Trans1 Recv Date: | 03/07/1995 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 03/07/1995 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | ILD984908202 |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | NYD980785760 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | Not reported |
| Import Indicator: | Not reported |
| Export Indicator: | Not reported |
| Discr Quantity Indicator: | Not reported |
| Discr Type Indicator: | Not reported |
| Discr Residue Indicator: | Not reported |
| Discr Partial Reject Indicator: | Not reported |
| Discr Full Reject Indicator: | Not reported |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | Not reported |
| Waste Code 1: | TETRACHLOROETHYLENE |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 00014 |
| Units: | Gallons (liquids only) |
| Number of Containers: | 001 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Recycle |
| Specific Gravity: | 01.00 |
| | |
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Generator Ship Date: | 06/17/2009 |
| Trans1 Recv Date: | 06/17/2009 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 06/30/2009 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000245179WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | IGNITABLE WASTE |
| Waste Code b: | METHYL ETHYL KETONE |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 146 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 05/01/2007 |
| Trans1 Recv Date: | 05/01/2007 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 05/21/2007 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000112414WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | METHANE, DICHLORO- (OR) METHYLENE CHLORIDE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 89 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

| | |
|---|---|
| Document ID: | Not reported |
| Manifest Status: | Not reported |
| Trans1 State ID: | IND058484114 |
| Year: | 2018 |
| Trans2 State ID: | Not reported |
| Generator Ship Date: | 05/28/2010 |
| Trans1 Recv Date: | 05/28/2010 |
| Trans2 Recv Date: | Not reported |
| TSD Site Recv Date: | 06/22/2010 |
| Part A Recv Date: | Not reported |
| Part B Recv Date: | Not reported |
| Generator EPA ID: | NYD986900728 |
| Trans1 EPA ID: | Not reported |
| Trans2 EPA ID: | Not reported |
| TSDF ID 1: | OHD980613541 |
| TSDF ID 2: | Not reported |
| Manifest Tracking Number: | 000337239WAS |
| Import Indicator: | N |
| Export Indicator: | N |
| Discr Quantity Indicator: | N |
| Discr Type Indicator: | N |
| Discr Residue Indicator: | N |
| Discr Partial Reject Indicator: | N |
| Discr Full Reject Indicator: | N |
| Manifest Ref Number: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Alt Facility RCRA ID: | Not reported |
| Alt Facility Sign Date: | Not reported |
| MGMT Method Type Code: | H040 |
| Waste Code a: | METHANE, DICHLORO- (OR) METHYLENE CHLORIDE |
| Waste Code b: | Not reported |
| Waste Code c: | Not reported |
| Waste Code e: | Not reported |
| Waste Code f: | Not reported |
| Waste Code g: | Not reported |
| Waste Code 1: | Not reported |
| Waste Code 2: | Not reported |
| Waste Code 3: | Not reported |
| Waste Code 4: | Not reported |
| Waste Code 5: | Not reported |
| Waste Code 6: | Not reported |
| Quantity: | 71 |
| Units: | Pounds |
| Number of Containers: | 1 |
| Container Type: | Metal drums, barrels, kegs |
| Handling Method: | Burn |
| Specific Gravity: | 1 |

Click this hyperlink while viewing on your computer to access
255 additional NY MANIFEST: record(s) in the EDR Site Report.

NJ MANIFEST:

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| County: | Not reported |
| Mailing Address: | EXECUTIVE BLVD |
| Mailing City,State,Zip: | ELMSFORD, NY 10523 |
| Telephone: | Not reported |
| Emergency Telephone: | Not reported |
| Contact: | Not reported |
| Comments: | Not reported |
| SIC Code: | Not reported |
| County: | NY005 |
| Municipal: | Not reported |
| Previous EPAID: | Not reported |
| Generator Flag: | Not reported |
| Transporter Flag: | Not reported |
| TSDF Flag: | Not reported |
| Name Change: | Not reported |
| Date Change: | Not reported |

Manifest Data:

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000348544VES |
| Date Shipped: | 11/15/2011 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | H141 |
| Quantity: | 10.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D009 |
| Hand Code: | H141 |
| Quantity: | 150.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000806607VES |
| Date Shipped: | 2/20/2013 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 93.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 45.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000806607VES |
| Date Shipped: | 2/20/2013 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 93.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 45.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000517494VES |
| Date Shipped: | 2/16/2012 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 D018 |
| Hand Code: | Not reported |
| Quantity: | 390.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000517494VES |
| Date Shipped: | 2/16/2012 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 D018 |
| Hand Code: | Not reported |
| Quantity: | 390.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000517494VES |
| Date Shipped: | 2/16/2012 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Waste:

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 D018 |
| Hand Code: | Not reported |
| Quantity: | 390.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| Manifest Year: | Not reported |
| Waste Code: | D001 |
| Hand Code: | Not reported |
| Quantity: | 60.00 |
| Unit: | Pounds |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000792415VES |
| Date Shipped: | 4/24/2015 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000792415VES |
| Date Shipped: | 4/24/2015 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000792415VES |
| Date Shipped: | 4/24/2015 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000790847VES |
| Date Shipped: | 3/4/2016 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

| | |
|---|---|
| EPA ID: | NYD986900728 |
| Manifest Number: | 000790847VES |
| Date Shipped: | 3/4/2016 |
| TSDF EPA ID: | NJD980536593 |
| Transporter EPA ID: | NJD080631369 |
| Transporter 2 EPA ID: | Not reported |
| Transporter 3 EPA ID: | Not reported |
| Transporter 4 EPA ID: | Not reported |
| Transporter 5 EPA ID: | Not reported |
| Transporter 6 EPA ID: | Not reported |
| Transporter 7 EPA ID: | Not reported |
| Transporter 8 EPA ID: | Not reported |
| Transporter 9 EPA ID: | Not reported |
| Transporter 10 EPA ID: | Not reported |
| Date Trans1 Transported Waste: | Not reported |
| Date Trans2 Transported Waste: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **1000398442**

| | |
|---|---|
| Date Trans3 Transported Waste: | Not reported |
| Date Trans4 Transported Waste: | Not reported |
| Date Trans5 Transported Waste: | Not reported |
| Date Trans6 Transported Waste: | Not reported |
| Date Trans7 Transported Waste: | Not reported |
| Date Trans8 Transported Waste: | Not reported |
| Date Trans9 Transported Waste: | Not reported |
| Date Trans10 Transported Waste: | Not reported |
| Date TSDF Received Waste: | Not reported |
| TSDF EPA Facility Name: | Not reported |
| QTY Units: | Not reported |
| Transporter SEQ ID: | Not reported |
| Transporter-1 Date: | Not reported |
| Waste SEQ ID: | Not reported |
| Waste Type Code 2: | Not reported |
| Waste Type Code 3: | Not reported |
| Waste Type Code 4: | Not reported |
| Waste Type Code 5: | Not reported |
| Waste Type Code 6: | Not reported |
| Date Accepted: | Not reported |
| Manifest Discrepancy Type: | Not reported |
| Data Entry Number: | Not reported |
| Was Load Rejected: | Not reported |
| Reason Load Was Rejected: | Not reported |

Click this hyperlink while viewing on your computer to access
19 additional NJ MANIFEST: record(s) in the EDR Site Report.

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**F30** **UPS-BRUSH AVENUE** **NY TANKS** **U003067748**
**NNW** **545 BRUSH AVE** **NY SPDES** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 4 of 9 in cluster F**

**Relative:** **Lower**
**Actual:** **5 ft.**

TANKS:

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | NEW YORK, NY 10465 |
| Facility Id: | 2-258180 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Inactive |
| Program Type: | PBS |
| Expiration Date: | N/A |
| UTM X: | 597950.90678 |
| UTM Y: | 4519097.57721 |

SPDES:

| | |
|---|---|
| Name: | Ups-Brush Avenue |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Permit Number: | NYR00D296 |
| State-Region: | 02 |
| Expiration Date: | 09/30/2017 |
| Current Major Minor Status: | Minor |

**UPS-BRUSH AVENUE (Continued)** **U003067748**

| | |
|---|---|
| Primary Facility SIC Code: | Not reported |
| State Water Body Name: | WESTCHESTER CREEK |
| Limit Set Status Flag: | Active |
| Total Actual Average Flow(MGD): | Not reported |
| Total App Design Flow(MGD): | Not reported |
| UDF1: | Not reported |
| Lat/Long: | +40.818 / -73.839 |
| DMR Cognizant Official: | Not reported |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |
| | |
| Non-Gov Permit Affiliation Type Desc: | DMR Mailing Address |
| Non-Gov Permit Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Permit Street Address: | UPS-BRUSH AVE |
| Non-Gov Permit Supplemental Location: | 643 W 43RD ST |
| Non-Gov Permit City: | NEW YORK |
| Non-Gov Permit State Code: | NY |
| Non-Gov Permit Zip Code: | 10036 |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Facility Street Address: | UPS-BRUSH AVENUE |
| Non-Gov Facility Supplemental Location: | 643 W 43RD ST |
| Non-Gov Facility City: | NEW YORK |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 10036 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |
| | |
| Name: | Ups-Brush Avenue |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |
| | |
| Non-Gov Permit Affiliation Type Desc: | Permittee |
| Non-Gov Permit Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Permit Street Address: | 643 W 43RD ST |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | NEW YORK |
| Non-Gov Permit State Code: | NY |
| Non-Gov Permit Zip Code: | 10036 |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Facility Street Address: | UPS-BRUSH AVENUE |
| Non-Gov Facility Supplemental Location: | 643 W 43RD ST |
| Non-Gov Facility City: | NEW YORK |
| Non-Gov Facility State Code: | NY |

**UPS-BRUSH AVENUE (Continued)** **U003067748**

| | |
|---|---|
| Non-Gov Facility Zip Code: | 10036 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |
| | |
| Name: | Ups-Brush Avenue |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |
| | |
| Non-Gov Permit Affiliation Type Desc: | Not reported |
| Non-Gov Permit Org Formal Name: | Not reported |
| Non-Gov Permit Street Address: | Not reported |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | Not reported |
| Non-Gov Permit State Code: | Not reported |
| Non-Gov Permit Zip Code: | Not reported |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | UNITED PARCEL SERVICE INC |
| Non-Gov Facility Street Address: | UPS-BRUSH AVENUE |
| Non-Gov Facility Supplemental Location: | 643 W 43RD ST |
| Non-Gov Facility City: | NEW YORK |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 10036 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

---

**F31** **UNITED PARCEL SERVICE** **NY UST** **U004064869**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 5 of 9 in cluster F**

**Relative:** UST:
**Lower**

**Actual:**
**5 ft.**

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Id/Status: | 2-601299 / Active |
| Program Type: | PBS |
| Region: | STATE |
| DEC Region: | 2 |
| Expiration Date: | 01/27/2028 |

**UNITED PARCEL SERVICE (Continued)** **U004064869**

UTM X: 597958.40241
UTM Y: 4519250.94552
Site Type: Trucking/Transportation/Fleet Operation

Affiliation Records:

Site Id: 23266
Affiliation Type: Emergency Contact
Company Name: UNITED PARCEL SERVICE
Contact Type: Not reported
Contact Name: SHAKEERA JOHNSON
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (201) 341-0390
EMail: Not reported
Fax Number: Not reported
Modified By: MFLEONAR
Date Last Modified: 2018-02-15

Site Id: 23266
Affiliation Type: Facility Operator
Company Name: UNITED PARCEL SERVICE
Contact Type: Not reported
Contact Name: MILLER PONTON
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (718) 678-8113
EMail: Not reported
Fax Number: Not reported
Modified By: JSMACRI
Date Last Modified: 2023-10-13

Site Id: 23266
Affiliation Type: Facility Owner
Company Name: UNITED PARCEL SERVICE
Contact Type: CORPORATE ENVIRONMENTAL COORDINATOR
Contact Name: MILLER PONTON
Address1: 643 WEST 43RD STREET
Address2: Not reported
City: NEW YORK
State: NY
Zip Code: 10036
Country Code: 001
Phone: (212) 316-3854
EMail: Not reported
Fax Number: Not reported
Modified By: JSMACRI
Date Last Modified: 2023-10-13

Site Id: 23266
Affiliation Type: Mail Contact

**UNITED PARCEL SERVICE (Continued)** **U004064869**

| | |
|---|---|
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | Not reported |
| Contact Name: | MILLER PONTON |
| Address1: | 300 OAK STREET |
| Address2: | BUILDINGS & SYSTEMS ENGINEERING |
| City: | UNIONDALE |
| State: | NY |
| Zip Code: | 11553 |
| Country Code: | 001 |
| Phone: | (631) 316-3854 |
| EMail: | MPONTON@UPS.COM |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-10-13 |

Tank Info:

| | |
|---|---|
| Tank Number: | 001 |
| Tank ID: | 10247 |
| Tank Status: | In Service |
| Material Name: | In Service |
| Capacity Gallons: | 10000 |
| Install Date: | 12/01/1985 |
| Date Tank Closed: | Not reported |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Fiberglass coated steel |
| Material Code: | 0001 |
| Common Name of Substance: | #2 Fuel Oil (On-Site Consumption) |
| Tightness Test Method: | 14 |
| Date Test: | 11/07/2013 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | JSMACRI |
| Last Modified: | 10/13/2023 |

Equipment Records:

C01 - Pipe Location - Aboveground
H05 - Tank Leak Detection - In-Tank System (ATG)
F04 - Pipe External Protection - Fiberglass
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
L09 - Piping Leak Detection - Exempt Suction Piping
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin
B00 - Tank External Protection - None
E04 - Piping Secondary Containment - Double walled UG

| | |
|---|---|
| Tank Number: | 001-A |
| Tank ID: | 167541 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |

**UNITED PARCEL SERVICE (Continued)** **U004064869**

| | |
|---|---|
| Capacity Gallons: | 4000 |
| Install Date: | 10/01/1986 |
| Date Tank Closed: | 08/01/1995 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 0009 |
| Common Name of Substance: | Gasoline |
| Tightness Test Method: | 99 |
| Date Test: | 12/01/1992 |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
I00 - Overfill - None
H04 - Tank Leak Detection - Groundwater Well
B02 - Tank External Protection - Original Sacrificial Anode
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None

| | |
|---|---|
| Tank Number: | 002 |
| Tank ID: | 45358 |
| Tank Status: | Closed - Removed |
| Material Name: | Closed - Removed |
| Capacity Gallons: | 500 |
| Install Date: | 10/01/1986 |
| Date Tank Closed: | 08/01/1995 |
| Registered: | True |
| Tank Location: | Underground |
| Tank Type: | Steel/carbon steel |
| Material Code: | 9999 |
| Common Name of Substance: | Other |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Pipe Model: | Not reported |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |

Equipment Records:

G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
B01 - Tank External Protection - Painted/Asphalt Coating
A00 - Tank Internal Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
B02 - Tank External Protection - Original Sacrificial Anode

**UNITED PARCEL SERVICE (Continued)** **U004064869**

D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None

Tank Number: 003
Tank ID: 45359
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 500
Install Date: 10/01/1986
Date Tank Closed: 08/01/1995
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 9999
Common Name of Substance: Other

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: MJGRIFFI
Last Modified: 05/09/2022

Equipment Records:

G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
H00 - Tank Leak Detection - None
I00 - Overfill - None
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
B02 - Tank External Protection - Original Sacrificial Anode

Tank Number: 004
Tank ID: 52167
Tank Status: In Service
Material Name: In Service
Capacity Gallons: 4000
Install Date: 09/01/1995
Date Tank Closed: Not reported
Registered: True
Tank Location: Underground
Tank Type: Equivalent technology
Material Code: 0009
Common Name of Substance: Gasoline

Tightness Test Method: 14
Date Test: 04/09/2004
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: JSMACRI
Last Modified: 10/13/2023

Equipment Records:

**UNITED PARCEL SERVICE (Continued)** **U004064869**

C01 - Pipe Location - Aboveground
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
F04 - Pipe External Protection - Fiberglass
L07 - Piping Leak Detection - Pressurized Piping Leak Detector
G04 - Tank Secondary Containment - Double-Walled (Underground)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
A00 - Tank Internal Protection - None
K01 - Spill Prevention - Catch Basin
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
I02 - Overfill - High Level Alarm
B04 - Tank External Protection - Fiberglass
J01 - Dispenser - Pressurized Dispenser
E04 - Piping Secondary Containment - Double walled UG

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**F32** **UPS** **NY LTANKS** **S102180041**
**NNW** **545 BRUSH AVE** **NY CBS** **N/A**
**1/8-1/4** **BRONX, NY 10465** **NY Spills**
**0.148 mi.**
**779 ft.** **Site 6 of 9 in cluster F**

**Relative:** **Lower**
**Actual:** **5 ft.**

LTANKS:

| | |
|---|---|
| Name: | 545 BRUSH AVENUE |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 8908245 / 1992-09-30 |
| Facility ID: | 8908245 |
| Site ID: | 212269 |
| Spill Date: | 1989-11-17 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | B4 |
| Cleanup Ceased: | 1992-09-30 |
| SWIS: | 0301 |
| Investigator: | BATTISTA |
| Referred To: | Not reported |
| Reported to Dept: | 1989-11-17 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1989-11-29 |
| Spill Record Last Update: | 1994-05-12 |
| Spiller Name: | Not reported |
| Spiller Company: | SAME |
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 175908 |
| DEC Memo: | Not reported |
| Remarks: | 4K TANK TANK AUDITOR INCONCLUSIVE LEAK RATE.E.I AND R. |

**UPS (Continued)** **S102180041**

All TTF:

| | |
|---|---|
| Facility ID: | 8908245 |
| Spill Number: | 8908245 |
| Spill Tank Test: | 1536438 |
| Site ID: | 212269 |
| Tank Number: | Not reported |
| Tank Size: | 0 |
| Material: | 0001 |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 00 |
| Test Method 2: | Unknown |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 212269 |
| Operable Unit ID: | 935699 |
| Operable Unit: | 01 |
| Material ID: | 444995 |
| Material Code: | 0001A |
| Material Name: | #2 fuel oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | -1.00 |
| Units: | Not reported |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

CBS:

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| CBS Number: | 2-000341 |
| Program Type: | CBS |
| Facility Status: | Unregulated/Closed |
| Expiration Date: | Not reported |
| Dec Region: | 2 |
| UTMX: | 597936.71079 |
| UTMY: | 4519223.33254 |

SPILLS:

| | |
|---|---|
| Name: | 545 BRUSH AVENUE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9307821 / 1993-09-27 |
| Facility ID: | 9307821 |
| Facility Type: | ER |
| DER Facility ID: | 284956 |

**UPS (Continued)** **S102180041**

| | |
|---|---|
| Site ID: | 138398 |
| DEC Region: | 2 |
| Spill Cause: | Unknown |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 1993-09-27 |
| Investigator: | CAMMISA |
| Referred To: | Not reported |
| Reported to Dept: | 1993-09-27 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Unknown |
| Spill Notifier: | Affected Persons |
| Cleanup Ceased: | 1993-09-27 |
| Cleanup Meets Std: | True |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1993-09-28 |
| Spill Record Last Update: | 2004-09-30 |
| Spiller Name: | Not reported |
| Spiller Company: | UNK - VEHICLE |
| Spiller Address: | Not reported |
| Spiller Company: | 001 |
| Contact Name: | Not reported |
| DEC Memo: | Not reported |
| Remarks: | SORBENT WAS APPLIED BUT MARX OF MATERIAL WASHED TO STORM DRAIN - TRUCK ON FRIDAY CAME BY FOR ABSORBENT - NOTIFIED IWCS. |

All Materials:

| | |
|---|---|
| Site ID: | 138398 |
| Operable Unit ID: | 986334 |
| Operable Unit: | 01 |
| Material ID: | 394073 |
| Material Code: | 0066A |
| Material Name: | unknown petroleum |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | Not reported |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | UPS |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Spill Number/Closed Date: | 2207848 / Not Reported |
| Facility ID: | 2207848 |
| Facility Type: | ER |
| DER Facility ID: | 593338 |
| Site ID: | 647133 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |

**UPS (Continued)** **S102180041**

| | |
|---|---|
| Spill Date: | 2022-12-21 |
| Investigator: | DXYE |
| Referred To: | Not reported |
| Reported to Dept: | 2022-12-21 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 1 |
| Date Entered In Computer: | 2022-12-21 |
| Spill Record Last Update: | 2022-12-21 |
| Spiller Name: | Not reported |
| Spiller Company: | UPS |
| Spiller Address: | Not reported |
| Spiller Company: | 999 |
| Contact Name: | BRIDGET |
| DEC Memo: | 12/21/22 - Ye - DDO - Spoke with the caller, who is from Haz-Mat One. UPS, one of their clients, reported a punctured saddle tank that spilled 20 gallons of diesel. Miller Environmental is currently performing clean-up. Miller PM: Michael (631) 603-2564. Spoke with Michael. The spill is halfway cleaned up. They are first focusing the cleanup on the main part of the road, where there's a lot of traffic. They arrived in time to put sausage booms to prevent oil entering the soil and are using speedy dry and citrus cleaner. There are no drain impacts. They will send photos and the fully executed manifest. |
| Remarks: | punctured saddle tank, MILLER Env for clean up |

All Materials:

| | |
|---|---|
| Site ID: | 647133 |
| Operable Unit ID: | 1394103 |
| Operable Unit: | 01 |
| Material ID: | 2409594 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 20.00 |
| Units: | G |
| Recovered: | Not reported |
| Resource Affected: | Not reported |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | UPS |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 1807344 / 2022-07-06 |
| Facility ID: | 1807344 |
| Facility Type: | ER |

**UPS (Continued)** **S102180041**

| | |
|---|---|
| DER Facility ID: | 175908 |
| Site ID: | 578105 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | Not reported |
| SWIS: | 0301 |
| Spill Date: | 2018-10-09 |
| Investigator: | RHLIN |
| Referred To: | Not reported |
| Reported to Dept: | 2018-10-09 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2018-10-09 |
| Spill Record Last Update: | 2022-07-06 |
| Spiller Name: | LAWRENCE ANDERSON |
| Spiller Company: | UPS |
| Spiller Address: | 545 BRUSH AVE |
| Spiller Company: | 999 |
| Contact Name: | LAWRENCE ANDERSON |
| DEC Memo: | 1010/18-Zhune spoke to Lawrence Anderson. Lawrence said equipment failure. There is no spill only<br>equipment failure. Hydrostat test in the sump failed the test. Equipment need to be repair.<br>7/6/22-Lin-No release to the environmental. Case closed. UPS environmental coordinator: Miller<br>Ponton 631-316-3854 |
| Remarks: | test fail dispenser pan for #2 |

All Materials:

| | |
|---|---|
| Site ID: | 578105 |
| Operable Unit ID: | 1325857 |
| Operable Unit: | 01 |
| Material ID: | 2334518 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | Not reported |
| Units: | Not reported |
| Recovered: | Not reported |
| Resource Affected: | Not reported |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | UPS |
| Address: | 545 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9507165 / 2005-07-15 |
| Facility ID: | 9507165 |
| Facility Type: | ER |

**UPS (Continued)** **S102180041**

| | |
|---|---|
| DER Facility ID: | 175908 |
| Site ID: | 212270 |
| DEC Region: | 2 |
| Spill Cause: | Unknown |
| Spill Class: | B3 |
| SWIS: | 0301 |
| Spill Date: | 1995-09-12 |
| Investigator: | MJHAGGER |
| Referred To: | Not reported |
| Reported to Dept: | 1995-09-12 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1948-12-27 |
| Spill Record Last Update: | 2005-07-15 |
| Spiller Name: | Not reported |
| Spiller Company: | SAME |
| Spiller Address: | Not reported |
| Spiller Company: | 999 |
| Contact Name: | PAUL HAMMEL |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was M TIBBE TRANSFERED FROM SIGONA TO TIBBE. 7/15/2005 JAA (Jack Aversa) file review. Reviewed UST closure report (Jan 1996) - requested by Mike Haggerty and faxed by LBG on 6/17/2005, Report Appendix- faxed by LBG on 6/27/2005, and Disposal receipts (faxed by LBG on 7/15/2005). Leggette, Brashears, and Graham, Inc (LBG) retained by UPS to observe and document the removal of tanks and piping. Two 550 gallon used oil USTs (1 steel, 1 fiberglass) and one 4,000 gallon (double wall steel, fiberglass coated) UST were removed from 2 separate excavations on Sept 5,12 and 13, 1995. Approx 20 feet of 1 inch diameter steel piping connected to a 10k gallon heating oil UST were replaced. UST remvoal and piping replacement conducted by Gas Installations Inc (GI), of Inwood NY. Steel tanks transported by GI to Broxn Iron and Metal works for recycling (receipt provided). FRP tank crushed and disposed by GI at a sanitary landfill. PID readings showed non-detect for used oil ust soil samples. 4 excavation samples were sent to the lab and were non-detect for BTEX. amd VOCs, non-detect for RCRA metals. UG piping confirmatory samples - 2 PAH’s slightly exceeded STARS. Gasoline UST removal - soil screened with PID and separated into 2 piles(clean and gasoline impacted). Approx 100 yards stockpiled and later shipped off site for disposal/recycling (receipt included - soil remediation |

**UPS (Continued)** **S102180041**

of Philadelphia). 6 post excavation samples indicated minor exceedances for total BTEX and MTBE.
Receipts provided for tank bottoms. PBS # 2-601299 - tanks shown as closed. No further action
required. File closed.

Remarks: FOUND CONTAMINATED SOIL AND SOME SHEEN ON GROUND WATER

All Materials:

| | |
|---|---|
| Site ID: | 212270 |
| Operable Unit ID: | 1018029 |
| Operable Unit: | 01 |
| Material ID: | 361593 |
| Material Code: | 0064A |
| Material Name: | unknown material |
| Case No.: | Not reported |
| Material FA: | Other |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

---

**F33** **UNITED PARCEL SERVICE** **NY AST** **A100520422**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 7 of 9 in cluster F**

**Relative:** **Lower**

**Actual:** **5 ft.**

AST:

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Unregulated/Closed |
| Facility Id: | 2-000341 |
| Program Type: | CBS |
| UTM X: | 597936.71079 |
| UTM Y: | 4519223.33254 |
| Expiration Date: | N/A |
| Site Type: | Trucking/Transportation/Fleet Operation |

Tank Info:

| | |
|---|---|
| Tank Number: | 005C |
| Tank Id: | 192772 |
| Tank Location: | Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - In Place |
| Pipe Model: | Not reported |
| Install Date: | 09/01/1995 |
| Capacity Gallons: | 200 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 06/08/2012 |
| Register: | True |

**UNITED PARCEL SERVICE (Continued)** **A100520422**

| | |
|---|---|
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | Not reported |
| Tank Number: | 005D |
| Tank Id: | 192773 |
| Tank Location: | Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection. |
| Tank Type: | Steel/Carbon Steel/Iron |
| Tank Status: | Closed - In Place |
| Pipe Model: | Not reported |
| Install Date: | 09/01/1995 |
| Capacity Gallons: | 200 |
| Tightness Test Method: | NN |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | 06/08/2012 |
| Register: | True |
| Modified By: | MJGRIFFI |
| Last Modified: | 05/09/2022 |
| Material Name: | Not reported |

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**F34** **UNITED PARCEL SERVICE** **NY AST** **A100521063**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 8 of 9 in cluster F**

**Relative:** **Lower**
**Actual:** **5 ft.**

AST:

| | |
|---|---|
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Facility Id: | 2-601299 |
| Program Type: | PBS |
| UTM X: | 597958.40241 |
| UTM Y: | 4519250.94552 |
| Expiration Date: | 01/27/2028 |
| Site Type: | Trucking/Transportation/Fleet Operation |

Affiliation Records:

| | |
|---|---|
| Site Id: | 23266 |
| Affiliation Type: | Emergency Contact |
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | Not reported |
| Contact Name: | SHAKEERA JOHNSON |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 999 |
| Phone: | (201) 341-0390 |
| EMail: | Not reported |
| Fax Number: | Not reported |

**UNITED PARCEL SERVICE (Continued)** **A100521063**

| | |
|---|---|
| Modified By: | MFLEONAR |
| Date Last Modified: | 2018-02-15 |
| | |
| Site Id: | 23266 |
| Affiliation Type: | Facility Operator |
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | Not reported |
| Contact Name: | MILLER PONTON |
| Address1: | Not reported |
| Address2: | Not reported |
| City: | Not reported |
| State: | NN |
| Zip Code: | Not reported |
| Country Code: | 001 |
| Phone: | (718) 678-8113 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-10-13 |
| | |
| Site Id: | 23266 |
| Affiliation Type: | Facility Owner |
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | CORPORATE ENVIRONMENTAL COORDINATOR |
| Contact Name: | MILLER PONTON |
| Address1: | 643 WEST 43RD STREET |
| Address2: | Not reported |
| City: | NEW YORK |
| State: | NY |
| Zip Code: | 10036 |
| Country Code: | 001 |
| Phone: | (212) 316-3854 |
| EMail: | Not reported |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-10-13 |
| | |
| Site Id: | 23266 |
| Affiliation Type: | Mail Contact |
| Company Name: | UNITED PARCEL SERVICE |
| Contact Type: | Not reported |
| Contact Name: | MILLER PONTON |
| Address1: | 300 OAK STREET |
| Address2: | BUILDINGS & SYSTEMS ENGINEERING |
| City: | UNIONDALE |
| State: | NY |
| Zip Code: | 11553 |
| Country Code: | 001 |
| Phone: | (631) 316-3854 |
| EMail: | MPONTON@UPS.COM |
| Fax Number: | Not reported |
| Modified By: | JSMACRI |
| Date Last Modified: | 2023-10-13 |

Tank Info:

| | |
|---|---|
| Tank Number: | 005A |

**UNITED PARCEL SERVICE (Continued)** **A100521063**

Tank Id: 54021
Material Code: 0015
Common Name of Substance: Motor Oil

Equipment Records:

I04 - Overfill - Product Level Gauge (A/G)
J02 - Dispenser - Suction Dispenser
C02 - Pipe Location - Underground/On-ground
G01 - Tank Secondary Containment - Diking (Aboveground)
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
L09 - Piping Leak Detection - Exempt Suction Piping
K01 - Spill Prevention - Catch Basin
E00 - Piping Secondary Containment - None
F00 - Pipe External Protection - None
D02 - Pipe Type - Galvanized Steel

Tank Location: Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection.
Tank Type: Steel/Carbon Steel/Iron
Tank Status: In Service
Pipe Model: Not reported
Install Date: 09/01/1995
Capacity Gallons: 200
Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: JSMACRI
Last Modified: 10/13/2023
Material Name: motor oil

Tank Number: 005B
Tank Id: 54022
Material Code: 0022
Common Name of Substance: Waste Oil/Used Oil

Equipment Records:

J00 - Dispenser - None
I04 - Overfill - Product Level Gauge (A/G)
C02 - Pipe Location - Underground/On-ground
G01 - Tank Secondary Containment - Diking (Aboveground)
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
E00 - Piping Secondary Containment - None
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
F00 - Pipe External Protection - None

Tank Location: Aboveground - on saddles, legs, racks, etc.... Tank bottom is elevated above grade or tank pad, allowing visual inspection.
Tank Type: Steel/Carbon Steel/Iron
Tank Status: In Service

**UNITED PARCEL SERVICE (Continued)** **A100521063**

| | |
|---|---|
| Pipe Model: | Not reported |
| Install Date: | 09/01/1995 |
| Capacity Gallons: | 200 |
| Tightness Test Method: | - |
| Date Test: | Not reported |
| Next Test Date: | Not reported |
| Date Tank Closed: | Not reported |
| Register: | True |
| Modified By: | JSMACRI |
| Last Modified: | 10/13/2023 |
| Material Name: | waste oil/used oil |

---

**F35** **UNITED PARCEL SERVICE** **UST FINDER** **1028572234**
**NNW** **545 BRUSH AVENUE** **N/A**
**1/8-1/4** **BRONX, NY 10465**
**0.148 mi.**
**779 ft.** **Site 9 of 9 in cluster F**

**Relative:** **Lower**

**Actual:** **5 ft.**

UST FINDER:

| | |
|---|---|
| Object ID: | 302595 |
| Facility ID: | NY23266 |
| Name: | UNITED PARCEL SERVICE |
| Address: | 545 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Address Match Type: | Not reported |
| Open USTs: | 2 |
| Closed USTs: | 3 |
| TOS USTs: | 0 |
| Population 1500ft: | 56 |
| Private Wells 1500ft: | 0 |
| Within 100yr Floodplain: | No |
| Land Use: | Developed, High Intensity |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |
| WHPA HUC12: | Not reported |
| Facility Status: | Open UST(s) |
| Date of Last Inspection: | Not reported |
| EPA Region: | 2 |
| Tribe: | Not reported |
| Coordinate Source: | State |
| X Coord: | -73.838543 |
| Y Coord: | 40.817054 |
| Latitude: | 40.817054 |
| Longitude: | -73.838543 |

UST FINDER:

| | |
|---|---|
| Object ID: | 1219826 |
| Facility ID: | NY23266 |
| Tank ID: | NY26950 |
| Tank Status: | Closed |
| Installation Date: | 1986/10/01 16:00:00+00 |

**UNITED PARCEL SERVICE (Continued)** **1028572234**

| | |
|---|---|
| Removal Date: | Not reported |
| Tank Capacity: | 500 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |
| Object ID: | 1219827 |
| Facility ID: | NY23266 |
| Tank ID: | NY29421 |
| Tank Status: | Closed |
| Installation Date: | 1986/10/01 16:00:00+00 |
| Removal Date: | Not reported |
| Tank Capacity: | 500 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |
| Object ID: | 1219828 |
| Facility ID: | NY23266 |
| Tank ID: | NY31893 |
| Tank Status: | Closed |
| Installation Date: | 1986/10/01 16:00:00+00 |
| Removal Date: | Not reported |
| Tank Capacity: | 4000 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |
| Object ID: | 1219829 |
| Facility ID: | NY23266 |
| Tank ID: | NY28196 |
| Tank Status: | Open |
| Installation Date: | 1985/12/01 16:00:00+00 |
| Removal Date: | Not reported |
| Tank Capacity: | 10000 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |
| Object ID: | 1219830 |
| Facility ID: | NY23266 |
| Tank ID: | NY28621 |
| Tank Status: | Open |
| Installation Date: | 1995/09/01 15:59:59+00 |
| Removal Date: | Not reported |
| Tank Capacity: | 4000 |
| Substances: | Not reported |
| Tank Wall Type: | Not reported |

---

**36**
**NNW**
**1/8-1/4**
**0.205 mi.**
**1083 ft.**

**N Y BRUSH LLC**
**650 BRUSH AVE**
**BRONX, NY 10465**

**RCRA-LQG** **1010327866**
**NY MANIFEST** **NYR000140368**

**Relative:**
**Lower**

**Actual:**
**9 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20070101 |
| Handler Name: | N Y Brush Llc |
| Handler Address: | Brush Ave |
| Handler City,State,Zip: | BRONX, NY 10465-1804 |
| EPA ID: | NYR000140368 |

**N Y BRUSH LLC (Continued)** **1010327866**

| | |
|---|---|
| Contact Name: | CHENG LU |
| Contact Address: | 15TH AVE |
| Contact City,State,Zip: | COLLEGE POINT, NY 11356 |
| Contact Telephone: | 718-358-2000 x2535 |
| Contact Fax: | Not reported |
| Contact Email: | LUC@PEPSI-NY.COM |
| Contact Title: | Not reported |
| EPA Region: | 02 |
| Land Type: | Private |
| Federal Waste Generator Description: | Large Quantity Generator |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Handler Activities |
| State District Owner: | Ny |
| State District: | NYSDEC R2 |
| Mailing Address: | 15TH AVE |
| Mailing City,State,Zip: | COLLEGE POINT, NY 11356 |
| Owner Name: | Ny Brush Llc C/O Pepsi-Cola Bottling Co |
| Owner Type: | Private |
| Operator Name: | N Y Brush Llc |
| Operator Type: | Private |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | N |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20150414 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |

**N Y BRUSH LLC (Continued)** **1010327866**

| | |
|---|---|
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | No |
| Manifest Broker: | No |
| Sub-Part P Indicator: | No |

Handler - Owner Operator:

| | |
|---|---|
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: N Y BRUSH LLC | |
| Legal Status: | Private |
| Date Became Current: | 20060314 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: NY BRUSH LLC C/O PEPSI-COLA BOTTLING CO | |
| Legal Status: | Private |
| Date Became Current: | 20060314 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 50-35 56TH RD |
| Owner/Operator City,State,Zip: | MASPETH, NY 11378 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

| | |
|---|---|
| Owner/Operator Indicator: | Operator |
| Owner/Operator Name: N Y BRUSH LLC | |
| Legal Status: | Private |
| Date Became Current: | 20060314 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | Not reported |
| Owner/Operator City,State,Zip: | Not reported |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: NY BRUSH LLC C/O PEPSI-COLA BOTTLING CO | |
| Legal Status: | Private |
| Date Became Current: | 20060314 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 50-35 56TH RD |
| Owner/Operator City,State,Zip: | MASPETH, NY 11378 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

**N Y BRUSH LLC (Continued)** **1010327866**

Historic Generators:

| | |
|---|---|
| Receive Date: | 20060628 |
| Handler Name: N Y BRUSH LLC | |
| Federal Waste Generator Description: | Large Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20070101 |
| Handler Name: N Y BRUSH LLC | |
| Federal Waste Generator Description: | Large Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | Yes |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

| | |
|---|---|
| Receive Date: | 20060629 |
| Handler Name: N Y BRUSH LLC | |
| Federal Waste Generator Description: | Large Quantity Generator |
| State District Owner: | Ny |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

List of NAICS Codes and Descriptions:

| | |
|---|---|
| NAICS Codes: | No NAICS Codes Found |

Has the Facility Received Notices of Violations:

| | |
|---|---|
| Found Violation: | No |
| Agency Which Determined Violation: | Not reported |
| Violation Short Description: | Not reported |
| Date Violation was Determined: | Not reported |
| Actual Return to Compliance Date: | Not reported |
| Return to Compliance Qualifier: | Not reported |
| Violation Responsible Agency: | Not reported |
| Scheduled Compliance Date: | Not reported |
| Enforcement Identifier: | Not reported |
| Date of Enforcement Action: | Not reported |
| Enforcement Responsible Agency: | Not reported |
| Enforcement Docket Number: | Not reported |

**N Y BRUSH LLC (Continued)** **1010327866**

Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 20130924
Evaluation Responsible Agency: EPA
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: R2STP
Evaluation Responsible Sub-Organization: RCB
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

NY MANIFEST:
EPA ID: NYR000140368
Country: USA
Name: NY BRUSH LLC C/O PEPSI BOTTLING CO OF NY
Address: 650 BRUSH AVE
Address 2: Not reported
City,State,Zip: BRONX, NY 10465-1804
Zip 4: Not reported
Location Address 1: 650 BRUSH AVENUE
Location Address 2: Not reported
Location City,State,Zip: BORNX, NY
Location Zip 4: Not reported
Facility Status: Not reported
Total Tanks: Not reported
Code: BP

**N Y BRUSH LLC (Continued)** **1010327866**

Mailing:
- Mailing Name: NY BRUSH LLC C/O PEPSI BOTTLING CO OF NY
- Mailing Contact: ALEXANDER VALLI
- Mailing Address 1: 50 34 56TH ROAD
- Mailing Address 2: Not reported
- Mailing City,State,Zip: MASPETH, NY 11378
- Mailing Zip 4: Not reported
- Mailing Country: USA
- Mailing Phone: 9086687777

Manifest Data:
- Document ID: Not reported
- Manifest Status: Not reported
- Trans1 State ID: NYR000097972
- Year: 2018
- Trans2 State ID: Not reported
- Generator Ship Date: 07/13/2006
- Trans1 Recv Date: 07/13/2006
- Trans2 Recv Date: Not reported
- TSD Site Recv Date: 07/14/2006
- Part A Recv Date: Not reported
- Part B Recv Date: Not reported
- Generator EPA ID: NYR000140368
- Trans1 EPA ID: Not reported
- Trans2 EPA ID: Not reported
- TSDF ID 1: NYD049836679
- TSDF ID 2: Not reported
- Manifest Tracking Number: NYG3468771
- Import Indicator: N
- Export Indicator: N
- Discr Quantity Indicator: N
- Discr Type Indicator: N
- Discr Residue Indicator: N
- Discr Partial Reject Indicator: N
- Discr Full Reject Indicator: N
- Manifest Ref Number: Not reported
- Alt Facility RCRA ID: Not reported
- Alt Facility Sign Date: Not reported
- MGMT Method Type Code: Not reported
- Waste Code a: B007
- Waste Code b: Not reported
- Waste Code c: Not reported
- Waste Code e: Not reported
- Waste Code f: Not reported
- Waste Code g: Not reported
- Waste Code 1: Not reported
- Waste Code 2: Not reported
- Waste Code 3: Not reported
- Waste Code 4: Not reported
- Waste Code 5: Not reported
- Waste Code 6: Not reported
- Quantity: 21383
- Units: Kilograms
- Number of Containers: 1
- Container Type: Dump truck
- Handling Method: Landfill

**N Y BRUSH LLC (Continued)** **1010327866**

Specific Gravity: 1

---

**37**
**NNW**
**1/4-1/2**
**0.315 mi.**
**1664 ft.**

**H.O. PENN MACHINERY COMPANY INC**
**699 BRUSH AVE**
**BRONX, NY 10465**

**NY LTANKS** **U003644410**
**NY TANKS** **N/A**
**NY Spills**
**NY SPDES**

**Relative:**
**Lower**

**Actual:**
**10 ft.**

LTANKS:

| | |
|---|---|
| Name: | CLOSED-LACKOF RECENT INFO |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 9200766 / 2003-03-07 |
| Facility ID: | 9200766 |
| Site ID: | 186683 |
| Spill Date: | 1992-04-20 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | C4 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | ADMIN. CLOSED |
| Referred To: | Not reported |
| Reported to Dept: | 1992-04-20 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1992-04-24 |
| Spill Record Last Update: | 2003-03-07 |
| Spiller Name: | Not reported |
| Spiller Company: | Not reported |
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 156030 |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was ADMIN.CLOSED 03/07/2003 Closed Due To The Nature / Extent Of The Spill Report |
| Remarks: | 3K. CLOSED DUE TO LACK OF ANY RECENT INFO-DOES NOT MEET ANY CLEANUP REQUIREMENTS. |

All TTF:

| | |
|---|---|
| Facility ID: | 9200766 |
| Spill Number: | 9200766 |
| Spill Tank Test: | 1539893 |
| Site ID: | 186683 |
| Tank Number: | Not reported |
| Tank Size: | 0 |
| Material: | 0022 |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 00 |
| Test Method 2: | Unknown |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 186683 |
| Operable Unit ID: | 964580 |
| Operable Unit: | 01 |
| Material ID: | 415541 |
| Material Code: | 0022 |
| Material Name: | waste oil/used oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | -1.00 |
| Units: | L |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | H O PENN MACHINERY CO |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Spill Number/Closed Date: | 9612128 / 2006-12-13 |
| Facility ID: | 9612128 |
| Site ID: | 186684 |
| Spill Date: | 1997-01-08 |
| Spill Cause: | Tank Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | C3 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | rvketani |
| Referred To: | Not reported |
| Reported to Dept: | 1997-01-08 |
| CID: | 270 |
| Water Affected: | Not reported |
| Spill Notifier: | Affected Persons |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| Meets Standard: | False |
| UST Involvement: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1997-01-08 |
| Spill Record Last Update: | 2006-12-18 |
| Spiller Name: | FRED SCILIANO |
| Spiller Company: | H O PENN |
| Spiller Address: | 699 BRUSH AVE |
| Spiller County: | 001 |
| Spiller Contact: | FRED SCILIANO |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Spiller Phone: | (718) 409-8500 |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 324195 |
| DEC Memo: | Prior to Sept, 2004 data translation this spill Lead_DEC Field was MULQUEEN 11/8/04 - Austin - received Site assessment/tank closure report from Ira Conklin and sons for H.O. Penn on 8/5/04 - report dated 5/12/97 - end This was NOT transferred to CO 11/16/06 - Austin - Reassigned from Austin to Ketani for followup/review - end 12/6/06 - Raphael Ketani. The site is owned and occupied by H O Penn Machinery Co., Inc., 699 Brush Avenue, Bronx, 10465. The NYC Property Tax database and Property Shark do not list 699 Brush Avenue. The parent company is H O Penn Machinery Co., Inc., 122 Noxon Road, Poughkeepsie, NY, 12603, (845) 452-1200. The site in the Bronx is (718) 863-3800. The PBS case is #2-064084 and there are 2 tanks that were closed 1/1/97 and 6 active tanks. The active tanks are: 2-2000 gal. with lube oil and 1-2000 gal. with waste oil; 1-500 gal. with lube oil; 1-3000 gal. with diesel; 1-6000 gal. with #2 oil. These 6 tanks were installed 2/1/97. There was a tank test failure on 1/8/97 and the finding of contaminated soil around the tank. The caller was Stacey Pettine of Ira D. Conklin & Sons (914) 561-1512. I called H O Penn Machinery Co at (718) 863-3800, but could only leave a voice mail for Jeff Baumann of the Service Department. I sent a CSL. 12/8/06 - Raphael Ketani. Donna Eagan of H O Penn's Poughkeepsie office (845) 437-4069 left a voice mail yesterday stating that she will be working with DEC as Mr. Baumann is out. She asked me to call her to discuss what DEC needs in the way of documentation. I tried calling her, but could only leave a message. 12/11/06 - Raphael Ketani. Ms. Eagan called me. She said that she had a copy of the cleanup closure report for the Bronx site. I asked her to send me a copy. She said she would. 12/13/06 - Raphael Ketani. I received the closure report from Donna Egan. The report contained a short narative section, tables of PID readings for each excavation area - there was only a detection of 149.7 ppm for only the floor of excavation #1, a tank location diagram, a set of end-point soil analytical results for each excavation site - there were no detections, a tank cleaning certificat, a soil manifest, bills of lading for the tank bottoms, and soil tracking forms. Based on the documentation in the closure report, I am closing the case. |
| Remarks: | contaminated soil around tank |

All Materials:

| | |
|---|---|
| Site ID: | 186684 |
| Operable Unit ID: | 1043629 |
| Operable Unit: | 01 |
| Material ID: | 556396 |
| Material Code: | 0015 |
| Material Name: | motor oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Site ID: | 186684 |
| Operable Unit ID: | 1043629 |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Operable Unit: | 01 |
| Material ID: | 556397 |
| Material Code: | 0022 |
| Material Name: | waste oil/used oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Site ID: | 186684 |
| Operable Unit ID: | 1043629 |
| Operable Unit: | 01 |
| Material ID: | 556395 |
| Material Code: | 0010 |
| Material Name: | hydraulic oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

TANKS:

| | |
|---|---|
| Name: | H O PENN MACHINERY CO |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Facility Id: | 2-242586 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Inactive |
| Program Type: | PBS |
| Expiration Date: | N/A |
| UTM X: | 597994.29622 |
| UTM Y: | 4519272.64068 |

SPILLS:

| | |
|---|---|
| Name: | BUSINESS |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 1702321 / 2017-06-15 |
| Facility ID: | 1702321 |
| Facility Type: | ER |
| DER Facility ID: | 156030 |
| Site ID: | 551454 |
| DEC Region: | 2 |
| Spill Cause: | Equipment Failure |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2017-06-08 |
| Investigator: | PXLAKHAN |
| Referred To: | Not reported |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Reported to Dept: | 2017-06-08 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2017-06-08 |
| Spill Record Last Update: | 2017-06-15 |
| Spiller Name: | Not reported |
| Spiller Company: | HAMPAN |
| Spiller Address: | Not reported |
| Spiller Company: | 999 |
| Contact Name: | MARCUS WESAW |
| DEC Memo: | 06/08/17 - Lakhani The property is a Caterpillar dealership. The dealership has one Caterpillar in operation in the shop bay. During a normal procedure at the dealership, the Caterpillar's fuel line ruptured releasing 25 gallons of diesel onto the concrete. No drains or catch basins were affected. Miller Environmental was hired to complete the cleanup and provide DEC with a report. Contact for H.O. Penn Machinery Company, the dealership, is Markus Wesaw (Cell: 845-416-7173, Ph: 845-437-4069) 06/15/17 File Review: Spill Report (Miller Environmental, 06/14/17) - Miller was contacted by H.O. Penn Machinery Company, Inc. on 06/08/17 with a report of a hydraulic oil leak at the location. Upon inspection of the impacted area, it appeared that while working on payloader a hydraulic oil line was cut and hydraulic oil was released onto the concrete pavement. HO Penn personnel applied absorbents. Miller applied additional speedy dry to all impacted areas to contain and recover the discharged product. The speedy dry was swept up and containerized prior to offsite disposal. Miller reports that all impacted material has been recovered and disposed of an it appears that no further action is warranted regarding the spill. Spill is closed. |
| Remarks: | spill on pavement. clean up crew in route |

All Materials:

| | |
|---|---|
| Site ID: | 551454 |
| Operable Unit ID: | 1299543 |
| Operable Unit: | 01 |
| Material ID: | 2305761 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 25.00 |
| Units: | G |
| Recovered: | Not reported |
| Resource Affected: | Not reported |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Oxygenate: | Not reported |
| Name: | H.O. PENN MACHINERY |
| Address: | 699 BRUSH AVE. |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0803910 / 2008-07-07 |
| Facility ID: | 0803910 |
| Facility Type: | ER |
| DER Facility ID: | 350003 |
| Site ID: | 400723 |
| DEC Region: | 2 |
| Spill Cause: | Human Error |
| Spill Class: | Not reported |
| SWIS: | 0301 |
| Spill Date: | 2008-07-03 |
| Investigator: | hrpatel |
| Referred To: | Not reported |
| Reported to Dept: | 2008-07-03 |
| CID: | 406 |
| Water Affected: | Not reported |
| Spill Source: | Commercial/Industrial |
| Spill Notifier: | Responsible Party |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | Not reported |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2008-07-03 |
| Spill Record Last Update: | 2008-07-07 |
| Spiller Name: | JIM STANCO |
| Spiller Company: | CENTRAL PETROLIUM |
| Spiller Address: | 147 GAZZA BLVD. |
| Spiller Company: | 001 |
| Contact Name: | DONNA EGAN |
| DEC Memo: | 07/07/08-Hiralkumar Patel. spoke with Jim at Central petorleum. oil spilled due to loose fittings on fill box. spilled on concrete pavement. no soil/sewer/drain affected. all cleaned up. case closed. |
| Remarks: | During a delivery....Mechanical / operator error. Old fitting on the fill pipe of the UST and fill nozzle was not in secure enough. Spill cause was a combo of both. Pavement impacted. No sewers or waterways etc. Used a machine for clean up. Material was put into a drum. |

All TTF:

| | |
|---|---|
| Facility ID: | 0803910 |
| Spill Number: | 0803910 |
| Spill Tank Test: | 2486426 |
| Site ID: | 400723 |
| Tank Number: | Not reported |
| Tank Size: | 3000 |
| Material: | 0008 |
| EPA UST: | Not reported |
| UST: | True |
| Cause: | 04 |
| Source: | 02 |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Test Method: | 00 |
| Test Method 2: | Unknown |
| Leak Rate: | .00 |
| Gross Fail: | Not reported |
| Modified By: | Watchdog |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 400723 |
| Operable Unit ID: | 1157537 |
| Operable Unit: | 01 |
| Material ID: | 2148561 |
| Material Code: | 0008 |
| Material Name: | diesel |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 16.00 |
| Units: | G |
| Recovered: | 16.00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Name: | H.P.O. PENN TRUCK |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 0606856 / 2006-09-14 |
| Facility ID: | 0606856 |
| Facility Type: | ER |
| DER Facility ID: | 156030 |
| Site ID: | 370272 |
| DEC Region: | 2 |
| Spill Cause: | Other |
| Spill Class: | C4 |
| SWIS: | 0301 |
| Spill Date: | 2006-09-14 |
| Investigator: | SMSANGES |
| Referred To: | Not reported |
| Reported to Dept: | 2006-09-14 |
| CID: | 444 |
| Water Affected: | Not reported |
| Spill Source: | Commercial Vehicle |
| Spill Notifier: | Other |
| Cleanup Ceased: | Not reported |
| Cleanup Meets Std: | False |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |
| UST Trust: | False |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 2006-09-14 |
| Spill Record Last Update: | 2006-09-14 |
| Spiller Name: | DONNA EGAN |
| Spiller Company: | H.P.O. PENN TRUCK |
| Spiller Address: | 699 BRUSH AVE |
| Spiller Company: | 001 |
| Contact Name: | DONNA EGAN |
| DEC Memo: | Not reported |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

Remarks: AN ENGINE IN THE BACK OF A TRUCK FELL OVER AND KNOCKED A DRUM HOLDING OIL OVER: SOME MAY HAVE SPILLED OUT ON ROADWAY ALONG LONG ISLAND EXPRESSWAY AND BRONX: MOST WAS IN BACK OF TRUCK: ITY HAPPENED IN MIDDLE OF NIGHT WITH NIGHT DRIVER AND WHEN CALLER CAN GET A HOLD OF DRIVER SHE WILL HAVE MORE INFO: STILL INVESTIGATING:

All Materials:

| | |
|---|---|
| Site ID: | 370272 |
| Operable Unit ID: | 1128088 |
| Operable Unit: | 01 |
| Material ID: | 2117738 |
| Material Code: | 0015 |
| Material Name: | motor oil |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | 25.00 |
| Units: | G |
| Recovered: | 25.00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

| | |
|---|---|
| Site ID: | 370272 |
| Operable Unit ID: | 1128088 |
| Operable Unit: | 01 |
| Material ID: | 2117698 |
| Material Code: | 0066A |
| Material Name: | unknown petroleum |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | Not reported |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Soil |
| Oxygenate: | Not reported |

SPDES:

| | |
|---|---|
| Name: | H.O. Penn Machinery Company Inc |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| Permit Number: | NYR00D814 |
| State-Region: | 02 |
| Expiration Date: | 09/30/2017 |
| Current Major Minor Status: | Minor |
| Primary Facility SIC Code: | Not reported |
| State Water Body Name: | WESTCHESTER CREEK |
| Limit Set Status Flag: | Active |
| Total Actual Average Flow(MGD): | Not reported |
| Total App Design Flow(MGD): | Not reported |
| UDF1: | Not reported |
| Lat/Long: | +40.819 / -73.837 |
| DMR Cognizant Official: | Not reported |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Non-Gov Permit Affiliation Type Desc: | DMR Mailing Address |
| Non-Gov Permit Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Permit Street Address: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Permit Supplemental Location: | 122 NOXON RD |
| Non-Gov Permit City: | POUGHKEEPSIE |
| Non-Gov Permit State Code: | NY |
| Non-Gov Permit Zip Code: | 12603 |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Street Address: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Supplemental Location: | 122 NOXON ROAD |
| Non-Gov Facility City: | POUGHKEEPSIE |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 12603 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

| | |
|---|---|
| Name: | H.O. Penn Machinery Company Inc |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |

| | |
|---|---|
| Non-Gov Permit Affiliation Type Desc: | Permittee |
| Non-Gov Permit Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Permit Street Address: | 122 NOXON RD |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | POUGHKEEPSIE |
| Non-Gov Permit State Code: | NY |
| Non-Gov Permit Zip Code: | 12603 |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Street Address: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Supplemental Location: | 122 NOXON ROAD |
| Non-Gov Facility City: | POUGHKEEPSIE |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 12603 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

**H.O. PENN MACHINERY COMPANY INC (Continued)** **U003644410**

| | |
|---|---|
| Name: | H.O. Penn Machinery Company Inc |
| Address: | 699 BRUSH AVE |
| City,State,Zip: | BRONX, NY 10465 |
| UDF2: | Not reported |
| UDF3: | Not reported |
| FIPS County Code: | NY005 |
| Non-Gov Permit Affiliation Type Desc: | Not reported |
| Non-Gov Permit Org Formal Name: | Not reported |
| Non-Gov Permit Street Address: | Not reported |
| Non-Gov Permit Supplemental Location: | Not reported |
| Non-Gov Permit City: | Not reported |
| Non-Gov Permit State Code: | Not reported |
| Non-Gov Permit Zip Code: | Not reported |
| Non-Gov Facility Affiliation Type Desc: | Owner |
| Non-Gov Facility Org Formal Name: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Street Address: | H.O. PENN MACHINERY COMPANY INC |
| Non-Gov Facility Supplemental Location: | 122 NOXON ROAD |
| Non-Gov Facility City: | POUGHKEEPSIE |
| Non-Gov Facility State Code: | NY |
| Non-Gov Facility Zip Code: | 12603 |
| State Water Body: | Not reported |
| Region Permit Processed: | Not reported |
| Dow Discharge Class Code: | Not reported |
| SPDES Class Description: | Not reported |
| Affiliation Type Description: | Not reported |
| Name: | Not reported |
| Contacts Title: | Not reported |
| Contacts Email: | Not reported |
| NOI Submission Date: | Not reported |
| Facility Type: | Not reported |

---

**G38** **VERIZON NEW YORK INC (NY90549)** **NY LTANKS S100144737**
**NW** **500 ZEREGA AVENUE** **NY TANKS N/A**
**1/4-1/2** **BRONX, NY 10473** **NY NYC LAND USE**
**0.317 mi.**
**1672 ft.** **Site 1 of 2 in cluster G**

**Relative:** **Lower**

**Actual:** **4 ft.**

LTANKS:

| | |
|---|---|
| Name: | 500 ZEREGA AVENUE |
| Address: | 500 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY |
| Spill Number/Closed Date: | 8703906 / 1996-08-06 |
| Facility ID: | 8703906 |
| Site ID: | 270294 |
| Spill Date: | 1987-08-11 |
| Spill Cause: | Tank Test Failure |
| Spill Source: | Commercial/Industrial |
| Spill Class: | A3 |
| Cleanup Ceased: | Not reported |
| SWIS: | 0301 |
| Investigator: | MCTIBBE |
| Referred To: | Not reported |
| Reported to Dept: | 1987-08-11 |
| CID: | Not reported |
| Water Affected: | Not reported |
| Spill Notifier: | Tank Tester |
| Last Inspection: | Not reported |
| Recommended Penalty: | False |

**VERIZON NEW YORK INC (NY90549) (Continued)** **S100144737**

| | |
|---|---|
| Meets Standard: | False |
| UST Involvement: | True |
| Remediation Phase: | 0 |
| Date Entered In Computer: | 1987-08-20 |
| Spill Record Last Update: | 1997-04-17 |
| Spiller Name: | Not reported |
| Spiller Company: | NEW YORK TELEPHONE/NYNEX |
| Spiller Address: | Not reported |
| Spiller County: | 001 |
| Spiller Contact: | Not reported |
| Spiller Phone: | Not reported |
| Spiller Extention: | Not reported |
| DEC Region: | 2 |
| DER Facility ID: | 220114 |
| DEC Memo: | Not reported |
| Remarks: | EXCAVATE - ISOLATE - RETEST TANKS. |

All TTF:

| | |
|---|---|
| Facility ID: | 8703906 |
| Spill Number: | 8703906 |
| Spill Tank Test: | 1531345 |
| Site ID: | 270294 |
| Tank Number: | 001 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 03 |
| Test Method 2: | Horner EZ Check I or II |
| Leak Rate: | 1.27 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

| | |
|---|---|
| Facility ID: | 8703906 |
| Spill Number: | 8703906 |
| Spill Tank Test: | 1531346 |
| Site ID: | 270294 |
| Tank Number: | 002 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 03 |
| Test Method 2: | Horner EZ Check I or II |
| Leak Rate: | 1.27 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

| | |
|---|---|
| Facility ID: | 8703906 |
| Spill Number: | 8703906 |
| Spill Tank Test: | 1531347 |
| Site ID: | 270294 |

**VERIZON NEW YORK INC (NY90549) (Continued)** **S100144737**

| | |
|---|---|
| Tank Number: | 003 |
| Tank Size: | 550 |
| Material: | Not reported |
| EPA UST: | Not reported |
| UST: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Test Method: | 03 |
| Test Method 2: | Horner EZ Check I or II |
| Leak Rate: | 1.27 |
| Gross Fail: | Not reported |
| Modified By: | Spills |
| Last Modified Date: | Not reported |

All Materials:

| | |
|---|---|
| Site ID: | 270294 |
| Operable Unit ID: | 910529 |
| Operable Unit: | 01 |
| Material ID: | 470116 |
| Material Code: | 0009 |
| Material Name: | gasoline |
| Case No.: | Not reported |
| Material FA: | Petroleum |
| Quantity: | .00 |
| Units: | G |
| Recovered: | .00 |
| Resource Affected: | Groundwater |
| Oxygenate: | Not reported |

TANKS:

| | |
|---|---|
| Name: | VERIZON NEW YORK INC (NY90549) |
| Address: | 500 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 10473 |
| Facility Id: | 2-343587 |
| Region: | STATE |
| DEC Region: | 2 |
| Site Status: | Active |
| Program Type: | PBS |
| Expiration Date: | 12/14/2027 |
| UTM X: | 597533.55556 |
| UTM Y: | 4519149.05928 |

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 500 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 10473 |
| Latitude: | 40.8176118 |
| Longitude: | -73.8432033 |
| Type Of Ownership Code: | Not reported |
| Owner Name: | VERIZON NEW YORK INC. |
| Borough: | BX |
| Tax Block: | 3542 |
| Tax Lot: | 13 |
| Community District: | 209 |
| Census Tract 2020: | 2009000 |

**VERIZON NEW YORK INC (NY90549) (Continued)** **S100144737**

| | |
|---|---|
| Census Block 2020: | 20090001004 |
| Census Tract 2010: | 90 |
| Census Block 2010: | 1004 |
| School District: | 08 |
| City Council District: | 18 |
| Fire Company: | L047 |
| Police Precinct: | 43 |
| Health Center District: | 26 |
| Health Area: | 3100 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 09 |
| Sanitation Subsection: | 4D |
| Zoning District 1: | M2-1: Manufacturing Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | G1: GARAGES AND GASOLINE STATIONS - All Parking Garages |
| Land Use Category: | Parking Facilities |
| Number Of Easements: | 0 |
| Lot Area: | 32785 |
| Total Building Floor Area: | 4200 |
| Commercial Floor Area: | 4200 |
| Residential Floor Area: | 0 |
| Office Floor Area: | 0 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 4200 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 0 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 1 |
| Number Of Floors: | 1.0000000 |
| Residential Units: | 0 |
| Total Units: | 1 |
| Lot Frontage: | 195.0000000 |
| Lot Depth: | 166.0000000 |
| Building Frontage: | 60.0000000 |
| Building Depth: | 61.5800000 |
| Extension Code: | N |
| Proximity Code: | 1 |
| Irregular Lot Code: | Y |
| Lot Type: | 3 |
| Basement Type/Grade: | 0 |
| Assessed Land Value: | 619200.00000 |
| Assessed Total Value: | 987300.00000 |
| Exempt Total Value: | 0.00000 |
| Year Built: | 1931 |
| Year Altered 1: | 1994 |
| Year Altered 2: | 2004 |
| Historic District Name: | Not reported |

**VERIZON NEW YORK INC (NY90549) (Continued)** **S100144737**

| | |
|---|---|
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.13000000000 |
| Maximum Allowable Residential Far: | 0.00000000000 |
| Maximum Allowable Commercial Far: | 2.00000000000 |
| Maximum Allowable Community Facility Far: | 0.00000000000 |
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2035420013.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0090 |
| X Coordinate: | 1027650 |
| Y Coordinate: | 237194 |
| Zoning Map #: | 7a |
| Zoning Map Code: | Not reported |
| Sanborn Map #: | 219 066 |
| Tax Map #: | 21404 |
| E-designation Number: | Not reported |
| Apportionment BBL: | Not reported |
| Apportionment Date: | Not reported |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | 1 |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | 1 |
| Version Number: | 24v1.1 |
| Changed By DCP: | Not reported |

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**G39** **500 ZEREGA AVENUE** **UST FINDER RELEASE** **1029066249**
**NW** **500 ZEREGA AVENUE** **N/A**
**1/4-1/2** **BRONX, NY 0**
**0.317 mi.**
**1672 ft.** **Site 2 of 2 in cluster G**

**Relative:** **Lower**
**Actual:** **4 ft.**

UST FINDER RELEASE:

| | |
|---|---|
| Object ID: | 260230 |
| Facility ID: | NY220114 |
| Lust ID: | NY8703906 |
| Name: | 500 ZEREGA AVENUE |
| Address: | 500 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 0 |
| Address Match Type: | Not reported |
| Reported Date: | 1987/08/11 16:00:00+00 |
| Status: | No Further Action |
| Substance: | Not reported |
| Population within 1500ft: | 5364 |
| Domestic Wells within 1500ft: | 0 |
| Land Use: | Developed, High Intensity |
| Within SPA: | No |
| SPA PWS Facility ID: | Not reported |
| SPA Water Type: | Not reported |
| SPA Facility Type: | Not reported |
| SPA HUC12: | Not reported |
| Within WHPA: | No |
| WHPA PWS Facility ID: | Not reported |
| WHPA Water Type: | Not reported |
| WHPA Facility Type: | Not reported |
| WHPA HUC12: | Not reported |
| Within 100yr Floodplain: | No |
| Tribe: | Not reported |
| EPA Region: | 2 |
| NFA Letter 1: | Not reported |

**500 ZEREGA AVENUE (Continued)** **1029066249**

| | |
|---|---|
| NFA Letter 2: | Not reported |
| NFA Letter 3: | Not reported |
| NFA Letter 4: | Not reported |
| Closed With Residual Contaminate: | Not reported |
| Coordinate Source: | State |
| X Coord: | -73.84433 |
| Y Coord: | 40.8166800000001 |
| Latitude: | 40.8166799999999 |
| Longitude: | -73.8443299999999 |

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**40** **NYCDOS FERRY POINT PARK** **NY SWF/LF** **S105912812**
**South** **44 BEAVER ST - 6TH FLOOR** **N/A**
**1/4-1/2** **BRONX, NY 10465**
**0.333 mi.**
**1757 ft.**

**Relative:**
**Higher**

**Actual:**
**32 ft.**

SWF/LF:

| | |
|---|---|
| Name: | NYCDOS FERRY POINT PARK |
| Address: | 44 BEAVER ST - 6TH FLOOR |
| City,State,Zip: | BRONX, NY 10465 |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | 2128378183 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Robert Lange |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | Composting - yard waste - permit |
| Activity Number: | [03Y25] |
| Active: | No |
| East Coordinate: | 598300 |
| North Coordinate: | 4517900 |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | Not reported |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

**41**
**WNW**
**1/4-1/2**
**0.338 mi.**
**1784 ft.**

**RAILROAD MAINTENANCE CORP.**
**432 ZEREGA AVENUE**
**BRONX, NY 10473**

**NY SWF/LF** **S105912814**
**NY NYC LAND USE** **N/A**

**Relative:**
**Lower**

**Actual:**
**10 ft.**

SWF/LF:

| | |
|---|---|
| Name: | RAILROAD MAINTENANCE CORP. |
| Address: | 432 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 10473 |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | 2128922000 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | M.GRASSO |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | Other |
| Activity Number: | [03Z19] |
| Active: | No |
| East Coordinate: | Not reported |
| North Coordinate: | Not reported |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | 2-6007-00096 |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 432 ZEREGA AVENUE |
| City,State,Zip: | BRONX, NY 10473 |
| Latitude: | 40.8163143 |
| Longitude: | -73.8438024 |
| Type Of Ownership Code: | Not reported |
| Owner Name: | TWO GIRLS & A BOY, . |
| Borough: | BX |
| Tax Block: | 3513 |
| Tax Lot: | 22 |
| Community District: | 209 |
| Census Tract 2020: | 2009000 |
| Census Block 2020: | 20090001004 |
| Census Tract 2010: | 90 |
| Census Block 2010: | 1004 |
| School District: | 08 |
| City Council District: | 18 |

**RAILROAD MAINTENANCE CORP. (Continued)** **S105912814**

| | |
|---|---|
| Fire Company: | L047 |
| Police Precinct: | 43 |
| Health Center District: | 26 |
| Health Area: | 3100 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 09 |
| Sanitation Subsection: | 4C |
| Zoning District 1: | M1-1: Manufacturing Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | S9: RESIDENCE - MULTIPLE USE - Single or Multiple Dwelling with Stores or Offices |
| Land Use Category: | Mixed Residential & Commercial Buildings |
| Number Of Easements: | 0 |
| Lot Area: | 31050 |
| Total Building Floor Area: | 6680 |
| Commercial Floor Area: | 2934 |
| Residential Floor Area: | 3746 |
| Office Floor Area: | 2934 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 0 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 0 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 1 |
| Number Of Floors: | 3.0000000 |
| Residential Units: | 2 |
| Total Units: | 4 |
| Lot Frontage: | 75.3300000 |
| Lot Depth: | 354.0800000 |
| Building Frontage: | 50.0000000 |
| Building Depth: | 36.0000000 |
| Extension Code: | Not reported |
| Proximity Code: | 1 |
| Irregular Lot Code: | Y |
| Lot Type: | 5 |
| Basement Type/Grade: | 0 |
| Assessed Land Value: | 245700.00000 |
| Assessed Total Value: | 362250.00000 |
| Exempt Total Value: | 0.00000 |
| Year Built: | 1931 |
| Year Altered 1: | 0 |
| Year Altered 2: | 0 |
| Historic District Name: | Not reported |
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.22000000000 |
| Maximum Allowable Residential Far: | 0.00000000000 |
| Maximum Allowable Commercial Far: | 1.00000000000 |

**RAILROAD MAINTENANCE CORP. (Continued)** **S105912814**

| | |
|---|---|
| Maximum Allowable Community Facility Far: | 2.40000000000 |
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2035130022.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0090 |
| X Coordinate: | 1027485 |
| Y Coordinate: | 236721 |
| Zoning Map #: | 7a |
| Zoning Map Code: | Not reported |
| Sanborn Map #: | 219 066 |
| Tax Map #: | 21403 |
| E-designation Number: | Not reported |
| Apportionment BBL: | Not reported |
| Apportionment Date: | Not reported |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | 1 |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | 1 |
| Version Number: | 24v1.1 |
| Changed By DCP: | Not reported |

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**42**
**NNW**
**1/4-1/2**
**0.361 mi.**
**1906 ft.**

**BLOCK 3579, LOT 1**
**BLOCK 3579, LOT 1**
**BRONX, NY 10473**

**NY VCP** **S113922170**
**N/A**

**Relative:**
**Lower**

**Actual:**
**7 ft.**

VCP:

| | |
|---|---|
| Name: | BLOCK 3579, LOT 1 |
| Address: | BLOCK 3579, LOT 1 |
| City,State,Zip: | BRONX, NY 10473 |
| Program Type: | VCP |
| Site Code: | 58877 |
| HW Code: | V00321 |
| Site Class: | N |
| SWIS: | 301 |
| Region: | 2 |
| Town: | New York City |
| Acres: | Not reported |
| Date Record Added: | 11/30/2000 |
| Date Record Updated: | 07/14/2004 |
| Updated By: | VCPTRANS |
| Site Description: | Site was denied entry to VCP due to lack of contamination. |
| Env Problem: | Not reported |
| Health Problem: | Not reported |
| Dump: | Not reported |
| Structure: | Not reported |
| Lagoon: | Not reported |
| Landfill: | Not reported |
| Pond: | Not reported |
| Disp Start: | Not reported |
| Disp Term: | Not reported |
| Lat/Long: | Not reported |
| Dell: | Not reported |
| Record Add: | Not reported |
| Record Upd: | Not reported |
| Updated By: | Not reported |
| Own Op: | 6 |
| Sub Type: | ZZZ |

**BLOCK 3579, LOT 1 (Continued)** **S113922170**

| | |
|---|---|
| Owner Name: | Not reported |
| Owner Company: | Ice Cream Partners, USA, LLC |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | ZZ |
| Owner Country: | United States of America |
| HW Code: | Not reported |
| Waste Type: | Not reported |
| Waste Quantity: | Not reported |
| Waste Code: | Not reported |
| Crossref ID: | Not reported |
| Cross Ref Type Code: | Not reported |
| Cross Ref Type: | Not reported |
| Record Added Date: | Not reported |
| Record Updated: | Not reported |
| Updated By: | Not reported |

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**43**
**NW**
**1/4-1/2**
**0.375 mi.**
**1982 ft.**

**RANDALL AVE AND ZEREGA AVE/WESTCHESTER CREEK** **NY SWF/LF** **S126023660**
**HAVMEYER AVE, RANDELL AVE, ZEREGA AVE, CAESAR PLACE** **NY ILI** **N/A**
**BRONX, NY**

**Relative:**
**Higher**

**Actual:**
**19 ft.**

SWF/LF:

| | |
|---|---|
| Name: | RANDALL AVE AND ZEREGA AVE/WESTCHESTER CREEK |
| Address: | HAVMEYER AVE, RANDELL AVE, ZEREGA AVE, CAESAR PLACE |
| City,State,Zip: | BRONX, NY |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | Not reported |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | Not reported |
| Activity Number: | Not reported |
| Active: | Not reported |
| East Coordinate: | Not reported |
| North Coordinate: | Not reported |
| Accuracy Code: | 2: Fair; Perimeter unclear |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | Not reported |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

**RANDALL AVE AND ZEREGA AVE/WESTCHESTER CREEK (Continued)** **S126023660**

ILI:

| | |
|---|---|
| Name: | RANDALL AVE AND ZEREGA AVE/WESTCHESTER CREEK |
| Address: | HAVMEYER AVE, RANDELL AVE, ZEREGA AVE, CAESAR PLACE |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.818432 |
| Longitude: | -73.843908 |
| Region: | 2 |
| SWID: | Not reported |
| NY Inactive List: | Not reported |
| Inactive Reg Number: | Not reported |
| Alternative Facility Names: | Not reported |
| Removed: | Not reported |
| Why Removed: | Not reported |
| Location Accuracy: | 2: Fair; Perimeter unclear |
| Date Of Last Inspection: | 19-Jul-18 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Authorization: | Not reported |
| Number: | Not reported |
| Issue Date: | Not reported |
| Expiration Date: | Not reported |
| Start Date: | Not reported |
| Stop Date: | Not reported |
| Landfill Type: | Not reported |

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**44** **EASTERN ECOLOGY COMPOSTING SITE WESTCHESTER CREEK** **NY SWF/LF** **S126022885**
**NNW** **665-637 ZEREGA AVE** **NY ILI** **N/A**
**1/4-1/2** **BRONX, NY**
**0.391 mi.**
**2063 ft.**

**Relative:**
**Lower**

**Actual:**
**13 ft.**

SWF/LF:

| | |
|---|---|
| Name: | EASTERN ECOLOGY COMPOSTING SITE WESTCHESTER CREEK BETWEEN SEWARD AVE & RANDALL AVE |
| Address: | 665-637 ZEREGA AVE |
| City,State,Zip: | BRONX, NY |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | Not reported |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |

**EASTERN ECOLOGY COMPOSTING SITE WESTCHESTER CREEK BETWEEN SE (Continued)** **S126022885**

| | |
|---|---|
| Contact Phone: | Not reported |
| Activity Desc: | Not reported |
| Activity Number: | Not reported |
| Active: | Not reported |
| East Coordinate: | Not reported |
| North Coordinate: | Not reported |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | Not reported |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

ILI:

| | |
|---|---|
| Name: | EASTERN ECOLOGY COMPOSTING SITE WESTCHESTER CREEK BETWEEN SEWARD A RANDALL AVE |
| Address: | 665-637 ZEREGA AVE |
| City,State,Zip: | BRONX, NY |
| Latitude: | 40.820539 |
| Longitude: | -73.840808 |
| Region: | 2 |
| SWID: | Not reported |
| NY Inactive List: | Not reported |
| Inactive Reg Number: | Not reported |
| Alternative Facility Names: | Not reported |
| Removed: | Not reported |
| Why Removed: | Not reported |
| Location Accuracy: | Not reported |
| Date Of Last Inspection: | 19-Jul-18 |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | Not reported |
| Contact Address: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Authorization: | Not reported |
| Number: | Not reported |
| Issue Date: | Not reported |
| Expiration Date: | Not reported |
| Start Date: | Not reported |
| Stop Date: | Not reported |
| Landfill Type: | Not reported |

**45**
**North**
**1/4-1/2**
**0.408 mi.**
**2155 ft.**

**EARTH BANK COMPANY INC.**
**748 BRUSH AVENUE**
**BRONX, NY 10465**

**NY SWF/LF** **S105841684**
**NY NYC LAND USE** **N/A**

**Relative:**
**Higher**

**Actual:**
**16 ft.**

SWF/LF:

| | |
|---|---|
| Name: | EARTH BANK COMPANY INC. |
| Address: | 748 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Flag: | INACTIVE |
| Region Code: | 2 |
| Phone Number: | Not reported |
| Owner Name: | Not reported |
| Owner Type: | Not reported |
| Owner Address: | Not reported |
| Owner Addr2: | Not reported |
| Owner City,St,Zip: | Not reported |
| Owner Email: | Not reported |
| Owner Phone: | Not reported |
| Contact Name: | RALPH DIDONATO |
| Contact Address: | Not reported |
| Contact Addr2: | Not reported |
| Contact City,St,Zip: | Not reported |
| Contact Email: | Not reported |
| Contact Phone: | Not reported |
| Activity Desc: | Transfer station - permit |
| Activity Number: | [03T16] |
| Active: | No |
| East Coordinate: | 598005 |
| North Coordinate: | 4519723 |
| Accuracy Code: | Not reported |
| Regulatory Status: | Not reported |
| Waste Type: | Not reported |
| Authorization #: | - 1- |
| Authorization Date: | Not reported |
| Expiration Date: | Not reported |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Laste Date: | Not reported |

NYC LAND USE:

| | |
|---|---|
| Name: | Not reported |
| Address: | 748 BRUSH AVENUE |
| City,State,Zip: | BRONX, NY 10465 |
| Latitude: | 40.8221437 |
| Longitude: | -73.8375092 |
| Type Of Ownership Code: | Not reported |
| Owner Name: | VALAD, JAVAD |
| Borough: | BX |
| Tax Block: | 5559 |
| Tax Lot: | 83 |
| Community District: | 210 |
| Census Tract 2020: | 2009000 |
| Census Block 2020: | 20090002017 |
| Census Tract 2010: | 90 |
| Census Block 2010: | 2012 |
| School District: | 08 |
| City Council District: | 13 |

**EARTH BANK COMPANY INC. (Continued)** **S105841684**

| | |
|---|---|
| Fire Company: | E072 |
| Police Precinct: | 45 |
| Health Center District: | 26 |
| Health Area: | 3100 |
| Sanitation District Boro: | 2 |
| Sanitation District Number: | 10 |
| Sanitation Subsection: | 3D |
| Zoning District 1: | R4A: Residential Districts |
| Zoning District 2: | Not reported |
| Zoning District 3: | Not reported |
| Zoning District 4: | Not reported |
| Commercial Overlay 1: | Not reported |
| Commercial Overlay 2: | Not reported |
| Special Purpose District 1: | Not reported |
| Special Purpose District 2: | Not reported |
| Special Purpose District 3: | Not reported |
| Limited Height District: | Not reported |
| Spill Boundary Indicator: | N |
| Building Class: | B1: TWO FAMILY DWELLINGS - Brick |
| Land Use Category: | One & Two Family Buildings |
| Number Of Easements: | 0 |
| Lot Area: | 2692 |
| Total Building Floor Area: | 2300 |
| Commercial Floor Area: | 0 |
| Residential Floor Area: | 2300 |
| Office Floor Area: | 0 |
| Retail Floor Area: | 0 |
| Garage Floor Area: | 0 |
| Storage Floor Area: | 0 |
| Factory Floor Area: | 0 |
| Other Floor Area: | 0 |
| Total Building Floor Area Source Code: | 2 |
| Number Of Buildings: | 1 |
| Number Of Floors: | 2.0000000 |
| Residential Units: | 2 |
| Total Units: | 2 |
| Lot Frontage: | 25.0000000 |
| Lot Depth: | 108.6300000 |
| Building Frontage: | 25.0000000 |
| Building Depth: | 46.0000000 |
| Extension Code: | G |
| Proximity Code: | 3 |
| Irregular Lot Code: | Y |
| Lot Type: | 5 |
| Basement Type/Grade: | 2 |
| Assessed Land Value: | 8340.00000 |
| Assessed Total Value: | 55560.00000 |
| Exempt Total Value: | 0.00000 |
| Year Built: | 2005 |
| Year Altered 1: | 0 |
| Year Altered 2: | 0 |
| Historic District Name: | Not reported |
| Landmark Status: | Not reported |
| Built Floor Area Ratio: | 0.85000000000 |
| Maximum Allowable Residential Far: | 0.75000000000 |
| Maximum Allowable Commercial Far: | 0.00000000000 |
| Maximum Allowable Community Facility Far: | 2.00000000000 |

**EARTH BANK COMPANY INC. (Continued)** **S105841684**

| | |
|---|---|
| Boro Code: | 2 |
| Borough, Tax Block and Lot: | 2055590083.00000000 |
| Condominium Number: | Not reported |
| Census Tract 2: | 0090 |
| X Coordinate: | 1029223 |
| Y Coordinate: | 238848 |
| Zoning Map #: | 7a |
| Zoning Map Code: | Not reported |
| Sanborn Map #: | 221 039 |
| Tax Map #: | 21807 |
| E-designation Number: | Not reported |
| Apportionment BBL: | 2055590081.00000000 |
| Apportionment Date: | 02/26/2007 |
| Pluto ??? Dtm Base Map Indicator: | 1 |
| 2007 Flood Insurance Rate Map Indicator: | Not reported |
| 2015 Preliminary Flood Insurance Rate Map Indicator: | Not reported |
| Version Number: | 24v1.1 |
| Changed By DCP: | Not reported |

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**46** **AAA THROGGS NECK** **FUDS** **1024899209**
**East** **N/A**
**1/2-1** **NEW YORK, NY**
**0.806 mi.**
**4255 ft.**

**Relative:**
**Higher**

**Actual:**
**17 ft.**

FUDS:

| | |
|---|---|
| EPA Region: | 02 |
| Installation ID: | NY29799F111000 |
| Congressional District Number: | 14 |
| Name: | AAA THROGGS NECK |
| FUDS Number: | C02NY0568 |
| City: | NEW YORK |
| State: | NY |
| County: | BRONX |
| Object ID: | 5630 |
| USACE Division: | NAD |
| USACE District: | New England District (NAE) |
| Status: | Properties without projects |
| Current Owner: | PRIV: PRIVATE PRIVATE RESIDENCES |
| EMS Map Link: | https://fudsportal.usace.army.mil/ems/inventory/map?id=56674 |
| Eligibility: | Eligible |
| Has Projects: | No |
| NPL Status: | Not reported |
| Project Required: | No |
| Feature Description: | The site containing 4.07 acres lease and permit was obtained by US Government in early 1952 for an AAA location. Between August 1952 and February 1954 all the leases and permits ware cancelled and the properties reverted back to the original owners. Currently the ownership of the site is subdivided between 24 owners of one and two family housing units. |
| Latitude: | 40.81416667 |
| Longitude: | -73.82 |

Count: 5 records. ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| BRONX | S113922040 | BLOCK 5541, LOT 225 (BRUSH AVENUE | BRUSH AVENUE | 10465 | NY VCP |
| BRONX | S126022979 | FORT SCHUYLER PARK AREA | LONG ISLAND SOUND, PENNYFIELD | | NY SWF/LF, NY ILI |
| BRONX | S126023254 | LB NORTHEAST | ZEREGA AVENUE | | NY SWF/LF, NY ILI |
| BRONX | S105684653 | CE - ZEREGA AVE. STATION | ZEREGA AVE. BETWEEN BLACKROCK | 10462 | NY VCP, NY MGP |
| BRONX | S121933888 | CE - ZEREGA AVE. STATION | ZEREGA AVE. BETWEEN BLACKROCK | 10462 | NY SHWS |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal NPL (Superfund) sites***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

***Lists of Federal Delisted NPL sites***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/25/2024
Date Data Arrived at EDR: 03/26/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/25/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Quarterly

***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA TSD facilities***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA generators***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***Federal institutional controls / engineering controls registries***

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/16/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/13/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/17/2024
Number of Days to Update: 90

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***Lists of state- and tribal hazardous waste facilities***

SHWS: Inactive Hazardous Waste Disposal Sites in New York State

Referred to as the State Superfund Program, the Inactive Hazardous Waste Disposal Site Remedial Program is the cleanup program for inactive hazardous waste sites and now includes hazardous substance sites

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Annually

***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF: Facility Register

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/25/2024
Date Data Arrived at EDR: 03/27/2024
Date Made Active in Reports: 06/18/2024
Number of Days to Update: 83

Source: Department of Environmental Conservation
Telephone: 518-402-8678
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

***Lists of state and tribal leaking storage tanks***

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/04/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

LTANKS: Spills Information Database
Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills.

Date of Government Version: 05/06/2024
Date Data Arrived at EDR: 05/06/2024
Date Made Active in Reports: 05/09/2024
Number of Days to Update: 3

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 05/06/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

HIST LTANKS: Listing of Leaking Storage Tanks

A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Lists of state and tribal registered storage tanks***

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/15/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/17/2024
Number of Days to Update: 90

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

UST: Petroleum Bulk Storage (PBS) Database

Facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: No Update Planned

CBS UST: Chemical Bulk Storage Database

Facilities that store regulated hazardous substances in underground tanks of any size

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 10/24/2005
Next Scheduled EDR Contact: 01/23/2006
Data Release Frequency: No Update Planned

MOSF UST: Major Oil Storage Facilities Database

Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF: Major Oil Storage Facility Site Listing

These facilities may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CBS: Chemical Bulk Storage Site Listing

These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

AST: Petroleum Bulk Storage

Registered Aboveground Storage Tanks.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: No Update Planned

CBS AST: Chemical Bulk Storage Database

Facilities that store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF AST: Major Oil Storage Facilities Database

Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/17/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

TANKS: Storage Tank Faciliy Listing
This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/20/2024
Date Made Active in Reports: 06/12/2024
Number of Days to Update: 84
Source: Department of Environmental Conservation
Telephone: 518-402-9543
Last EDR Contact: 06/18/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

***State and tribal institutional control / engineering control registries***

ENV RES DECL: Environmental Restrictive Declarations
The Environmental Restrictive Declarations (ERD) listed were recorded in connection with a zoning action against the noted Tax Blocks and Tax Lots, or portion thereof, and are available in the property records on file at the Office of the City Register for Bronx, Kings, New York and Queens counties or at the Richmond County Clerk's office. They contain environmental requirements with respect to hazardous materials, air quality and/or noise in accordance with Section 11-15 of this Resolution.

Date of Government Version: 03/11/2024
Date Data Arrived at EDR: 03/14/2024
Date Made Active in Reports: 06/05/2024
Number of Days to Update: 83
Source: New York City Department of City Planning
Telephone: 212-720-3300
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Varies

RES DECL: Restrictive Declarations Listing
A restrictive declaration is a covenant running with the land which binds the present and future owners of the property. As a condition of certain special permits, the City Planning Commission may require an applicant to sign and record a restrictive declaration that places specified conditions on the future use and development of the property. Certain restrictive declarations are indicated by a D on zoning maps.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/07/2024
Date Made Active in Reports: 03/11/2024
Number of Days to Update: 4
Source: NYC Department of City Planning
Telephone: 212-720-3401
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Varies

ENG CONTROLS: Registry of Engineering Controls
Environmental Remediation sites that have engineering controls in place.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82
Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

INST CONTROL: Registry of Institutional Controls
Environmental Remediation sites that have institutional controls in place.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82
Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

***Lists of state and tribal voluntary cleanup sites***

VCP: Voluntary Cleanup Agreements
New York established its Voluntary Cleanup Program (VCP) to address the environmental, legal and financial barriers that often hinder the redevelopment and reuse of contaminated properties. The Voluntary Cleanup Program was developed to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfield" sites.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9711
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/14/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Varies

VCP NYC: Voluntary Cleanup Program Listing NYC
New York City voluntary cleanup program sites.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/06/2024
Date Made Active in Reports: 05/30/2024
Number of Days to Update: 85

Source: New York City Office of Environmental Protection
Telephone: 212-788-8841
Last EDR Contact: 06/05/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

***Lists of state and tribal brownfield sites***

BROWNFIELDS: Brownfields Site List
A Brownfield is any real property where redevelopment or re-use may be complicated by the presence or potential presence of a hazardous waste, petroleum, pollutant, or contaminant.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9764
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

ERP: Environmental Restoration Program Listing
In an effort to spur the cleanup and redevelopment of brownfields, New Yorkers approved a $200 million Environmental Restoration or Brownfields Fund as part of the $1.75 billion Clean Water/Clean Air Bond Act of 1996 (1996 Bond Act). Enhancements to the program were enacted on October 7, 2003. Under the Environmental Restoration Program, the State provides grants to municipalities to reimburse up to 90 percent of on-site eligible costs and 100% of off-site eligible costs for site investigation and remediation activities. Once remediated, the property may then be reused for commercial, industrial, residential or public use.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/11/2024
Date Data Arrived at EDR: 03/12/2024
Date Made Active in Reports: 05/10/2024
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/11/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Semi-Annually

***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY: Registered Recycling Facility List

A listing of recycling facilities.

Date of Government Version: 03/25/2024
Date Data Arrived at EDR: 03/27/2024
Date Made Active in Reports: 06/18/2024
Number of Days to Update: 83

Source: Department of Environmental Conservation
Telephone: 518-402-8678
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

SWTIRE: Registered Waste Tire Storage & Facility List

A listing of facilities registered to accept waste tires.

Date of Government Version: 02/27/2018
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 63

Source: Department of Environmental Conservation
Telephone: 518-402-8694
Last EDR Contact: 05/31/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/22/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: No Update Planned

DEL SHWS: Delisted Registry Sites

A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

***Local Lists of Registered Storage Tanks***

HIST UST: Historical Petroleum Bulk Storage Database

These facilities have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. It is no longer updated due to the sensitive nature of the information involved. See UST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: Varies

HIST AST: Historical Petroleum Bulk Storage Database

These facilities have petroleum storage capabilities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. No longer updated due to the sensitive nature of the information involved. See AST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: No Update Planned

***Local Land Records***

LIENS: Spill Liens Information

Lien information from the Oil Spill Fund.

Date of Government Version: 04/19/2024
Date Data Arrived at EDR: 04/19/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 68

Source: Office of the State Comptroller
Telephone: 518-474-9034
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Semi-Annually

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/14/2024
Date Data Arrived at EDR: 06/17/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 7

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

SPILLS: Spills Information Database

Data collected on spills reported to NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

Date of Government Version: 05/06/2024
Date Data Arrived at EDR: 05/06/2024
Date Made Active in Reports: 05/09/2024
Number of Days to Update: 3

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 05/06/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

HIST SPILLS: SPILLS Database

This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/14/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/12/2013
Number of Days to Update: 40

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 11/02/2010
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/07/2013
Number of Days to Update: 63

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/30/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/18/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/13/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 86

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/11/2024
Date Data Arrived at EDR: 07/11/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 1

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/01/2024
Date Data Arrived at EDR: 04/17/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 86
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 57
Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/27/2023
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 87
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/23/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2024
Date Data Arrived at EDR: 04/19/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 68

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data
Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 04/01/2024
Date Data Arrived at EDR: 04/04/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 99

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing
This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/23/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines
An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/18/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 79

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/09/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 87

Source: EPA
Telephone: (212) 637-3000
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/08/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/23/2024
Date Data Arrived at EDR: 06/28/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/28/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/19/2023
Date Data Arrived at EDR: 04/05/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 62

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/27/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: No Update Planned

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/27/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data
The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 04/14/2024
Date Data Arrived at EDR: 04/16/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 07/16/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

UST FINDER: UST Finder Database
EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database
US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

E MANIFEST: Hazardous Waste Electronic Manifest System
EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 04/18/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 49

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Varies

PFAS 3: PFAS Environmental Site Remediation List
A list of records included in the Environmental Remediation database whose material is listed as Perfluorooctanoic Acid or Perfluorooctane Sulfonic Acid.

Date of Government Version: 02/06/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 04/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-9759
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

PFAS 2: New York State Inactive Landfill Initiative

A list of landfills that were investigated and the analytical results for PFOA and PFOS for those landfills. These data represent the landfills from the ILI database that were investigated.

Date of Government Version: 12/12/2022
Date Data Arrived at EDR: 08/10/2023
Date Made Active in Reports: 10/25/2023
Number of Days to Update: 76

Source: Department of Environmental Conservation
Telephone: 518-402-9662
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

DEC surveyed select businesses, fire departments, fire training centers, bulk storage facilities, airports, and Department of Defense (DoD) facilities. The responses to the survey have helped to determine if these entities used or stored materials containing PFOA/PFOS including AFFF and dispersants used in Teflon coating operations. The results of this survey will be updated periodically as additional responses are received..

Date of Government Version: 01/16/2019
Date Data Arrived at EDR: 05/08/2019
Date Made Active in Reports: 06/24/2019
Number of Days to Update: 47

Source: Department of Environmental Conservation
Telephone: 518-402-9020
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

AIRS: Air Emissions Data

Point source emissions inventory data.

Date of Government Version: 01/12/2024
Date Data Arrived at EDR: 01/24/2024
Date Made Active in Reports: 04/11/2024
Number of Days to Update: 78

Source: Department of Environmental Conservation
Telephone: 518-402-8452
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Annually

COAL ASH: Coal Ash Disposal Site Listing

A listing of coal ash disposal site locations.

Date of Government Version: 03/26/2024
Date Data Arrived at EDR: 03/27/2024
Date Made Active in Reports: 06/21/2024
Number of Days to Update: 86

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

DRYCLEANERS: Registered Drycleaners

A listing of all registered drycleaning facilities.

Date of Government Version: 03/06/2024
Date Data Arrived at EDR: 03/08/2024
Date Made Active in Reports: 05/29/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8403
Last EDR Contact: 05/31/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Annually

E DESIGNATION: E DESIGNATION SITE LISTING

The (E (Environmental)) designation would ensure that sampling and remediation take place on the subject properties, and would avoid any significant impacts related to hazardous materials at these locations. The (E) designations would require that the fee owner of the sites conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The (E) designations also include a mandatory construction-related health and safety plan which must be approved by NYCDEP.

Date of Government Version: 03/05/2024
Date Data Arrived at EDR: 03/13/2024
Date Made Active in Reports: 06/05/2024
Number of Days to Update: 84

Source: New York City Department of City Planning
Telephone: 718-595-6658
Last EDR Contact: 06/12/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Semi-Annually

FIN ASSURANCE 1: Financial Assurance Information Listing

Financial assurance information.

Date of Government Version: 03/27/2024
Date Data Arrived at EDR: 03/28/2024
Date Made Active in Reports: 06/18/2024
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

FIN ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 03/07/2024
Date Data Arrived at EDR: 03/14/2024
Date Made Active in Reports: 03/20/2024
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-8712
Last EDR Contact: 05/31/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

HSWDS: Hazardous Substance Waste Disposal Site Inventory

The list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-Registry sites that U.S. EPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared. Hazardous Substance Waste Disposal Sites are eligible to be Superfund sites now that the New York State Superfund has been refinanced and changed. This means that the study inventory has served its purpose and will no longer be maintained as a separate entity. The last version of the study inventory is frozen in time. The sites on the study will not automatically be made Superfund sites, rather each site will be further evaluated for listing on the Registry. So overtime they will be added to the registry or not.

Date of Government Version: 01/01/2003
Date Data Arrived at EDR: 10/20/2006
Date Made Active in Reports: 11/30/2006
Number of Days to Update: 41

Source: Department of Environmental Conservation
Telephone: 518-402-9564
Last EDR Contact: 05/26/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: No Update Planned

NYC LEAD: Lead-based Paint Testing Results

The results of the inspections for all classrooms serving students under six in applicable buildings. Identifies all classrooms, whether there was observation of peeling paint, and if there was, standard response protocol was followed.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/31/2024
Date Made Active in Reports: 04/22/2024
Number of Days to Update: 82

Source: New York City Department of Education
Telephone: 212-374-5141
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

NYC LEAD 2: Recent Lead Paint Violations

Pursuant to New York City?s Housing Maintenance Code, the Department of Housing Preservation and Development (HPD) issues violations against conditions in rental dwelling units that have been verified to violate the New York City Housing Maintenance Code (HMC) or the New York State Multiple Dwelling Law (MDL). Violations are issued when an inspection verifies that a violation of the HMC or MDL exists. It is closed when the violation is corrected, as observed/verified by HPD or as certified by the landlord.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85

Source: New York City Department of Housing Preservation & Development
Telephone: 212-863-8200
Last EDR Contact: 05/01/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

SPDES: State Pollutant Discharge Elimination System

New York State has a state program which has been approved by the United States Environmental Protection Agency for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. Under New York State law the program is known as the State Pollutant Discharge Elimination System (SPDES) and is broader in scope than that required by the Clean Water Act in that it controls point source discharges to groundwaters as well as surface waters.

Date of Government Version: 01/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 05/02/2024
Number of Days to Update: 79

Source: Department of Environmental Conservation
Telephone: 518-402-8233
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: No Update Planned

VAPOR REOPENED: Vapor Intrusion Legacy Site List

New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 02/08/2022
Date Made Active in Reports: 05/06/2022
Number of Days to Update: 87

Source: Department of Environmenal Conservation
Telephone: 518-402-9814
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

UIC: Underground Injection Control Wells

A listing of enhanced oil recovery underground injection wells.

Date of Government Version: 02/26/2024
Date Data Arrived at EDR: 02/28/2024
Date Made Active in Reports: 05/21/2024
Number of Days to Update: 83

Source: Department of Environmental Conservation
Telephone: 518-402-8056
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

COOLING TOWERS: Registered Cooling Towers

This data includes the location of cooling towers registered with New York State. The data is self-reported by owners/property managers of cooling towers in service in New York State. In August 2015, the New York State Department of Health released emergency regulations requiring the owners of cooling towers to register them with New York State.

Date of Government Version: 04/02/2024
Date Data Arrived at EDR: 04/10/2024
Date Made Active in Reports: 07/09/2024
Number of Days to Update: 90

Source: Department of Health
Telephone: 518-402-7650
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

ILI: New York State Inactive Landfill Initiative

A solid waste site priority list of mitigation and remedial activities to address sites causing, or substantially contributing to, impairments of drinking water quality. Inactive solid waste disposal sites, primarily landfills, and their potential impact on New York?s drinking water resources from site-related contaminants, with a focus on emerging contaminants.

Date of Government Version: 01/30/2024
Date Data Arrived at EDR: 02/02/2024
Date Made Active in Reports: 04/19/2024
Number of Days to Update: 77

Source: Department of Environmental Conservation
Telephone: 518-402-8671
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

NYC LAND USE: New York City Land Use Information

Land use colors

Date of Government Version: 05/03/2024
Date Data Arrived at EDR: 06/12/2024
Date Made Active in Reports: 06/28/2024
Number of Days to Update: 16

Source: New York City Department of City Planning
Telephone: 212-720-3300
Last EDR Contact: 06/12/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Varies

MGP: Manufactured Gas Plants Listing

From the late 1800's to the mid 1900's, hundreds of manufactured gas plants across New York State supplied homes and industry with fuel for heating, cooking, and lighting. Today, the New York State DEC is overseeing the investigation and cleanup of contamination left behind from these plants.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: Department of Environmental Conservation
Telephone: 518-402-9662
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

NYC OER: OER Cleanup Sites Listing

Properties remediated under OER's oversight, both in the E-Designation program and the NYC Voluntary Cleanup Program. Includes sites completed and in progress.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/06/2024
Date Made Active in Reports: 05/29/2024
Number of Days to Update: 84

Source: Office of Environmental Remediation
Telephone: 212-788-8841
Last EDR Contact: 06/05/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Conservation in New York.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: Department of Environmental Conservation
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Conservation in New York.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Environmental Conservation
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**COUNTY RECORDS**

CORTLAND COUNTY:

AST - CORTLAND: Cortland County Storage Tank Listing
A listing of aboveground storage tank sites located in Cortland County.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/16/2019
Number of Days to Update: 57

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

UST - CORTLAND: Cortland County Storage Tank Listing
A listing of underground storage tank sites located in Cortland County.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/16/2019
Number of Days to Update: 57

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

NASSAU COUNTY:

AST - NASSAU: Registered Tank Database
A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 11/27/2023
Date Data Arrived at EDR: 11/28/2023
Date Made Active in Reports: 02/06/2024
Number of Days to Update: 70

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

AST NCFM: Storage Tank Database
A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

TANKS NASSAU: Registered Tank Database in Nassau County
A listing of facilities in Nassau County with storage tanks.

Date of Government Version: 11/27/2023
Date Data Arrived at EDR: 11/28/2023
Date Made Active in Reports: 02/06/2024
Number of Days to Update: 70

Source: Nassau County Department of Health
Telephone: 516-227-9691
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

UST - NASSAU: Registered Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 11/27/2023
Date Data Arrived at EDR: 11/28/2023
Date Made Active in Reports: 02/06/2024
Number of Days to Update: 70

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

UST NCFM: Storage Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

ROCKLAND COUNTY:

AST - ROCKLAND: Petroleum Bulk Storage Database
A listing of aboveground storage tank sites located in Rockland County. Rockland County?s Petroleum Bulk Storage (PBS) program is no longer in service. All related operations/duties are now wholly overseen by the New York State Dept. of Environmental Conservation (NYSDEC).

Date of Government Version: 02/02/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 09/22/2017
Number of Days to Update: 189

Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: No Update Planned

UST - ROCKLAND: Petroleum Bulk Storage Database
A listing of underground storage tank sites located in Rockland County. Rockland County?s Petroleum Bulk Storage (PBS) program is no longer in service. All related operations/duties are now wholly overseen by the New York State Dept. of Environmental Conservation (NYSDEC).

Date of Government Version: 02/02/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 09/22/2017
Number of Days to Update: 189

Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: No Update Planned

SUFFOLK COUNTY:

AST - SUFFOLK: Storage Tank Database
A listing of aboveground storage tank sites located in Suffolk County.

Date of Government Version: 06/28/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 02/07/2019
Number of Days to Update: 63

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

TANKS SUFFOLK: Storage Tank Database
This county is not included in the state?s database. These are facilities that have no tank information in the storage tank database.

Date of Government Version: 06/28/2018
Date Data Arrived at EDR: 02/05/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 31

Source: Department of Health Services
Telephone: 631-854-2516
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

UST - SUFFOLK: Storage Tank Database
A listing of underground storage tank sites located in Suffolk County.

Date of Government Version: 06/28/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 02/07/2019
Number of Days to Update: 63

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 07/17/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: No Update Planned

WESTCHESTER COUNTY:

AST - WESTCHESTER: Listing of Storage Tanks
A listing of aboveground storage tank sites located in Westchester County.

Date of Government Version: 01/29/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 03/06/2024
Number of Days to Update: 27

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 07/23/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Semi-Annually

UST - WESTCHESTER: Listing of Storage Tanks
A listing of underground storage tank sites located in Westchester County.

Date of Government Version: 01/29/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 03/06/2024
Number of Days to Update: 27

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 07/23/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Semi-Annually

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/06/2024
Date Made Active in Reports: 04/25/2024
Number of Days to Update: 79

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/13/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Day Care Providers
Source: Department of Health
Telephone: 212-676-2444

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

**STREET AND ADDRESS INFORMATION**

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# GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

PROPOSED BALLYS CASINO - RING ROAD
450 HUTCHINSON RIVER PARKWAY
BRONX, NY 10465

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 40.813693 - 40° 48' 49.29'' |
| Longitude (West): | 73.835803 - 73° 50' 8.89'' |
| Universal Tranverse Mercator: | Zone 18 |
| UTM X (Meters): | 598189.6 |
| UTM Y (Meters): | 4518516.0 |
| Elevation: | 16 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 14115946 FLUSHING, NY |
| Version Date: | 2019 |

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

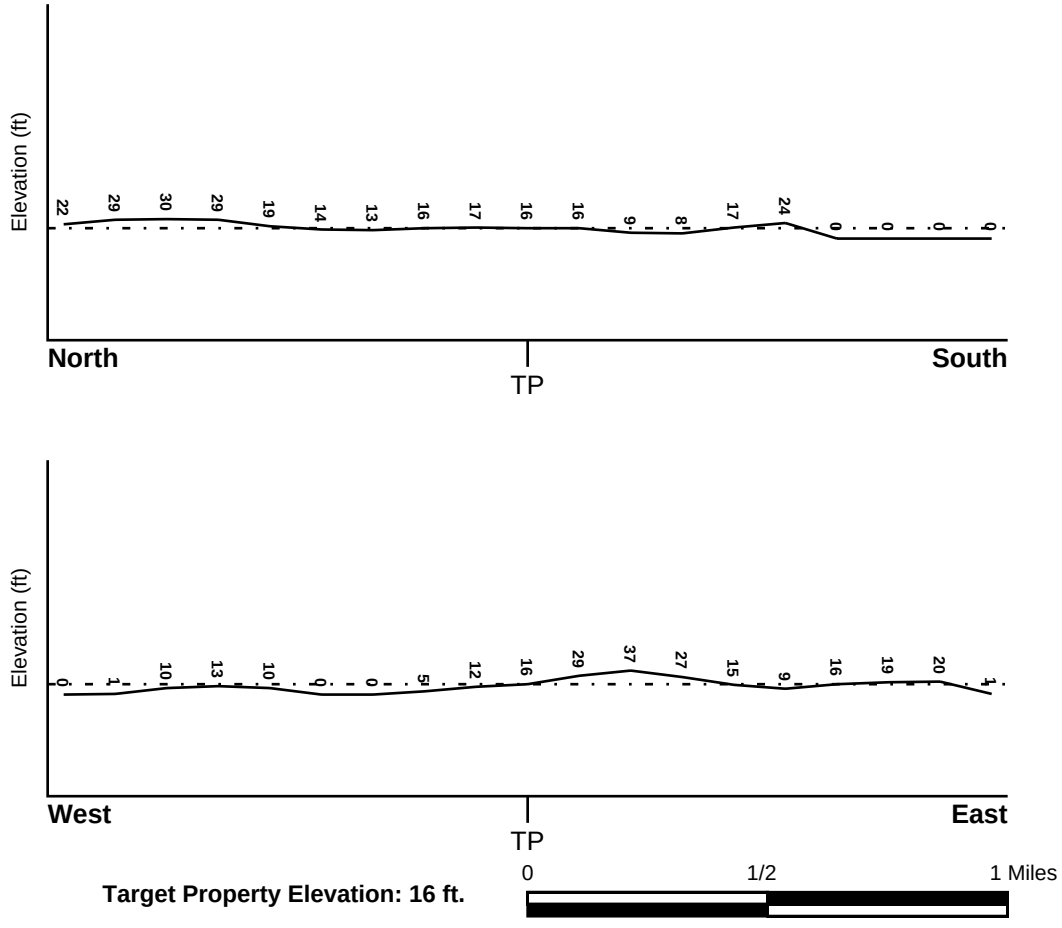
**TOPOGRAPHIC INFORMATION**

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General West

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




**Target Property Elevation: 16 ft.**

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

### FEMA FLOOD ZONE

| Flood Plain Panel at Target Property | FEMA Source Type |
|---|---|
| 3604970104F | FEMA FIRM Flood data |

| Additional Panels in search area: | FEMA Source Type |
|---|---|
| 3604970103F | FEMA FIRM Flood data |
| 3604970111F | FEMA FIRM Flood data |
| 3604970112F | FEMA FIRM Flood data |

### NATIONAL WETLAND INVENTORY

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| FLUSHING | YES - refer to the Overview Map and Detail Map |

## HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

***Site-Specific Hydrogeological Data*:***

| | |
|---|---|
| Search Radius: | 1.25 miles |
| Status: | Not found |

## AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| Not Reported | | |

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

**GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT** **GEOLOGIC AGE IDENTIFICATION**

| | | | |
|---|---|---|---|
| Era: | Paleozoic | Category: | Stratified Sequence |
| System: | Ordovician | | |
| Series: | Middle Ordovician (Mohawkian) | | |
| Code: | O2 *(decoded above as Era, System & Series)* | | |

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

**DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY**

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | | |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | Permeability Rate (in/hr) | Soil Reaction (pH) |
| 1 | 0 inches | 6 inches | variable | Not reported | Not reported | Max: 0.00<br>Min: 0.00 | Max: 0.00<br>Min: 0.00 |

**OTHER SOIL TYPES IN AREA**

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sandy loam

Surficial Soil Types: fine sandy loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: unweathered bedrock
gravelly - fine sandy loam
stratified
fine sandy loam

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

**WELL SEARCH DISTANCE INFORMATION**

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 1 mile |
| State Database | 1.000 |

**FEDERAL USGS WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 1 | USGS40000833436 | 1/4 - 1/2 Mile SSE |
| 2 | USGS40000833386 | 1/4 - 1/2 Mile SSE |
| 3 | USGS40000833327 | 1/2 - 1 Mile SSE |
| 4 | USGS40000833595 | 1/2 - 1 Mile East |
| 5 | USGS40000833850 | 1/2 - 1 Mile NNW |

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|

No PWS System Found

Note: PWS System location is not always the same as well location.

**STATE DATABASE WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|

No Wells Found

# PHYSICAL SETTING SOURCE MAP - 7720624.2s




County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

| | | | |
|---|---|---|---|
| SITE NAME: | Proposed Ballys Casino - Ring Road | CLIENT: | Langan Engineering, Inc. |
| ADDRESS: | 450 Hutchinson River Parkway<br>Bronx NY 10465 | CONTACT: | Kaitlyn Gioia |
| LAT/LONG: | 40.813693 / 73.835803 | INQUIRY #: | 7720624.2s |
| | | DATE: | July 29, 2024 5:00 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

**1**
**SSE** **FED USGS** **USGS40000833436**
**1/4 - 1/2 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 39. 1 | | |
| Type: | Well: Test hole not completed as a well | | |
| Description: | Not Reported | HUC: | 02030102 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | Not Reported | Well Depth Units: | Not Reported |
| Well Hole Depth: | 92 | Well Hole Depth Units: | ft |

---

**2**
**SSE** **FED USGS** **USGS40000833386**
**1/4 - 1/2 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 1. 1 | Type: | Well |
| Description: | Not Reported | HUC: | 02030102 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | Not Reported | Well Depth Units: | Not Reported |
| Well Hole Depth: | Not Reported | Well Hole Depth Units: | Not Reported |

---

**3**
**SSE** **FED USGS** **USGS40000833327**
**1/2 - 1 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 2. 1 | Type: | Well |
| Description: | Not Reported | HUC: | 02030102 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | Not Reported | Well Depth Units: | Not Reported |
| Well Hole Depth: | Not Reported | Well Hole Depth Units: | Not Reported |

---

**4**
**East** **FED USGS** **USGS40000833595**
**1/2 - 1 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 3. 1 | Type: | Well |
| Description: | Not Reported | HUC: | 02030102 |

| | | | |
|---|---|---|---|
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | Not Reported | Well Depth Units: | Not Reported |
| Well Hole Depth: | Not Reported | Well Hole Depth Units: | Not Reported |

---

**5**
**NNW**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000833850**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-NY | Organization Name: | USGS New York Water Science Center |
| Monitor Location: | B 9 | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | Not Reported | Formation Type: | Not Reported |
| Aquifer Type: | Not Reported | Construction Date: | Not Reported |
| Well Depth: | 140 | Well Depth Units: | ft |
| Well Hole Depth: | Not Reported | Well Hole Depth Units: | Not Reported |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

Federal EPA Radon Zone for BRONX County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

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Federal Area Radon Information for BRONX COUNTY, NY

Number of sites tested: 31

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area | 0.670 pCi/L | 96% | 4% | 0% |
| Basement | 1.110 pCi/L | 42% | 58% | 0% |

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

## HYDROGEOLOGIC INFORMATION

AQUIFLOW$^{R}$ Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

New York Public Water Wells
Source: New York Department of Health
Telephone: 518-458-6731

## OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database
Source: Department of Environmental Conservation
Telephone: 518-402-8072
These files contain records, in the database, of wells that have been drilled.

RADON

State Database: NY Radon
Source: Department of Health
Telephone: 518-402-7556
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

**STREET AND ADDRESS INFORMATION**

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# Appendix F Historical Resources

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.3

July 31, 2024

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

07/31/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.3

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Langan Engineering, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## *Certified Sanborn Results:*

**Certification #** F7D1-4C79-AF79

**PO #** 170773001

**Project** Prpsd Bally s Casino - Ring Rd

**Maps Provided:**

| | | | |
|---|---|---|---|
| 2007 | 1996 | 1981 | 1898 |
| 2006 | 1995 | 1978 | |
| 2005 | 1993 | 1977 | |
| 2004 | 1992 | 1967 | |
| 2003 | 1991 | 1950 | |
| 2002 | 1988 | 1930 | |
| 2001 | 1986 | 1919 | |
| 1998 | 1983 | 1908 | |

Sanborn® Library search results

Certification #: F7D1-4C79-AF79

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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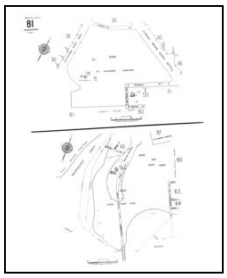
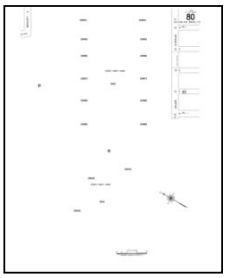
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 2007 Source Sheets

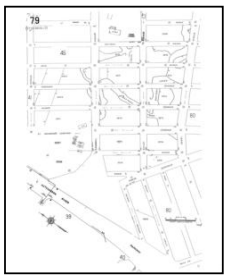


Volume 21, Sheet 81
2007

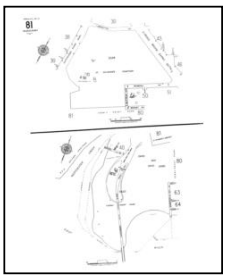


Volume 21, Sheet 80
2007

### 2006 Source Sheets

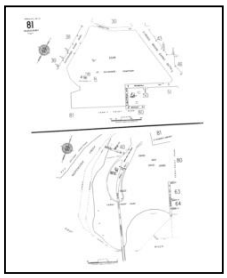


Volume 21, Sheet 79
2006



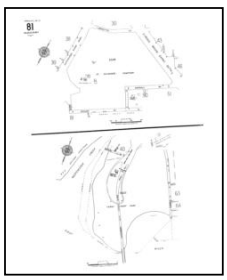
Volume 21, Sheet 81
2006

### 2005 Source Sheets



Volume 21, Sheet 81
2005

### 2004 Source Sheets

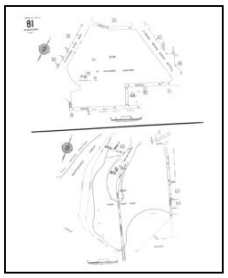


Volume 21, Sheet 81
2004

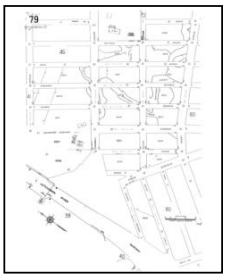
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

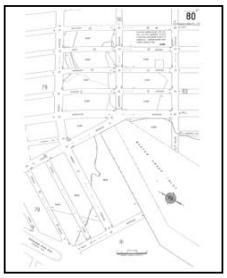
### 2003 Source Sheets



Volume 21, Sheet 81
2003

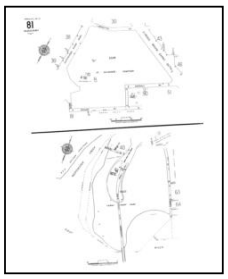


Volume 21, Sheet 79
2003



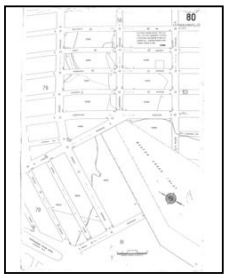
Volume 21, Sheet 80
2003

### 2002 Source Sheets

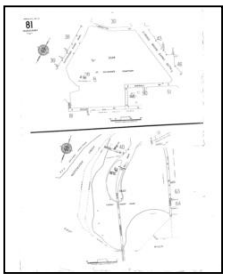


Volume 21, Sheet 81
2002

### 2001 Source Sheets

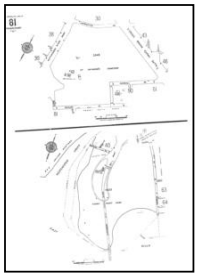


Volume 21, Sheet 80
2001



Volume 21, Sheet 81
2001

### 1998 Source Sheets

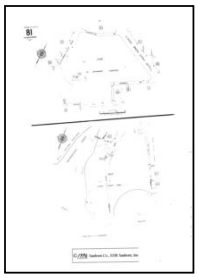


Volume 21, Sheet 81
1998

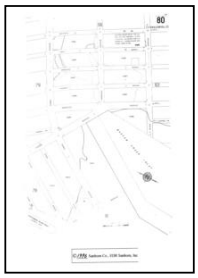
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1996 Source Sheets



Volume 21, Sheet 81
1996

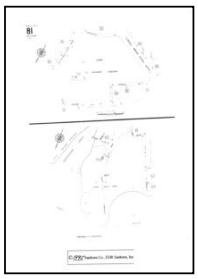


Volume 21, Sheet 80
1996



Volume 21, Sheet 79
1996

### 1995 Source Sheets

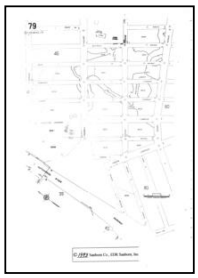


Volume 21, Sheet 81
1995

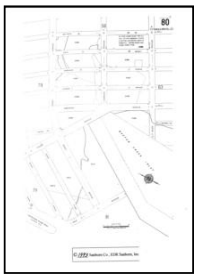
### 1993 Source Sheets



Volume 21, Sheet 81
1993

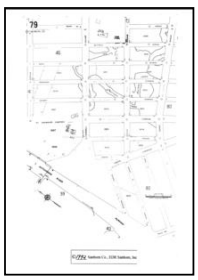


Volume 21, Sheet 79
1993

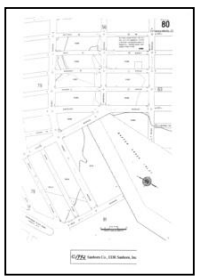


Volume 21, Sheet 80
1993

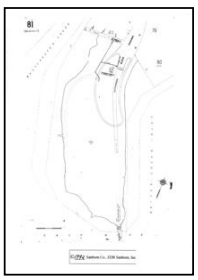
### 1992 Source Sheets



Volume 21, Sheet 79
1992



Volume 21, Sheet 80
1992



Volume 21, Sheet 81
1992

## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

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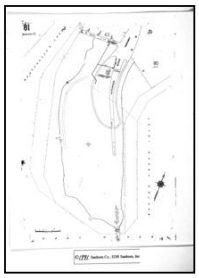
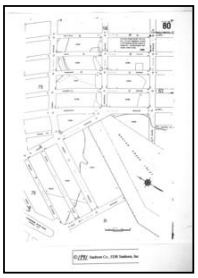


Volume 21, Sheet 81
1991



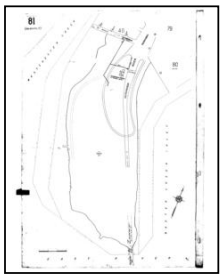
Volume 21, Sheet 80
1991

### 1988 Source Sheets



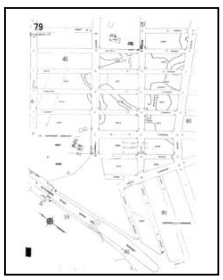
Volume 21, Sheet 81
1988

### 1986 Source Sheets

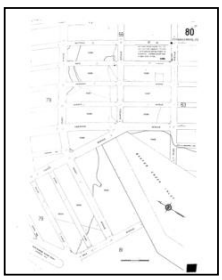


Volume 21, Sheet 81
1986

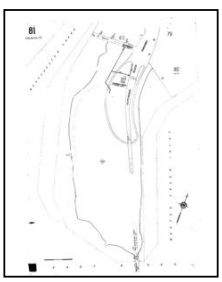
### 1983 Source Sheets



Volume 21, Sheet 79
1983



Volume 21, Sheet 80
1983



Volume 21, Sheet 81
1983

## *Sanborn Sheet Key*

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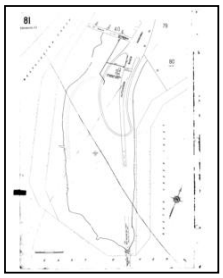
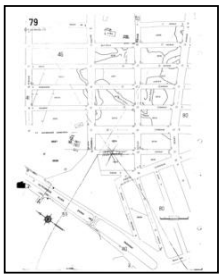
### 1981 Source Sheets

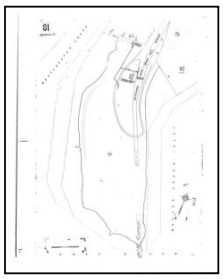


Volume 21, Sheet 81
1981



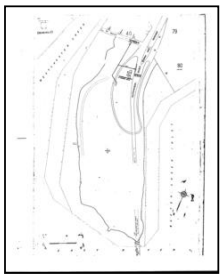
Volume 21, Sheet 79
1981

### 1978 Source Sheets



Volume 21, Sheet 81
1978

### 1977 Source Sheets

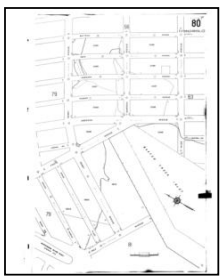


Volume 21, Sheet 81
1977

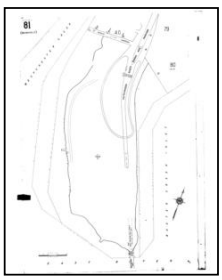


Volume 21, Sheet 80
1977

### 1967 Source Sheets



Volume 21, Sheet 80
1967



Volume 21, Sheet 81
1967

## *Sanborn Sheet Key*

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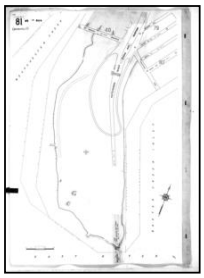
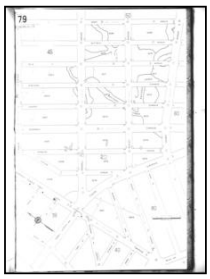
### 1950 Source Sheets



Volume 21, Sheet 81
1950

### 1930 Source Sheets

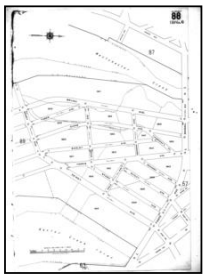


Volume 21, Sheet 79
1930

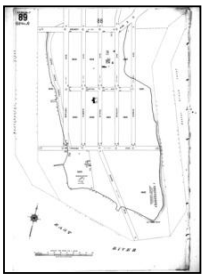


Volume 21, Sheet 81
1930

### 1919 Source Sheets

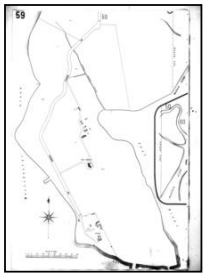


Volume 17, Sheet 88
1919



Volume 17, Sheet 89
1919

### 1908 Source Sheets



Volume A, Sheet 59
1908

## *Sanborn Sheet Key*

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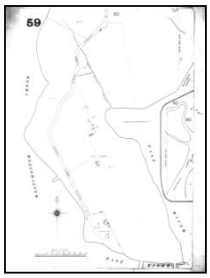
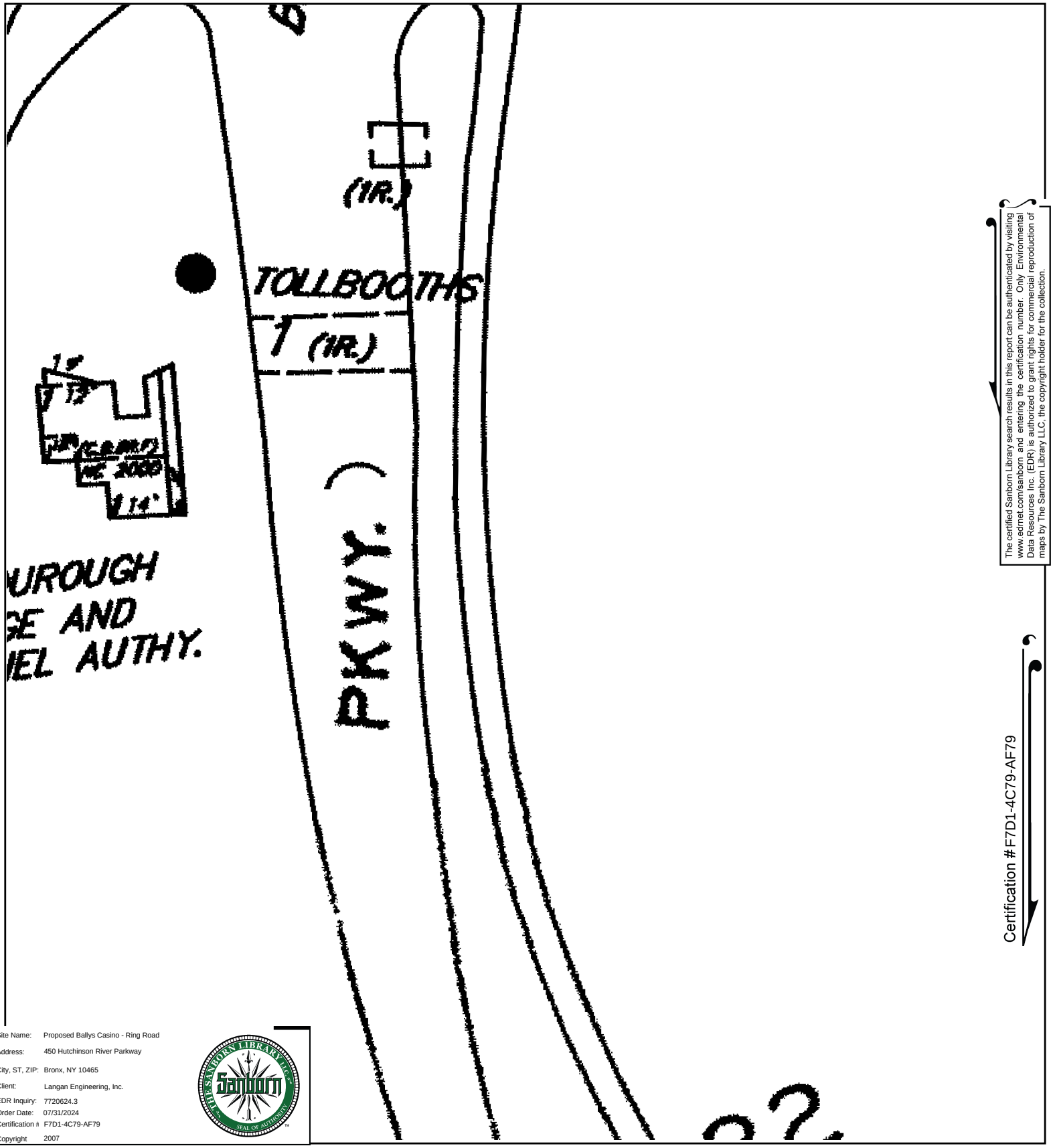
### 1898 Source Sheets




Volume A, Sheet 59
1898

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| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
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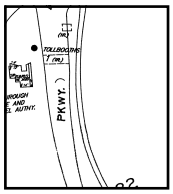

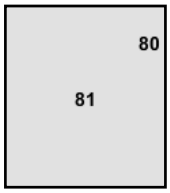


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Volume 21, Sheet 81

0 Feet 150 300 600

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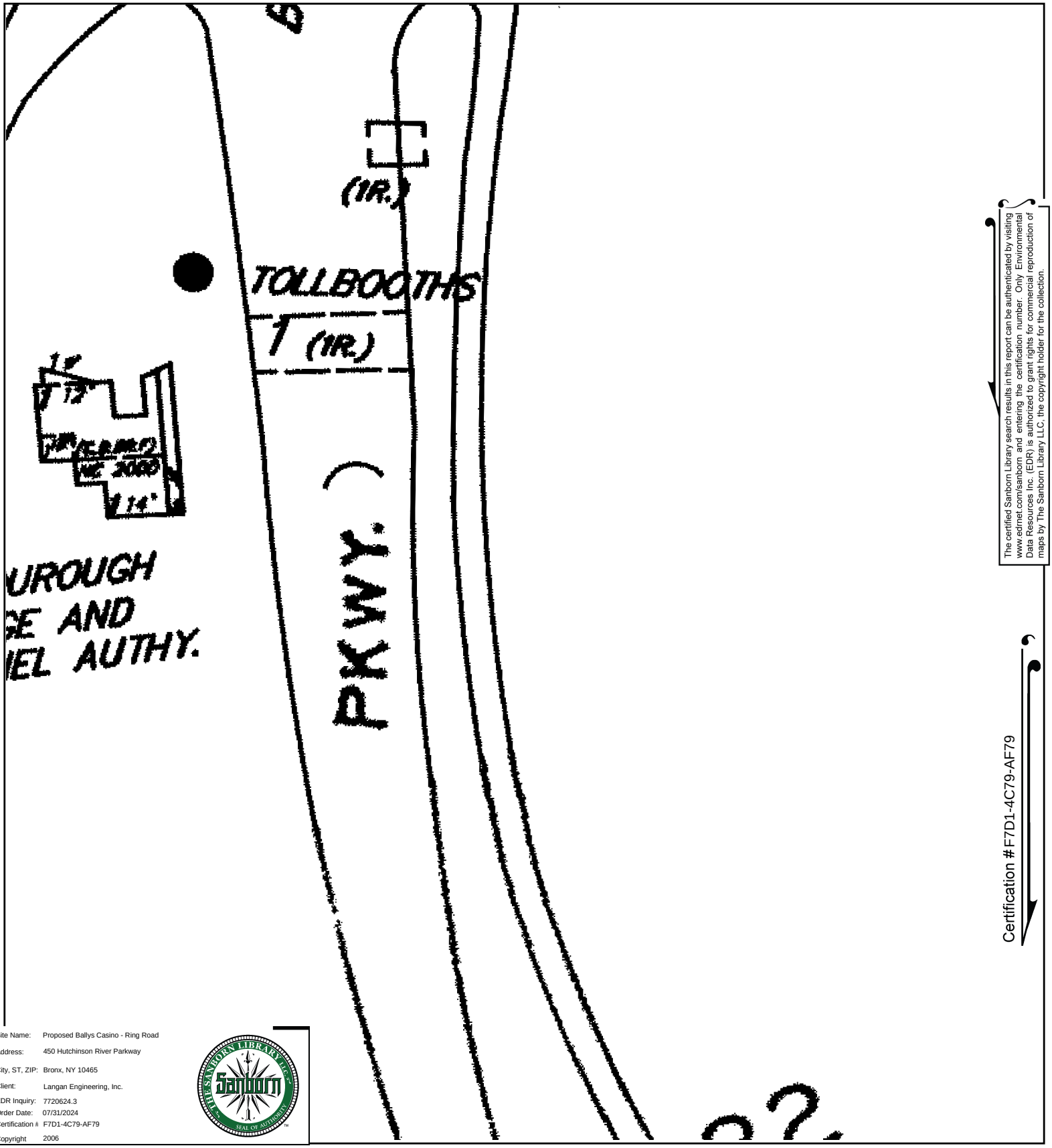


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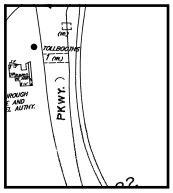
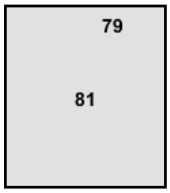
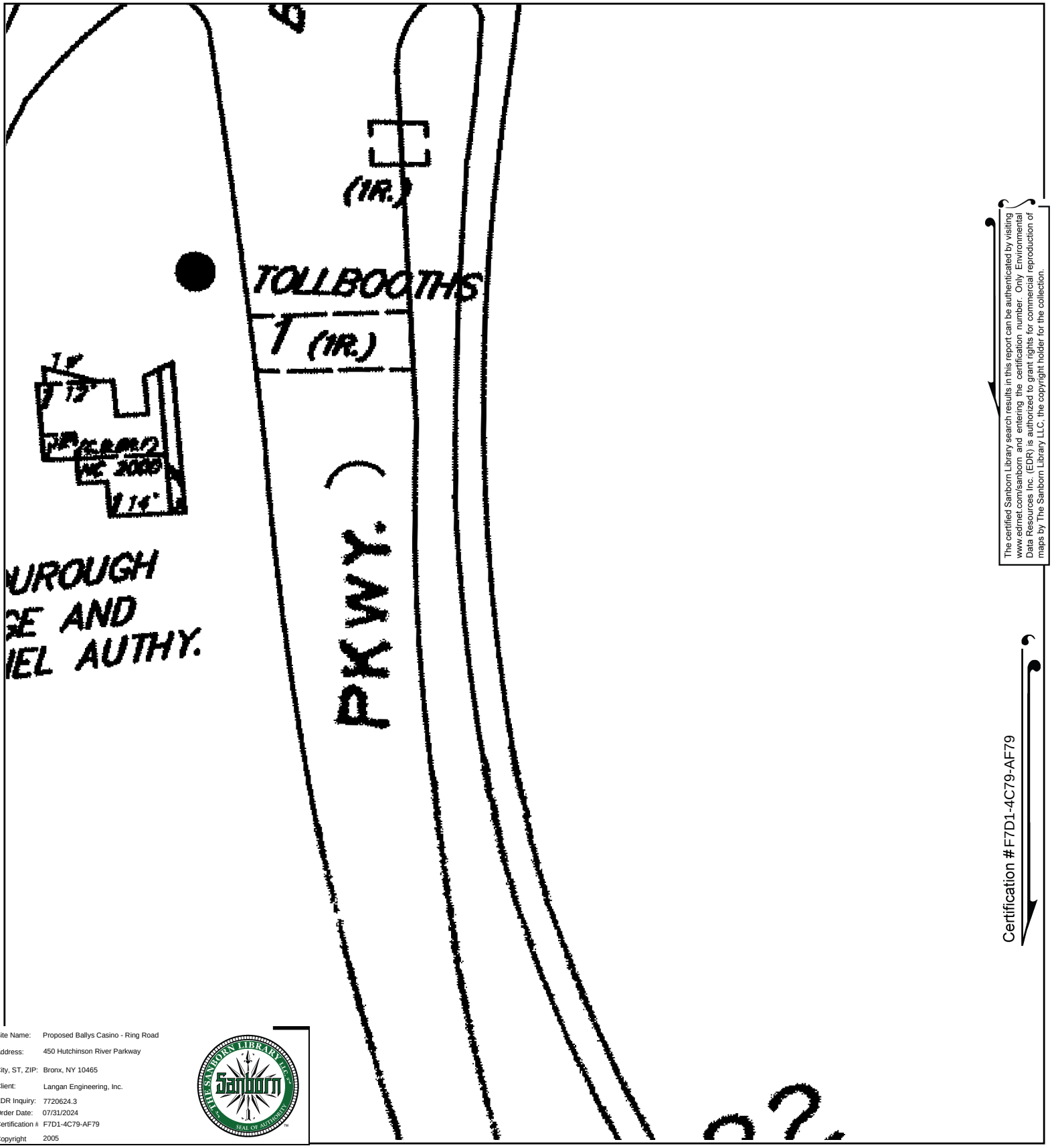





Volume 21, Sheet 81
Volume 21, Sheet 79

N

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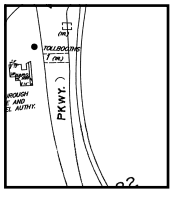
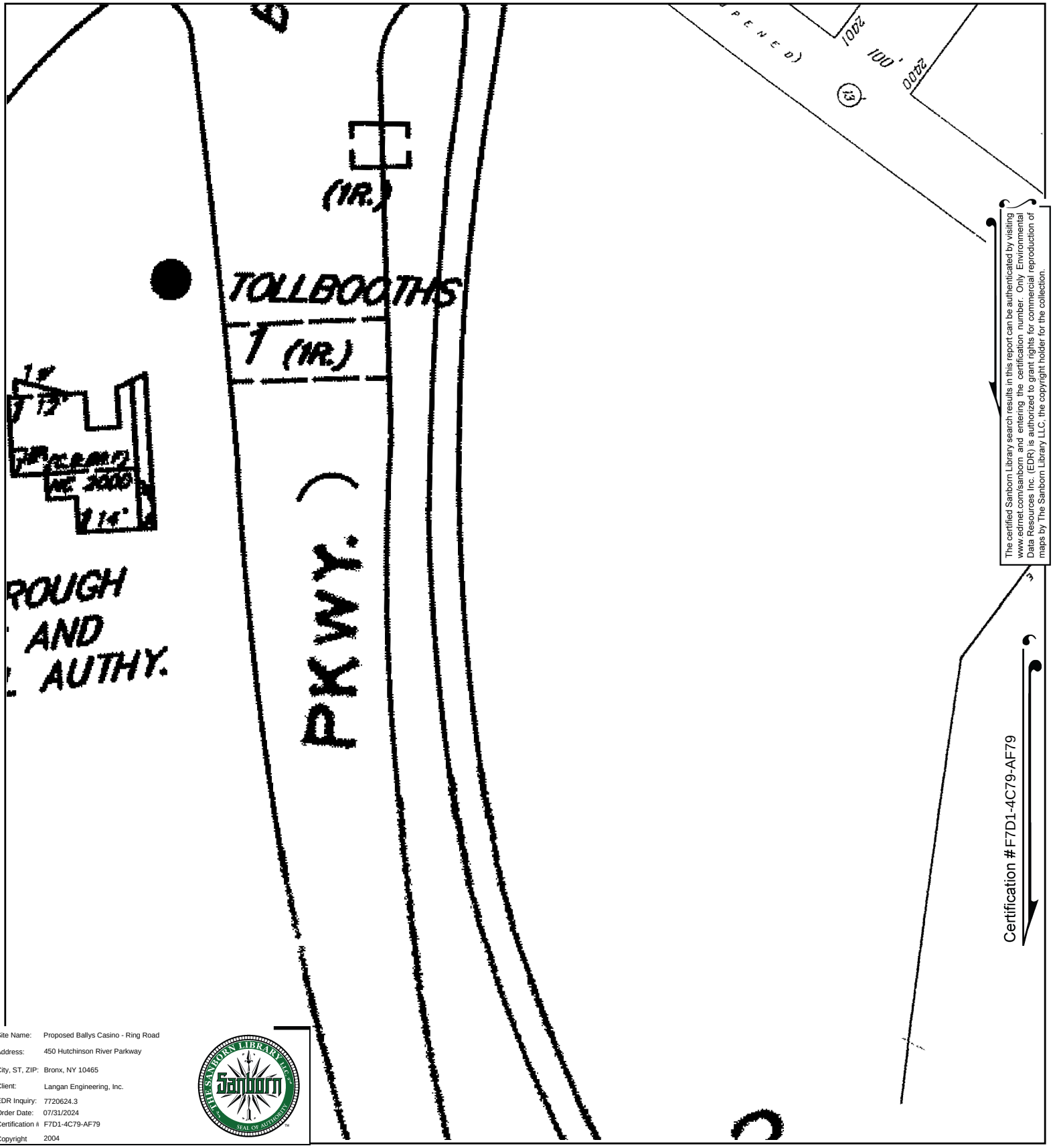


81

Volume 21, Sheet 81

N

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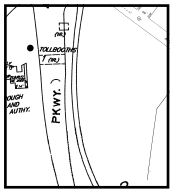

Volume 21, Sheet 81

81

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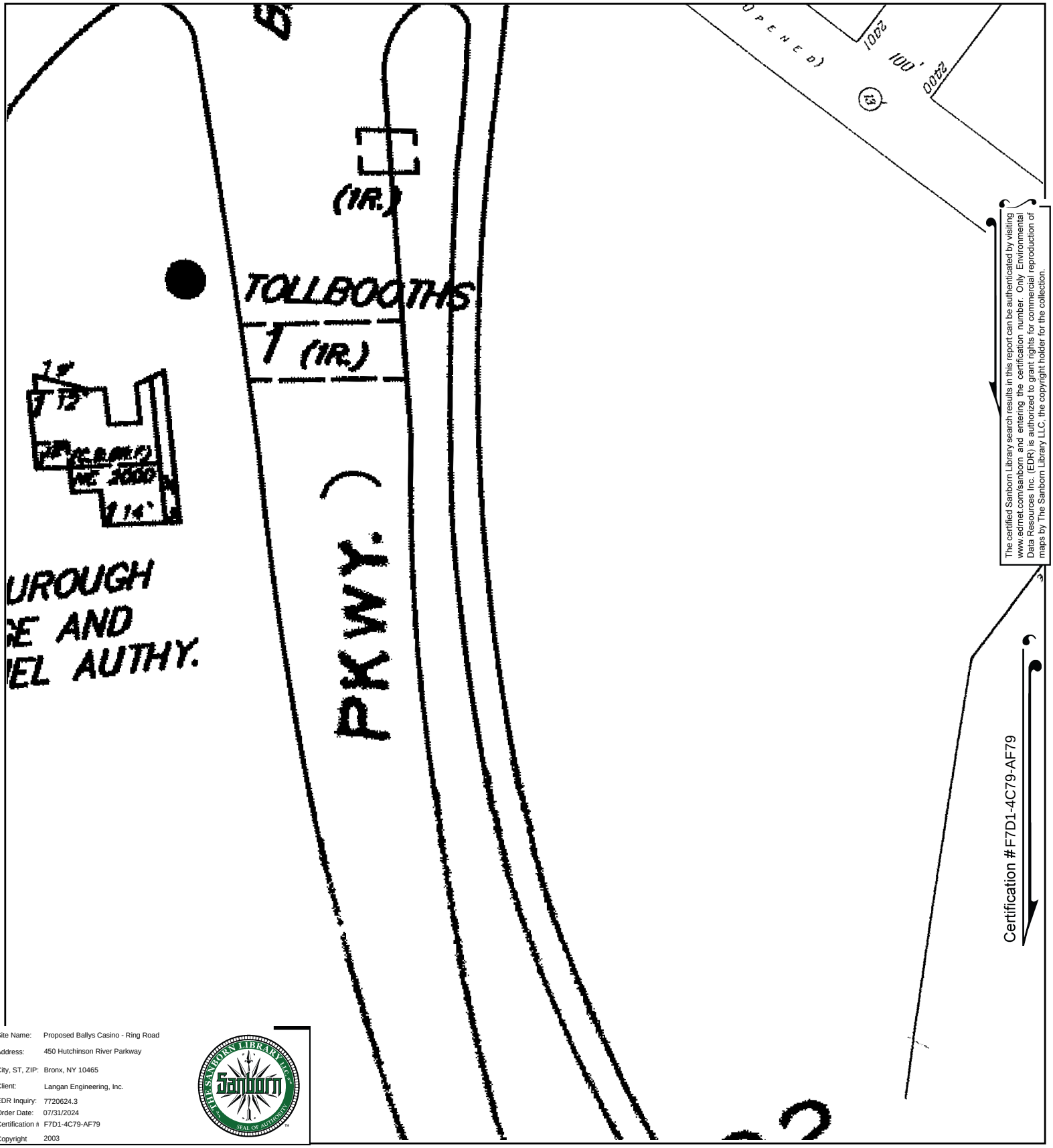


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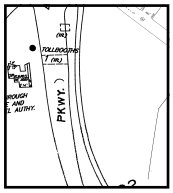

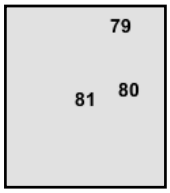


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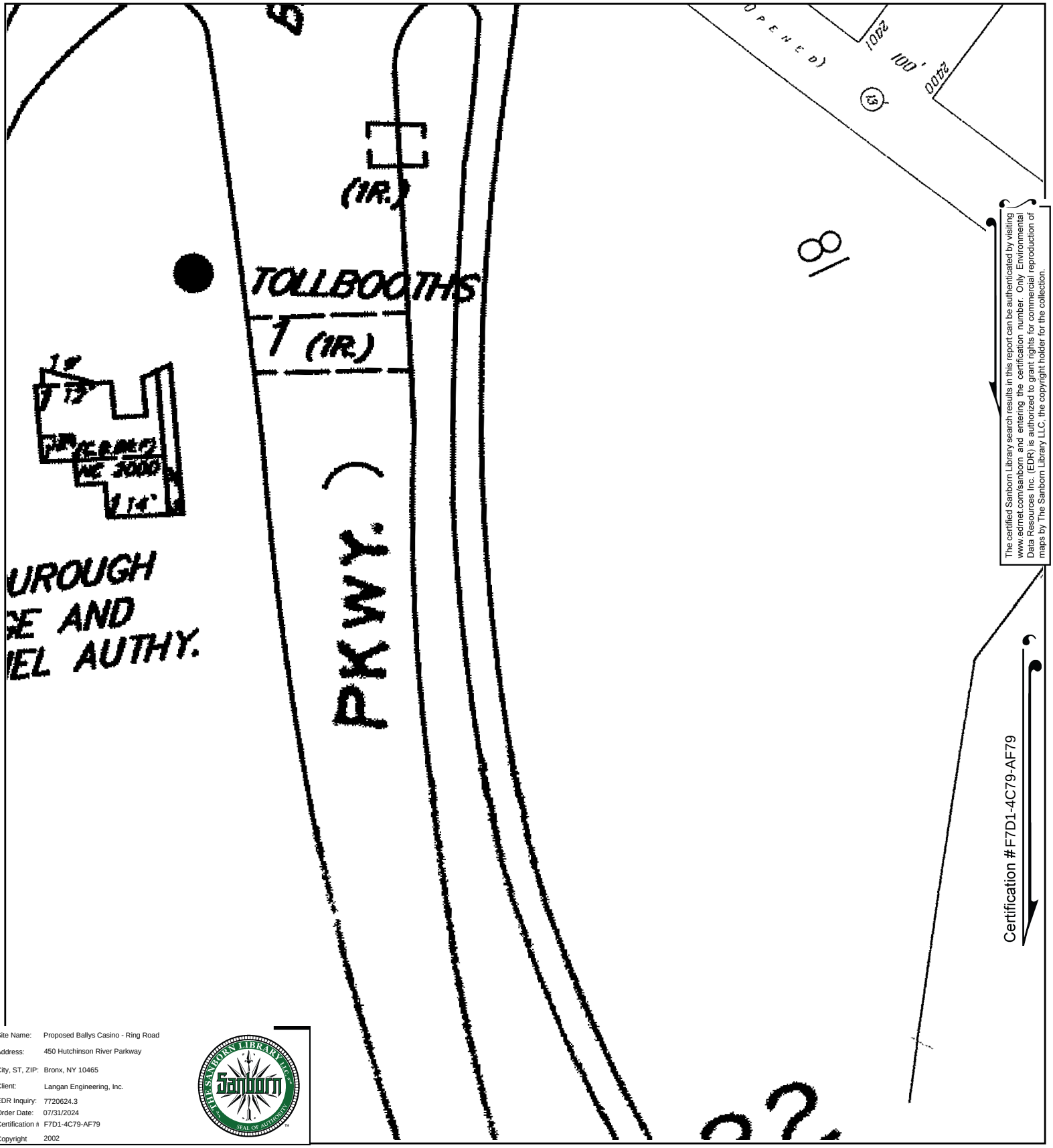
Volume 21, Sheet 79
Volume 21, Sheet 81

N

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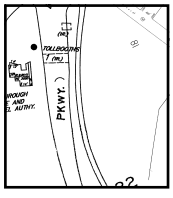

81

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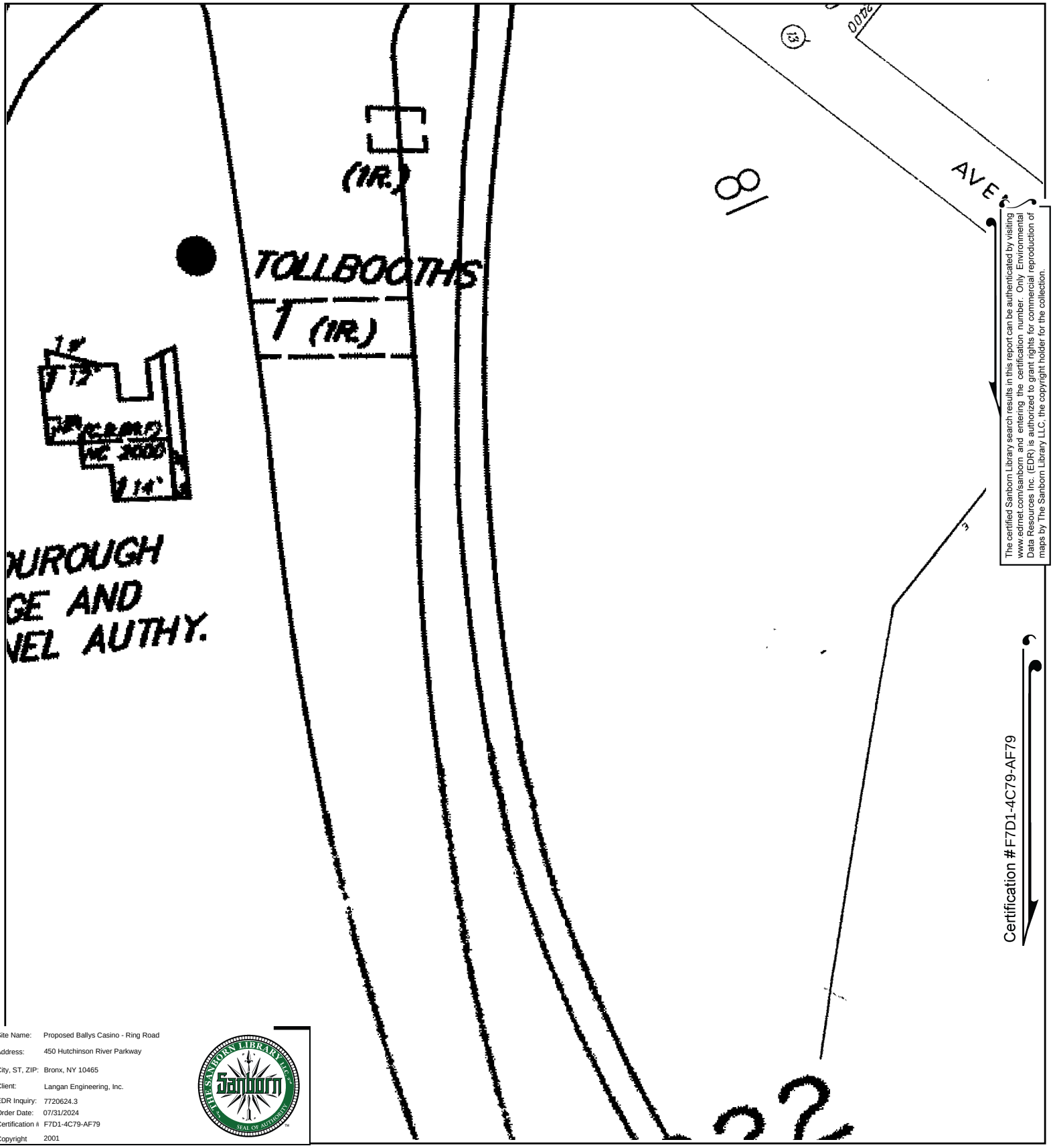


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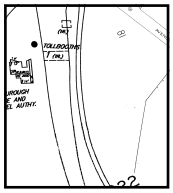

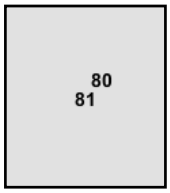


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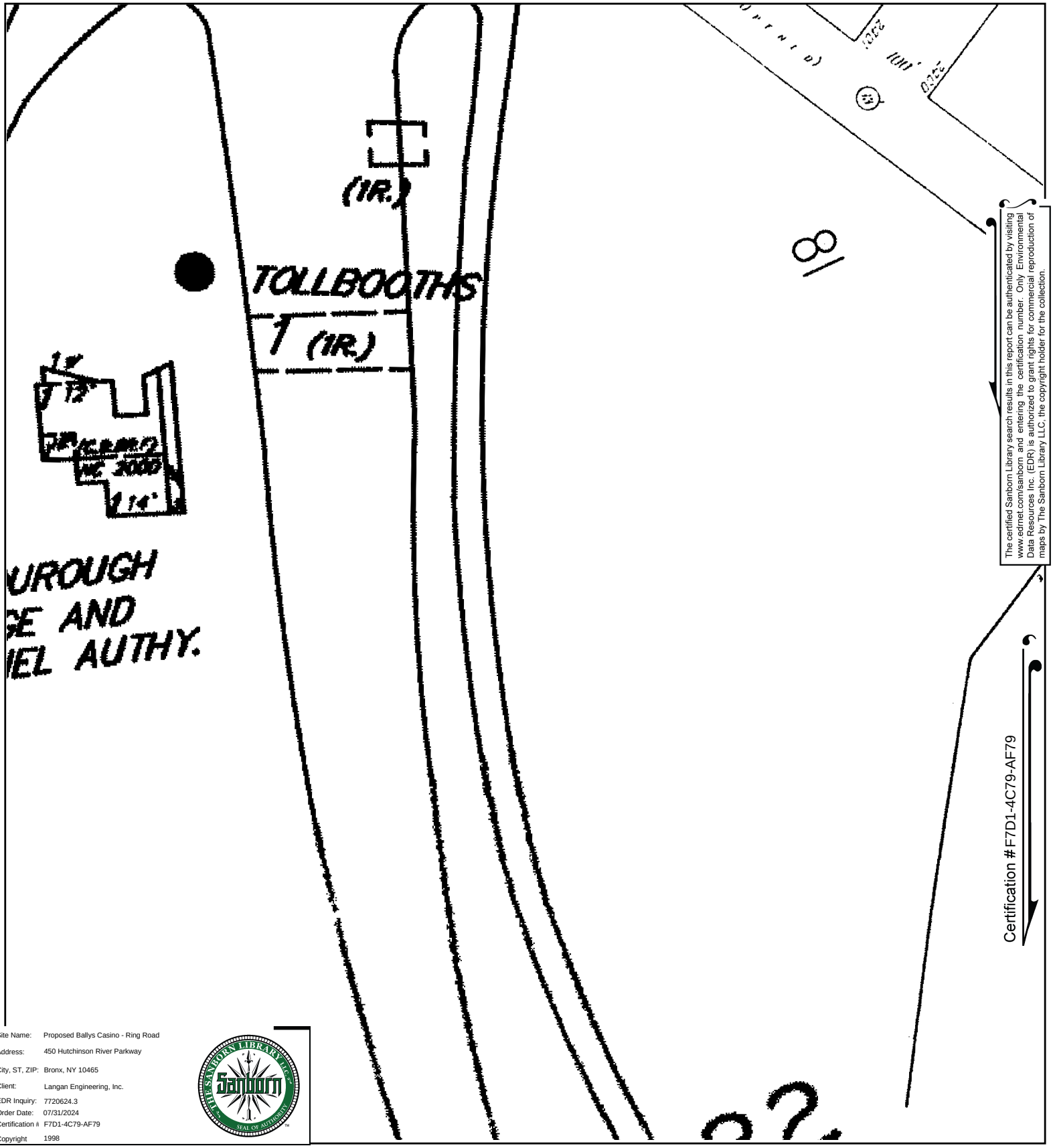
N

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Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1998

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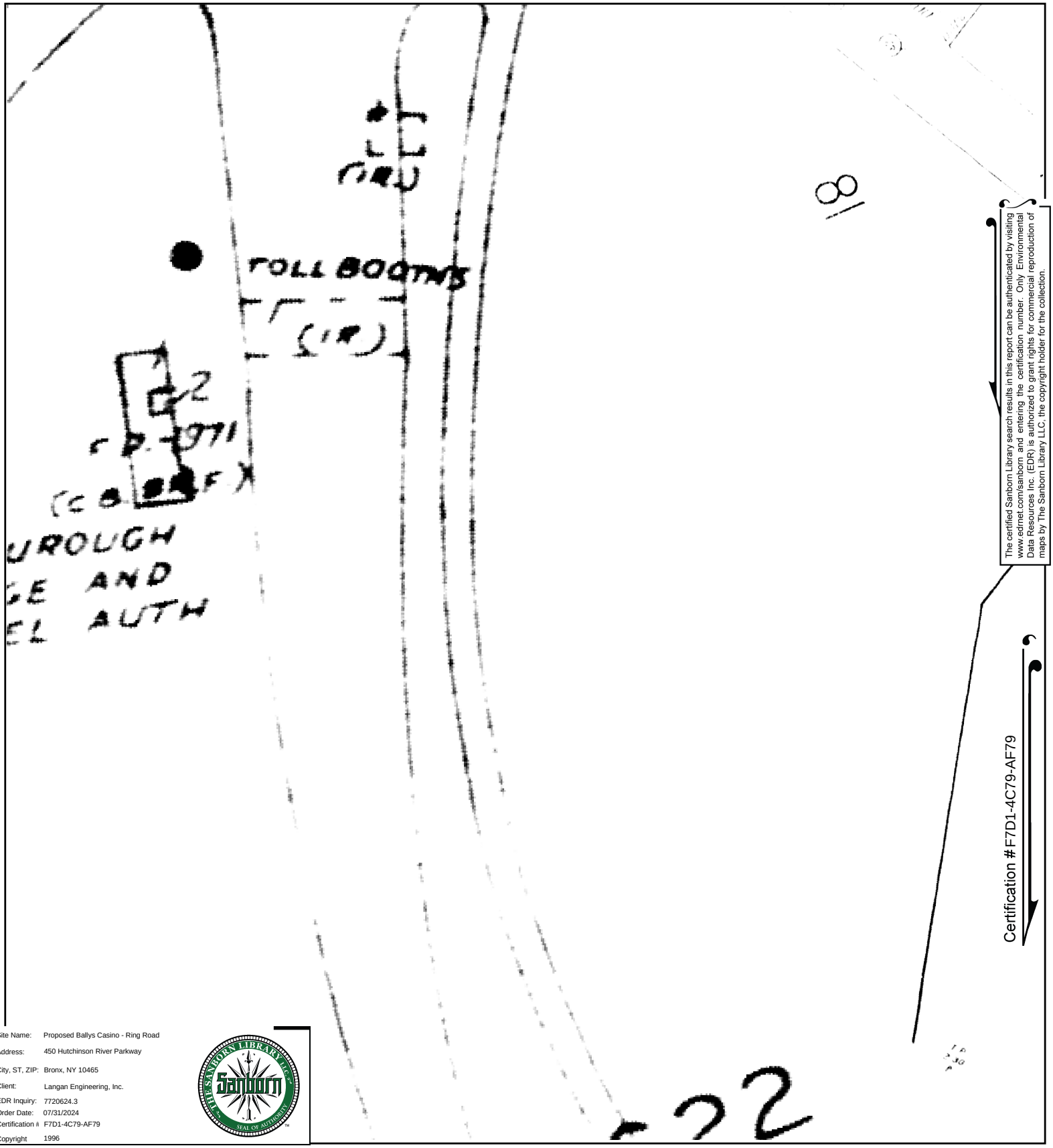


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| Client: | Langan Engineering, Inc. |
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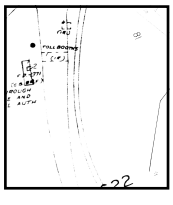

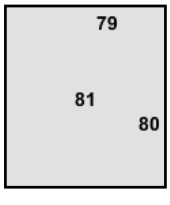


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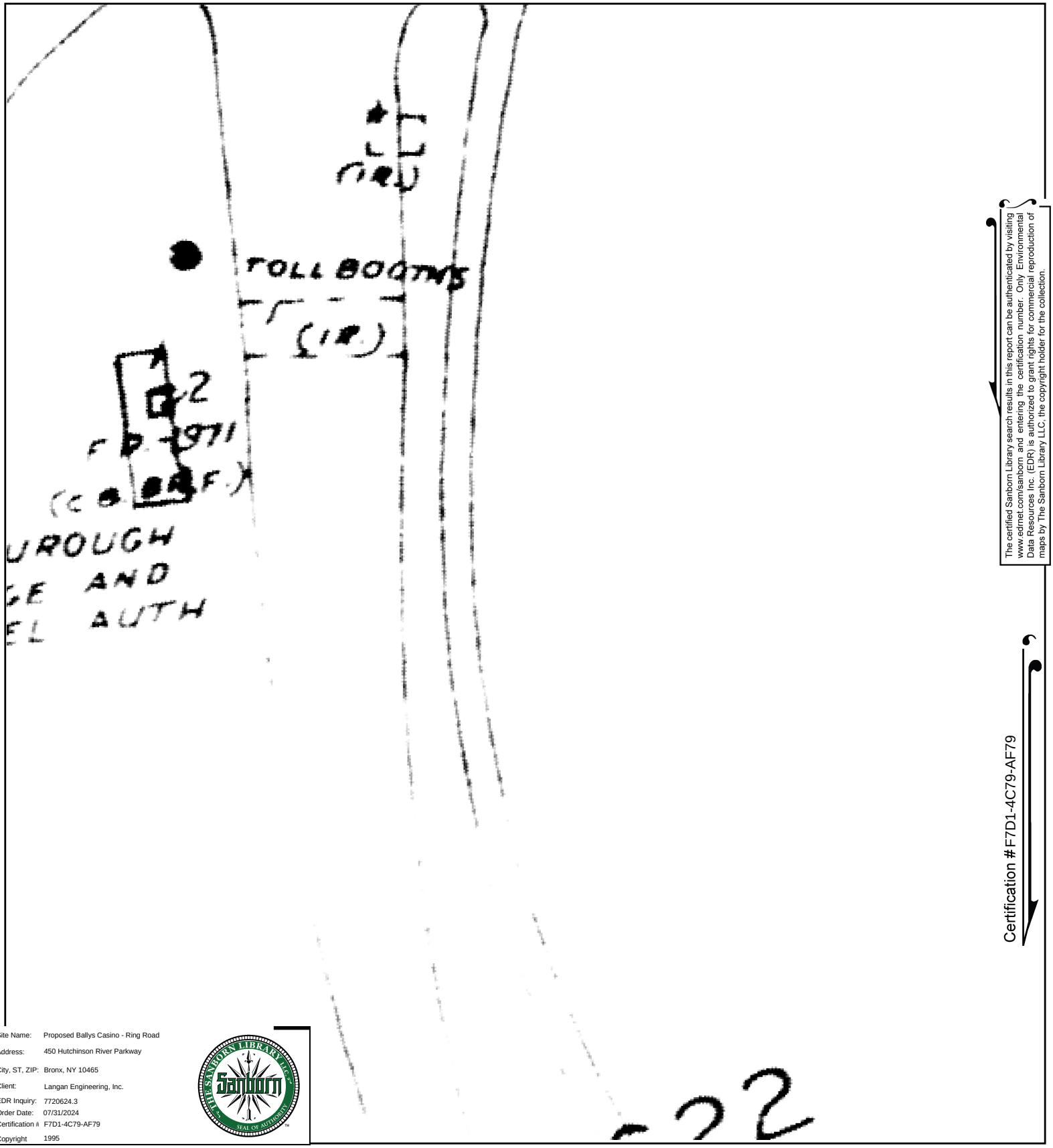


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City, ST, ZIP: Bronx, NY 10465
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Certification #: F7D1-4C79-AF79
Copyright: 1995

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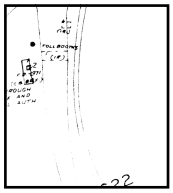

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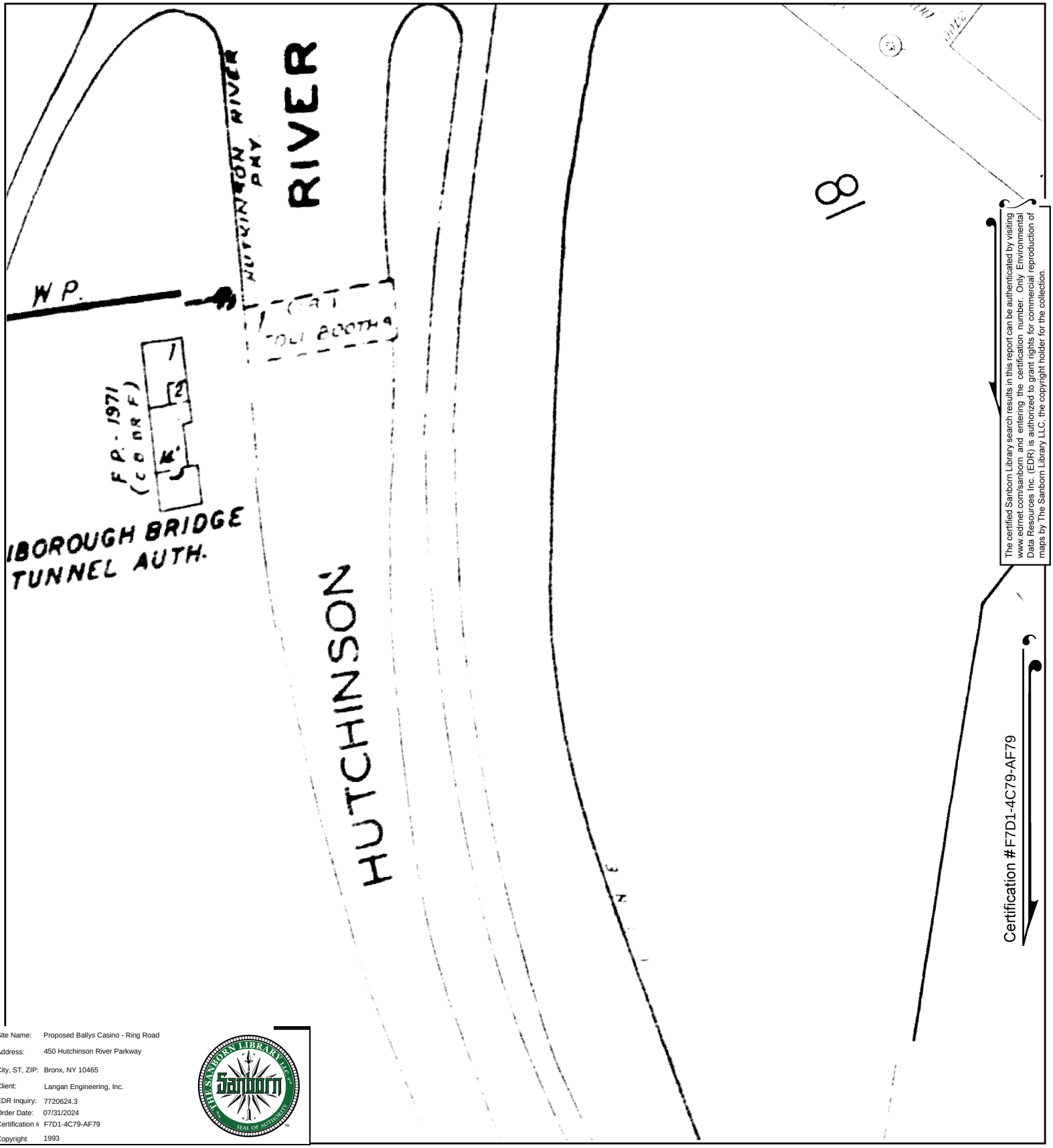


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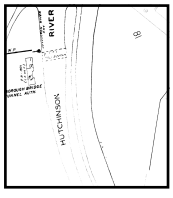

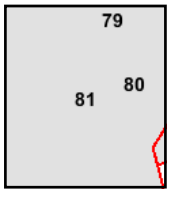


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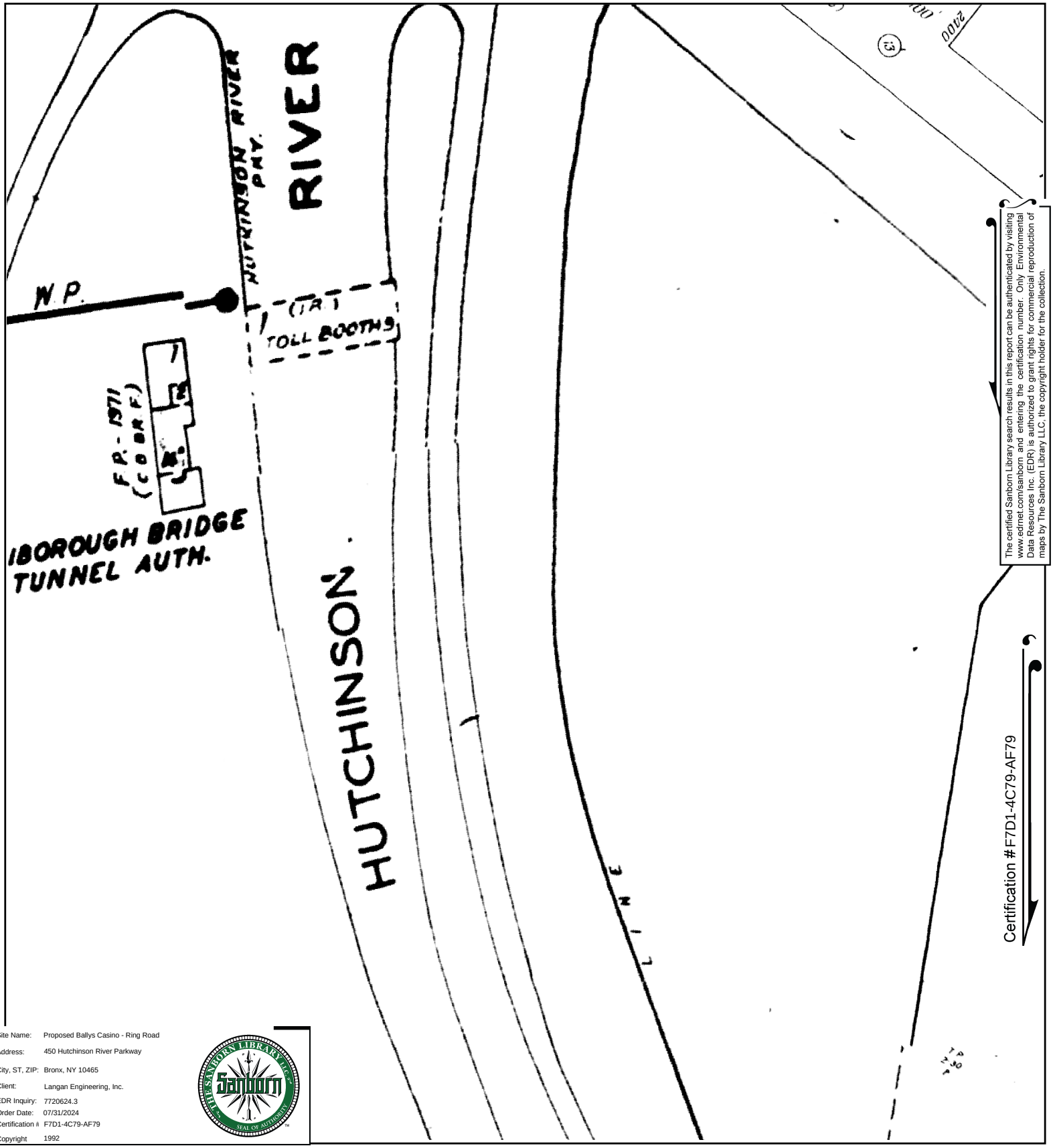


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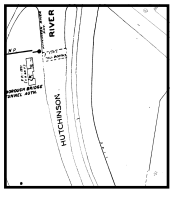


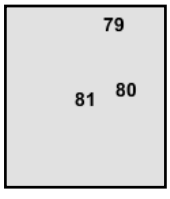


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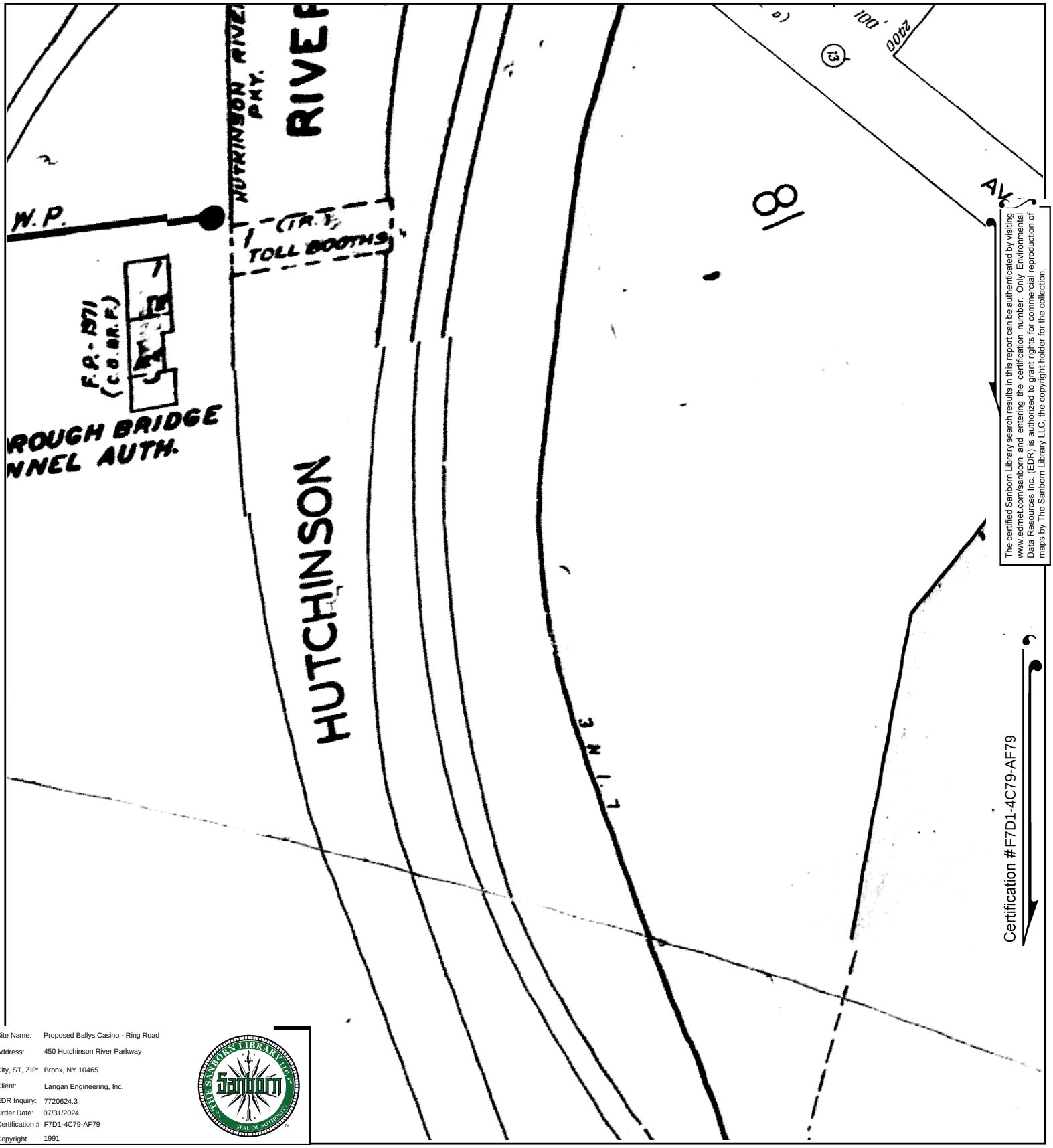


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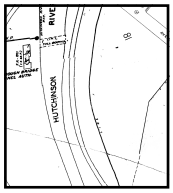

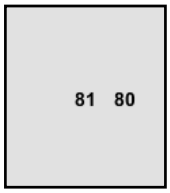


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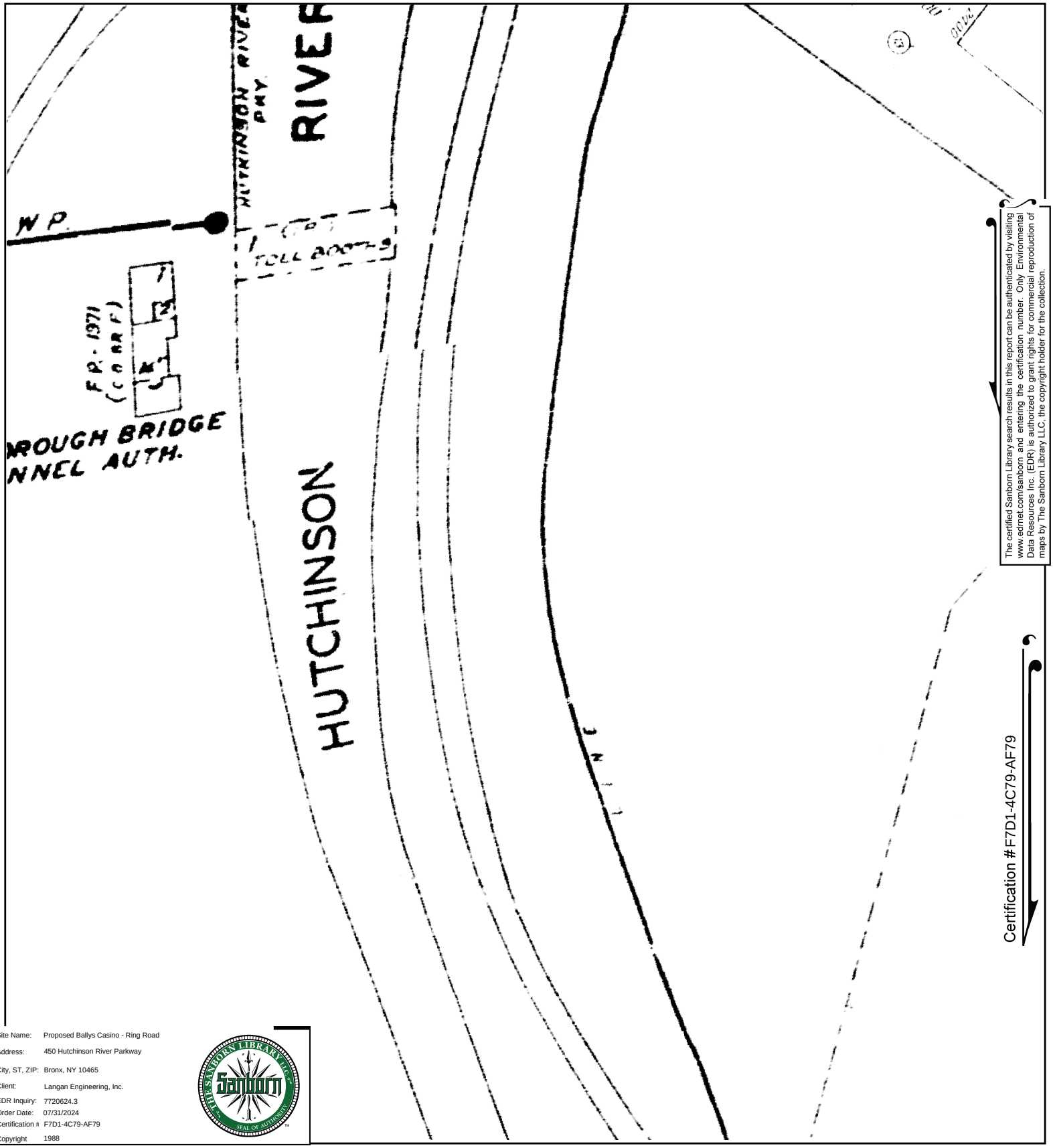


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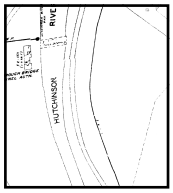

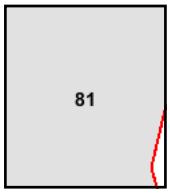


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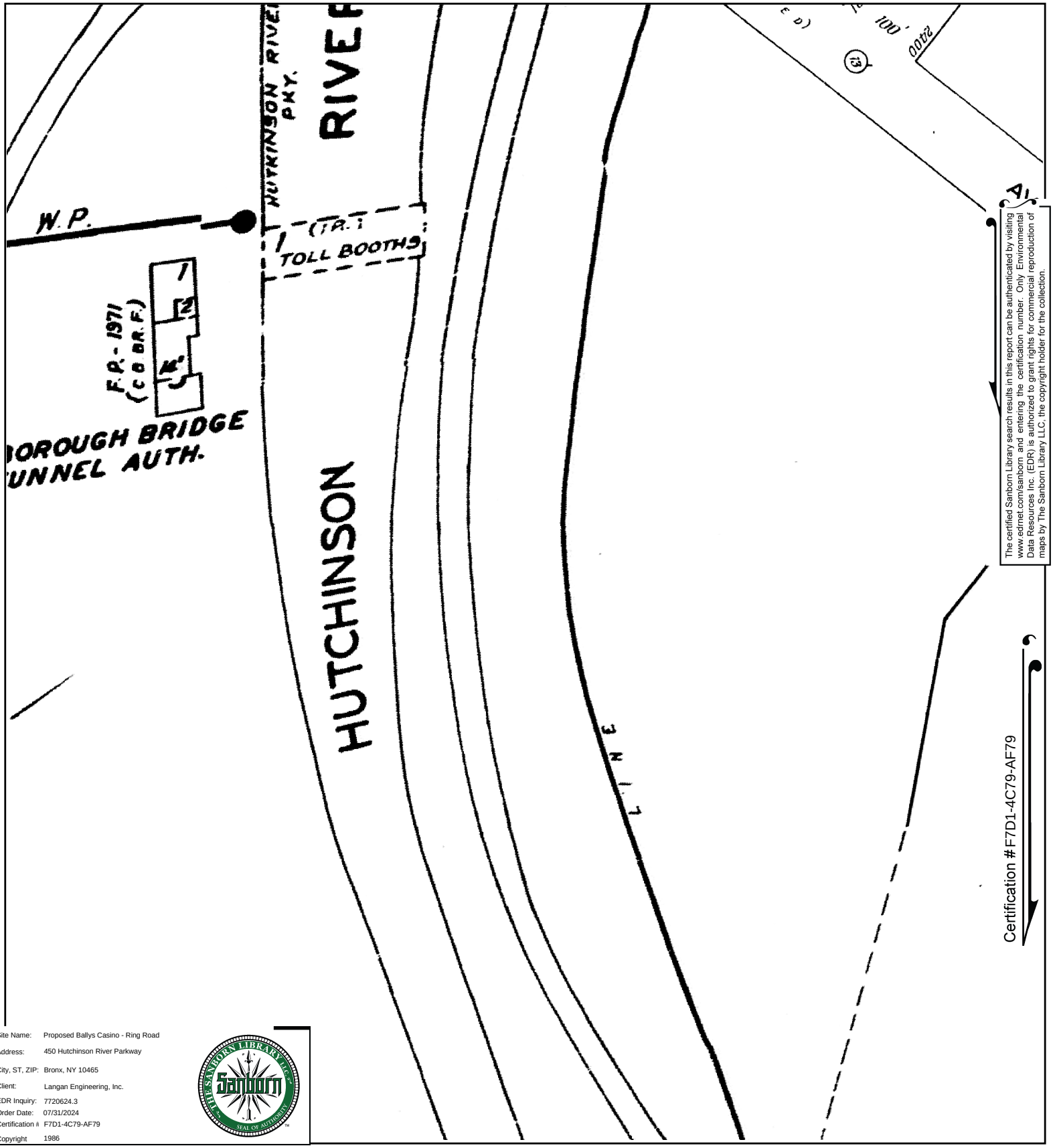


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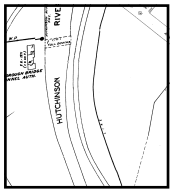

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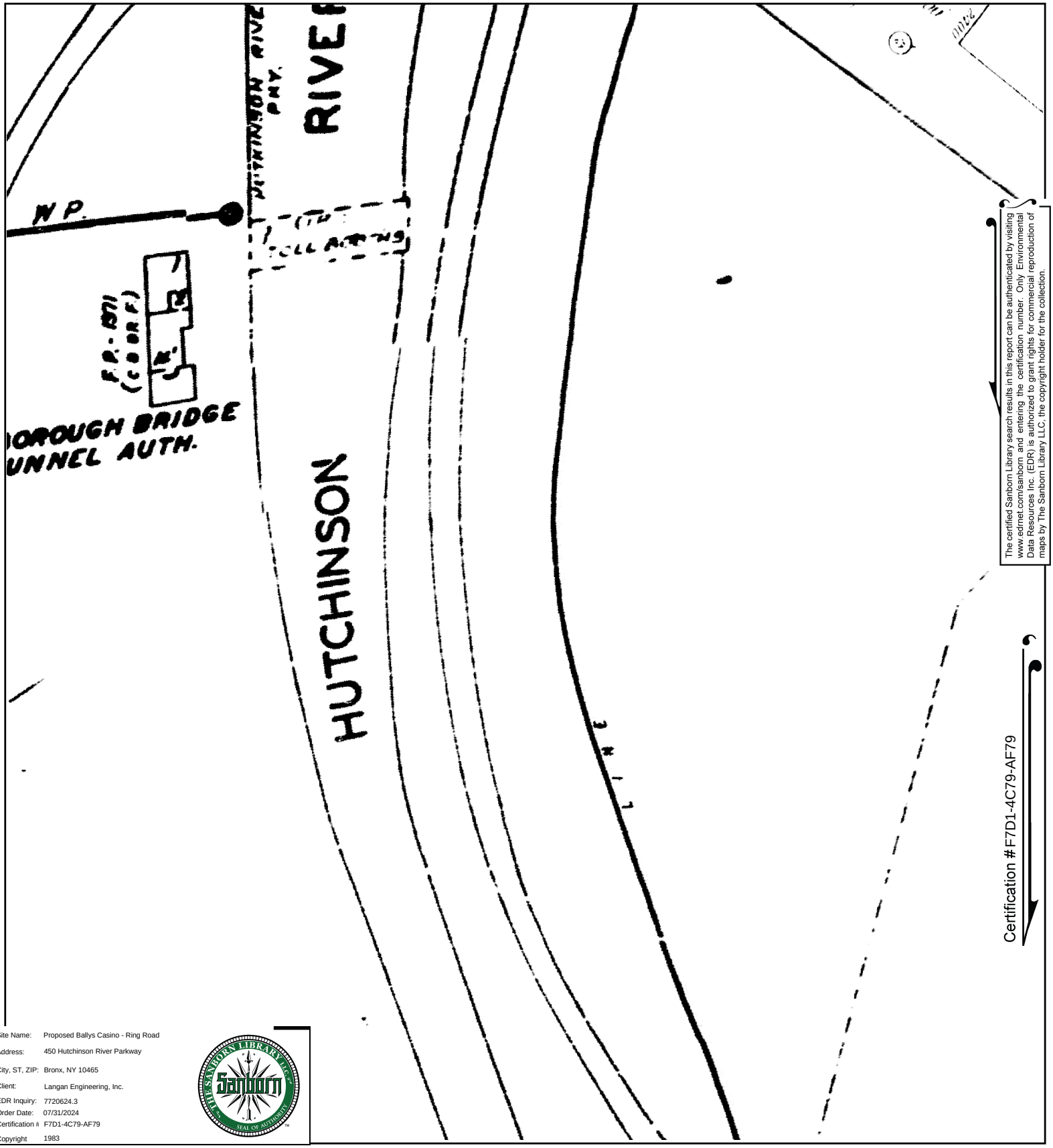


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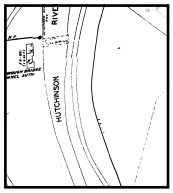

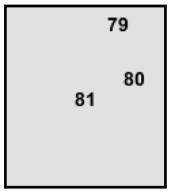


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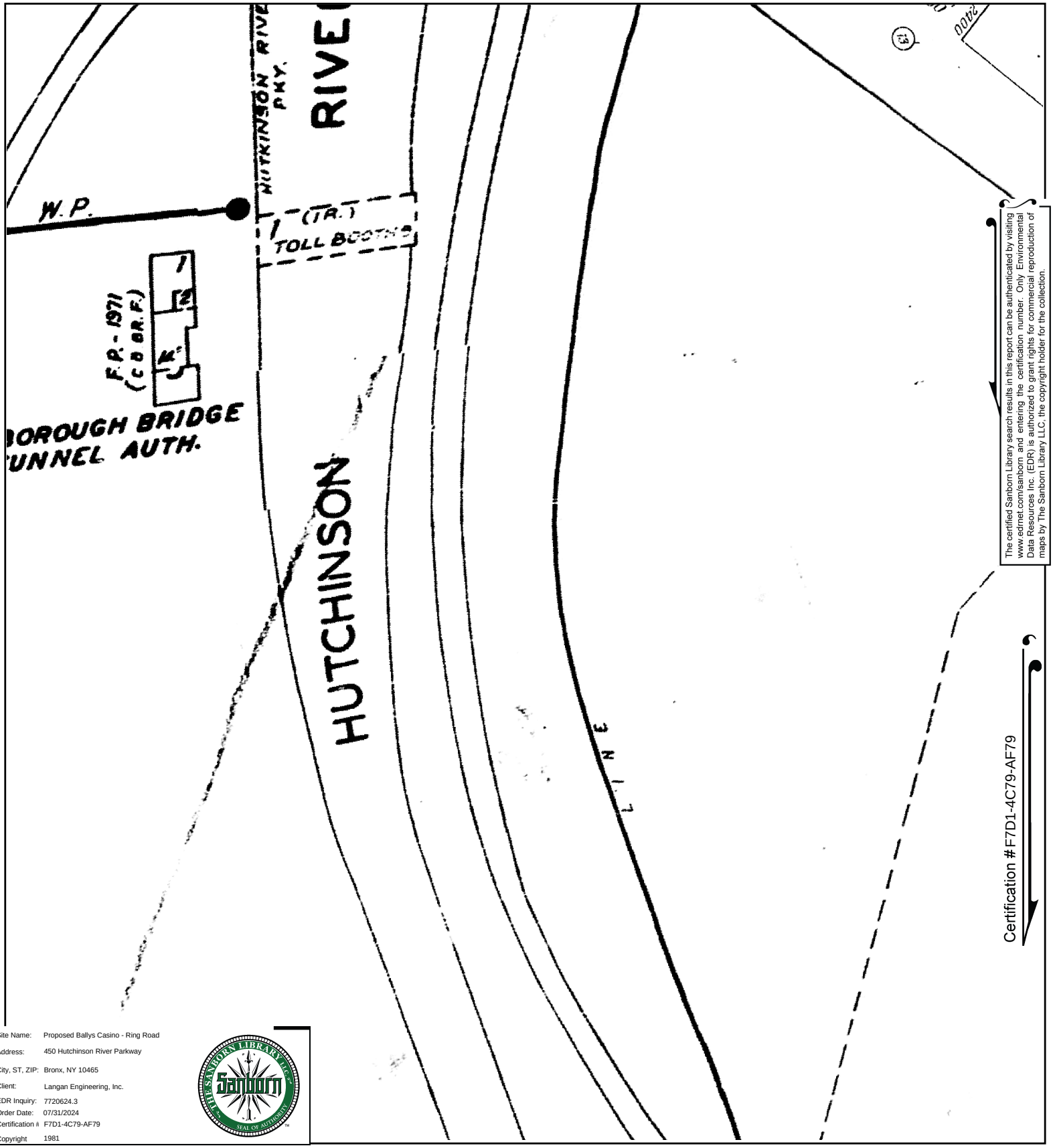


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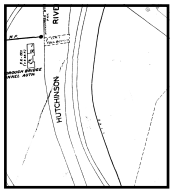

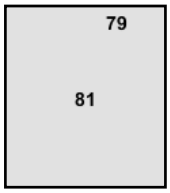


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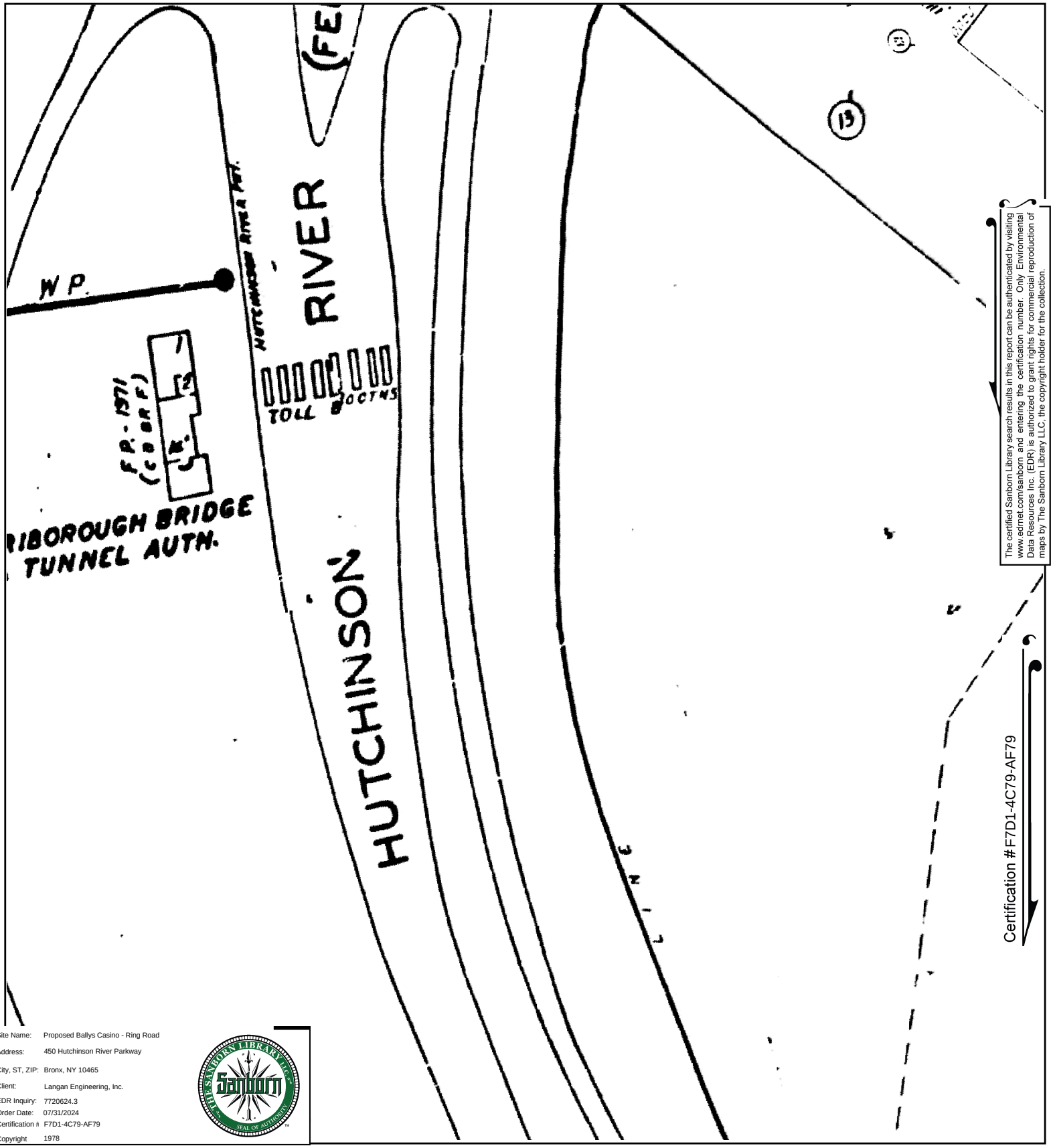


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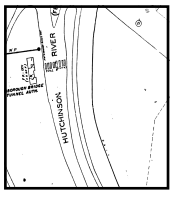

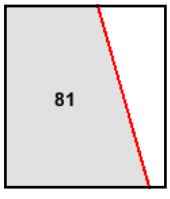


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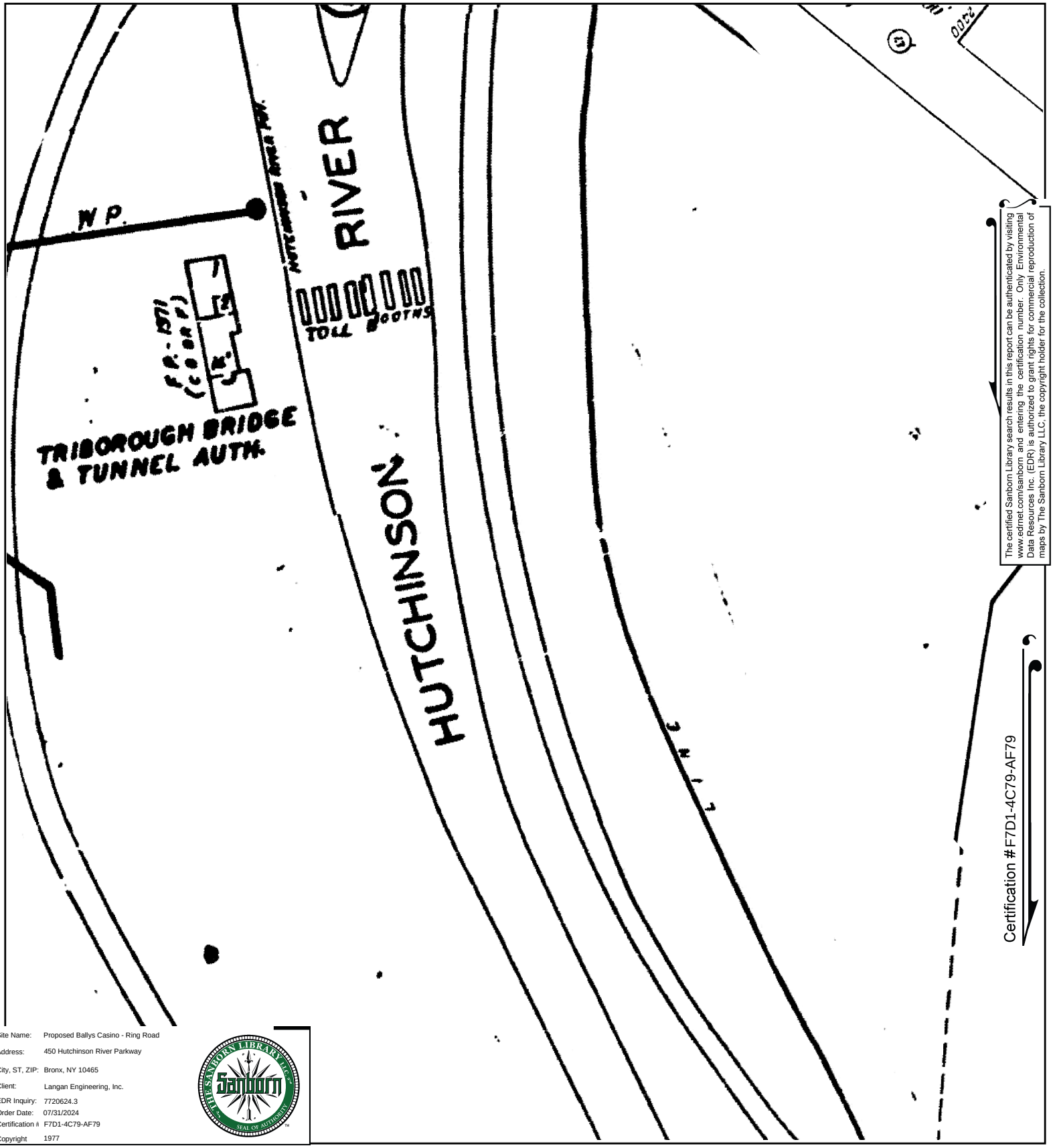


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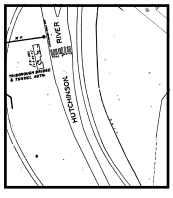

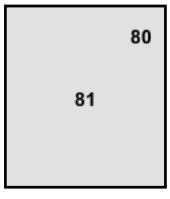


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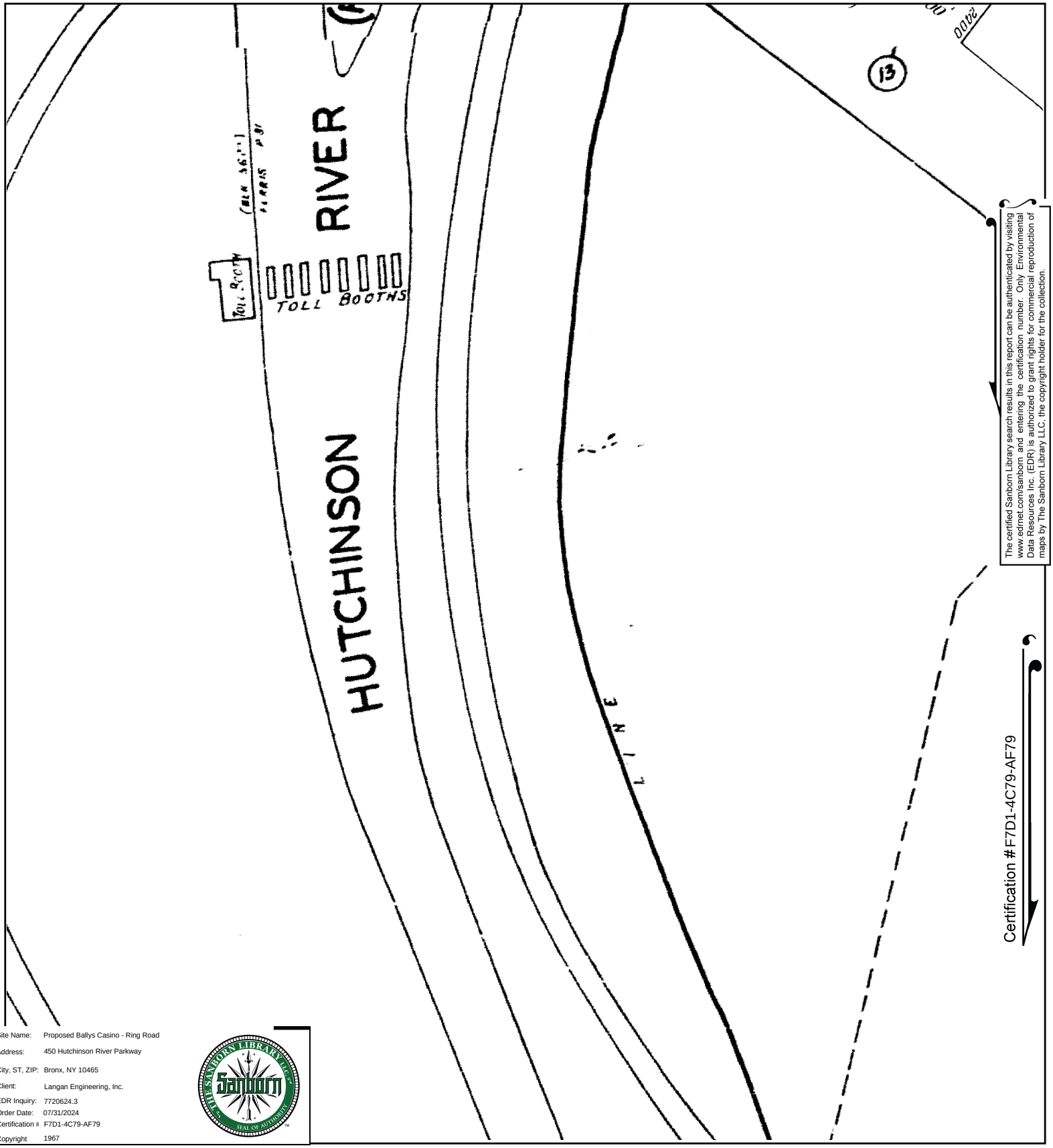


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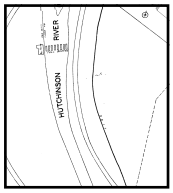

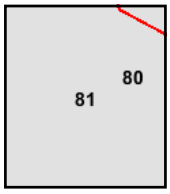


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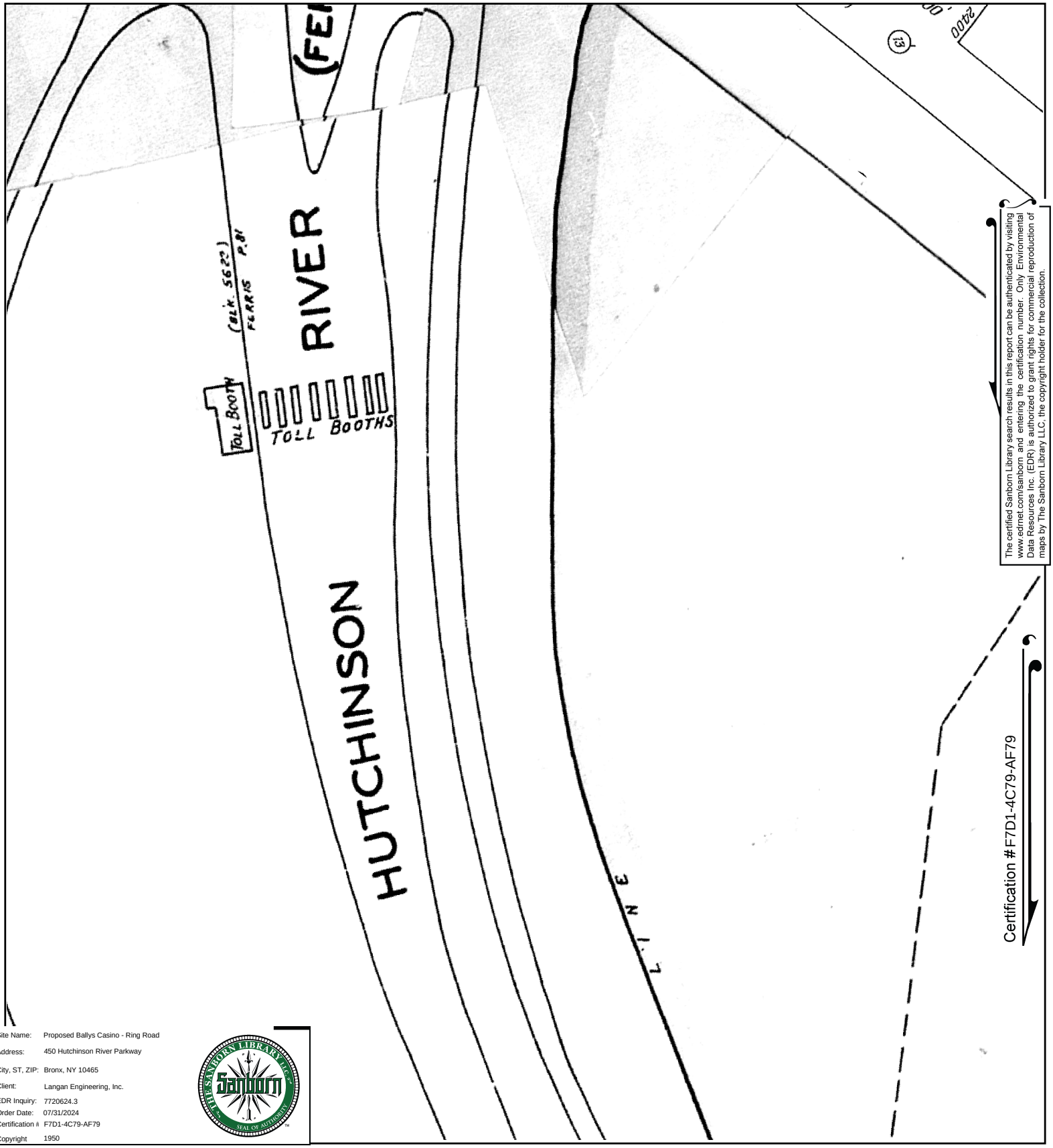


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81

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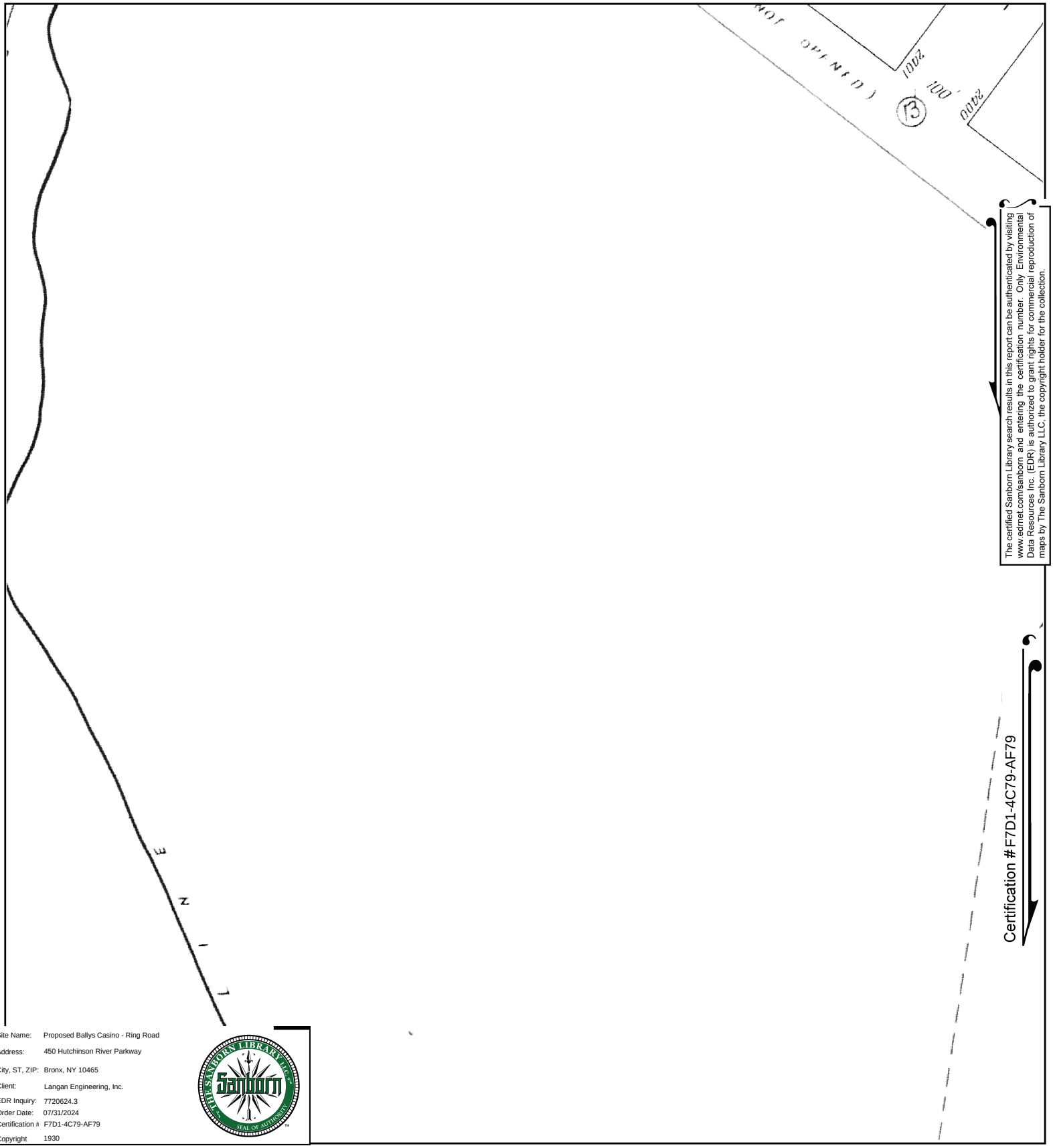


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Certification #F7D1-4C79-AF79

Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1930

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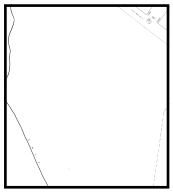
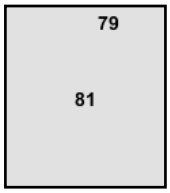
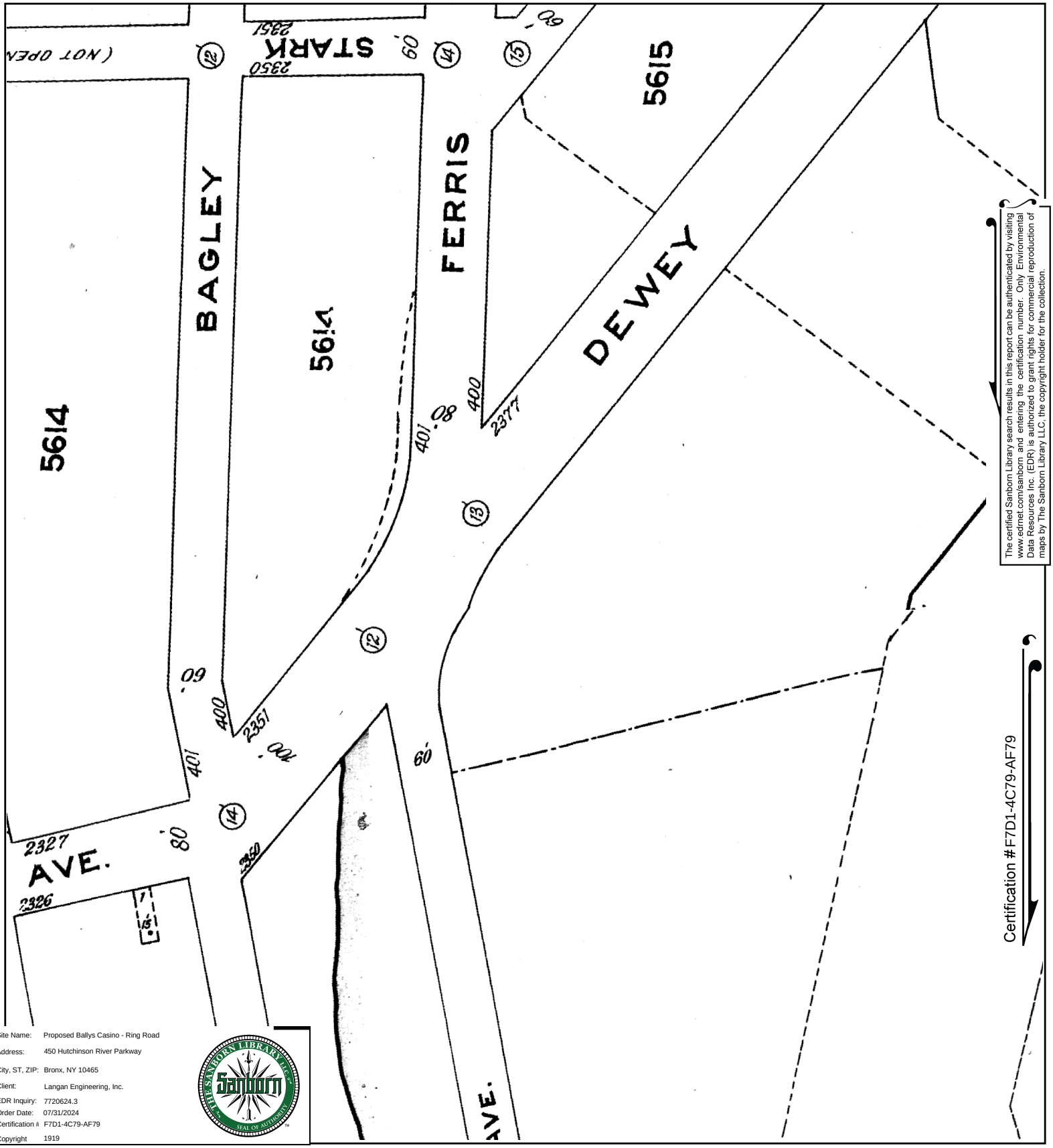





Volume 21, Sheet 81
Volume 21, Sheet 79

0 Feet 150 300 600

N

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Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1919 |

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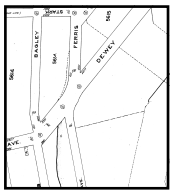

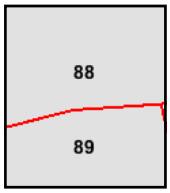


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Volume 17, Sheet 88

0 Feet 150 300 600

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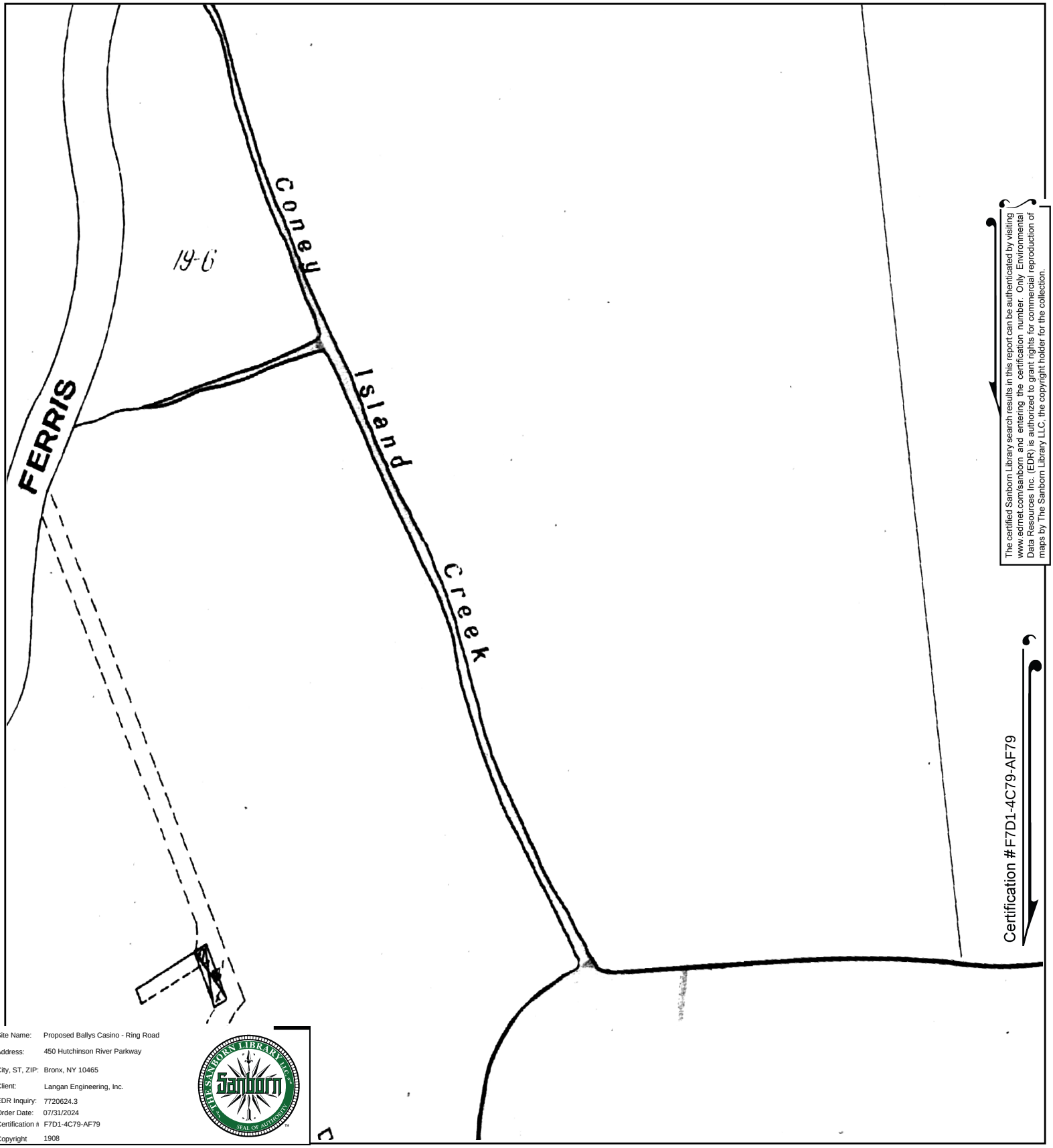


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Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1908 |

This Certified Sanborn Map combines the following sheets.
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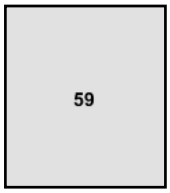
0 Feet 150 300 600






Volume A, Sheet 59

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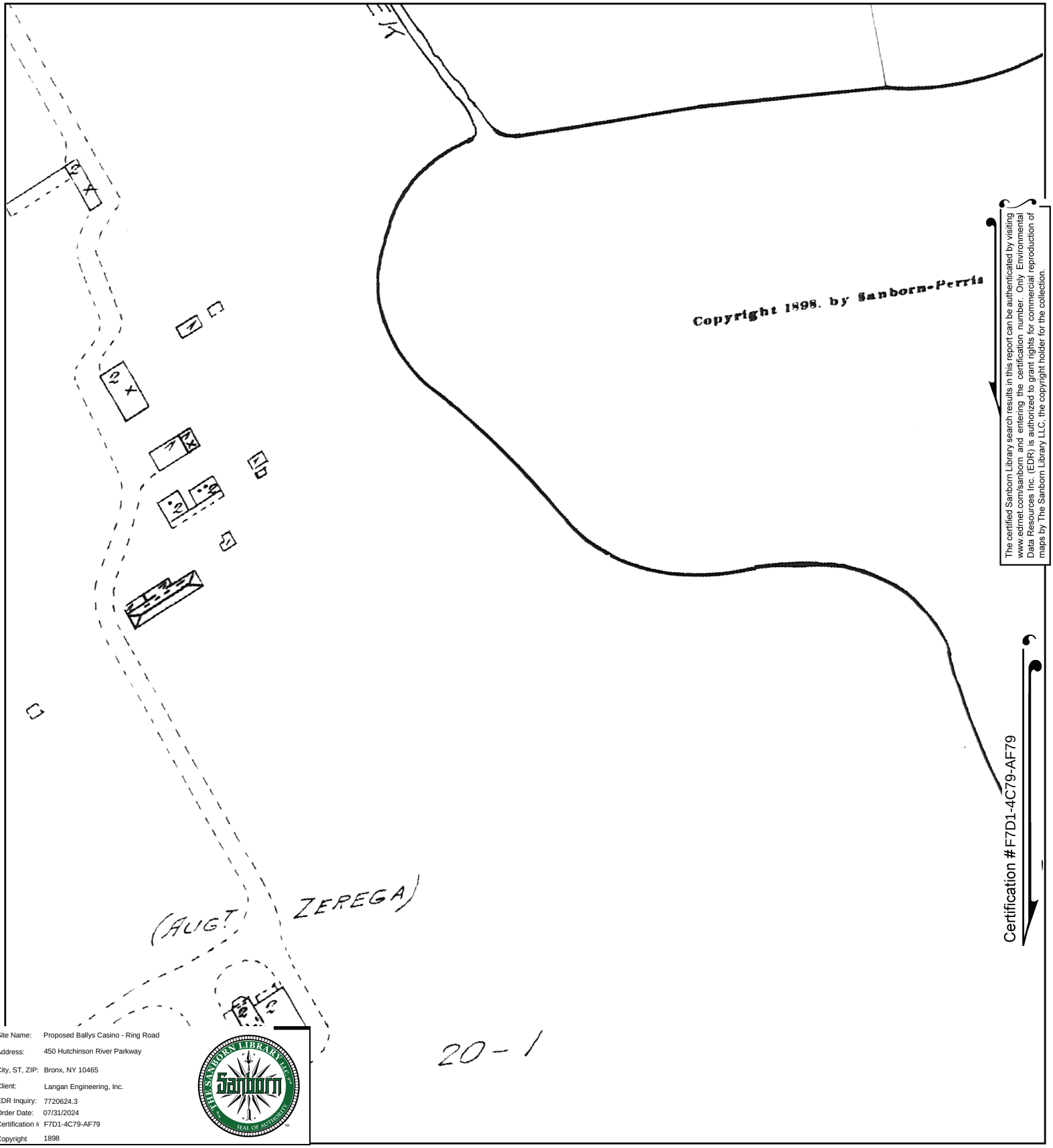


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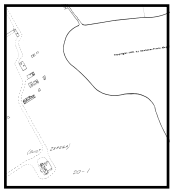
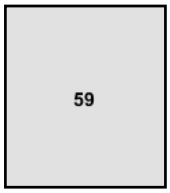
Certification #F7D1-4C79-AF79

Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1898

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.






Volume A, Sheet 59

0 Feet 150 300 600

N

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.3

July 31, 2024

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

07/31/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.3

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Langan Engineering, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## *Certified Sanborn Results:*

**Certification #** F7D1-4C79-AF79

**PO #** 170773001

**Project** Prpsd Bally s Casino - Ring Rd

**Maps Provided:**

| | | | |
|---|---|---|---|
| 2007 | 1996 | 1981 | 1898 |
| 2006 | 1995 | 1978 | |
| 2005 | 1993 | 1977 | |
| 2004 | 1992 | 1967 | |
| 2003 | 1991 | 1950 | |
| 2002 | 1988 | 1930 | |
| 2001 | 1986 | 1919 | |
| 1998 | 1983 | 1908 | |

Sanborn® Library search results

Certification #: F7D1-4C79-AF79

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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## *Sanborn Sheet Key*

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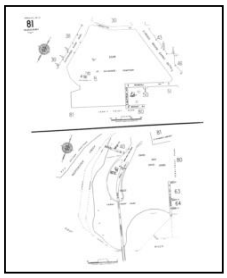
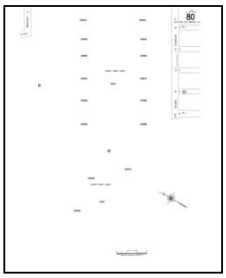
### 2007 Source Sheets

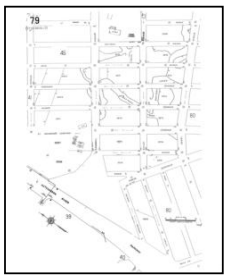


Volume 21, Sheet 81
2007

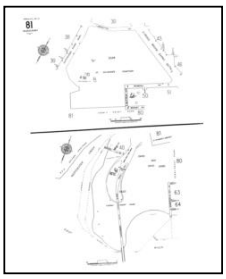


Volume 21, Sheet 80
2007

### 2006 Source Sheets

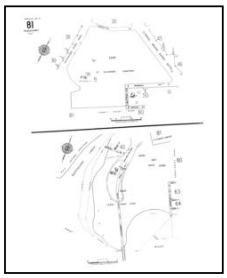


Volume 21, Sheet 79
2006



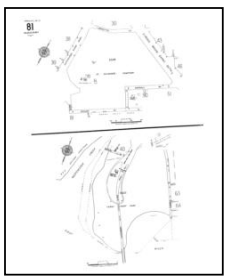
Volume 21, Sheet 81
2006

### 2005 Source Sheets



Volume 21, Sheet 81
2005

### 2004 Source Sheets



Volume 21, Sheet 81
2004

## *Sanborn Sheet Key*

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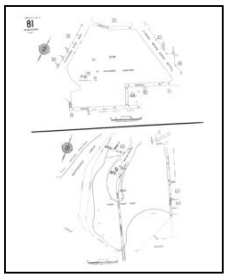
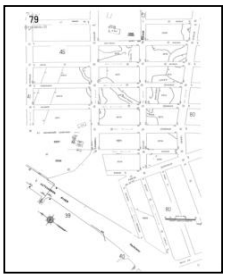
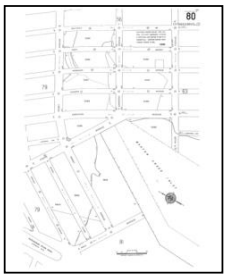


Volume 21, Sheet 81
2003



Volume 21, Sheet 79
2003



Volume 21, Sheet 80
2003

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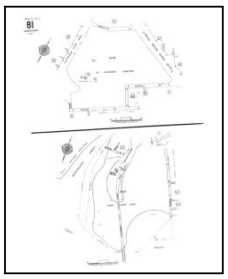
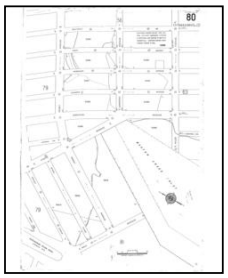
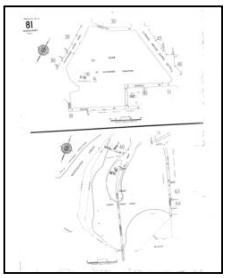


Volume 21, Sheet 81
2002

### 2001 Source Sheets

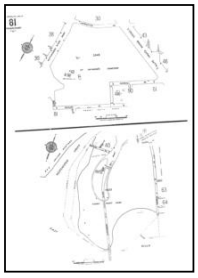


Volume 21, Sheet 80
2001



Volume 21, Sheet 81
2001

### 1998 Source Sheets



Volume 21, Sheet 81
1998

## *Sanborn Sheet Key*

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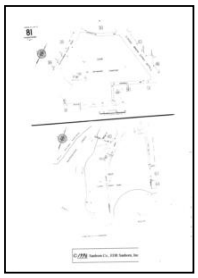
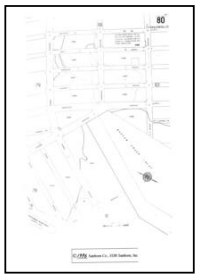
### 1996 Source Sheets



Volume 21, Sheet 81
1996

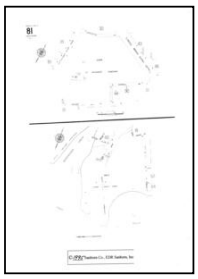


Volume 21, Sheet 80
1996



Volume 21, Sheet 79
1996

### 1995 Source Sheets

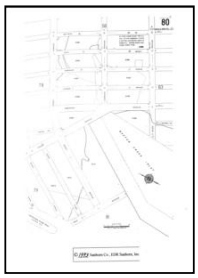


Volume 21, Sheet 81
1995

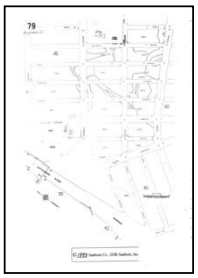
### 1993 Source Sheets



Volume 21, Sheet 81
1993

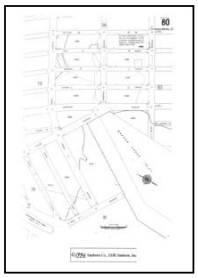


Volume 21, Sheet 80
1993

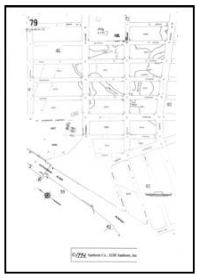


Volume 21, Sheet 79
1993

### 1992 Source Sheets



Volume 21, Sheet 80
1992



Volume 21, Sheet 79
1992



Volume 21, Sheet 81
1992

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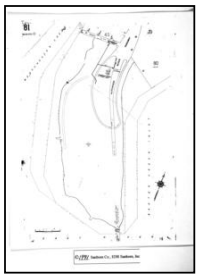
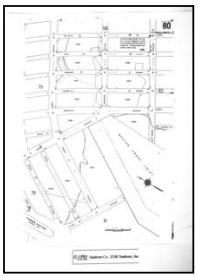


Volume 21, Sheet 81
1991



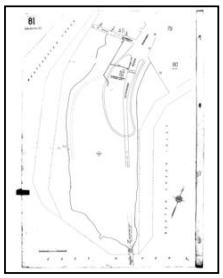
Volume 21, Sheet 80
1991

### 1988 Source Sheets



Volume 21, Sheet 81
1988

### 1986 Source Sheets



Volume 21, Sheet 81
1986

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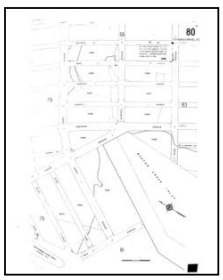
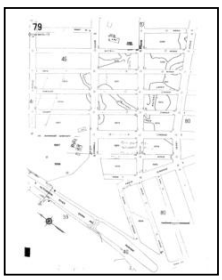
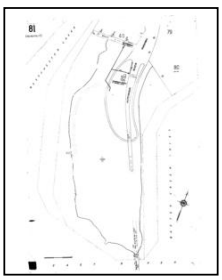


Volume 21, Sheet 80
1983



Volume 21, Sheet 79
1983



Volume 21, Sheet 81
1983

## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

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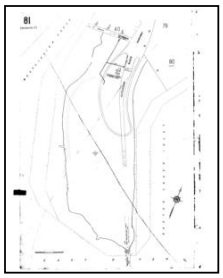
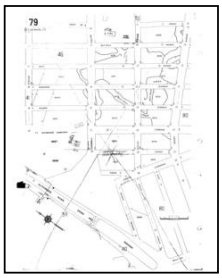
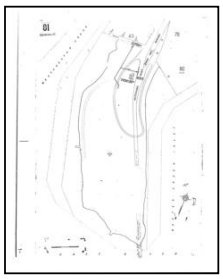


Volume 21, Sheet 81
1981



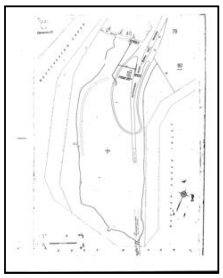
Volume 21, Sheet 79
1981

### 1978 Source Sheets



Volume 21, Sheet 81
1978

### 1977 Source Sheets

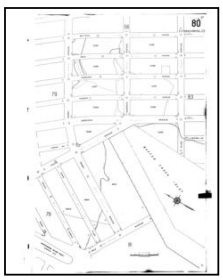


Volume 21, Sheet 81
1977

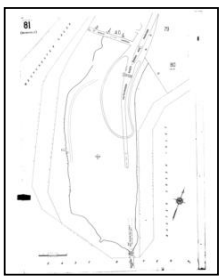


Volume 21, Sheet 80
1977

### 1967 Source Sheets



Volume 21, Sheet 80
1967



Volume 21, Sheet 81
1967

## *Sanborn Sheet Key*

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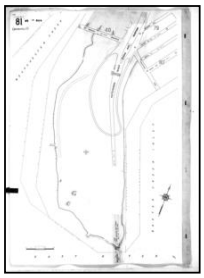
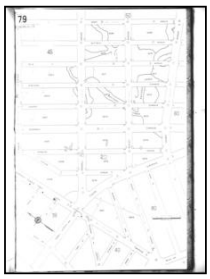
### 1950 Source Sheets



Volume 21, Sheet 81
1950

### 1930 Source Sheets

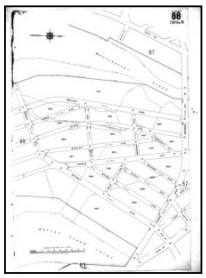


Volume 21, Sheet 79
1930

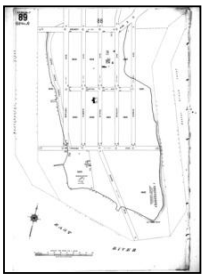


Volume 21, Sheet 81
1930

### 1919 Source Sheets

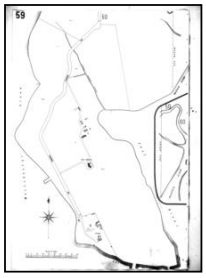


Volume 17, Sheet 88
1919



Volume 17, Sheet 89
1919

### 1908 Source Sheets

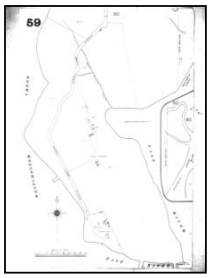


Volume A, Sheet 59
1908

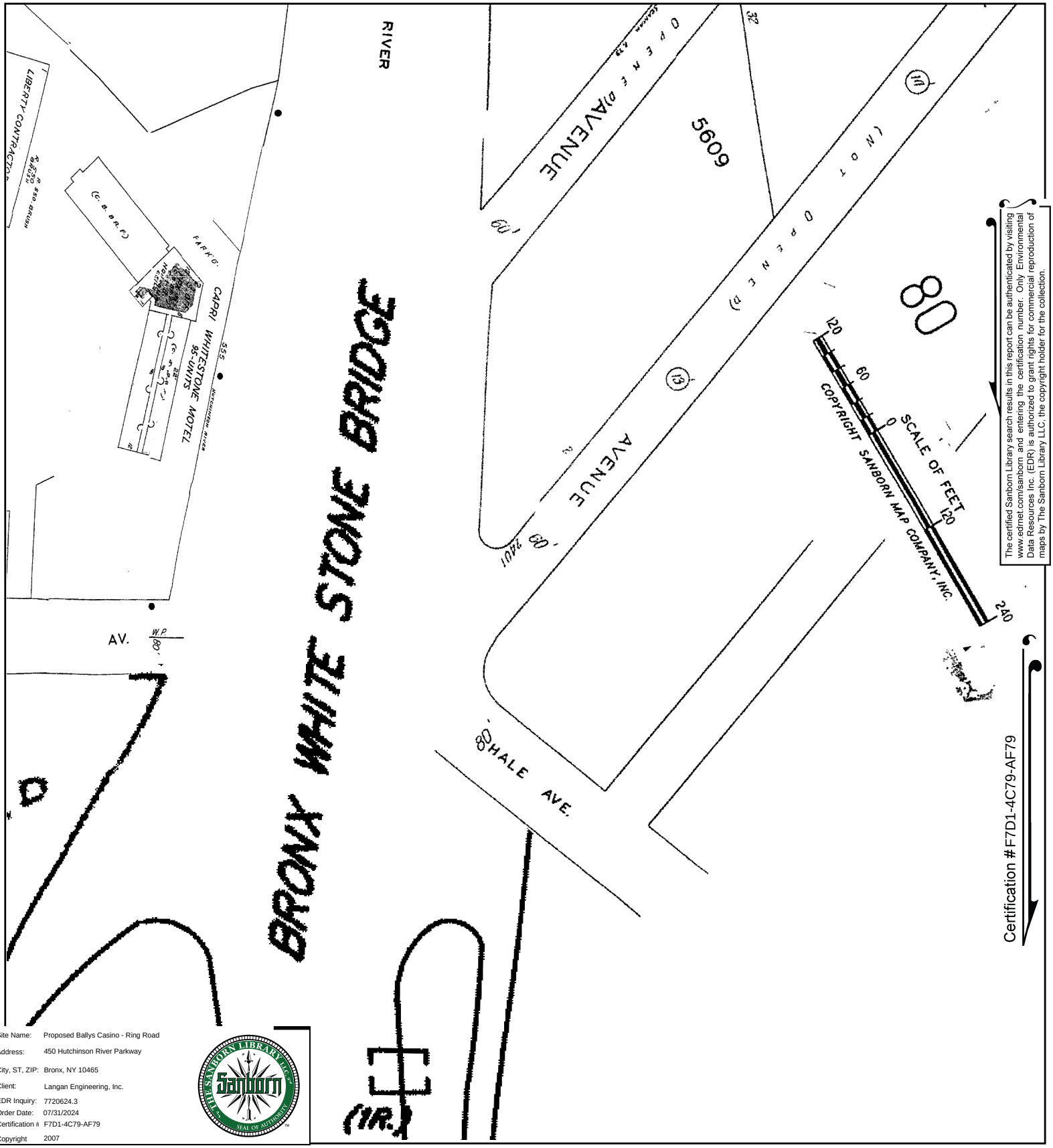
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1898 Source Sheets




Volume A, Sheet 59
1898

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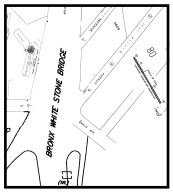
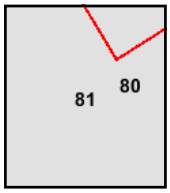
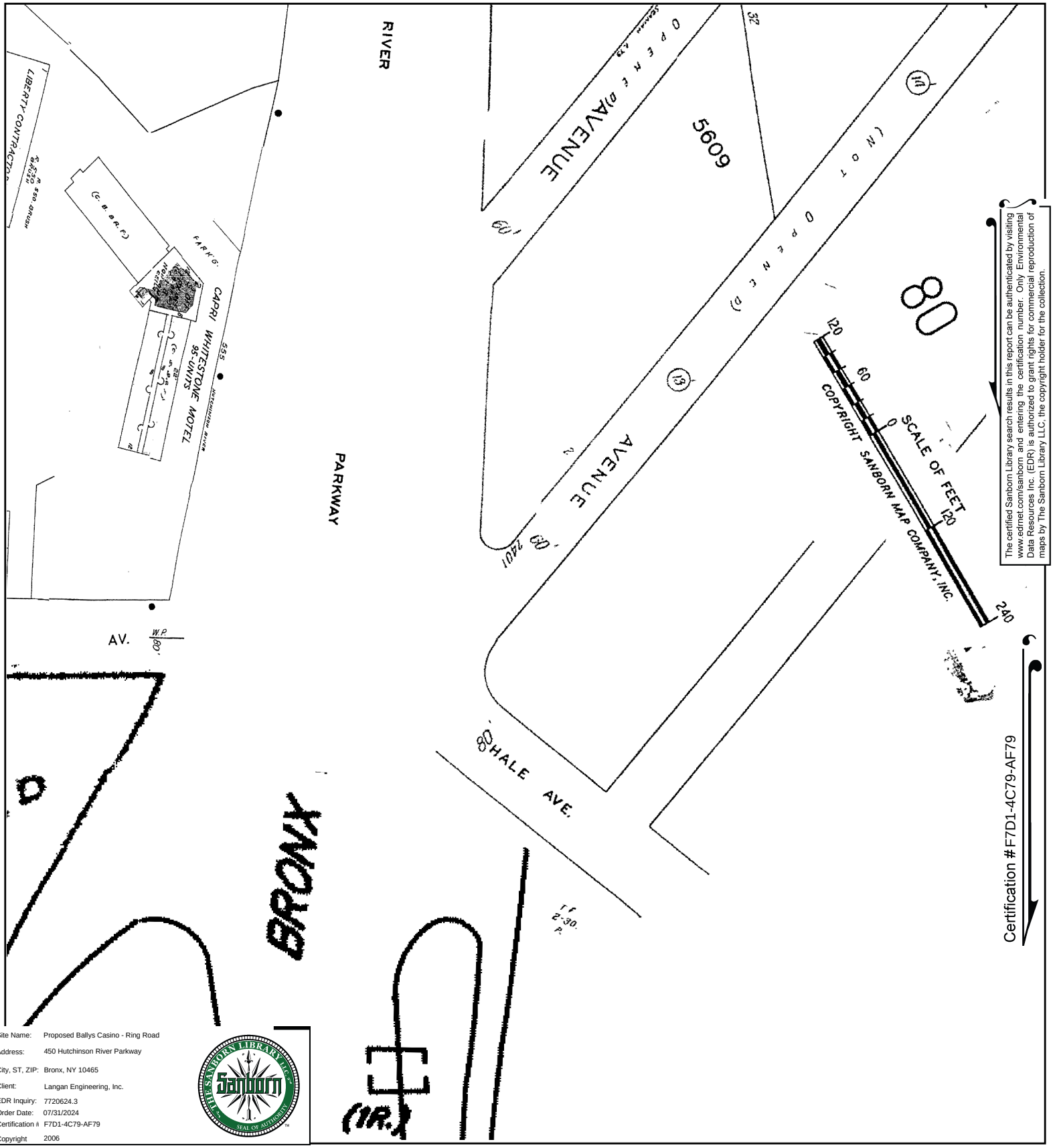



Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

N

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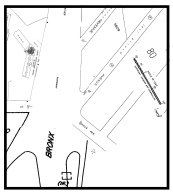

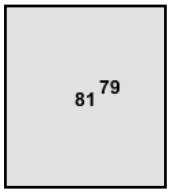


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Volume 21, Sheet 79

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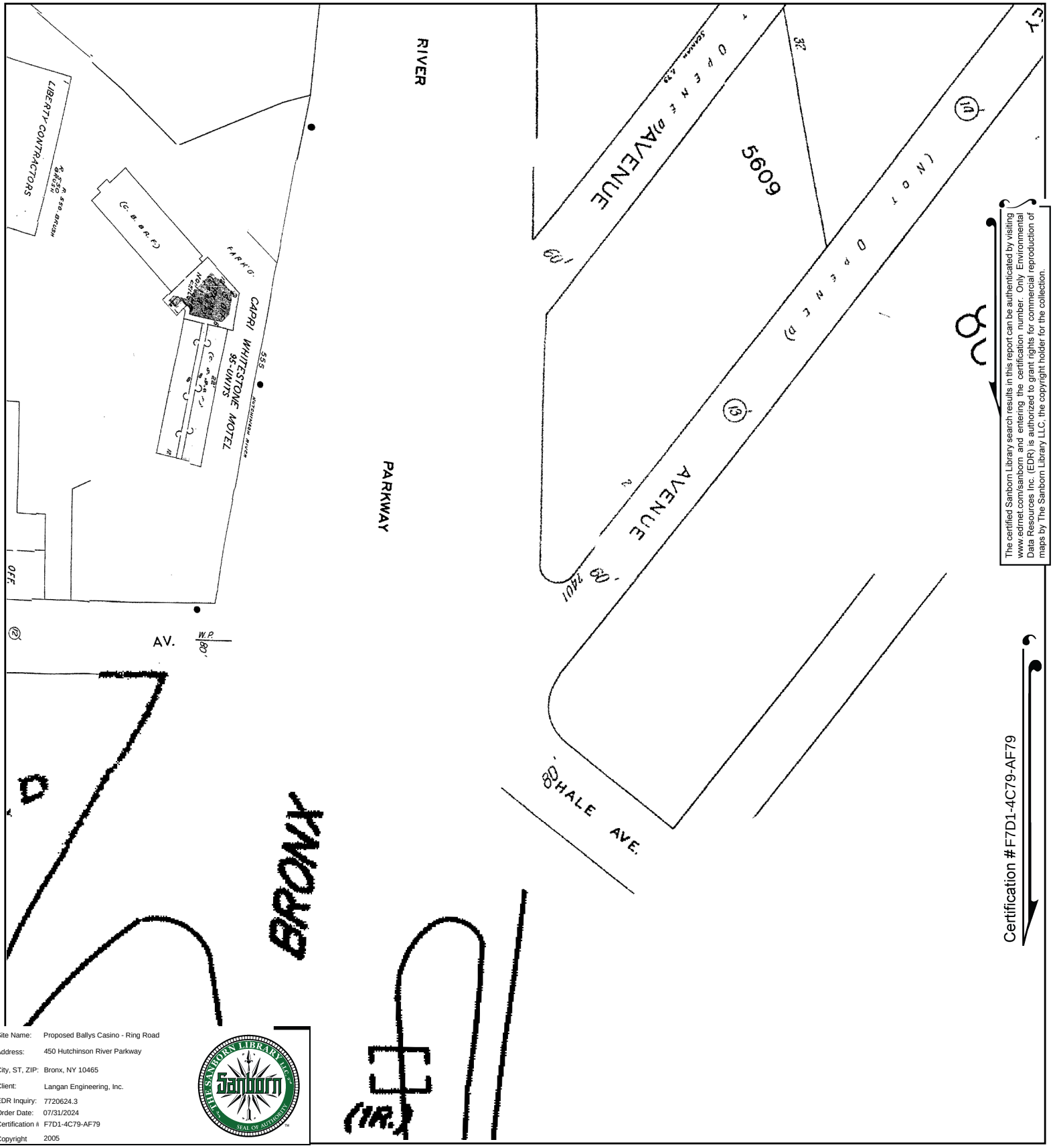


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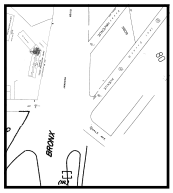

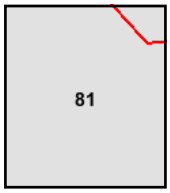


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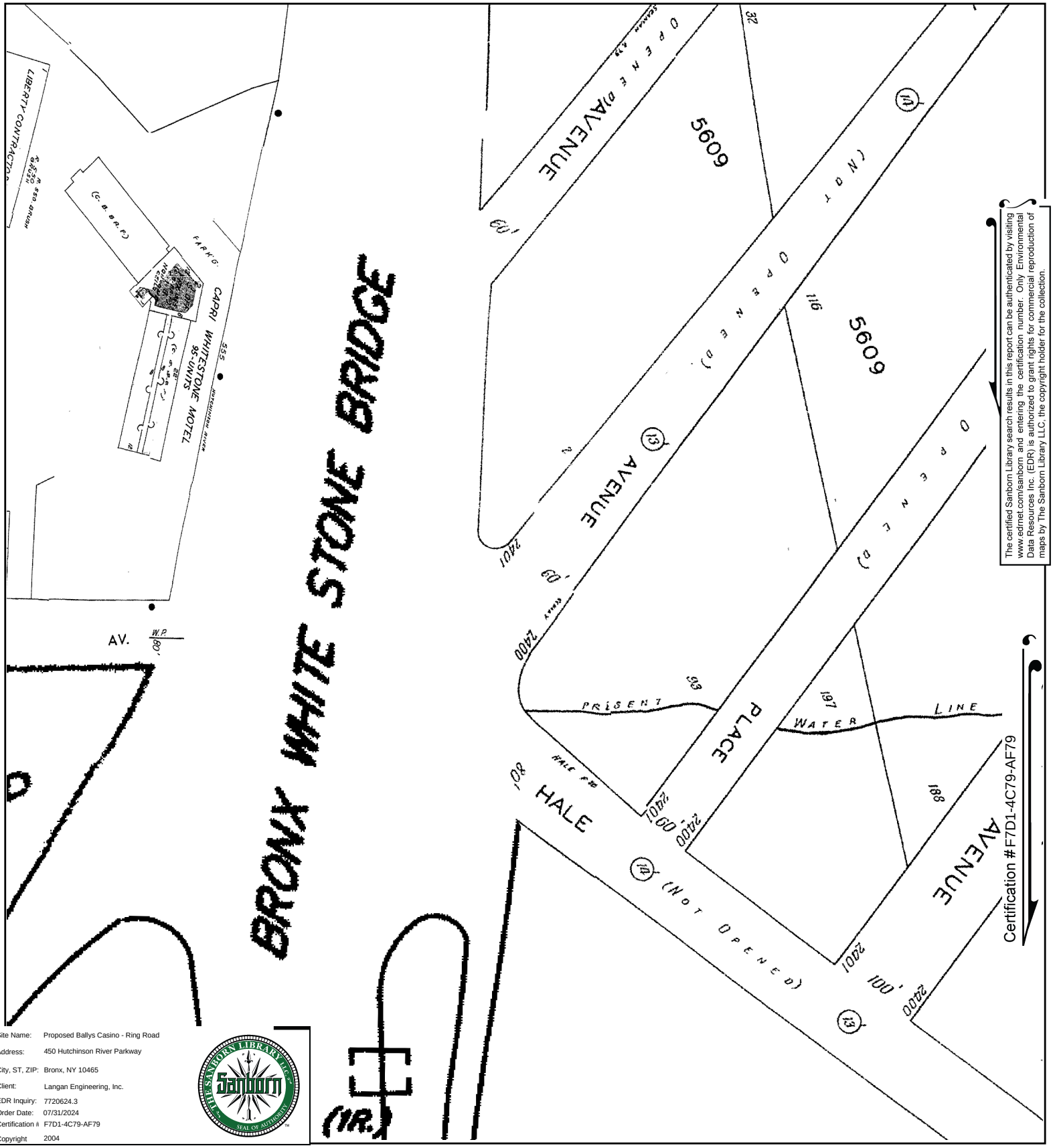


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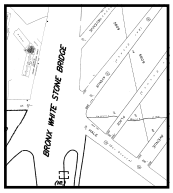


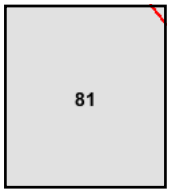


Volume 21, Sheet 81

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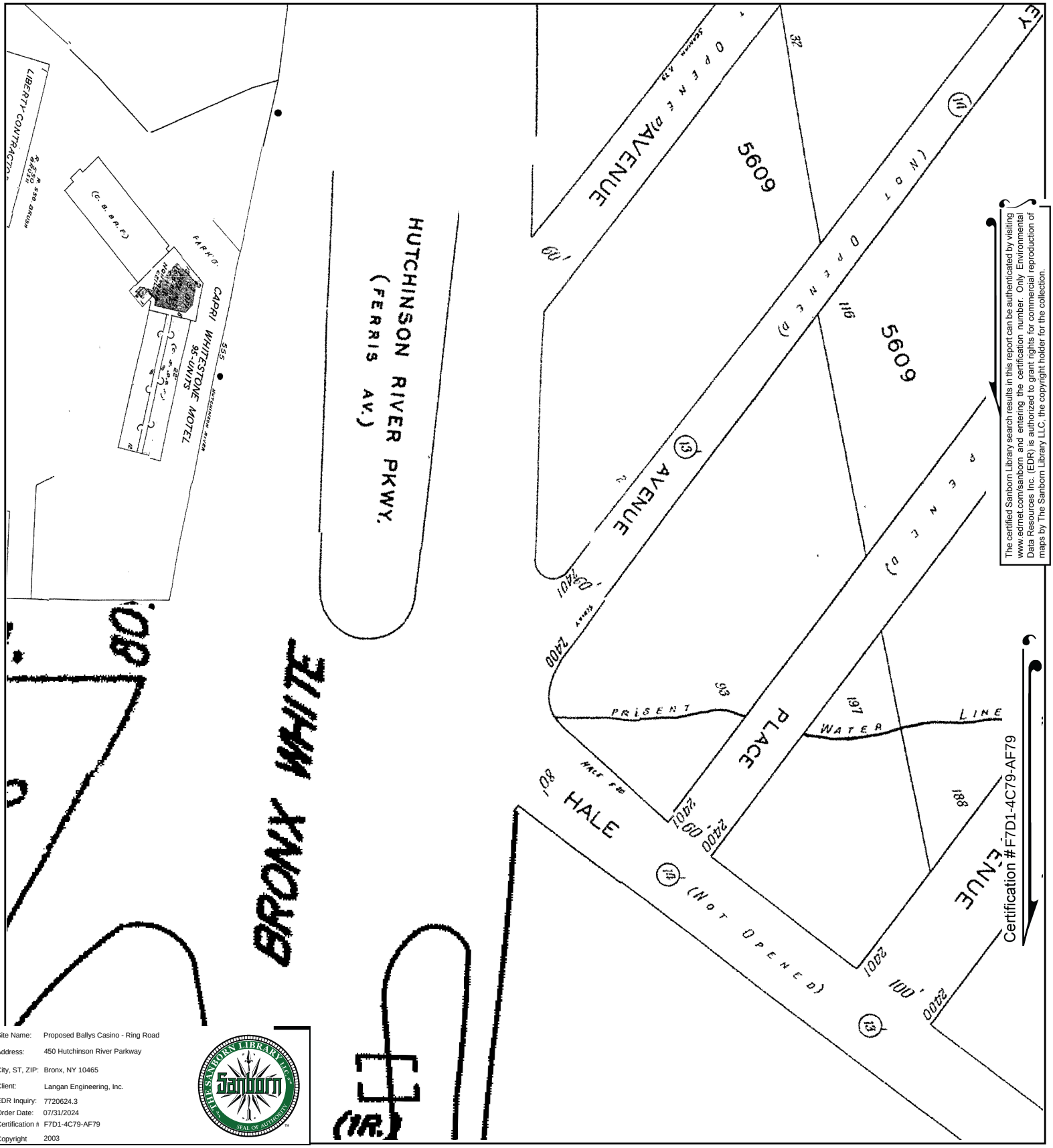


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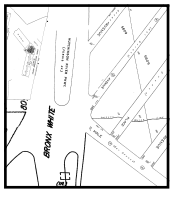

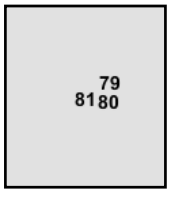


Volume 21, Sheet 80
Volume 21, Sheet 79
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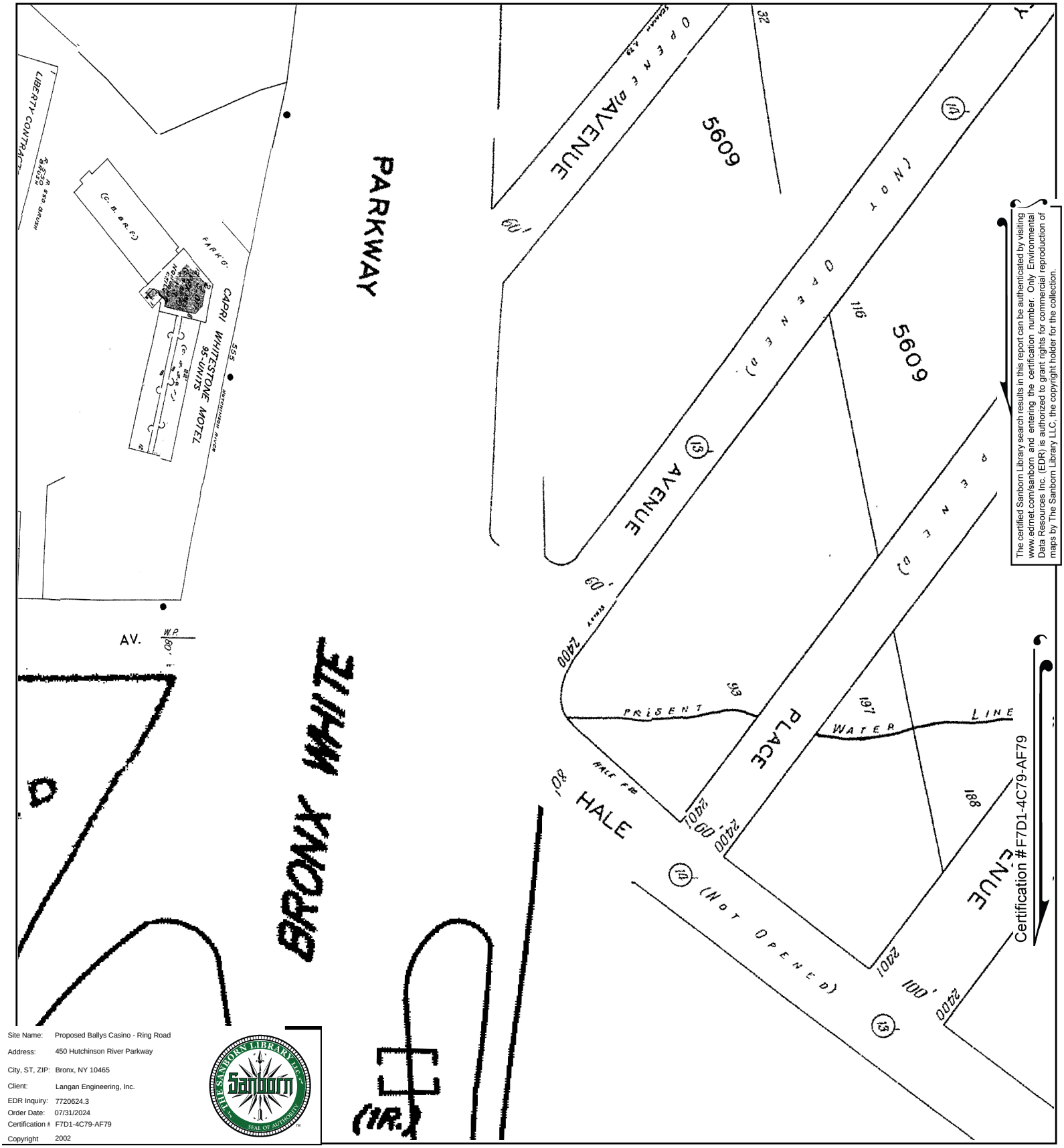
N

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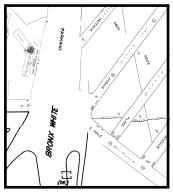

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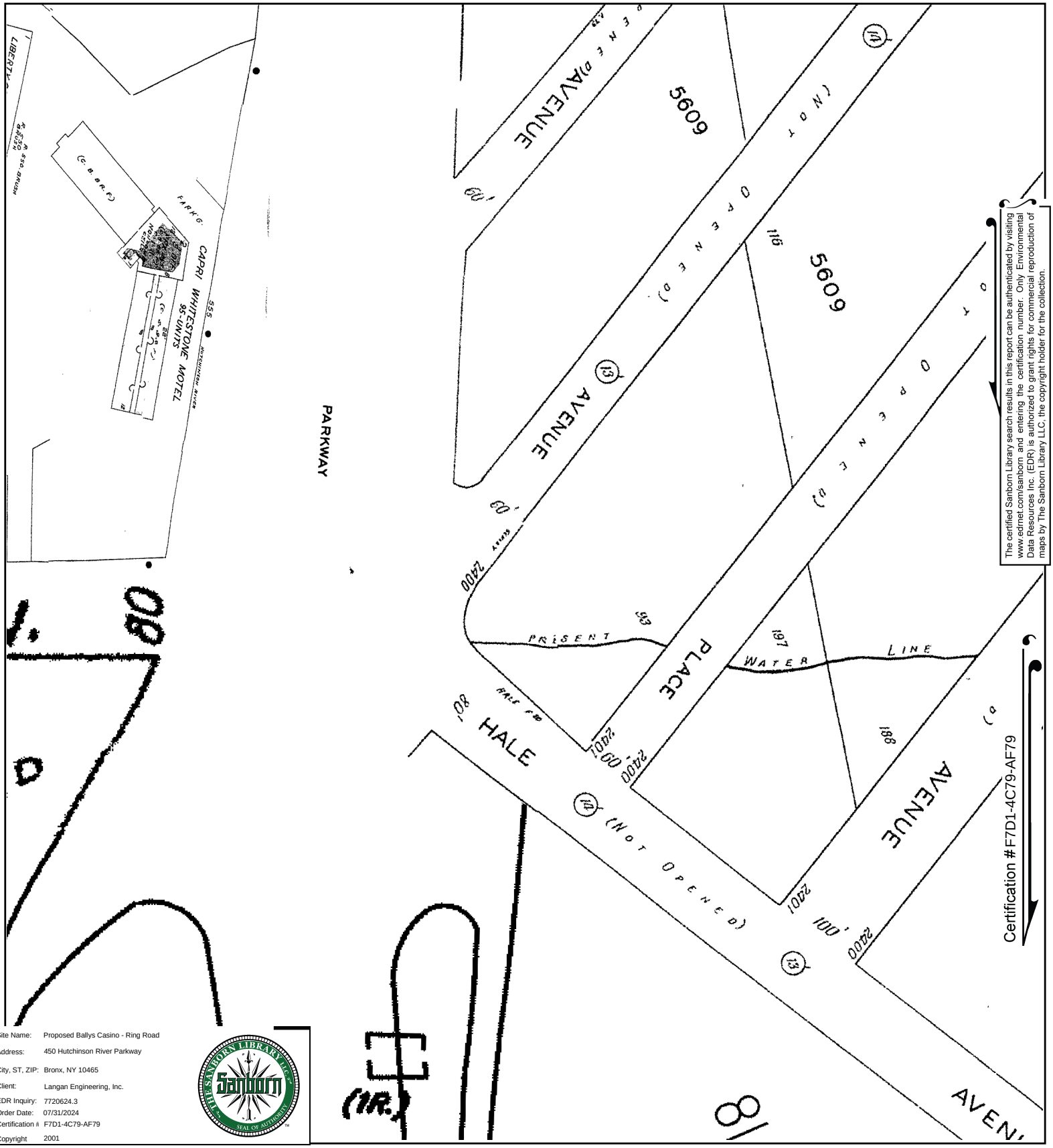


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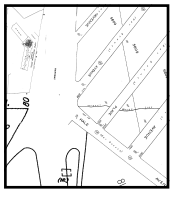

81
80

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Volume 21, Sheet 80

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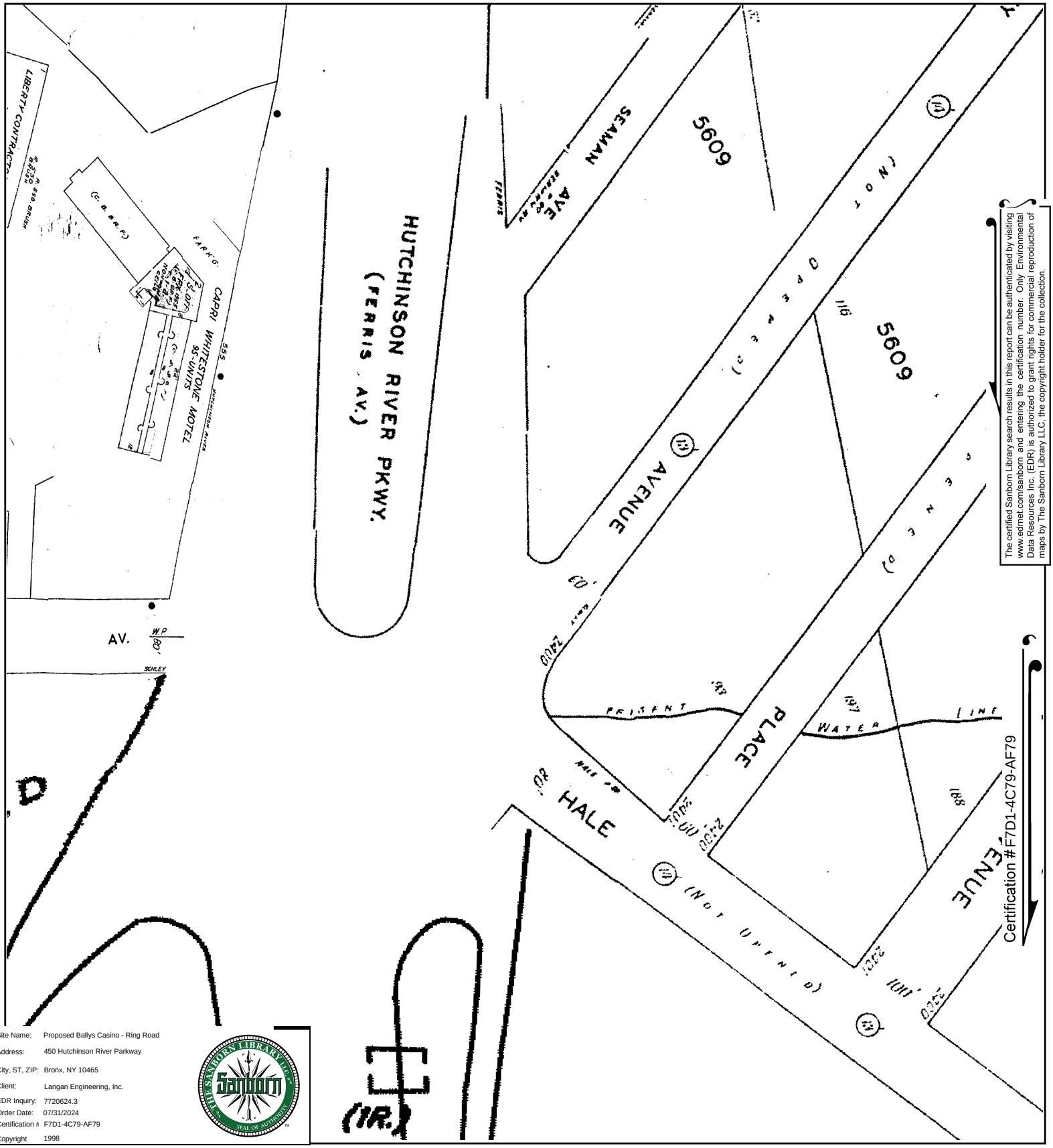


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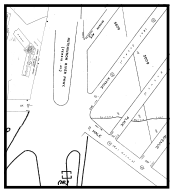

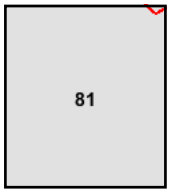


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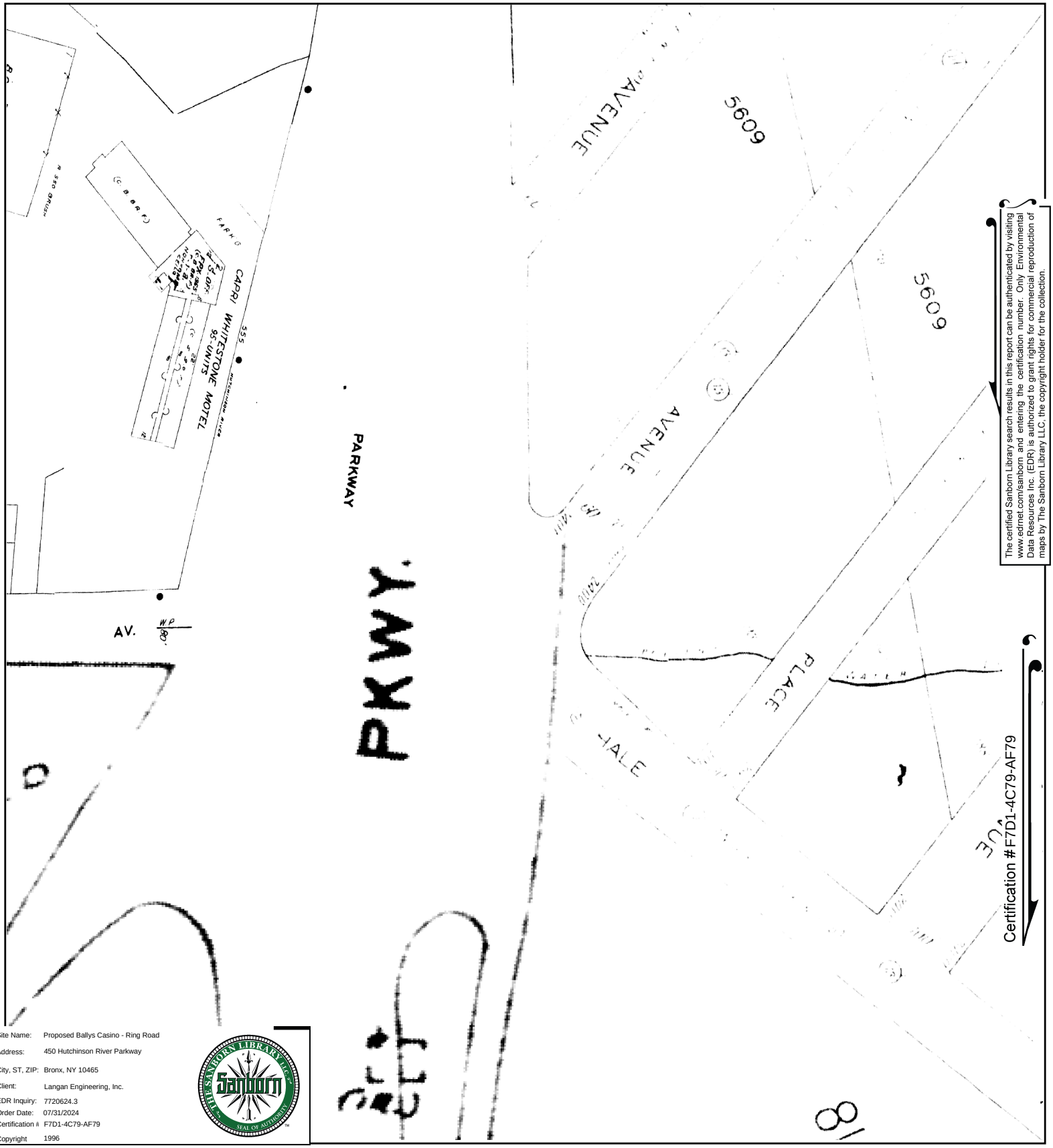


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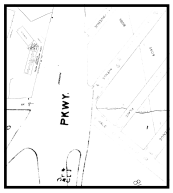


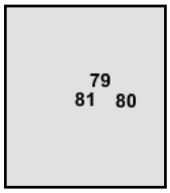


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Volume 21, Sheet 80
Volume 21, Sheet 81

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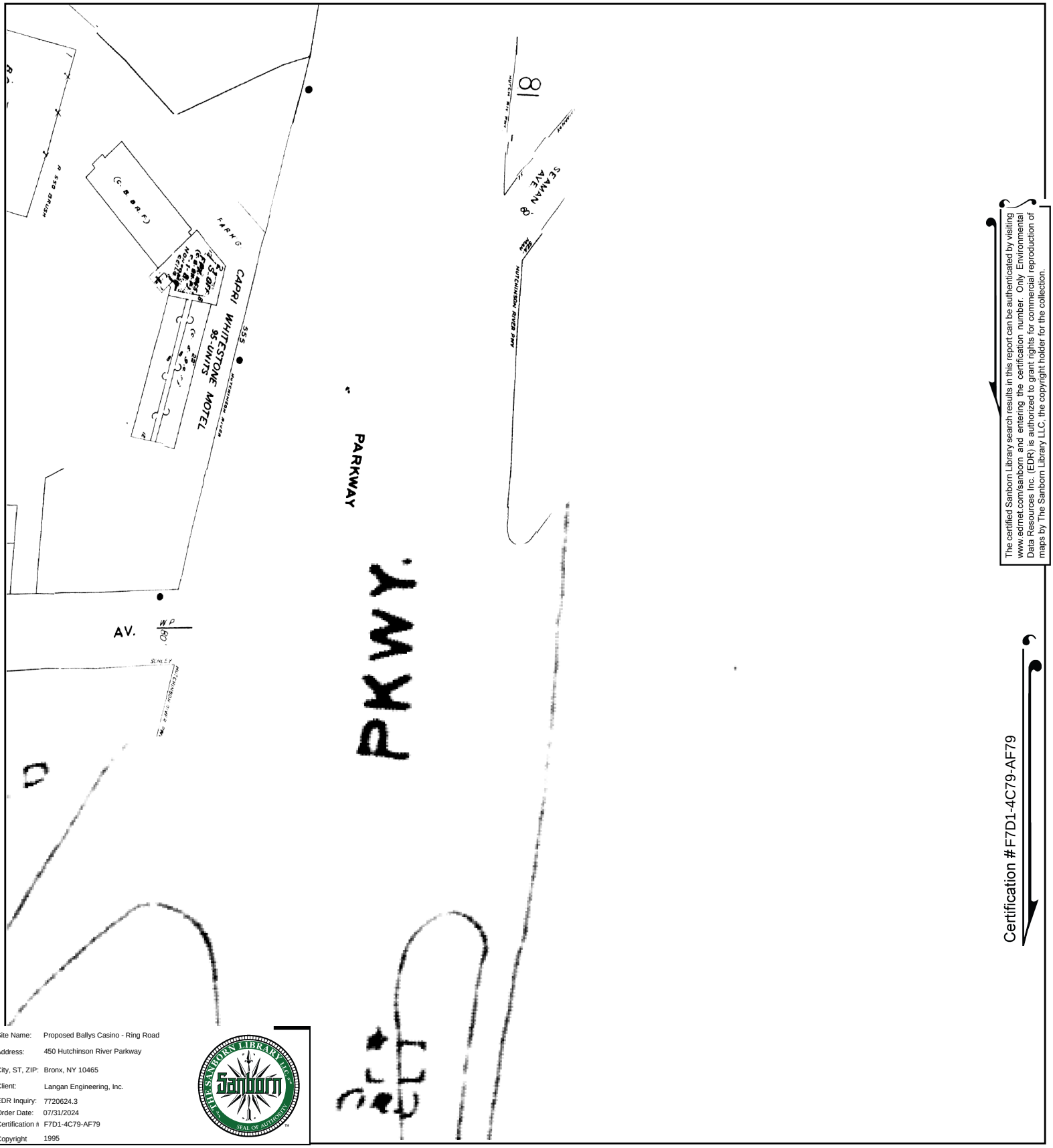


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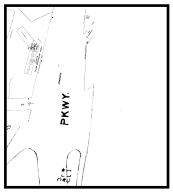


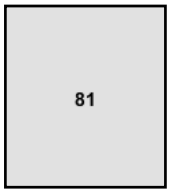


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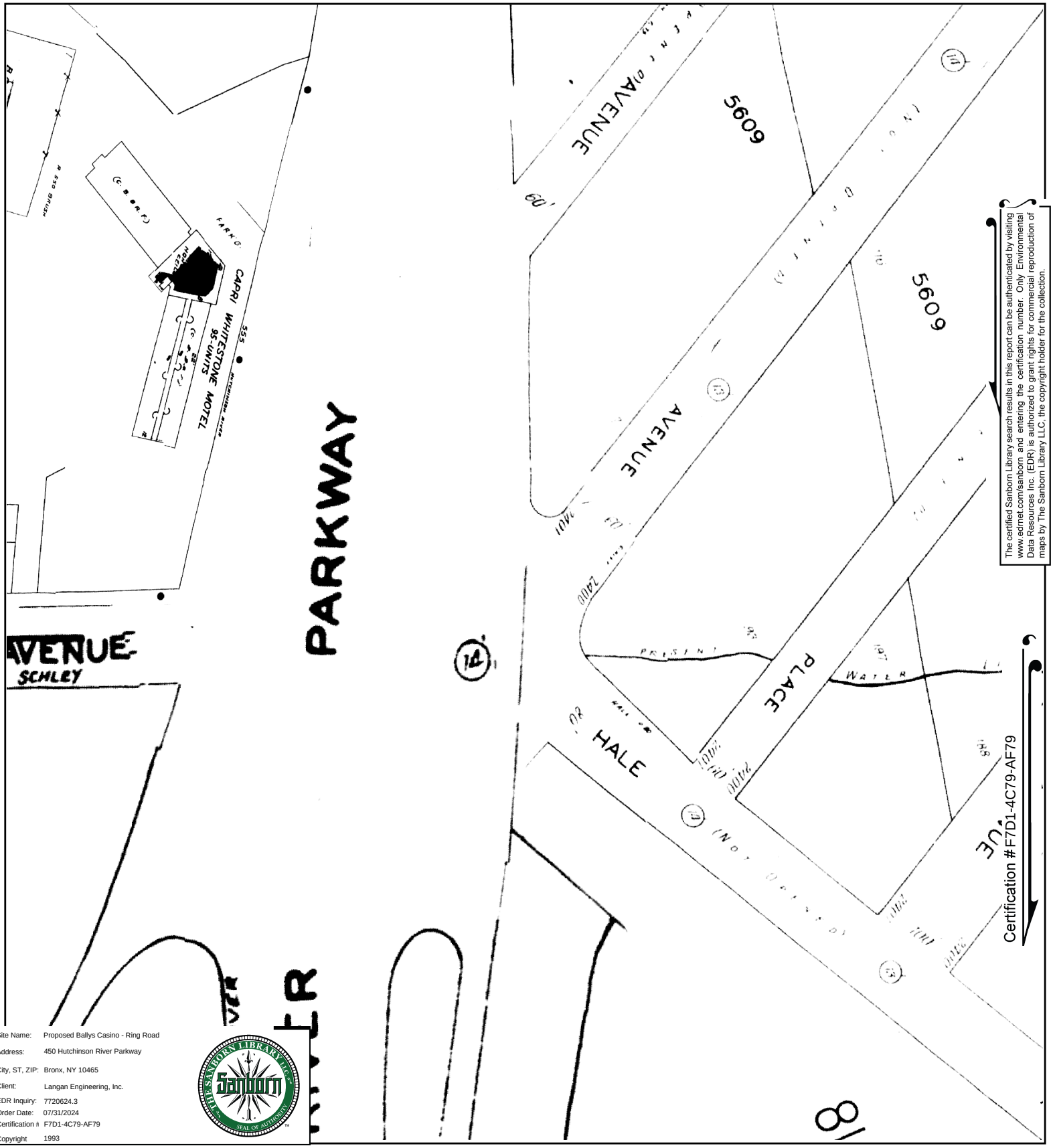


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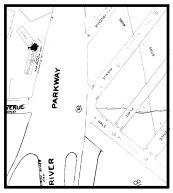


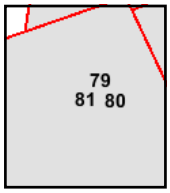


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Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

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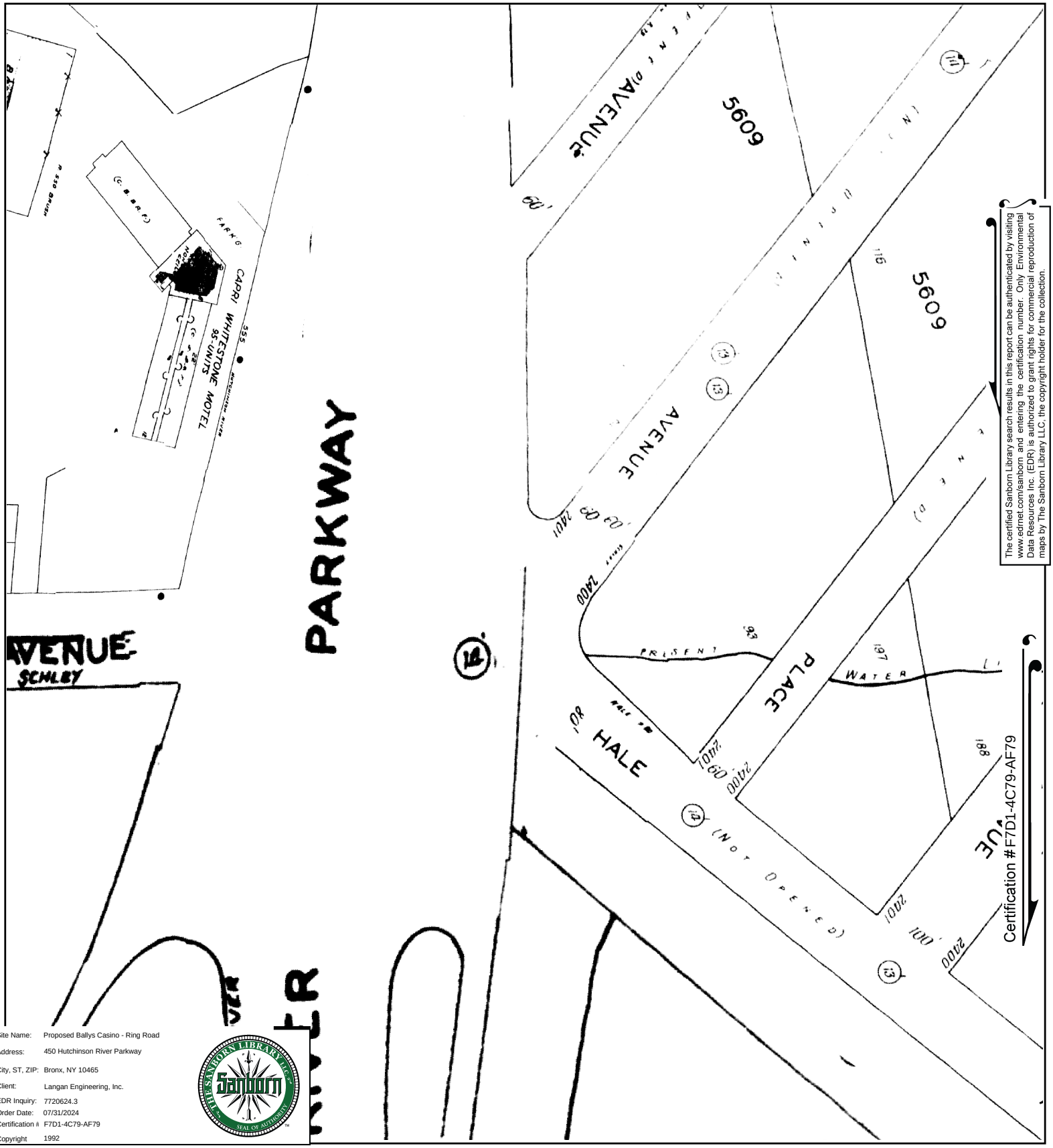


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| Site Name: | Proposed Ballys Casino - Ring Road |
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| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification #: | F7D1-4C79-AF79 |
| Copyright | 1992 |

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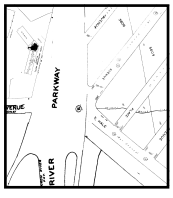

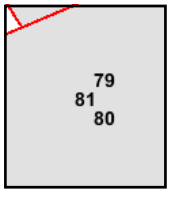


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Volume 21, Sheet 79
Volume 21, Sheet 80

0 Feet 150 300 600

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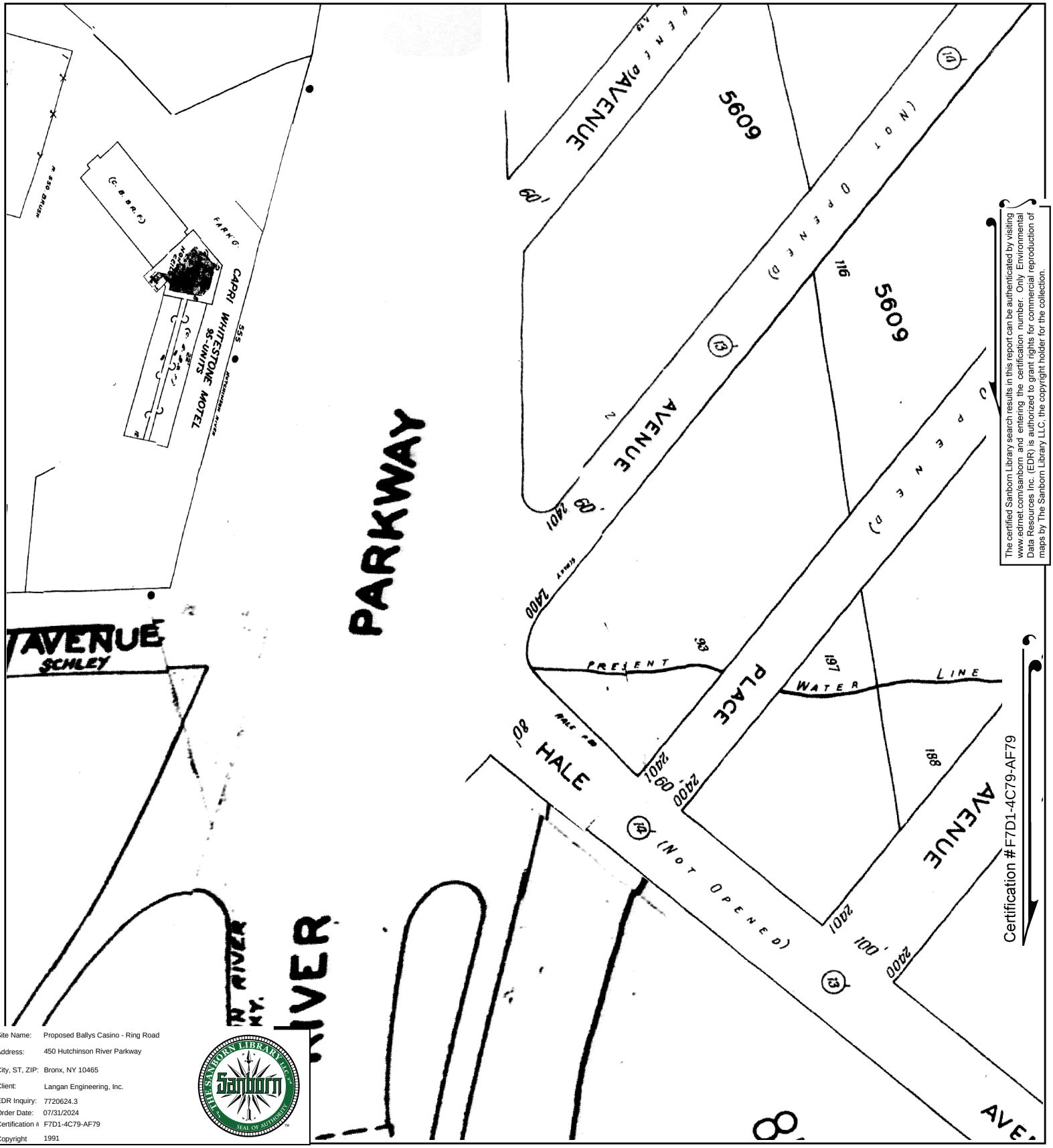


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| Copyright | 1991 |

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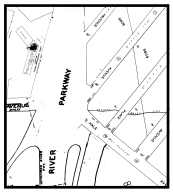


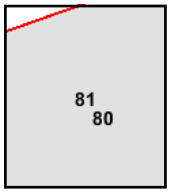


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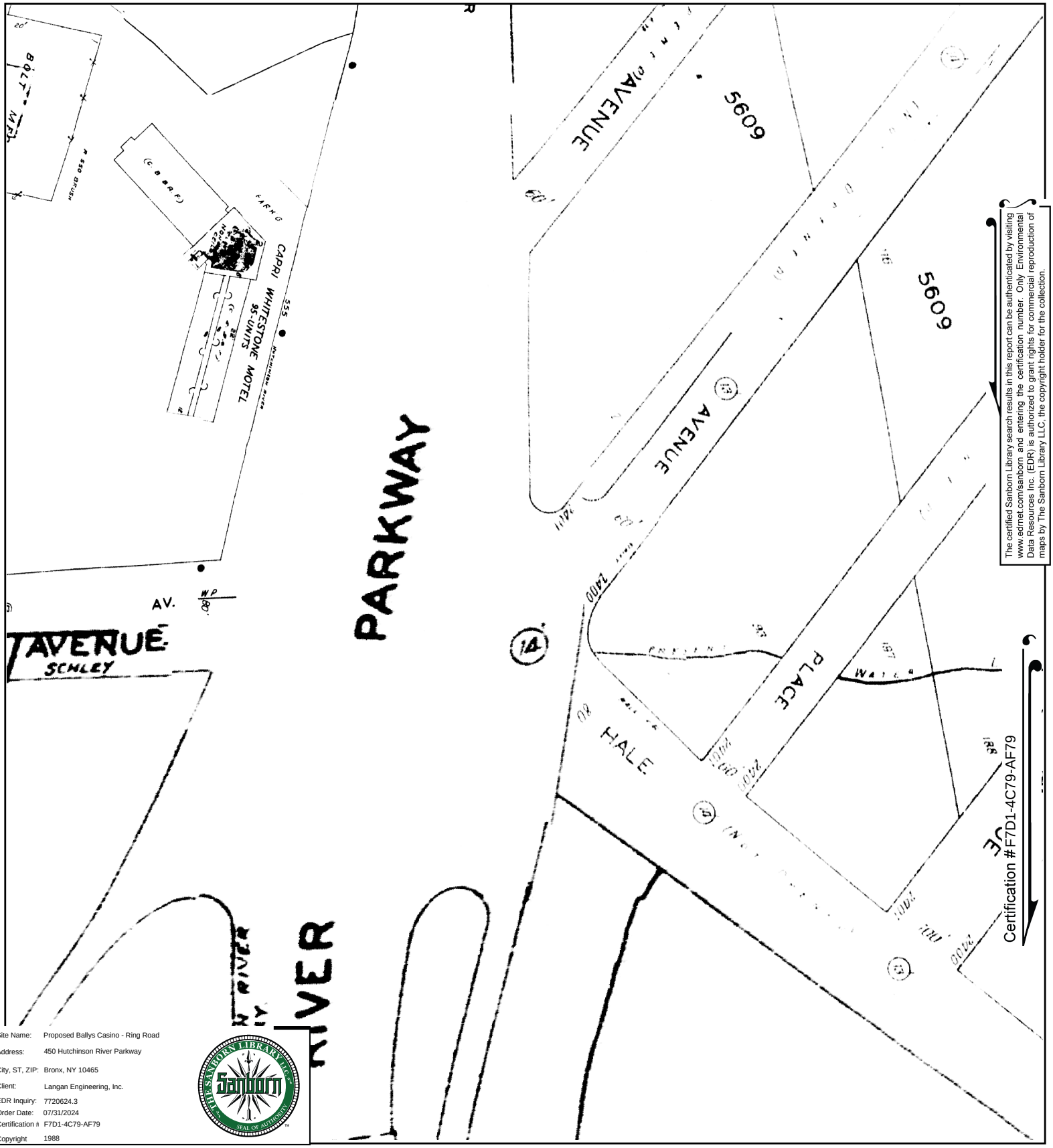


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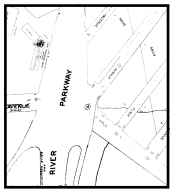

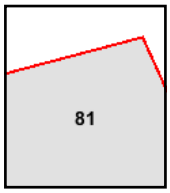


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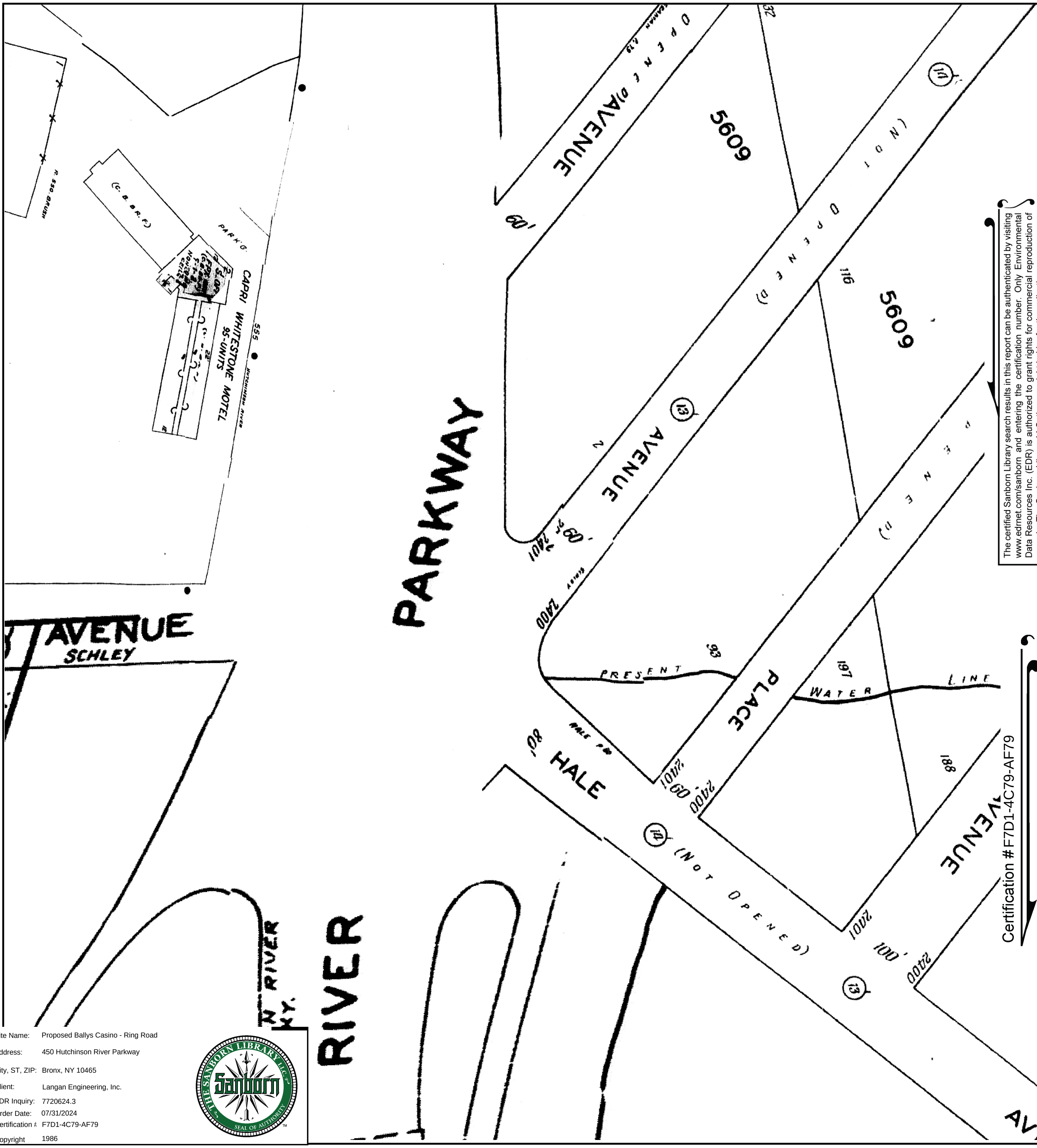


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Copyright 1986

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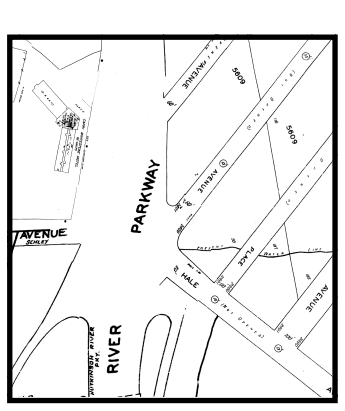

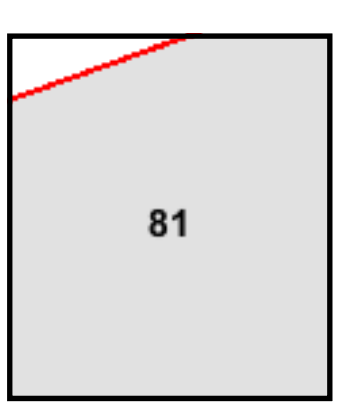


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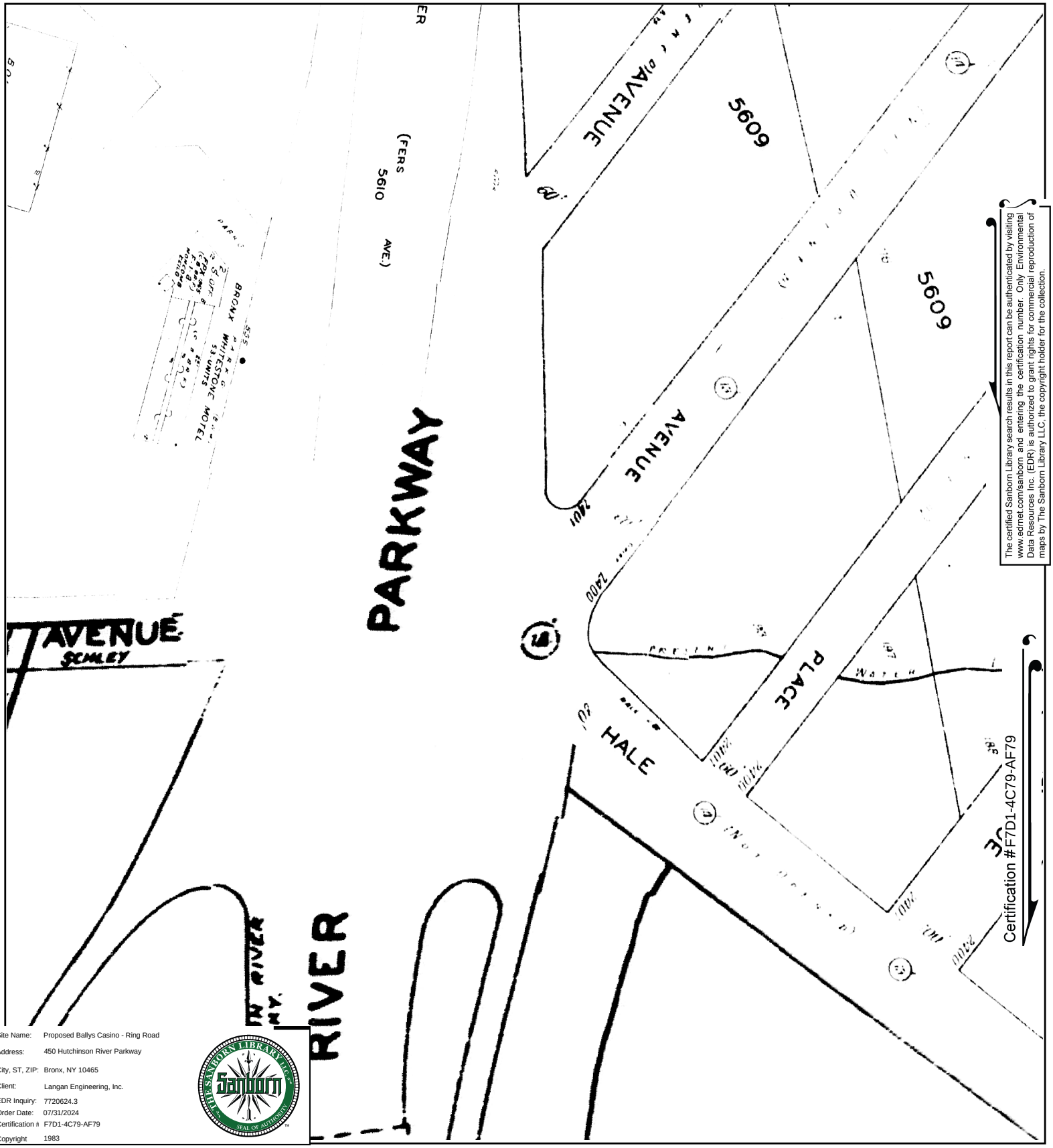


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| Copyright | 1983 |

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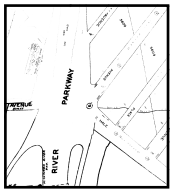

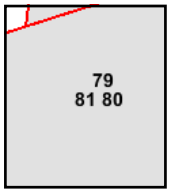


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Volume 21, Sheet 79
Volume 21, Sheet 80

0 Feet 150 300 600

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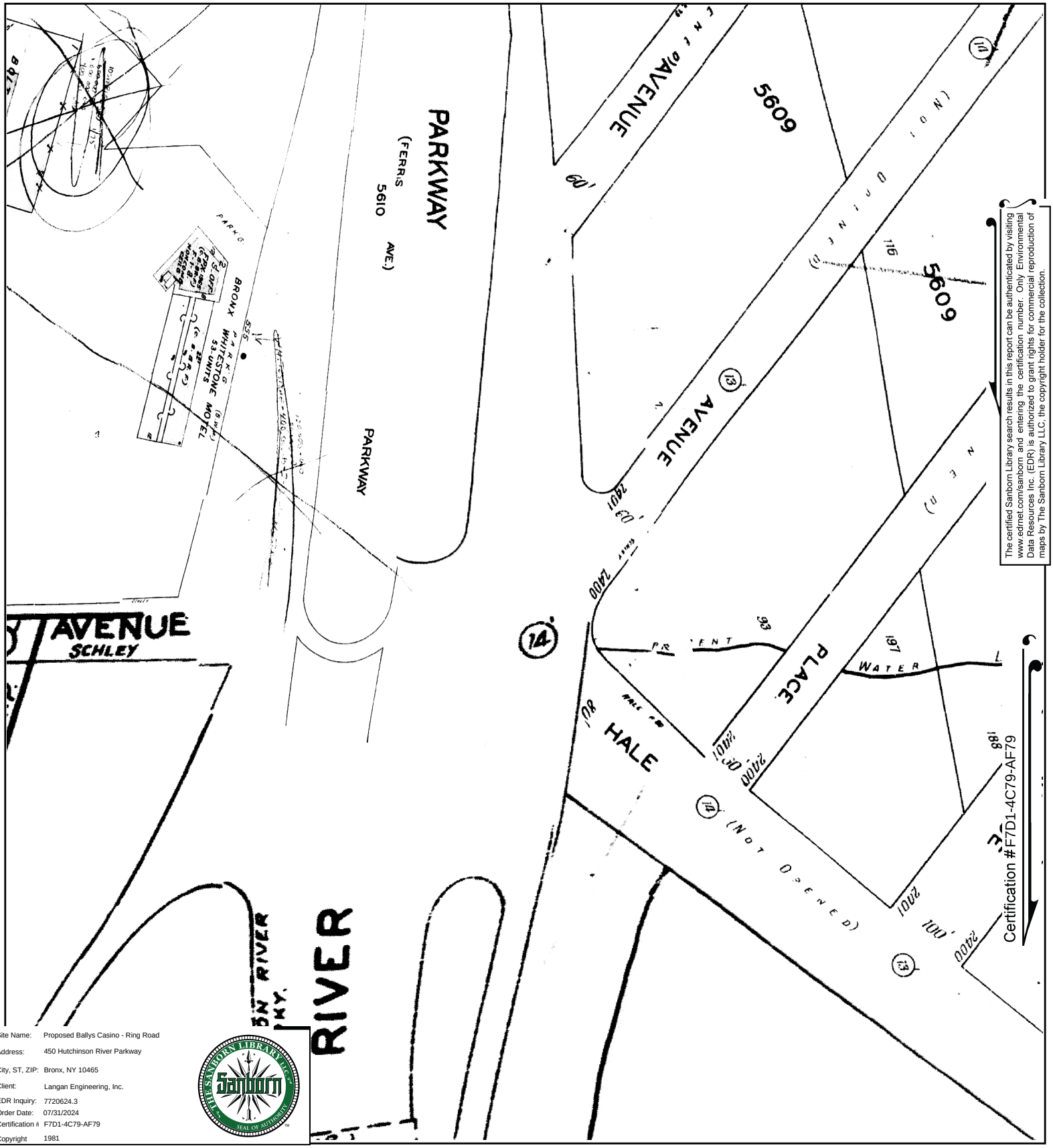


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| Copyright | 1981 |

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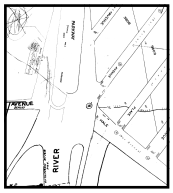

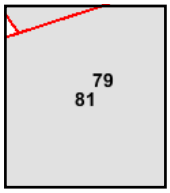


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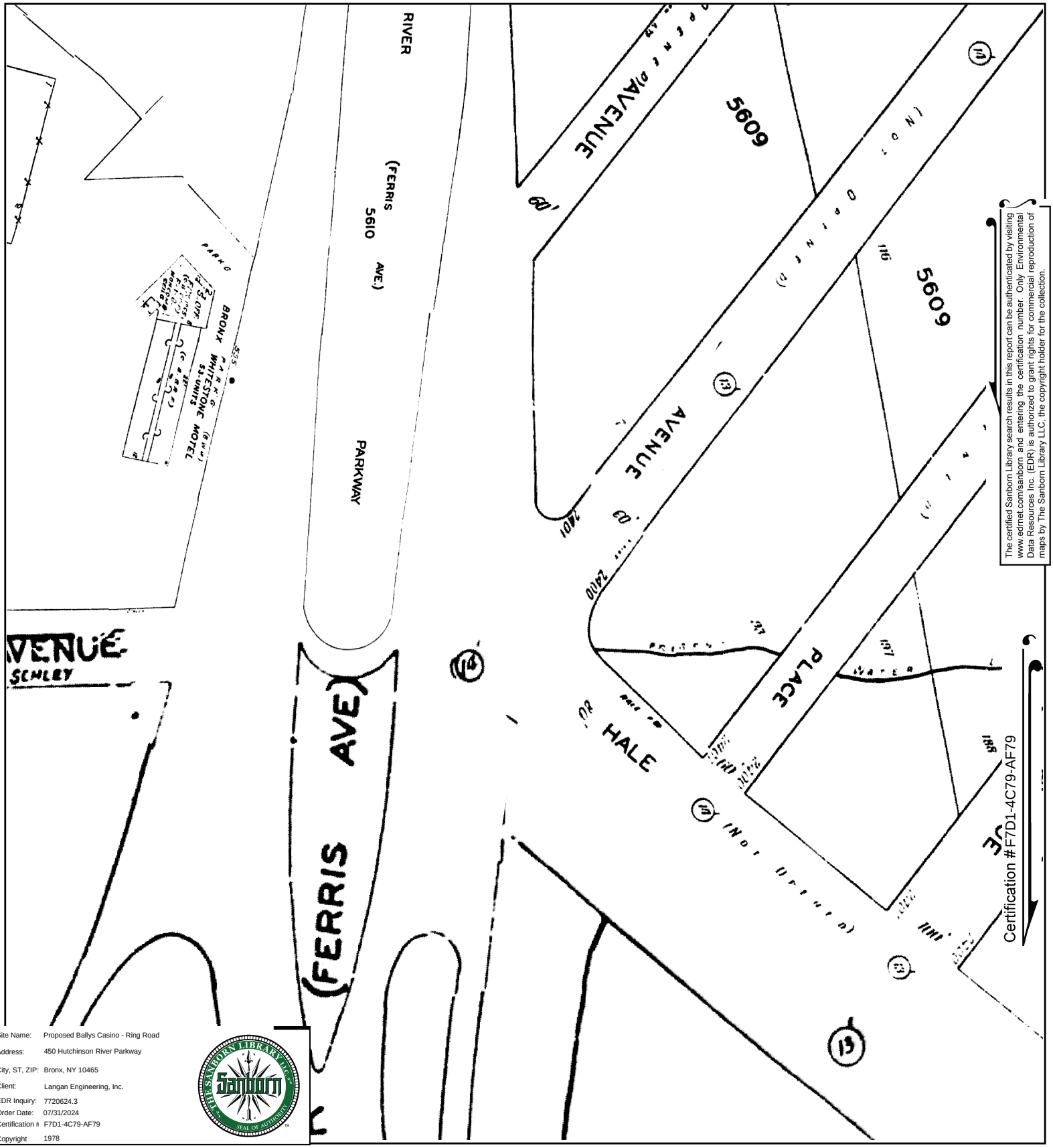


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| Copyright | 1978 |

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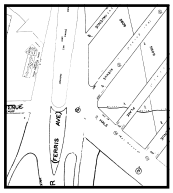

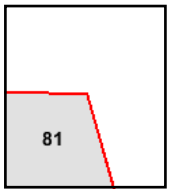


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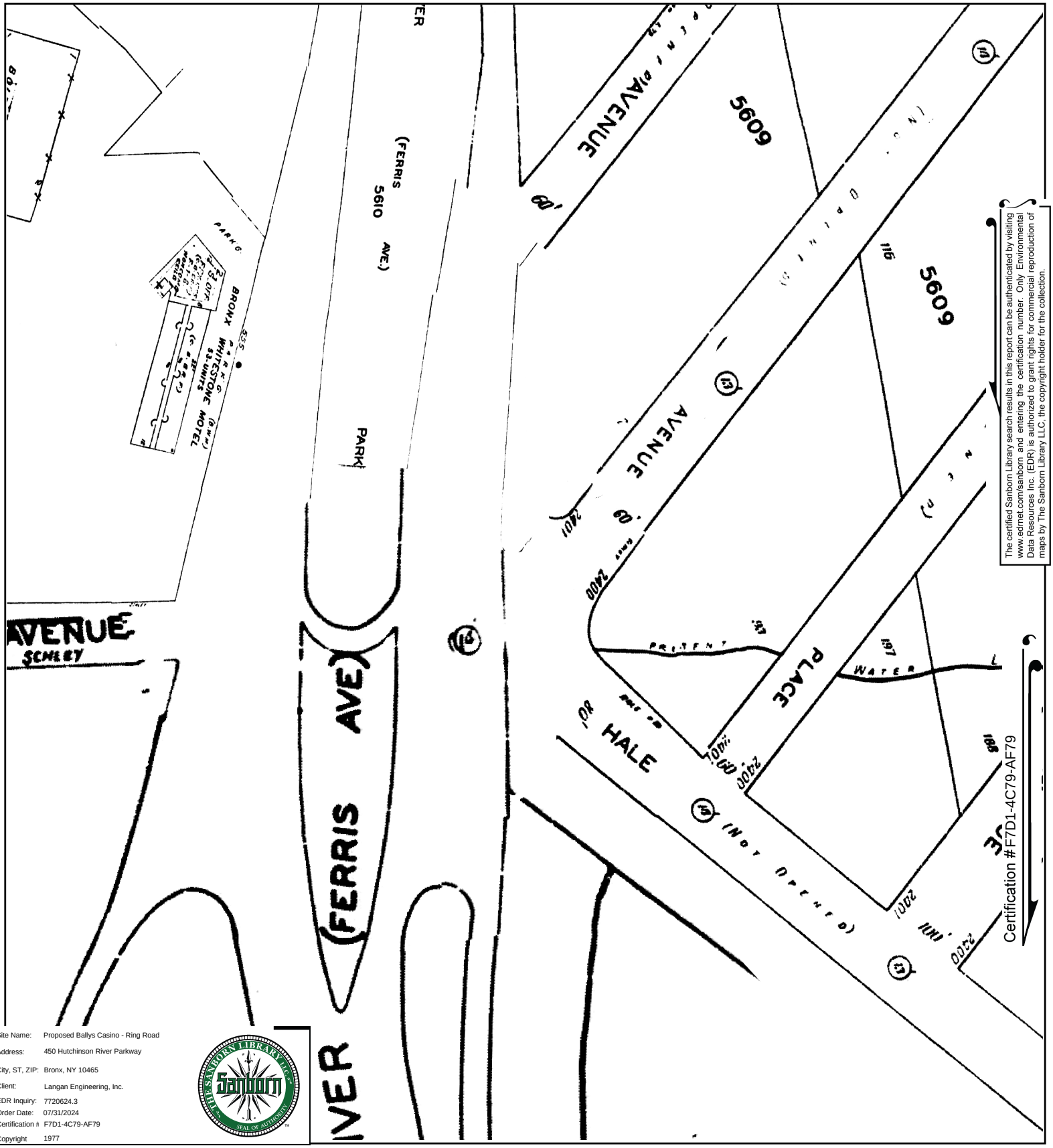


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Certification #: F7D1-4C79-AF79
Copyright: 1977

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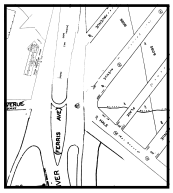

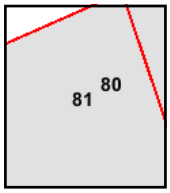


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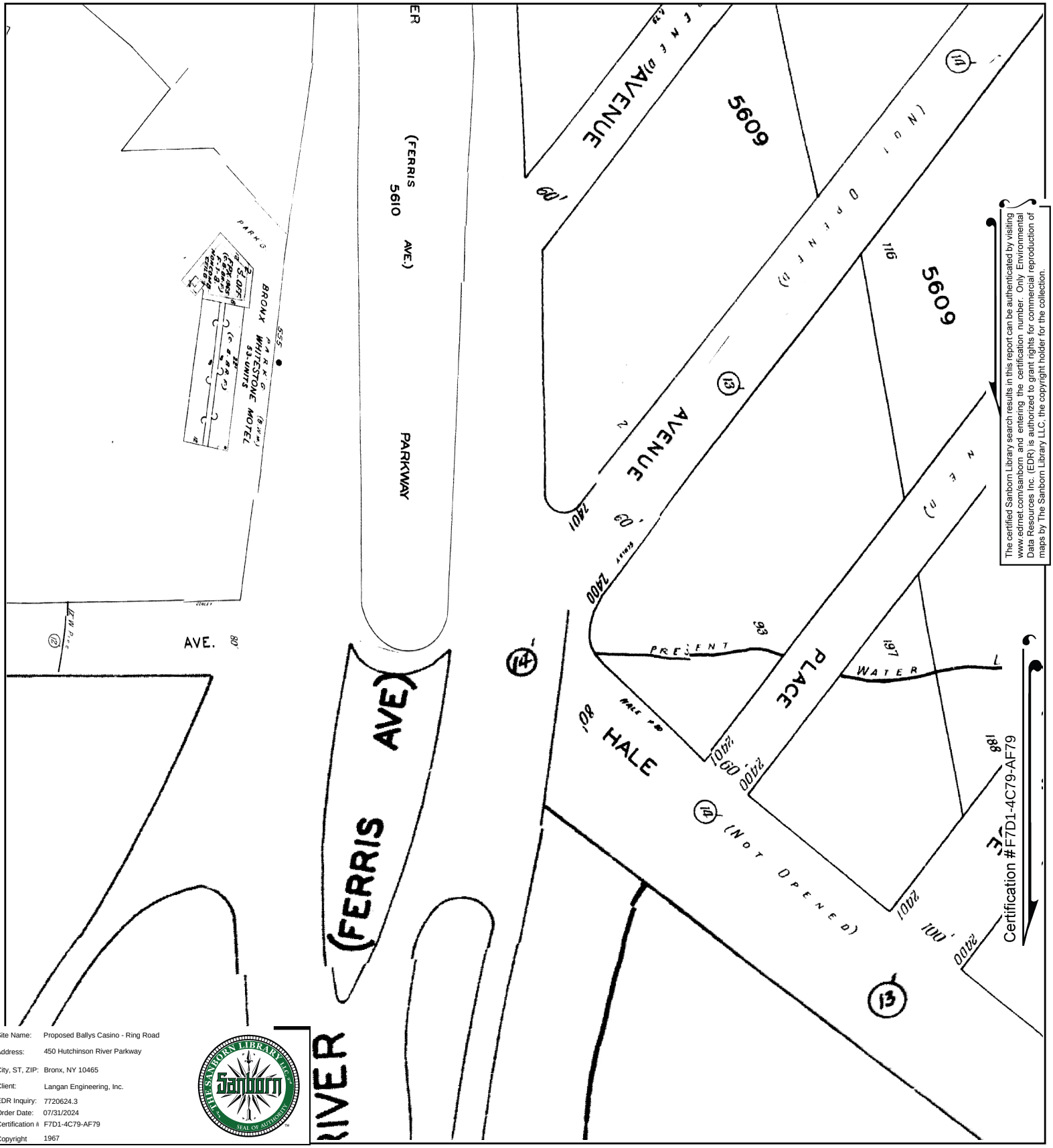


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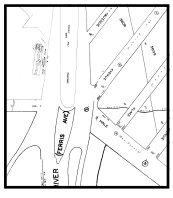

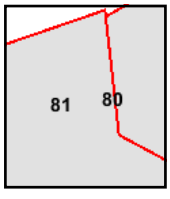


Volume 21, Sheet 81
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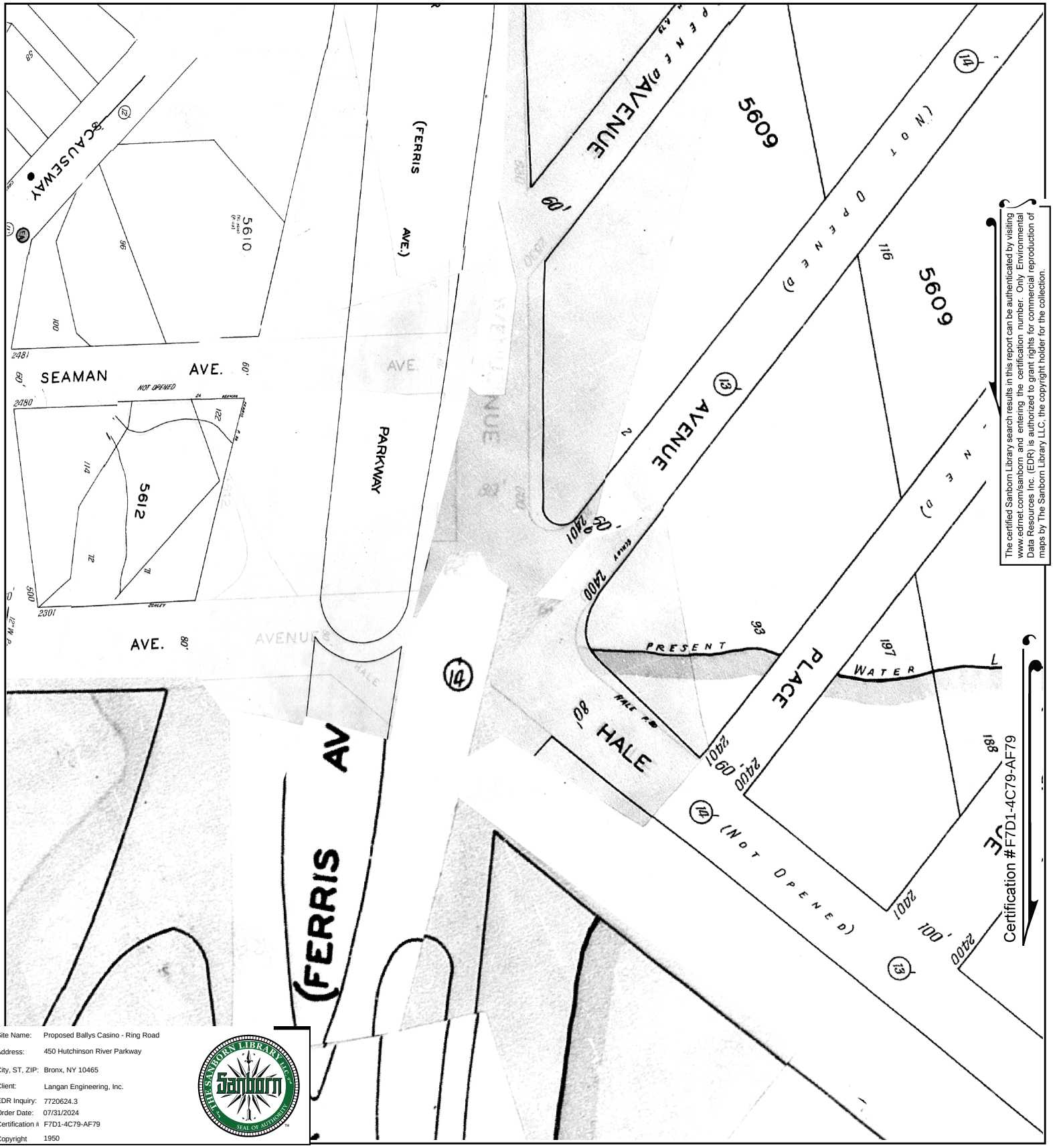


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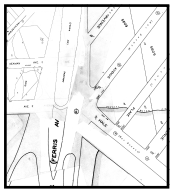

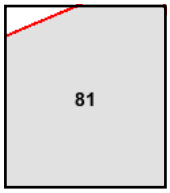


Volume 21, Sheet 81

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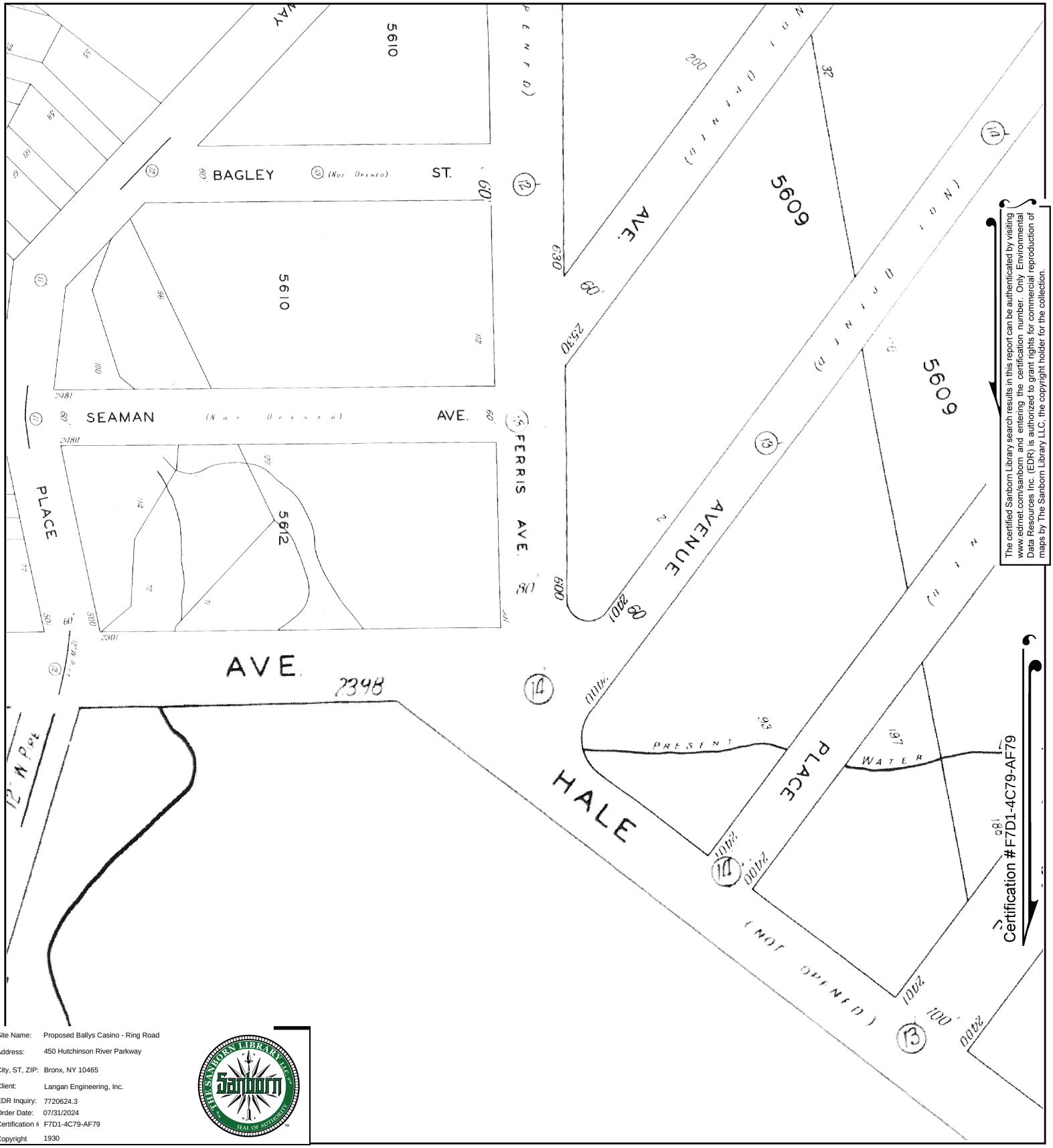


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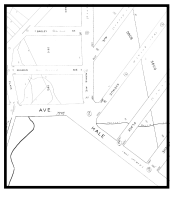

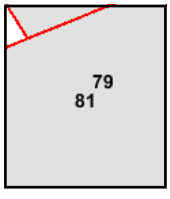


Volume 21, Sheet 81
Volume 21, Sheet 79

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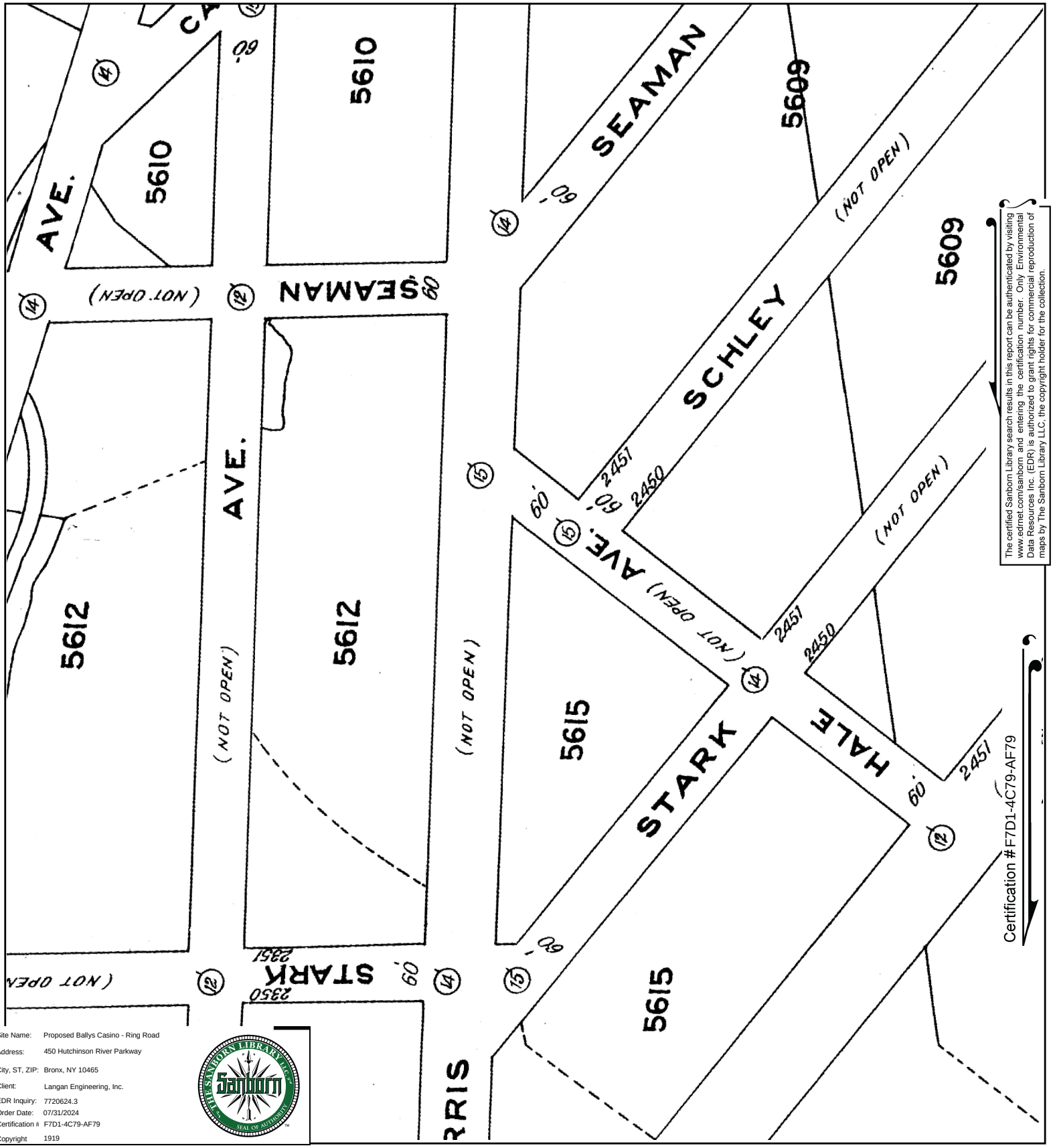


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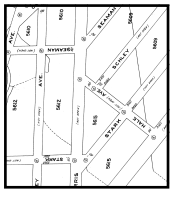

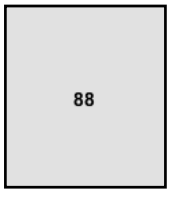


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Volume 17, Sheet 88

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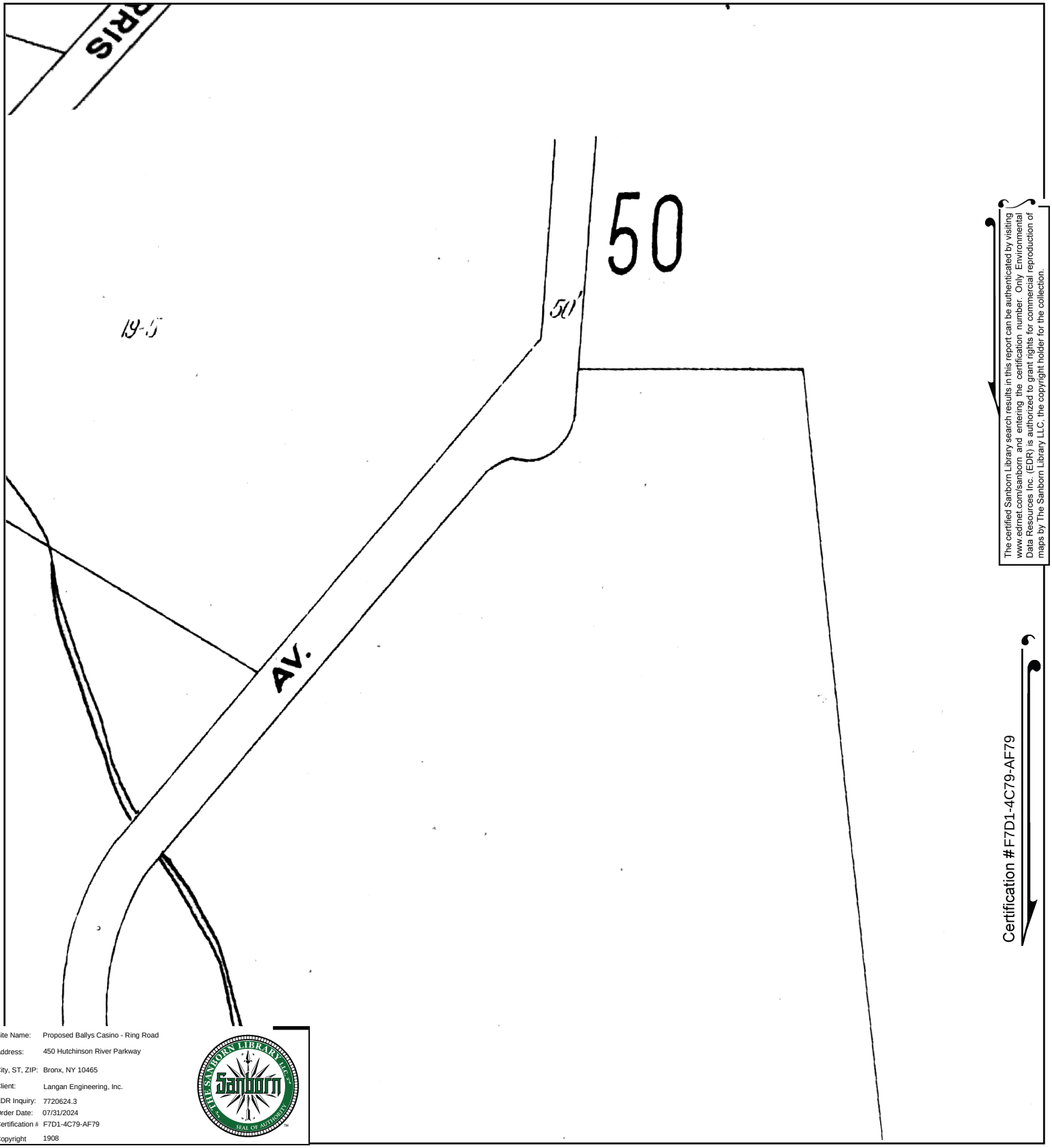


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| Certification # | F7D1-4C79-AF79 |
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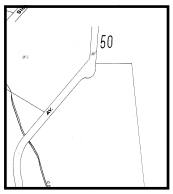


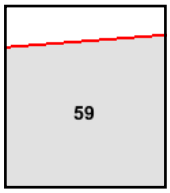


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0 Feet 150 300 600

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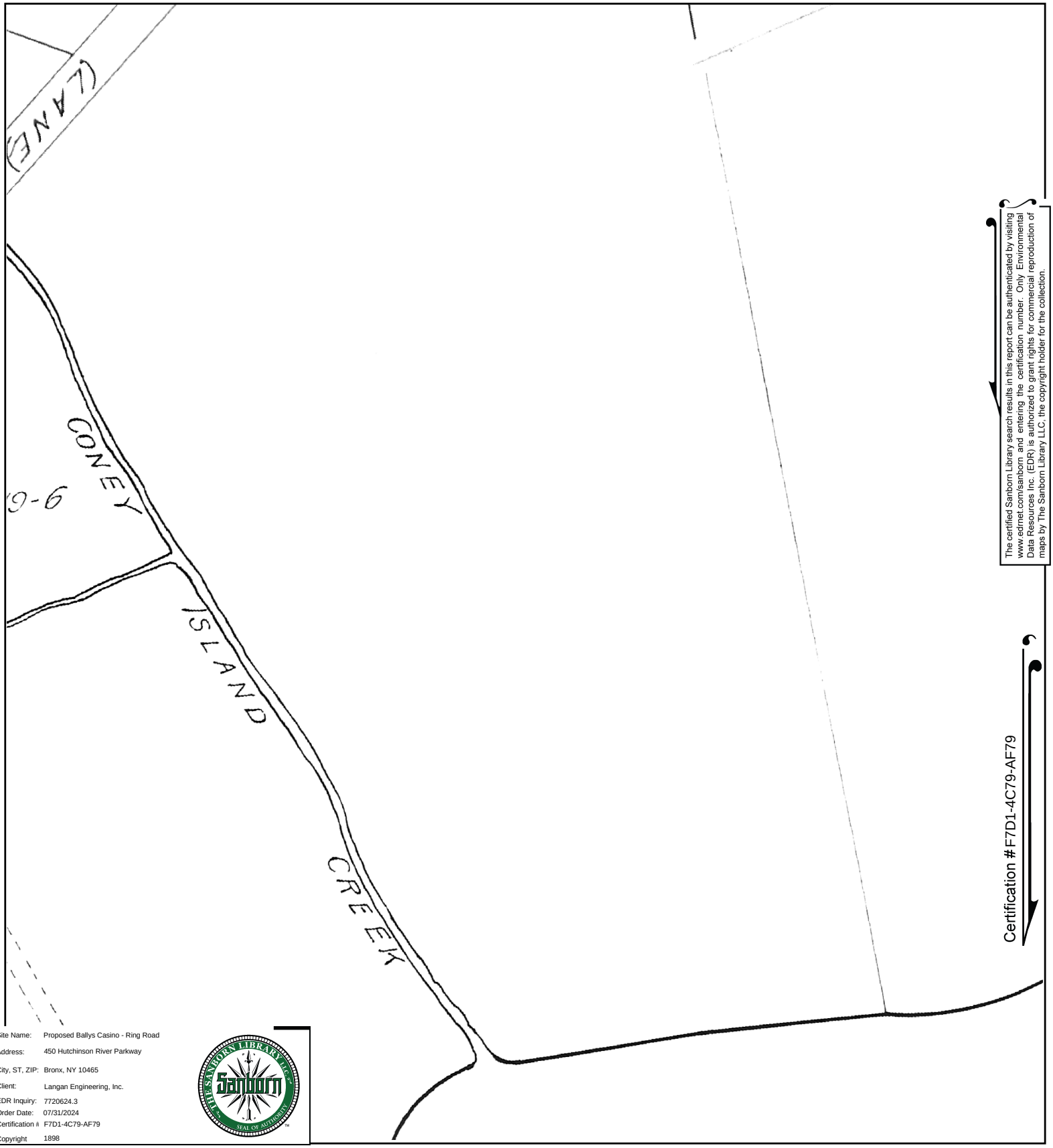


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Certification #F7D1-4C79-AF79

Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1898

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0 Feet 150 300 600

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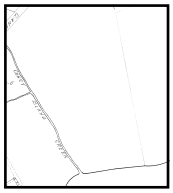

59

N

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.3

July 31, 2024

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

07/31/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.3

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

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## *Certified Sanborn Results:*

**Certification #** F7D1-4C79-AF79

**PO #** 170773001

**Project** Prpsd Bally s Casino - Ring Rd

**Maps Provided:**

| | | | |
|---|---|---|---|
| 2007 | 1996 | 1981 | 1898 |
| 2006 | 1995 | 1978 | |
| 2005 | 1993 | 1977 | |
| 2004 | 1992 | 1967 | |
| 2003 | 1991 | 1950 | |
| 2002 | 1988 | 1930 | |
| 2001 | 1986 | 1919 | |
| 1998 | 1983 | 1908 | |

Sanborn® Library search results

Certification #: F7D1-4C79-AF79

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- ☑ Library of Congress
- ☑ University Publications of America
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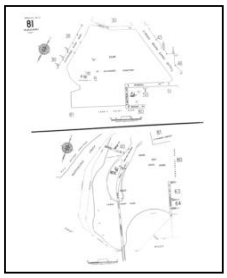
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 2007 Source Sheets



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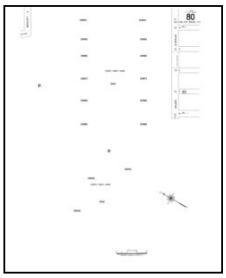
2007



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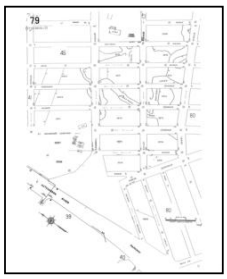
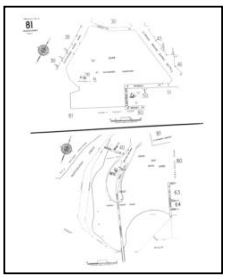
2007

### 2006 Source Sheets

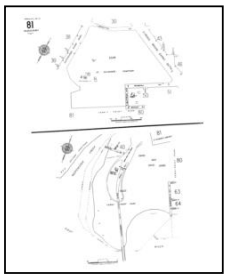


Volume 21, Sheet 79
2006



Volume 21, Sheet 81
2006

### 2005 Source Sheets



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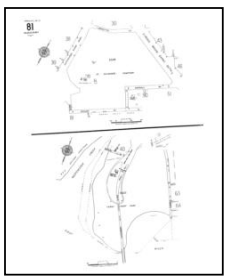
2005

### 2004 Source Sheets



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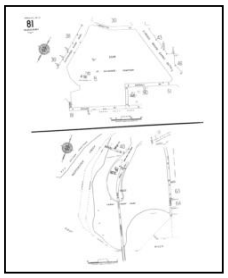
2004

## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 2003 Source Sheets



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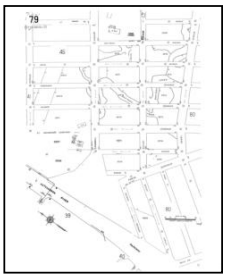
2003



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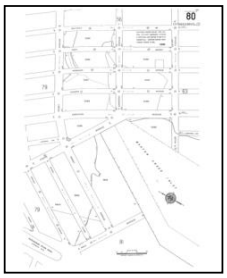
2003



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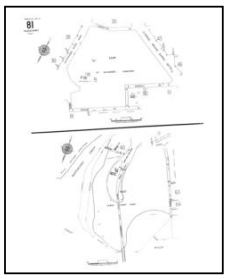
2003

### 2002 Source Sheets



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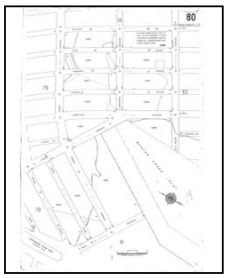
2002

### 2001 Source Sheets



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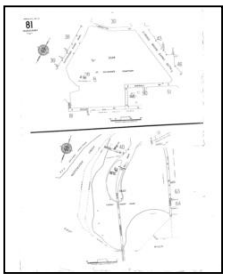
2001



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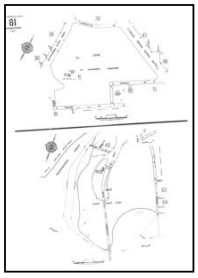
2001

### 1998 Source Sheets



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1998

## *Sanborn Sheet Key*

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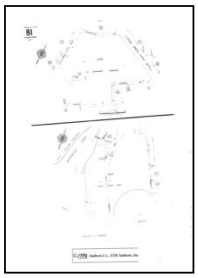
### 1996 Source Sheets



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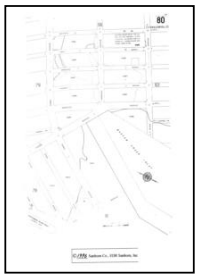
1996



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1996



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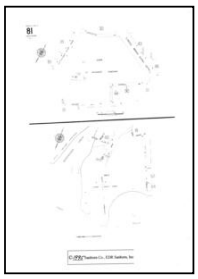
1996

### 1995 Source Sheets



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1995

### 1993 Source Sheets



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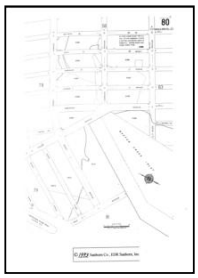
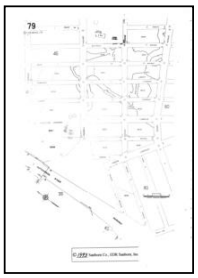
1993



Volume 21, Sheet 80
1993



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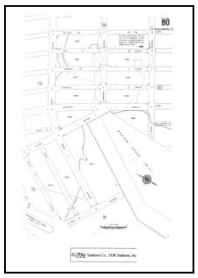
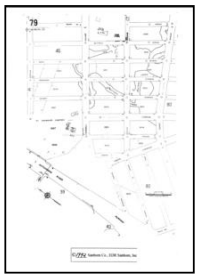
1993

### 1992 Source Sheets



Volume 21, Sheet 80
1992



Volume 21, Sheet 79
1992



Volume 21, Sheet 81
1992

## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

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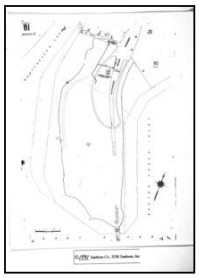
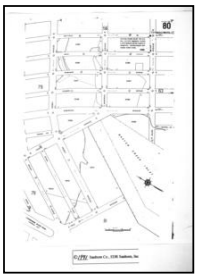


Volume 21, Sheet 81
1991



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1991

### 1988 Source Sheets



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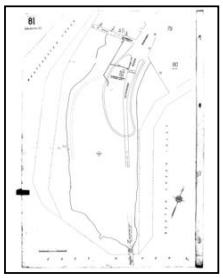
1988

### 1986 Source Sheets



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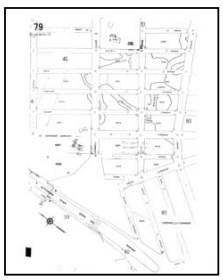
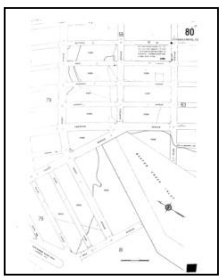
1986

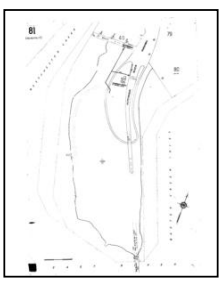
### 1983 Source Sheets



Volume 21, Sheet 79
1983



Volume 21, Sheet 80
1983



Volume 21, Sheet 81
1983

## *Sanborn Sheet Key*

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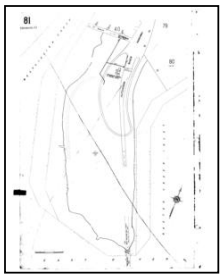

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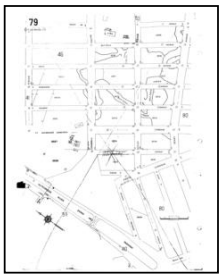
1981



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1981

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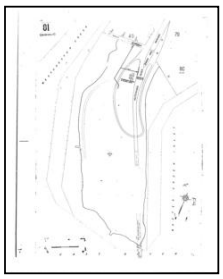

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1978

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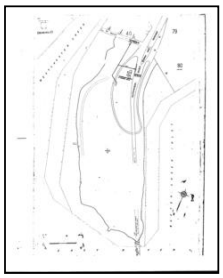

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1977



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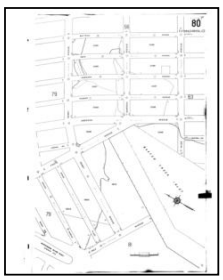
1977

### 1967 Source Sheets



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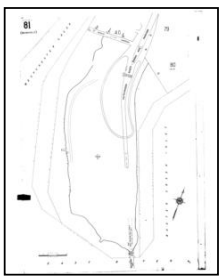
1967



Volume 21, Sheet 81
1967

## *Sanborn Sheet Key*

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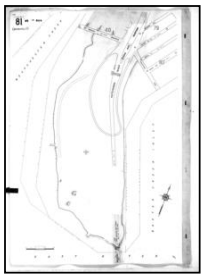

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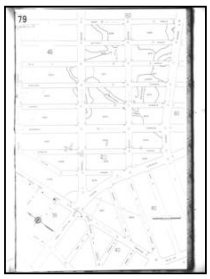
1950

### 1930 Source Sheets



Volume 21, Sheet 79
1930



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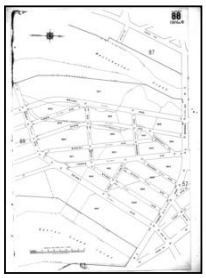
1930

### 1919 Source Sheets



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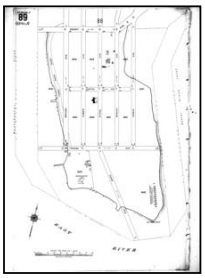
1919



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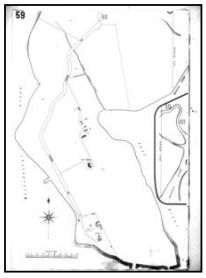
1919

### 1908 Source Sheets



Volume A, Sheet 59
1908

## *Sanborn Sheet Key*

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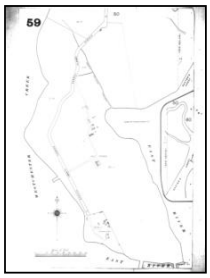
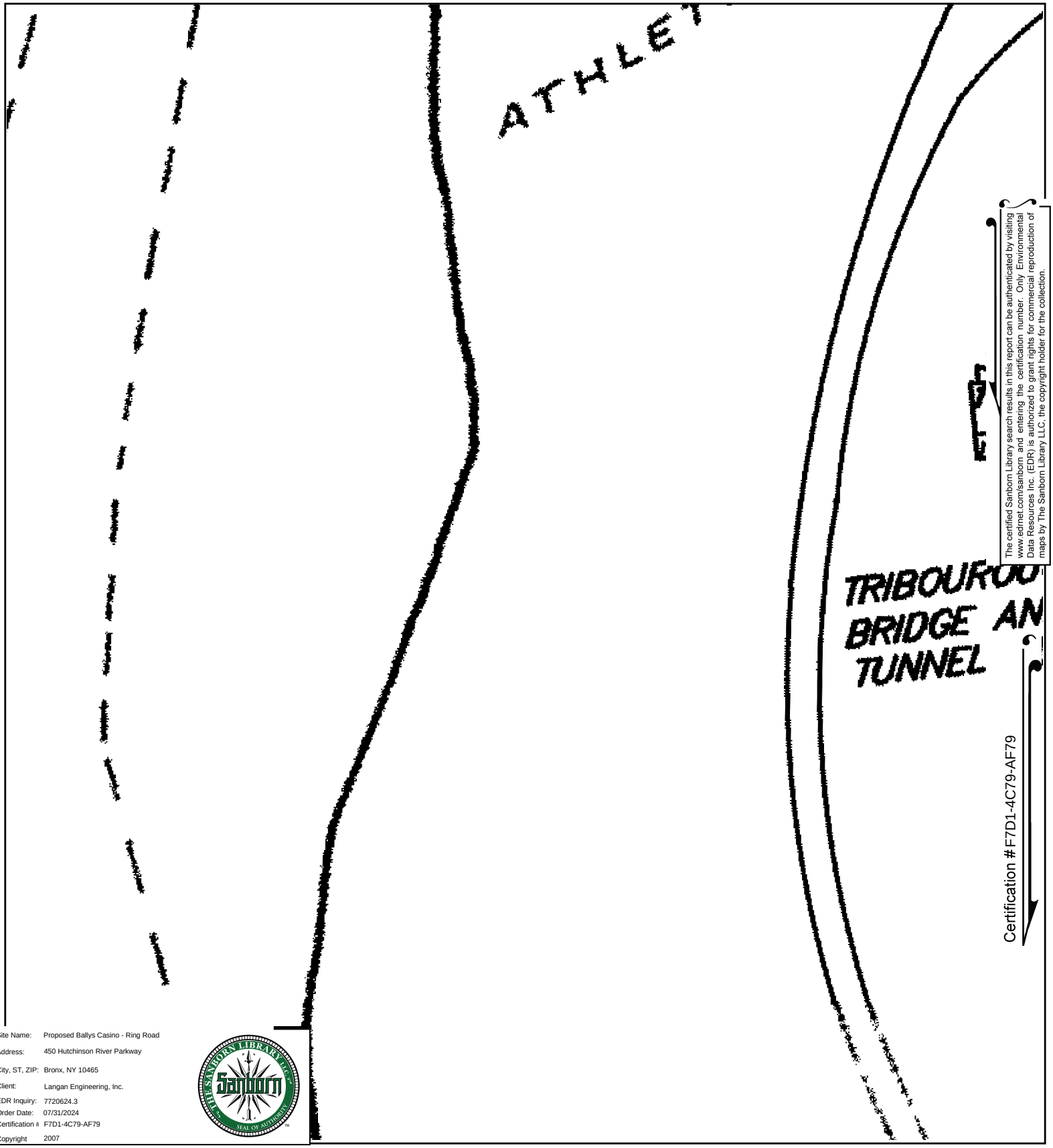
### 1898 Source Sheets




Volume A, Sheet 59
1898

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Certification #F7D1-4C79-AF79

Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
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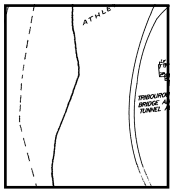

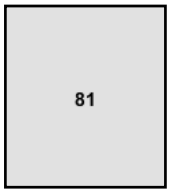


Volume 21, Sheet 80
Volume 21, Sheet 81

0 Feet 150 300 600

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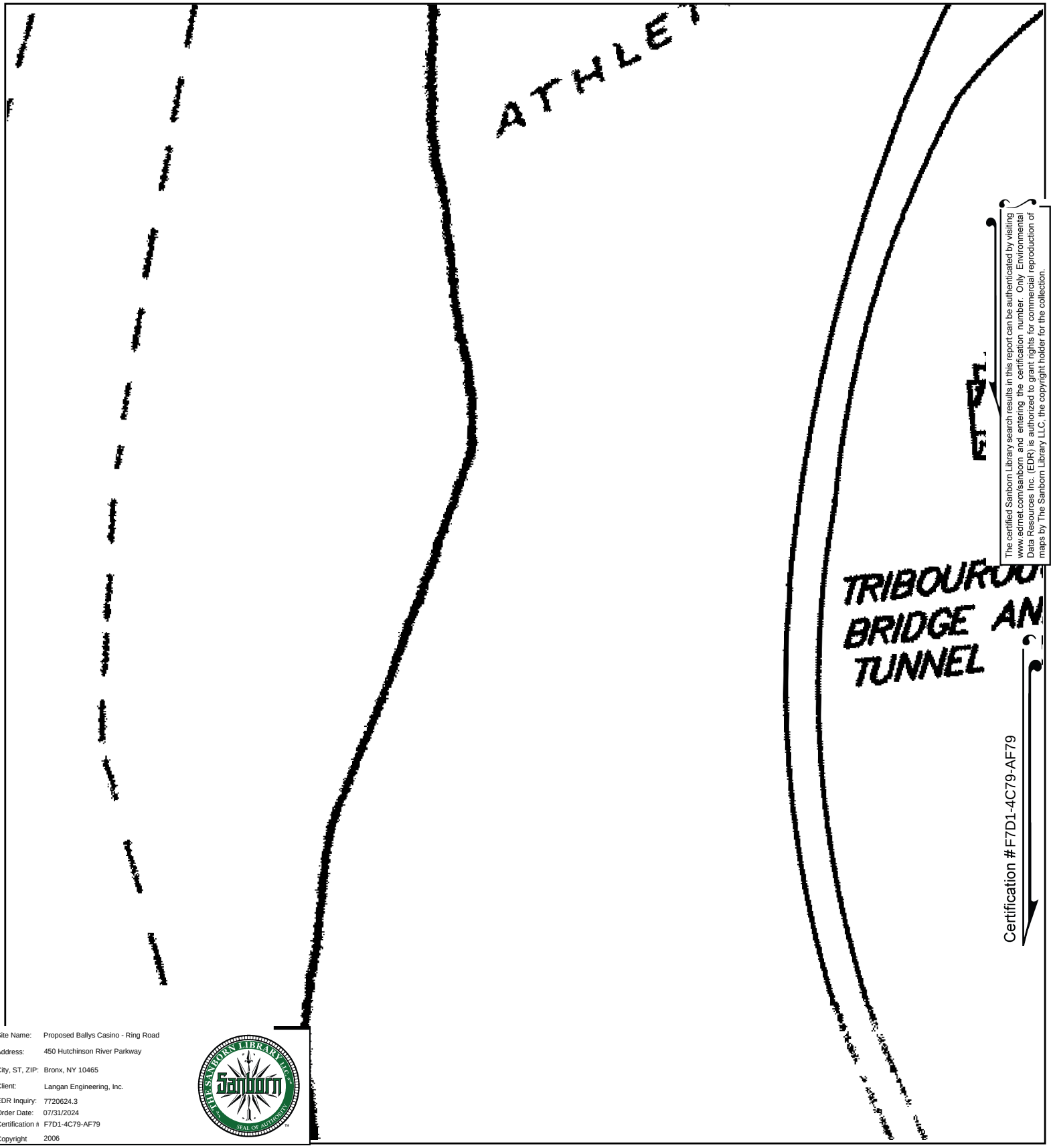


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City, ST, ZIP: Bronx, NY 10465
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Order Date: 07/31/2024
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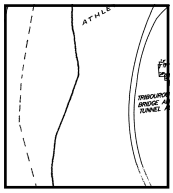

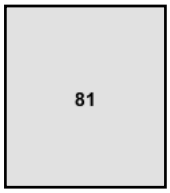


Volume 21, Sheet 81
Volume 21, Sheet 79

0 Feet 150 300 600

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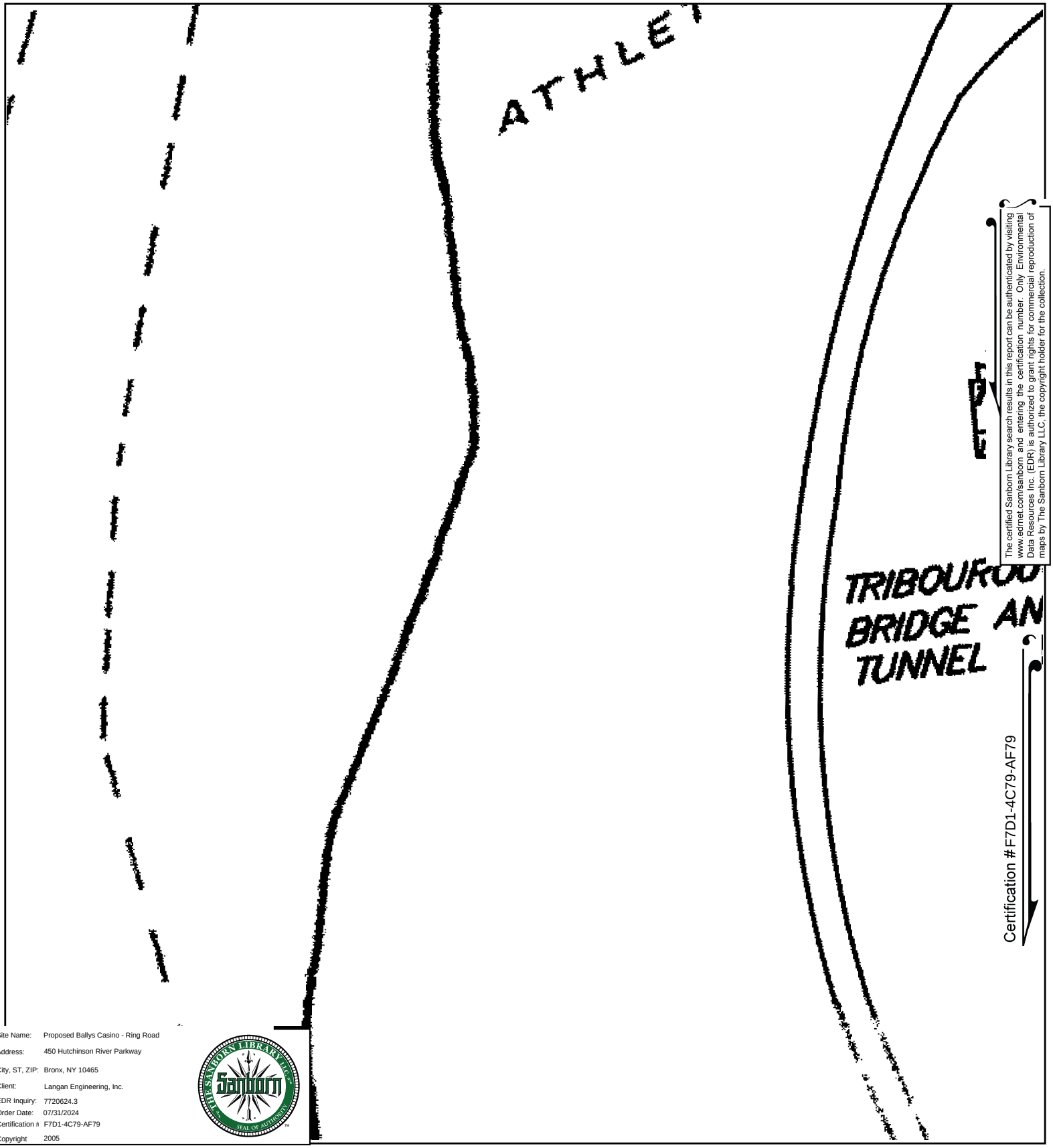


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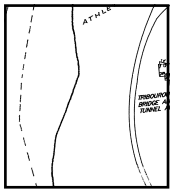

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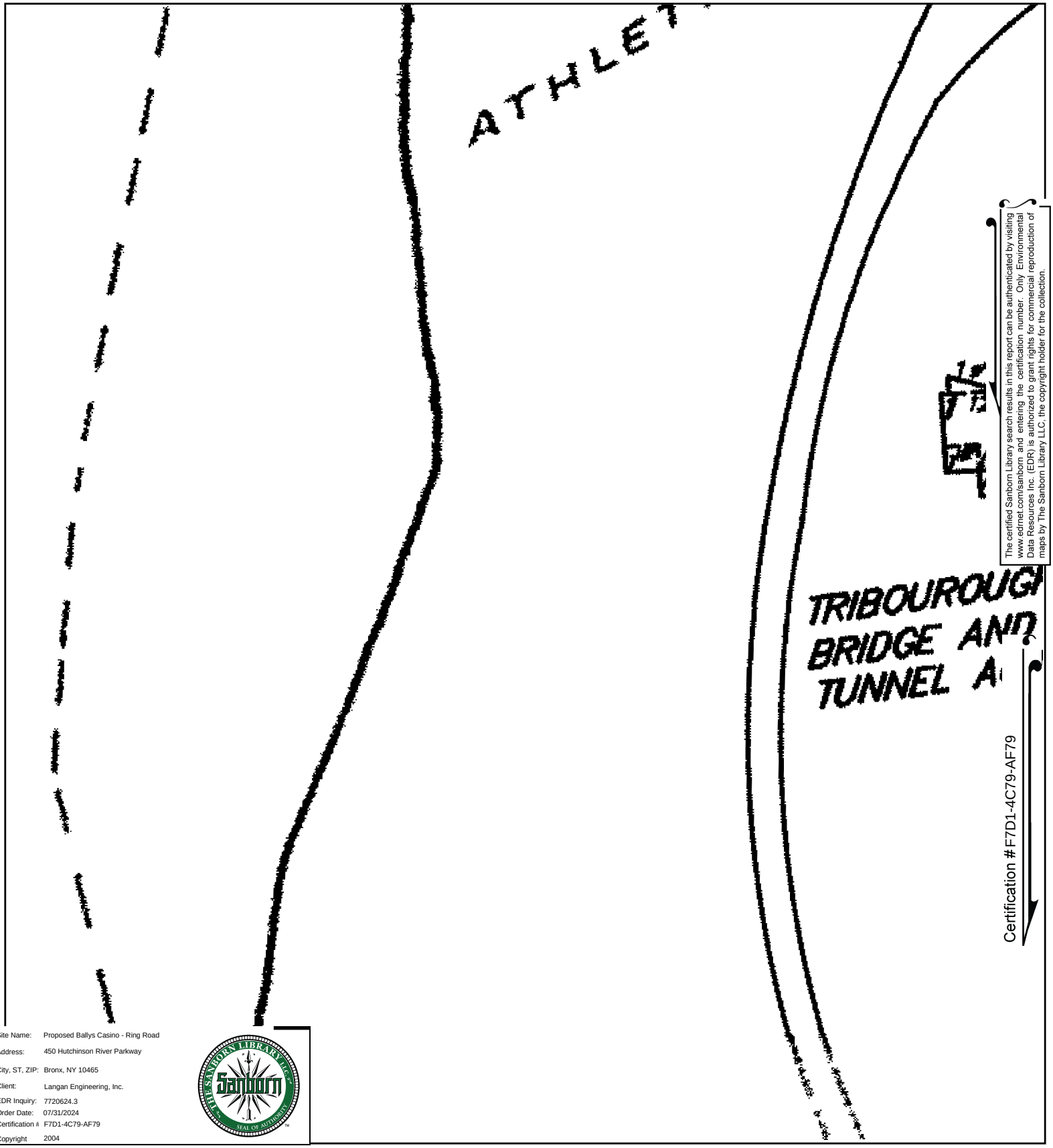


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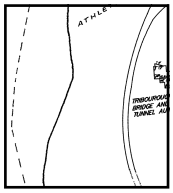

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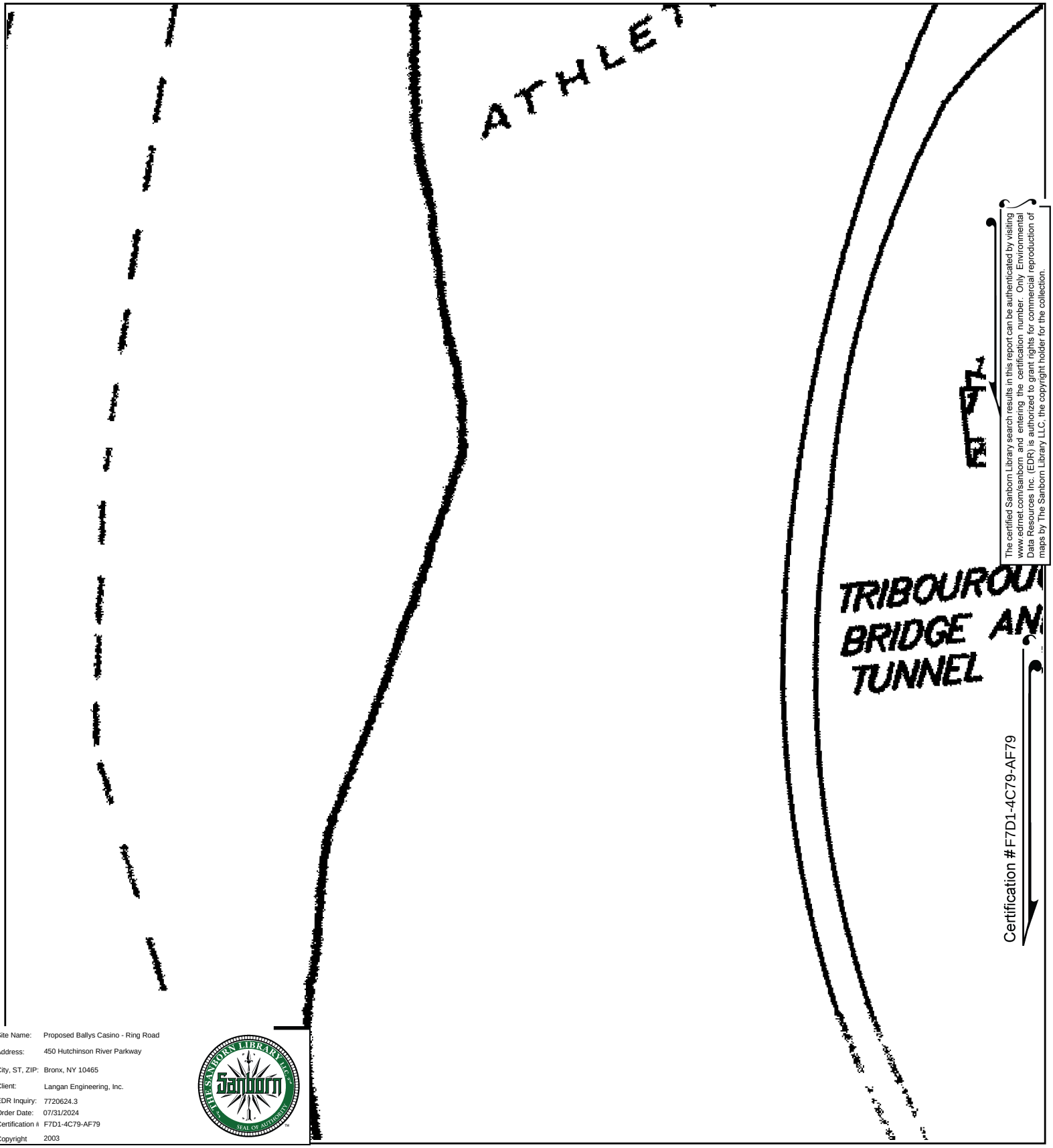


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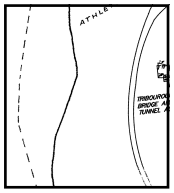

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Volume 21, Sheet 79
Volume 21, Sheet 81

0 Feet 150 300 600

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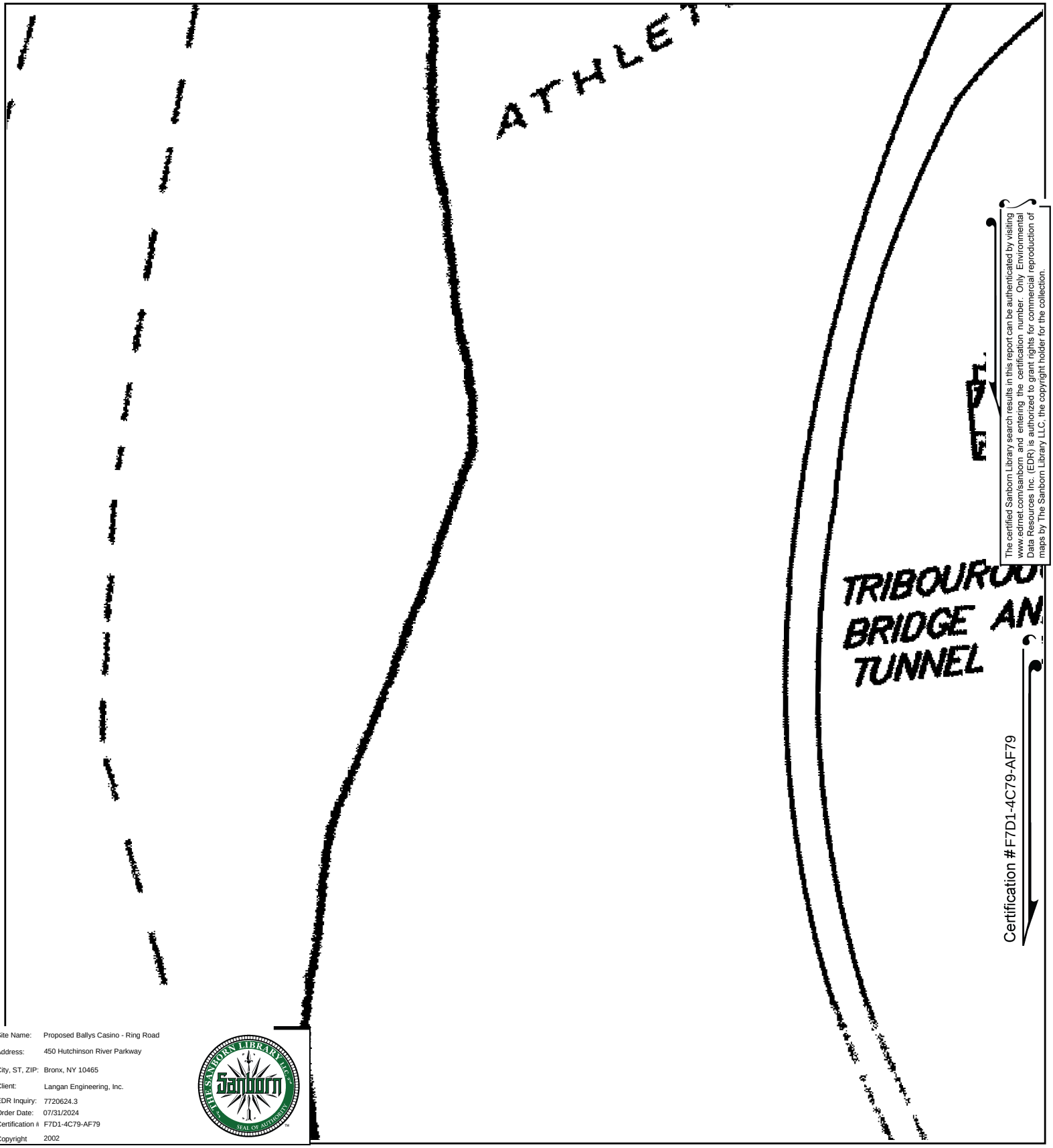


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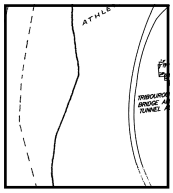

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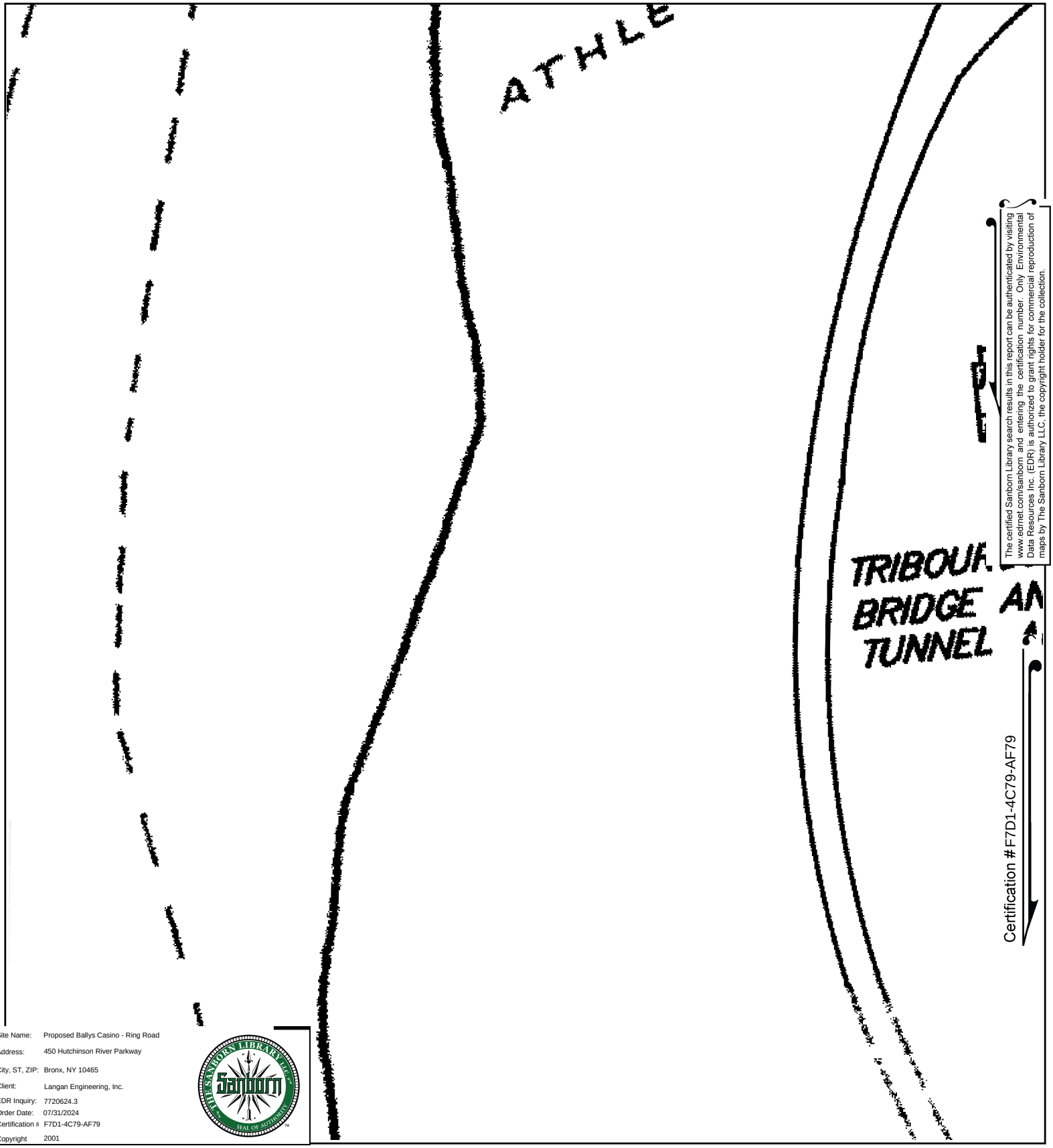


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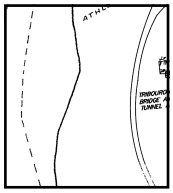

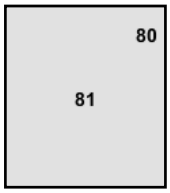


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Volume 21, Sheet 80

0 Feet 150 300 600

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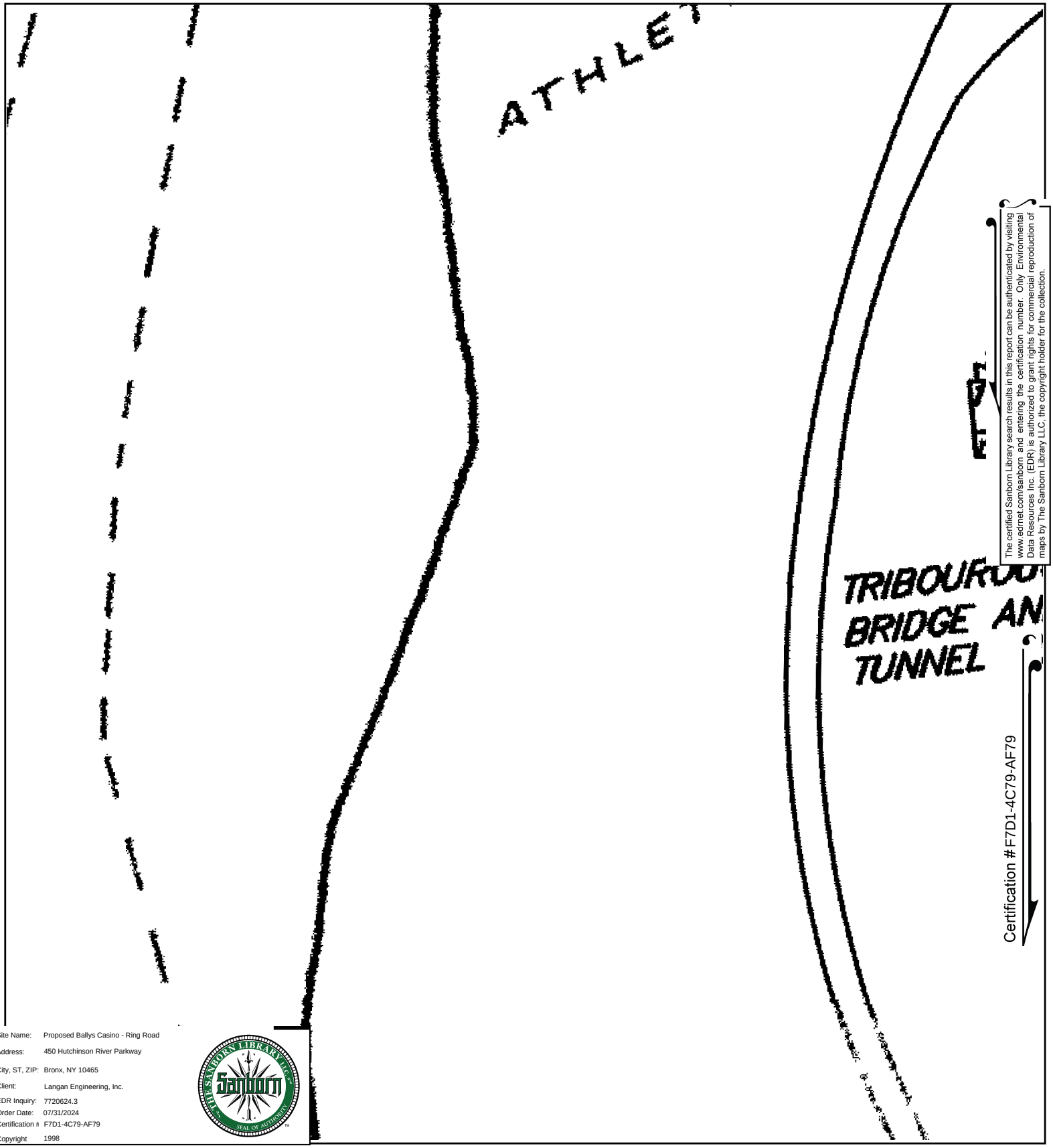


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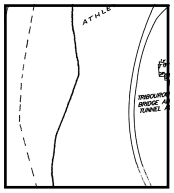

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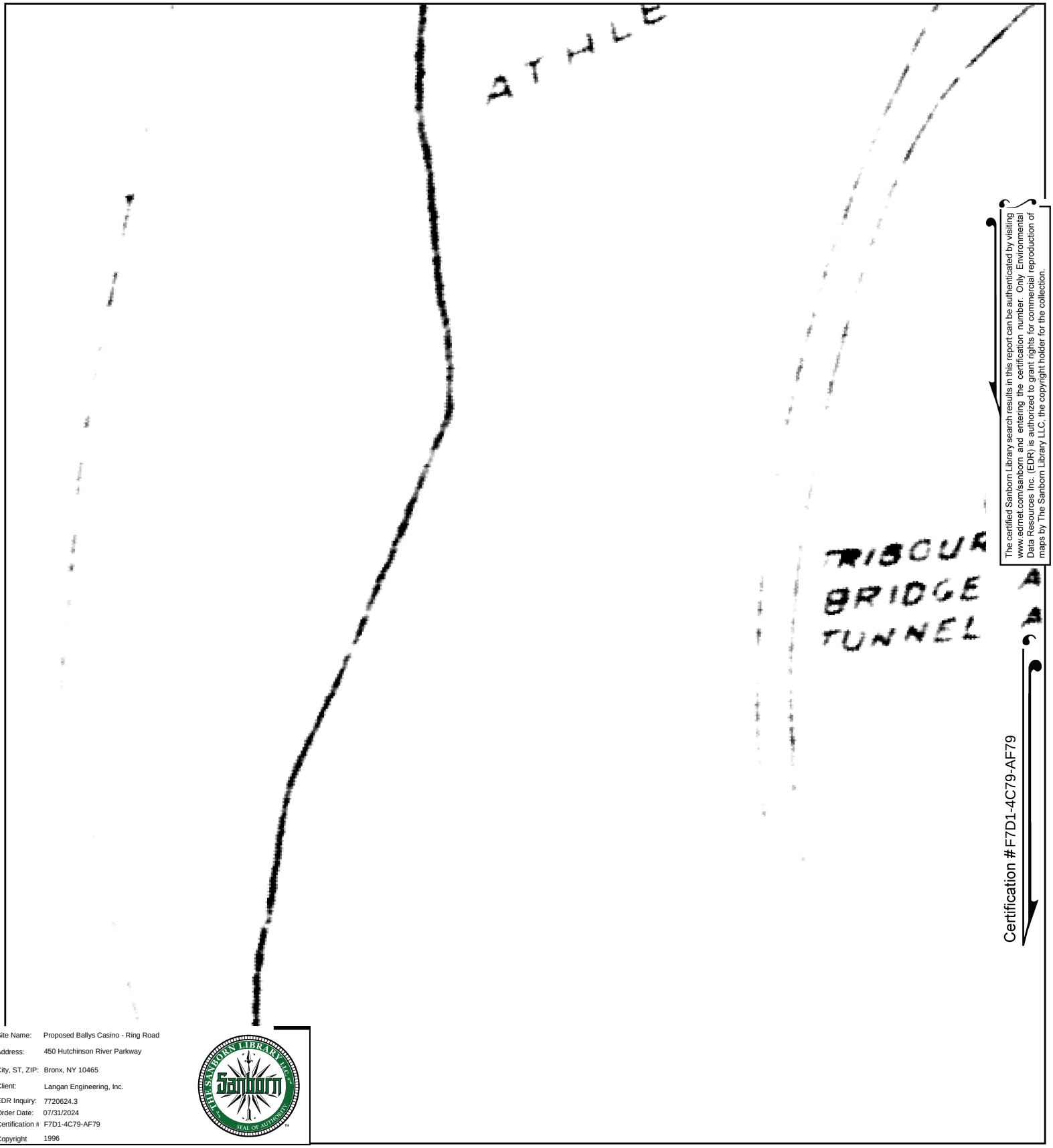


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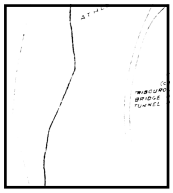

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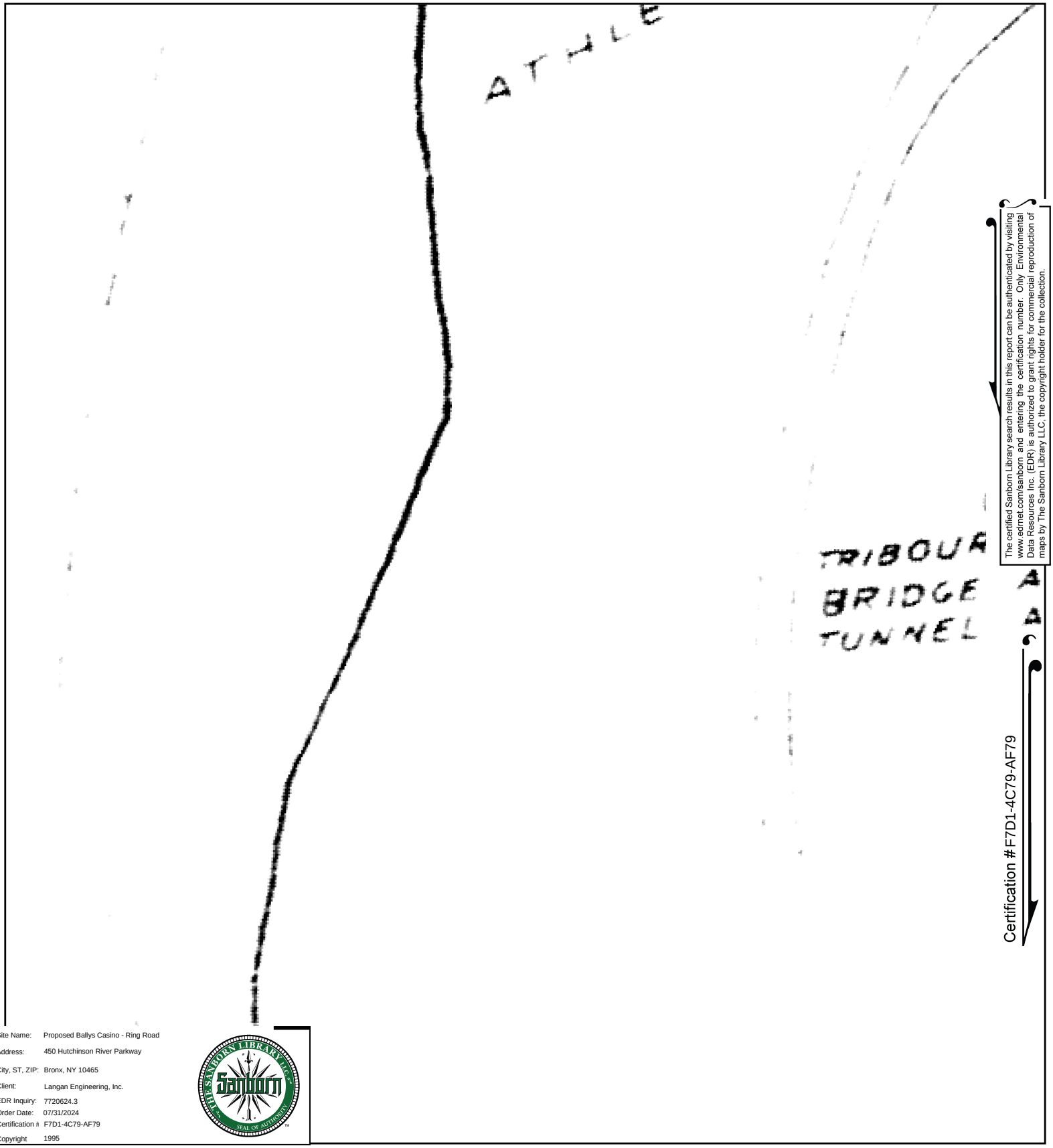


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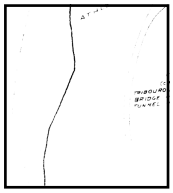

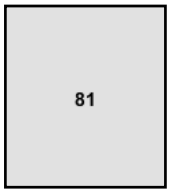


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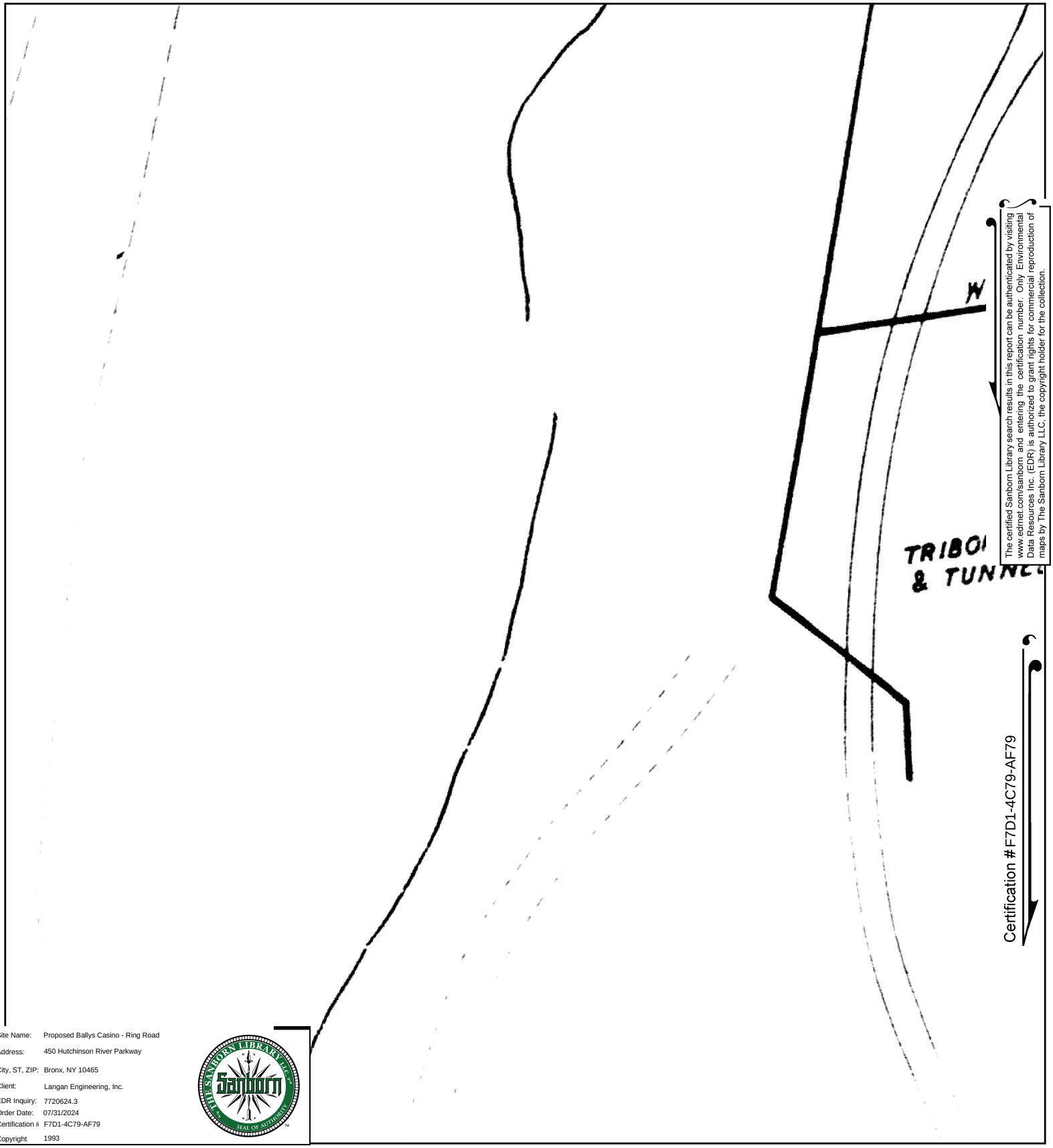


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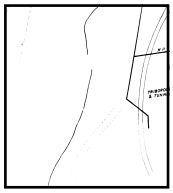

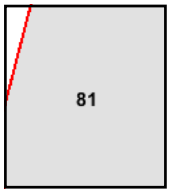


Volume 21, Sheet 79
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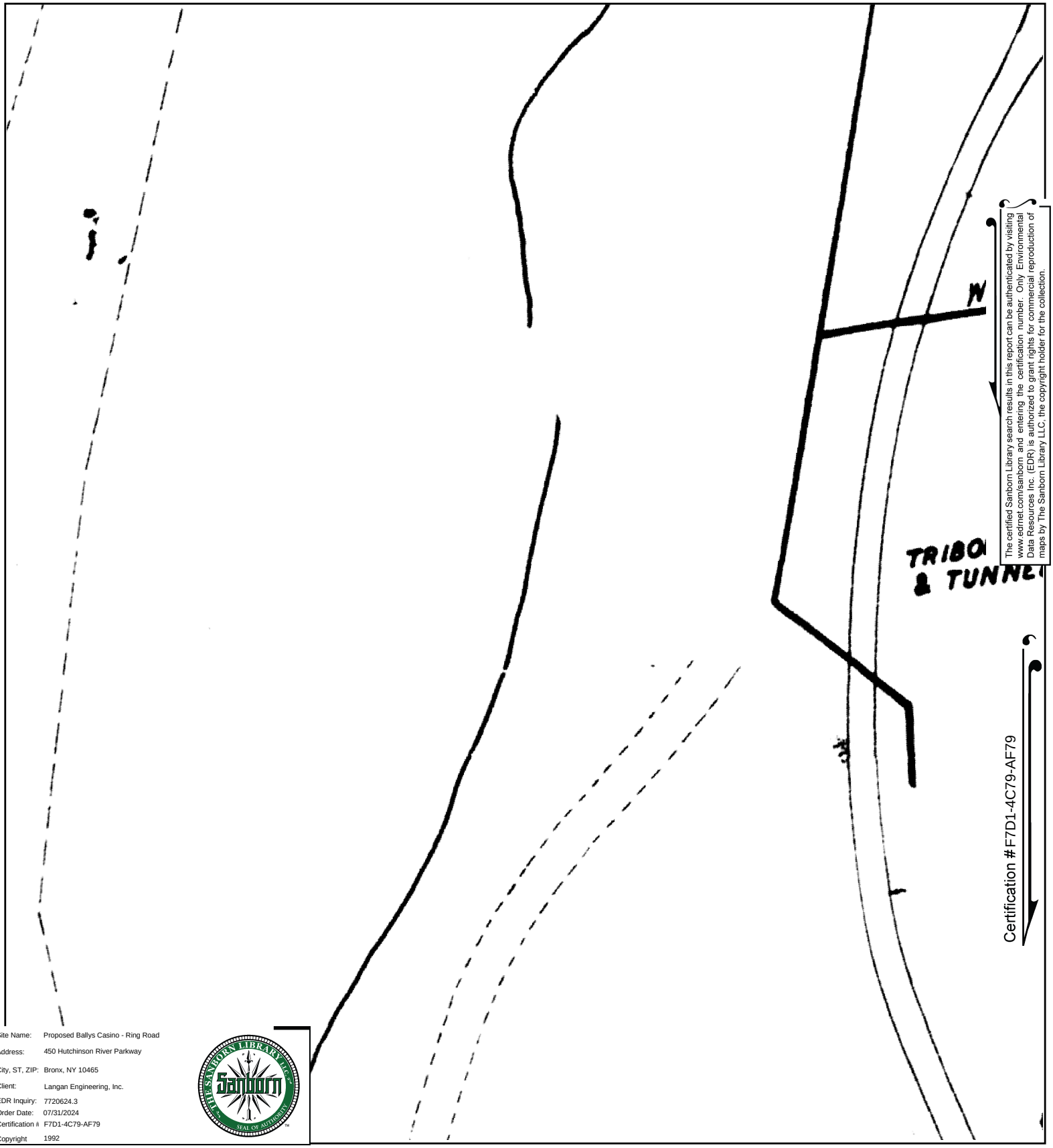


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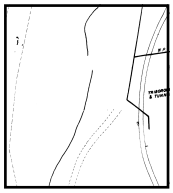

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Volume 21, Sheet 80

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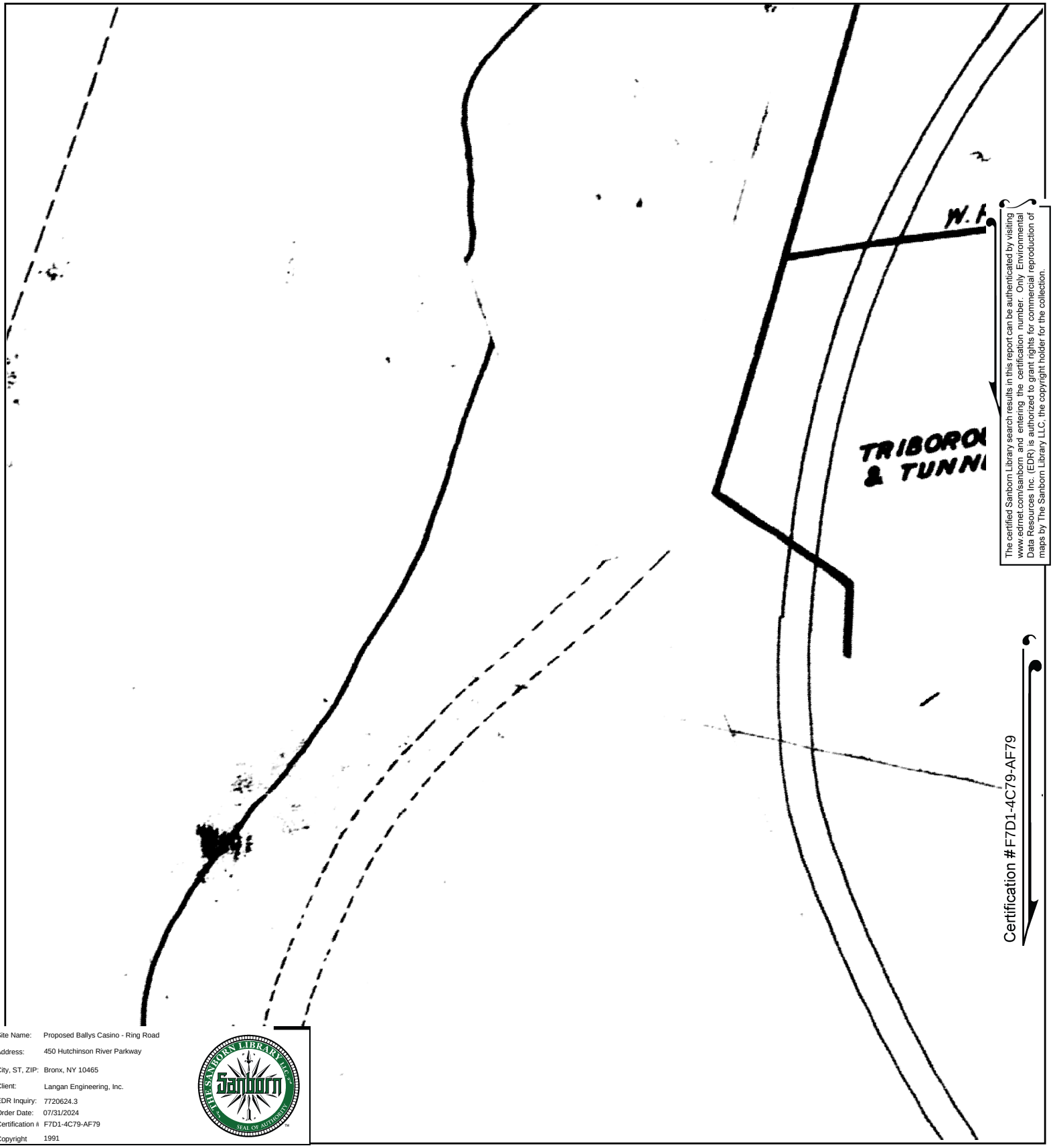


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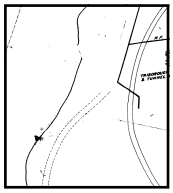

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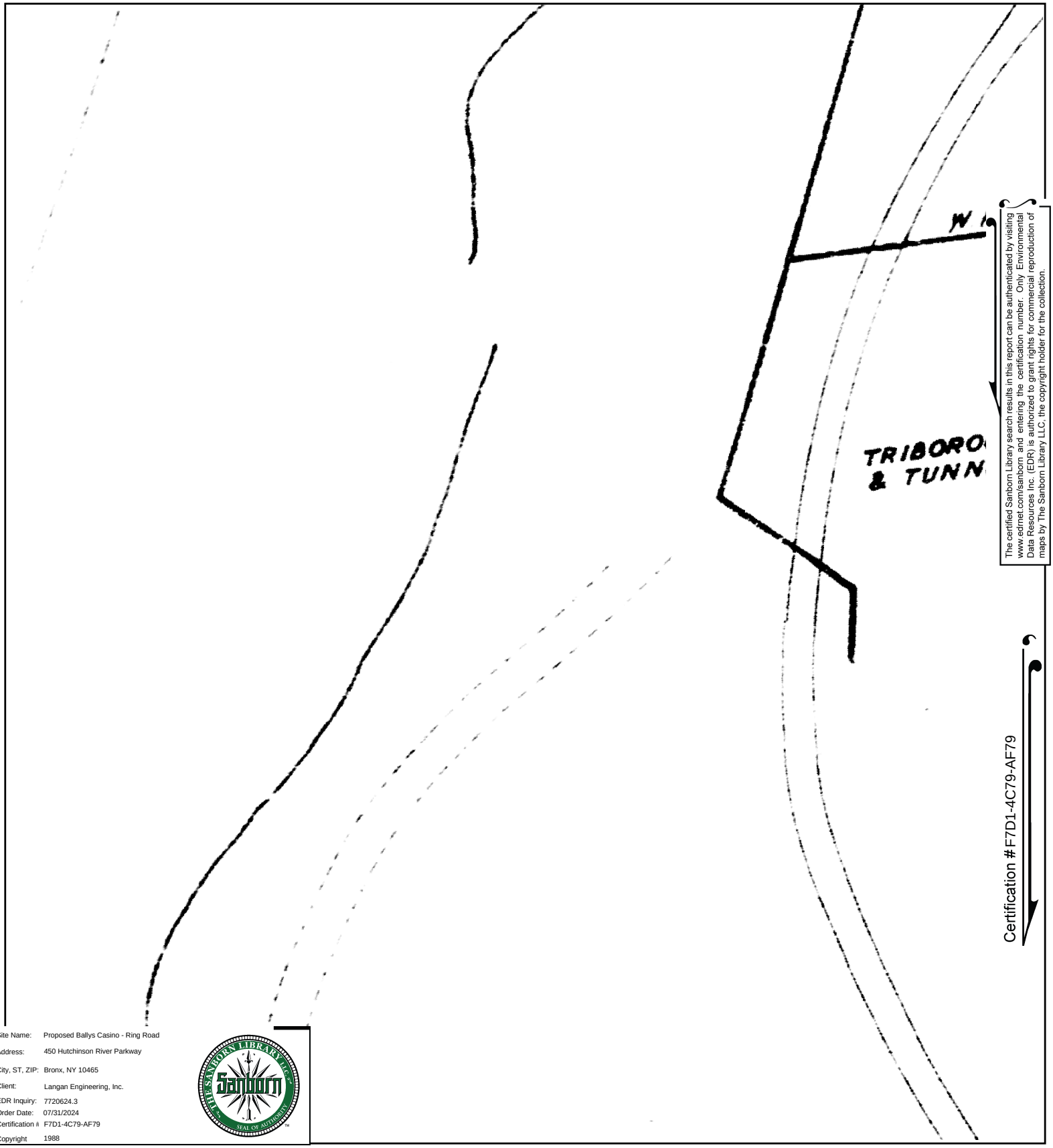


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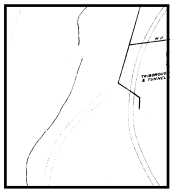

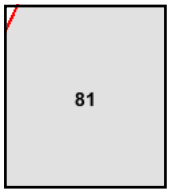


Volume 21, Sheet 81

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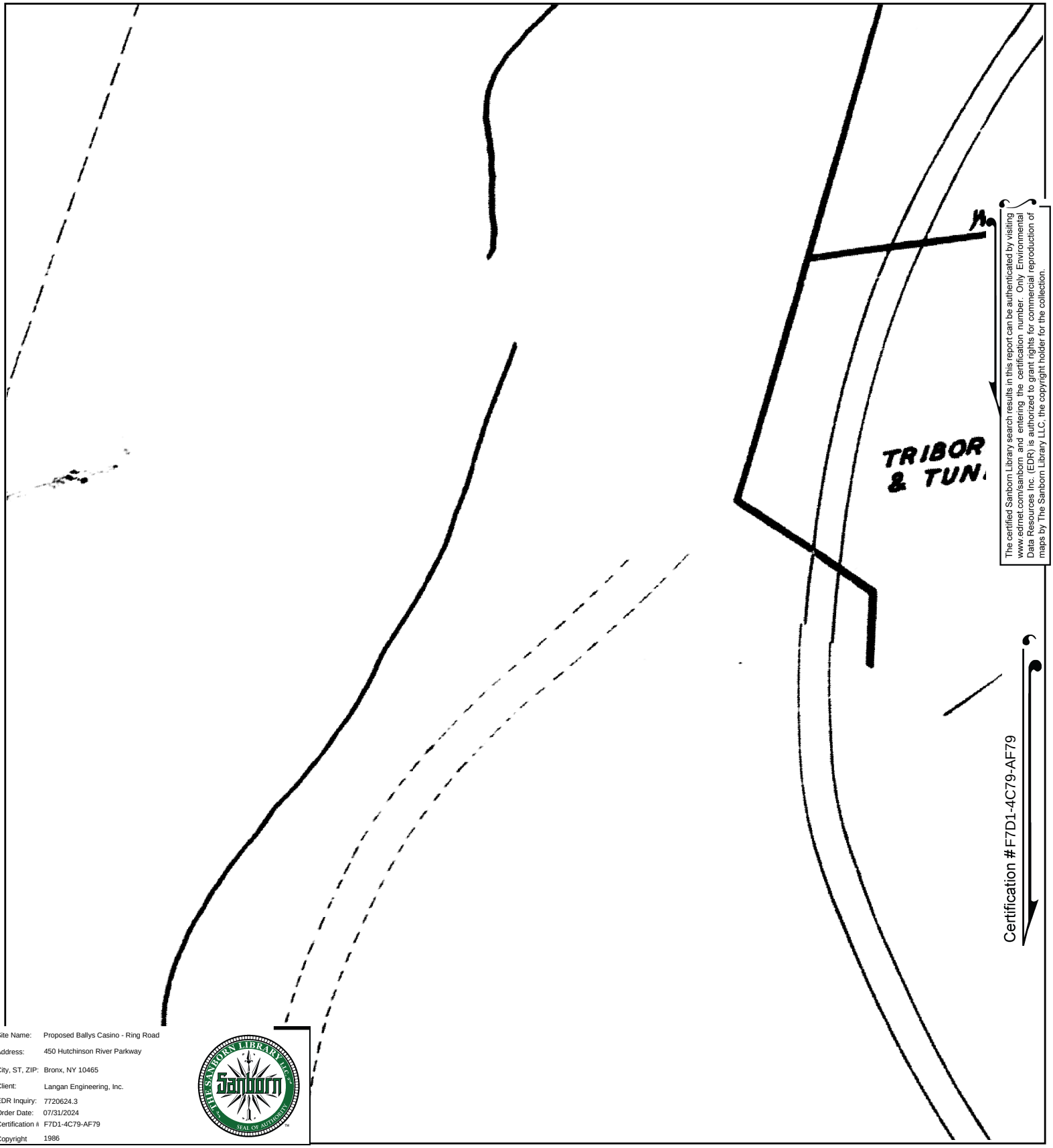


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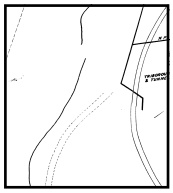

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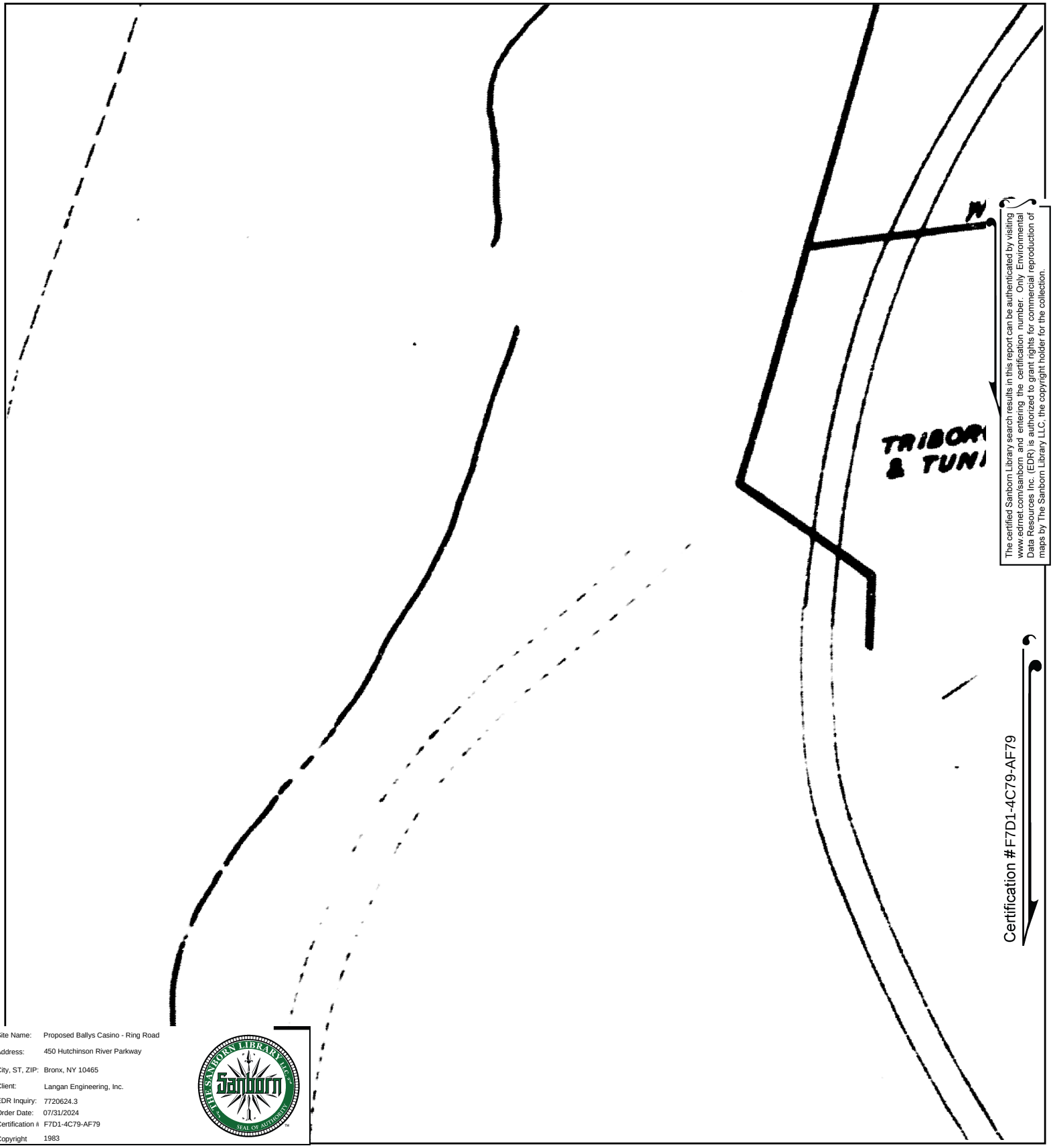


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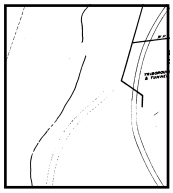

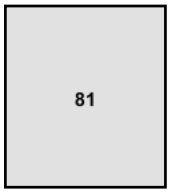


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Volume 21, Sheet 80
Volume 21, Sheet 79

0 Feet 150 300 600

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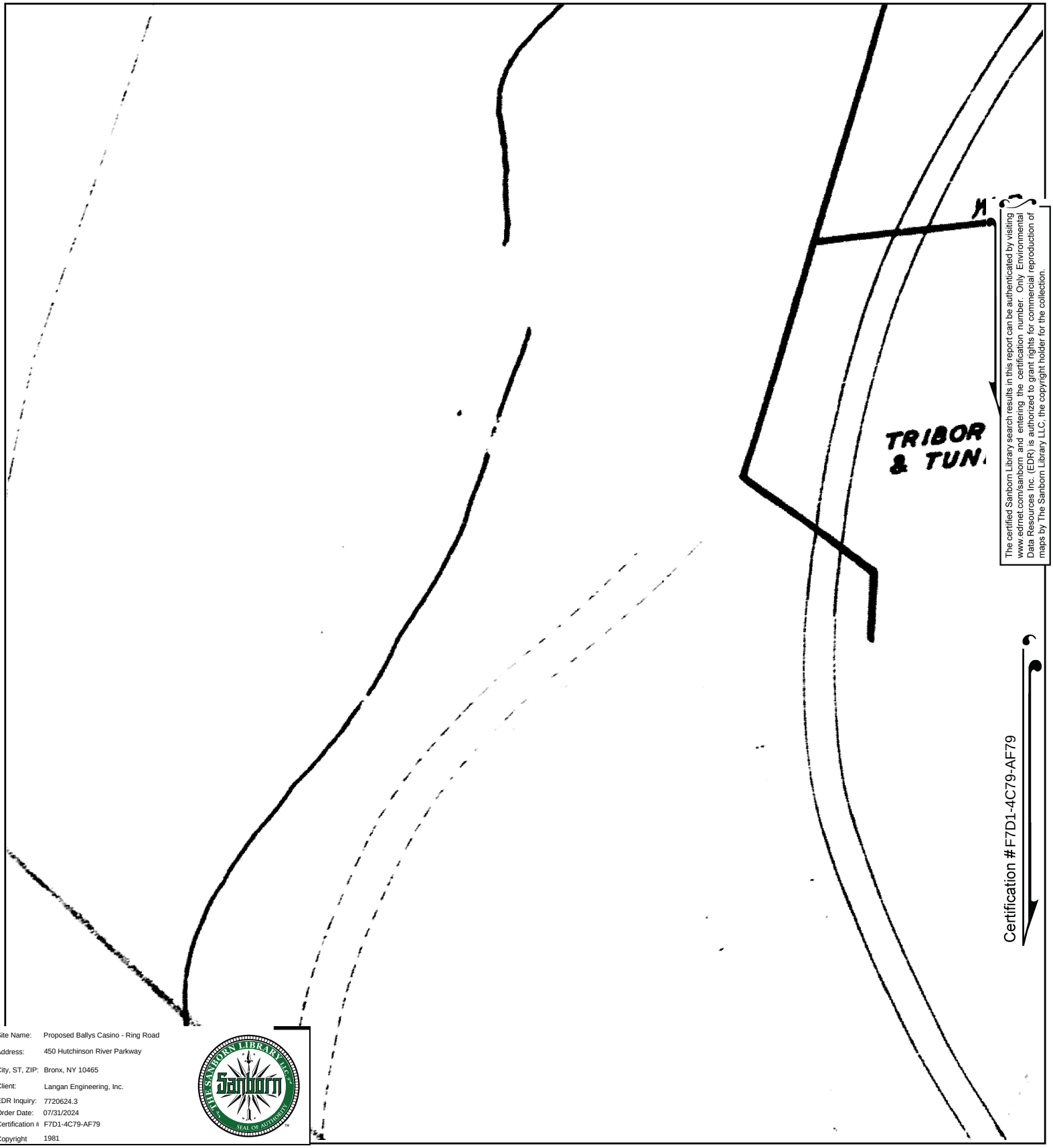


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| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1981 |

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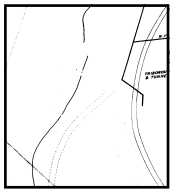

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Volume 21, Sheet 81

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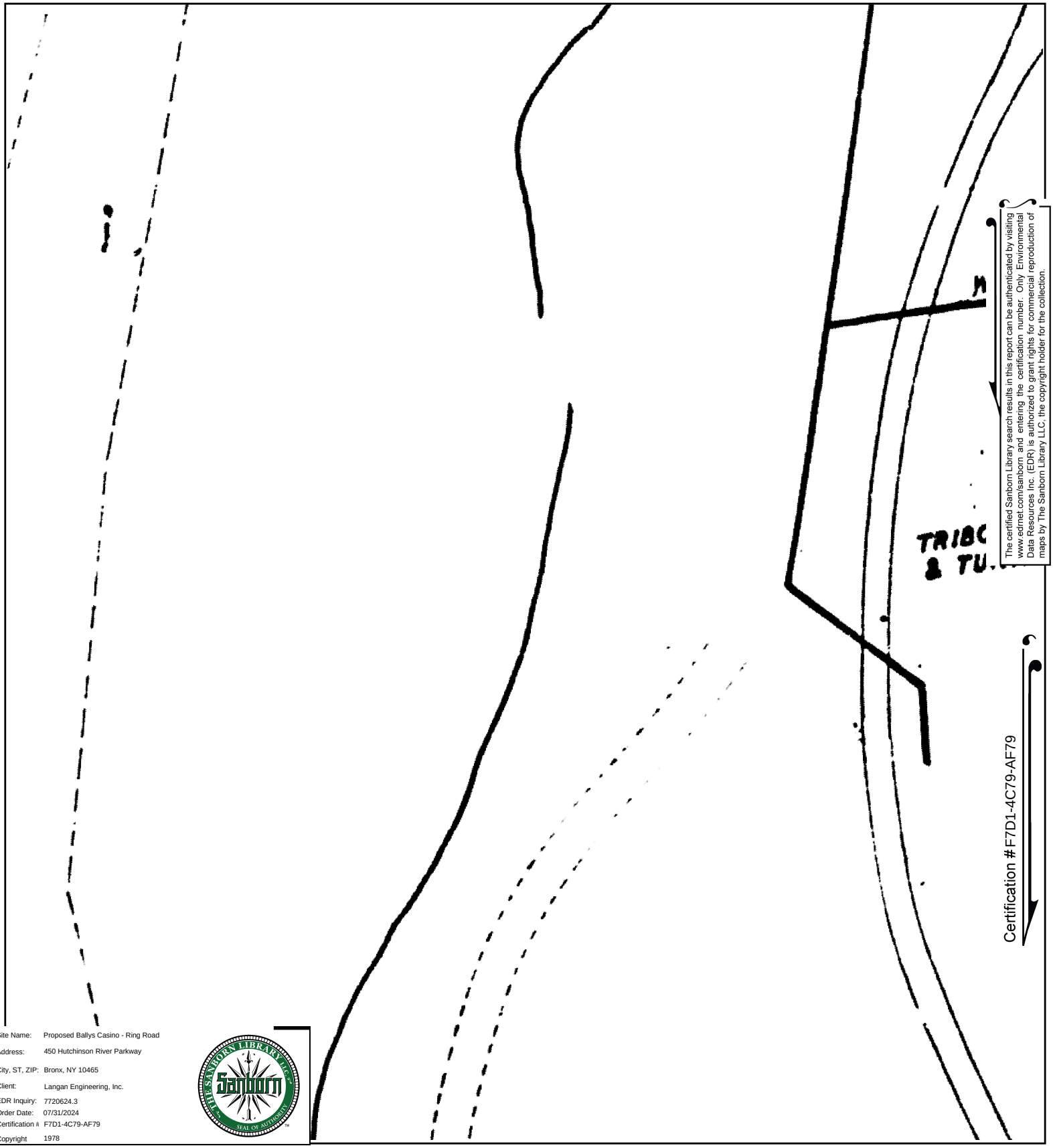


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Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1978

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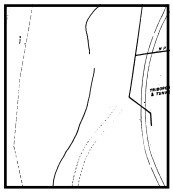

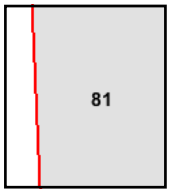


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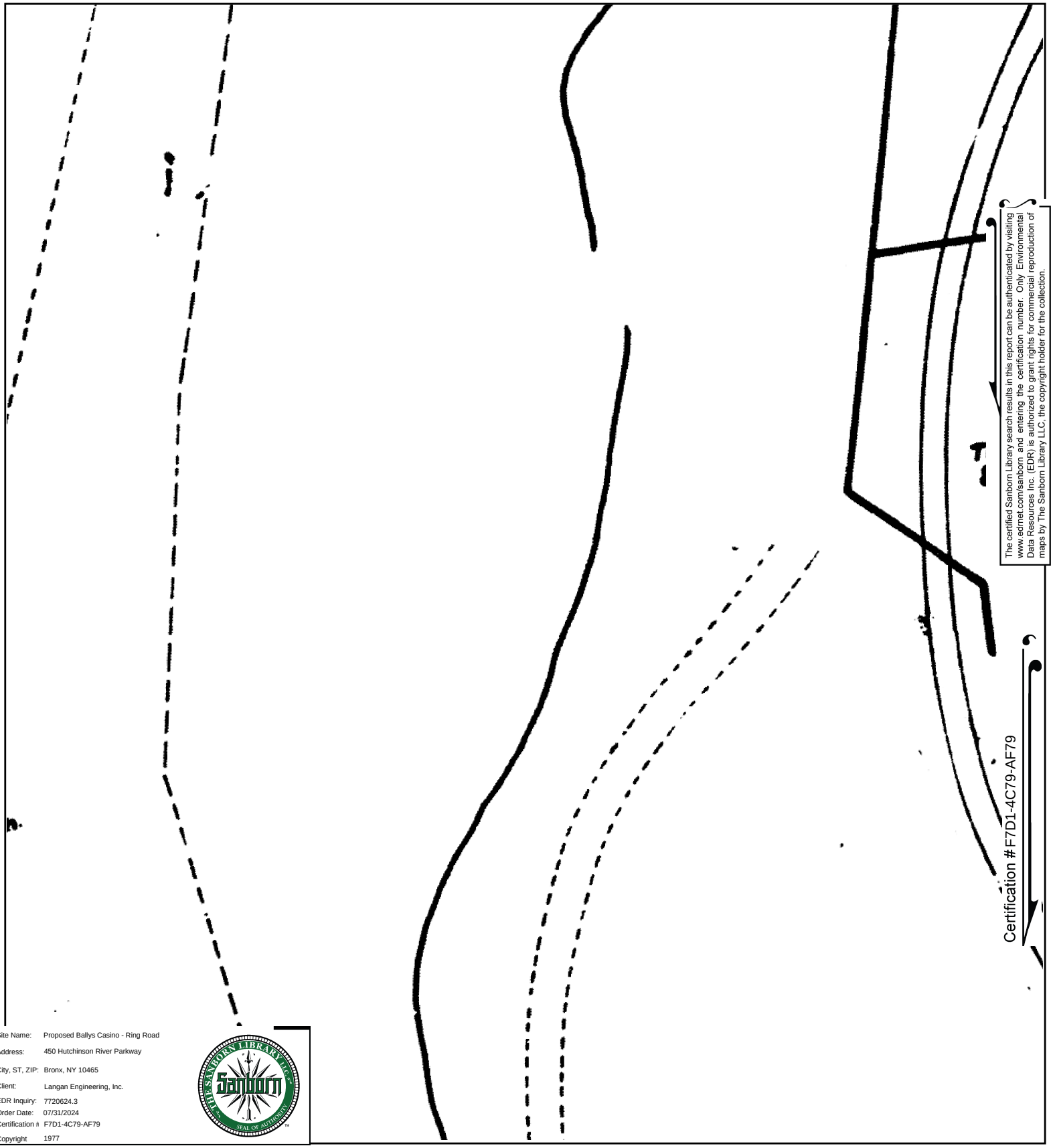

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|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1977 |

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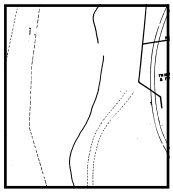

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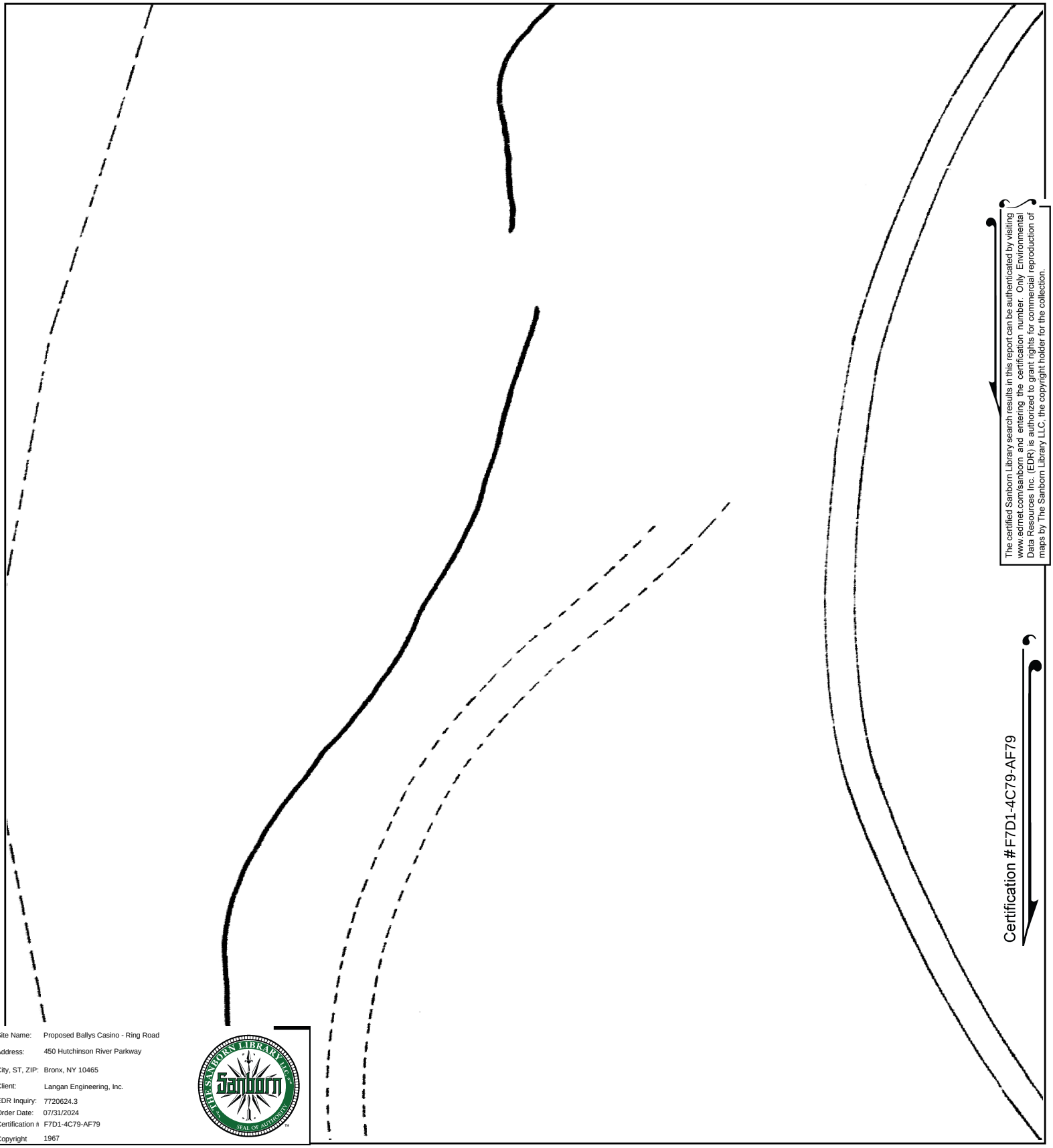

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| | |
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| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1967 |

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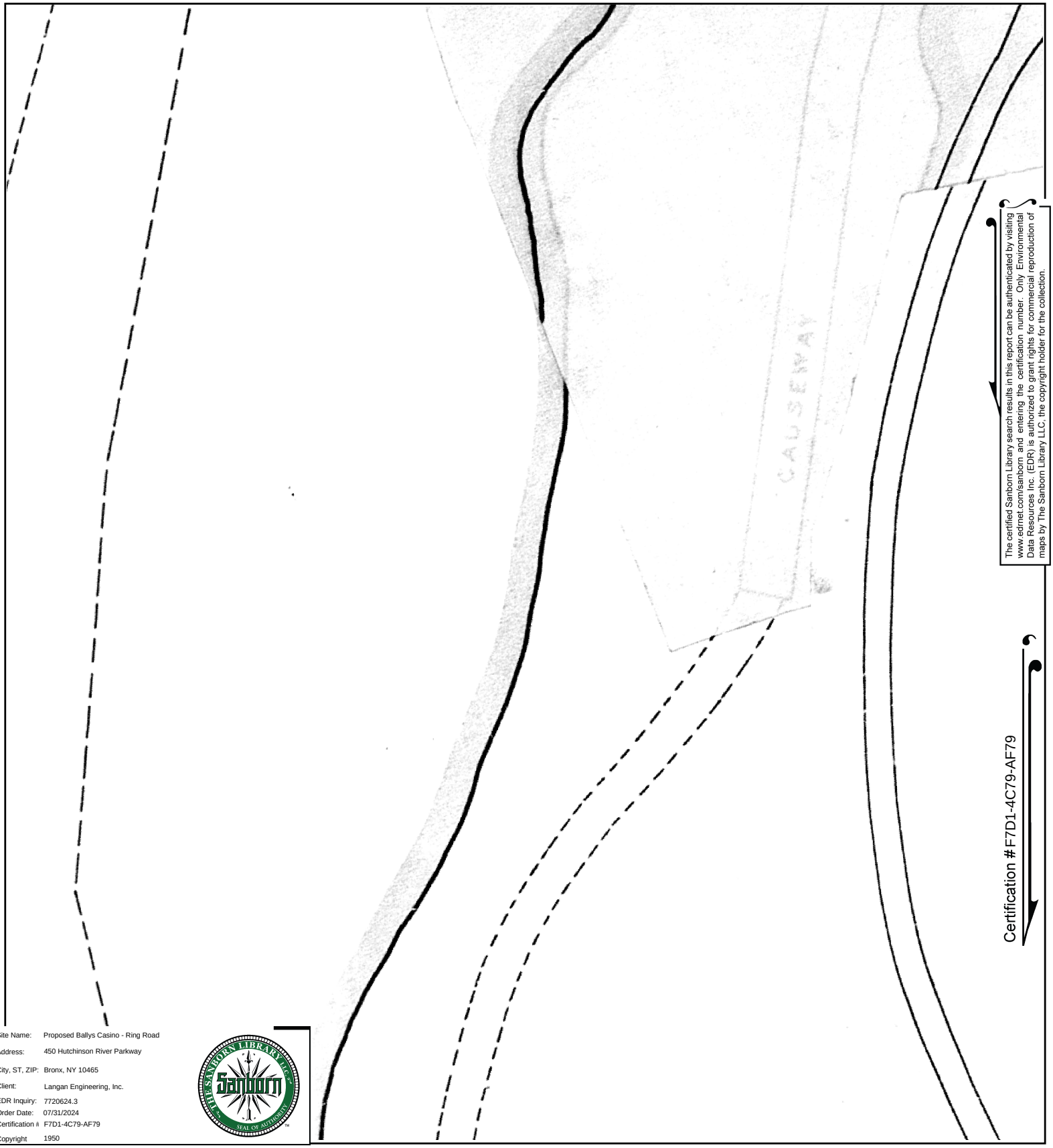
81

Volume 21, Sheet 81
Volume 21, Sheet 80

N



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Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1950

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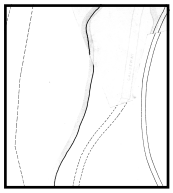

81

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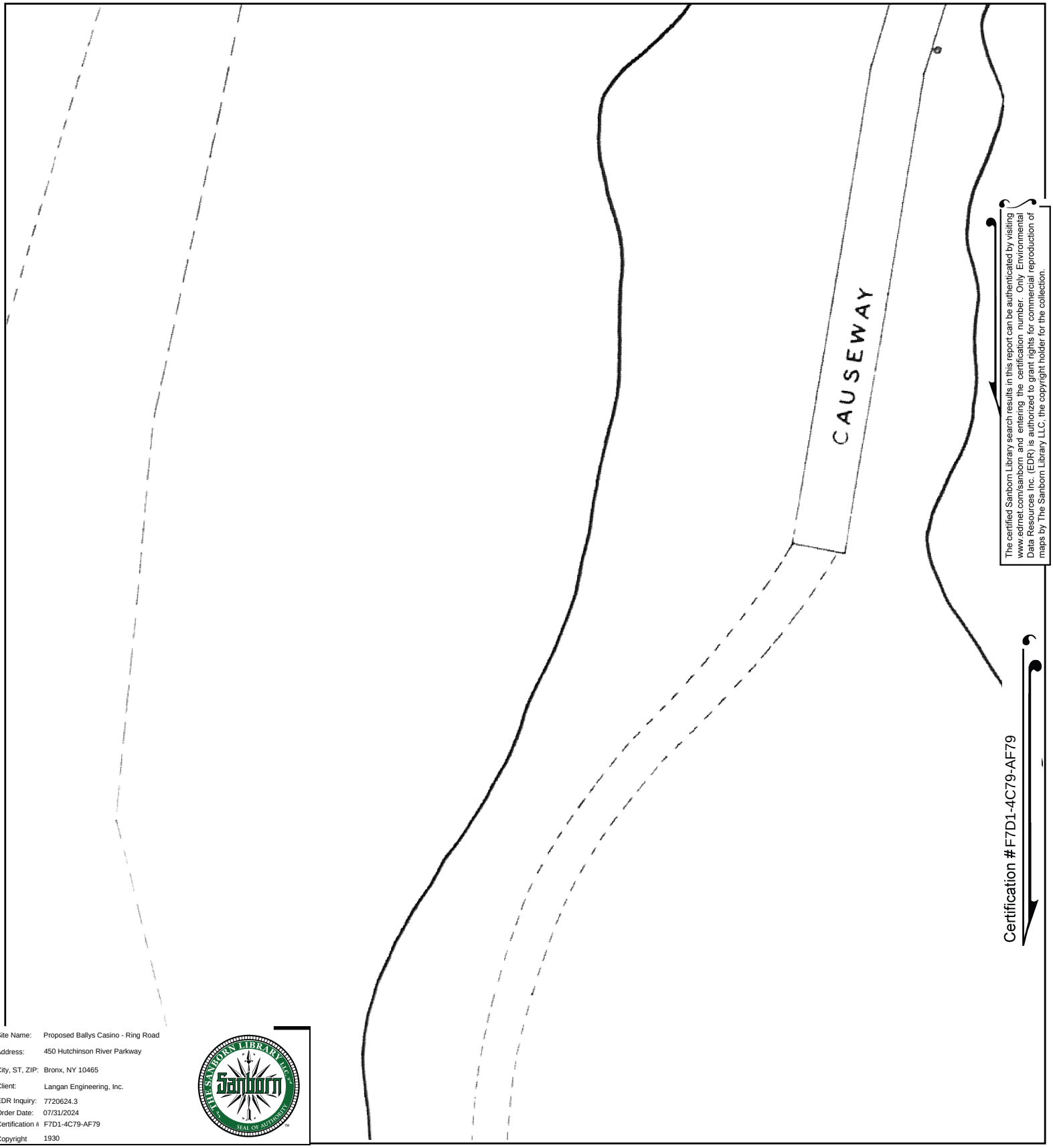
N

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Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1930

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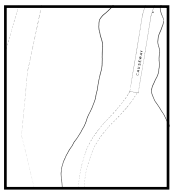

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0 Feet 150 300 600

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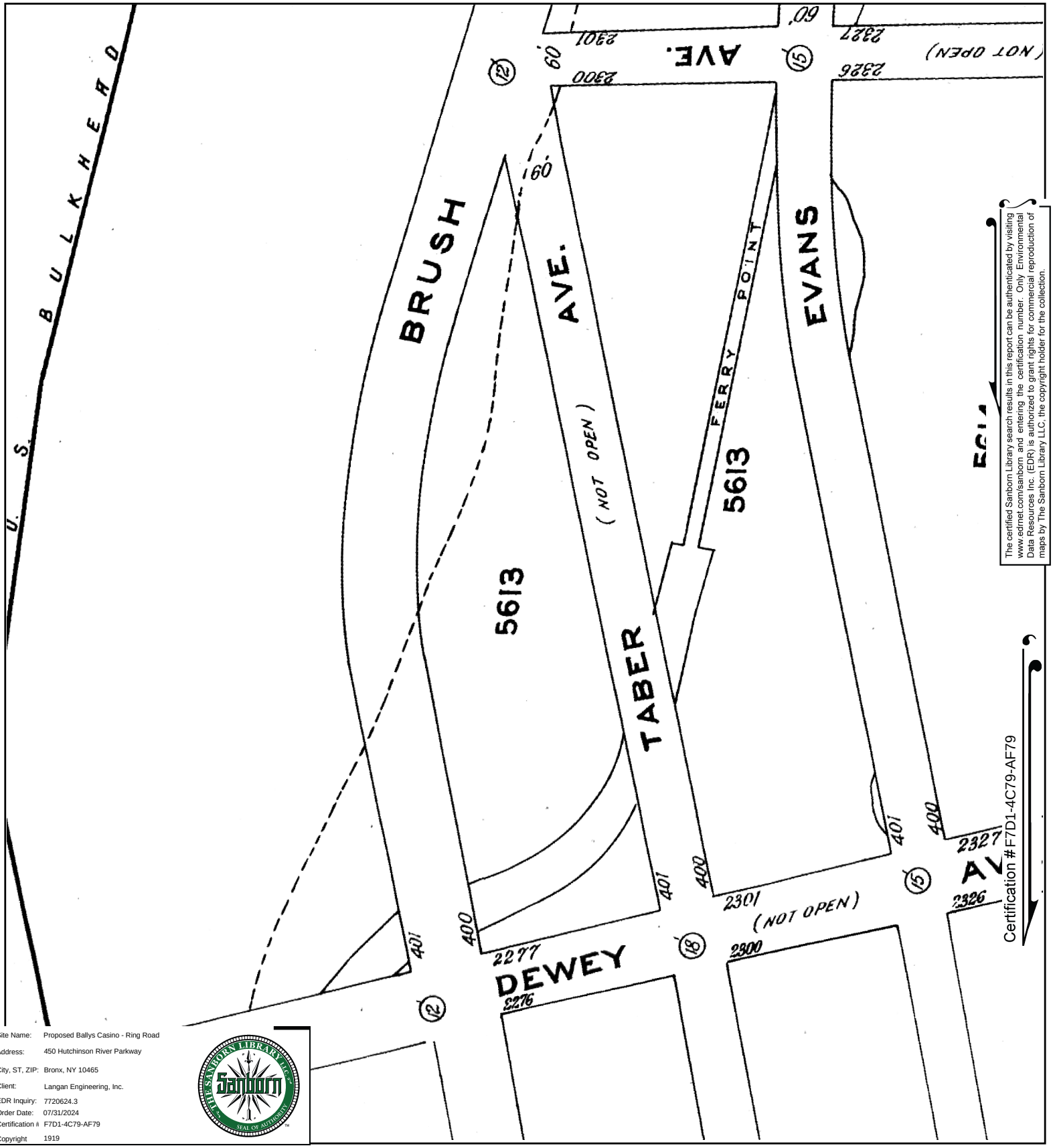


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| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1919 |

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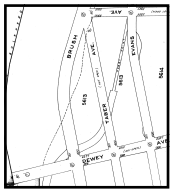

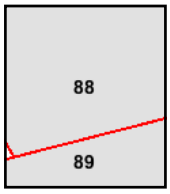


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Volume 17, Sheet 88

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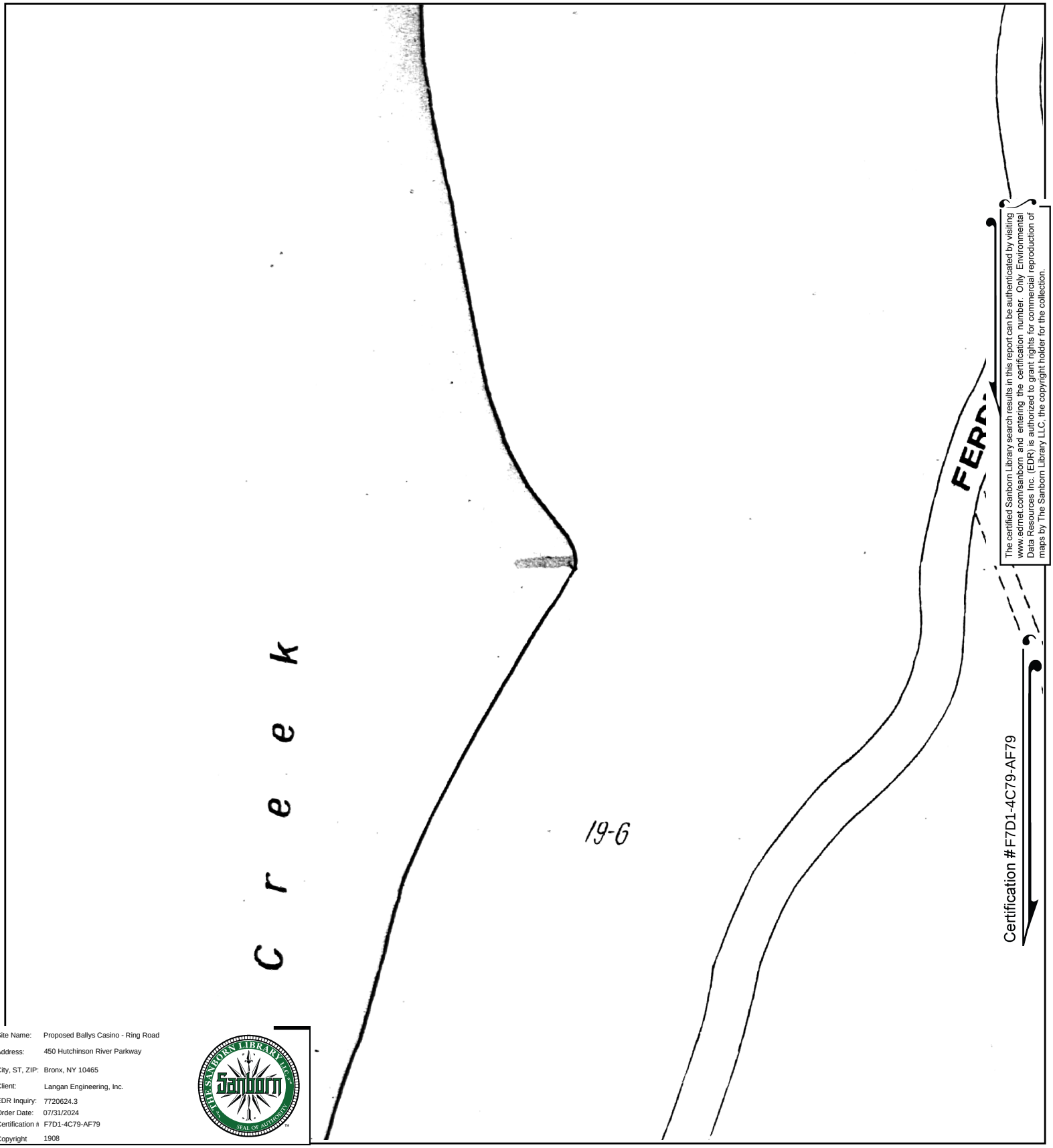


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Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
Order Date: 07/31/2024
Certification #: F7D1-4C79-AF79
Copyright: 1908

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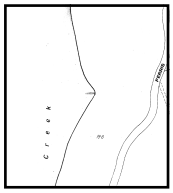

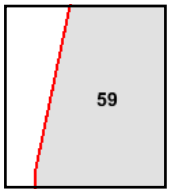


Volume A, Sheet 59

0 Feet 150 300 600

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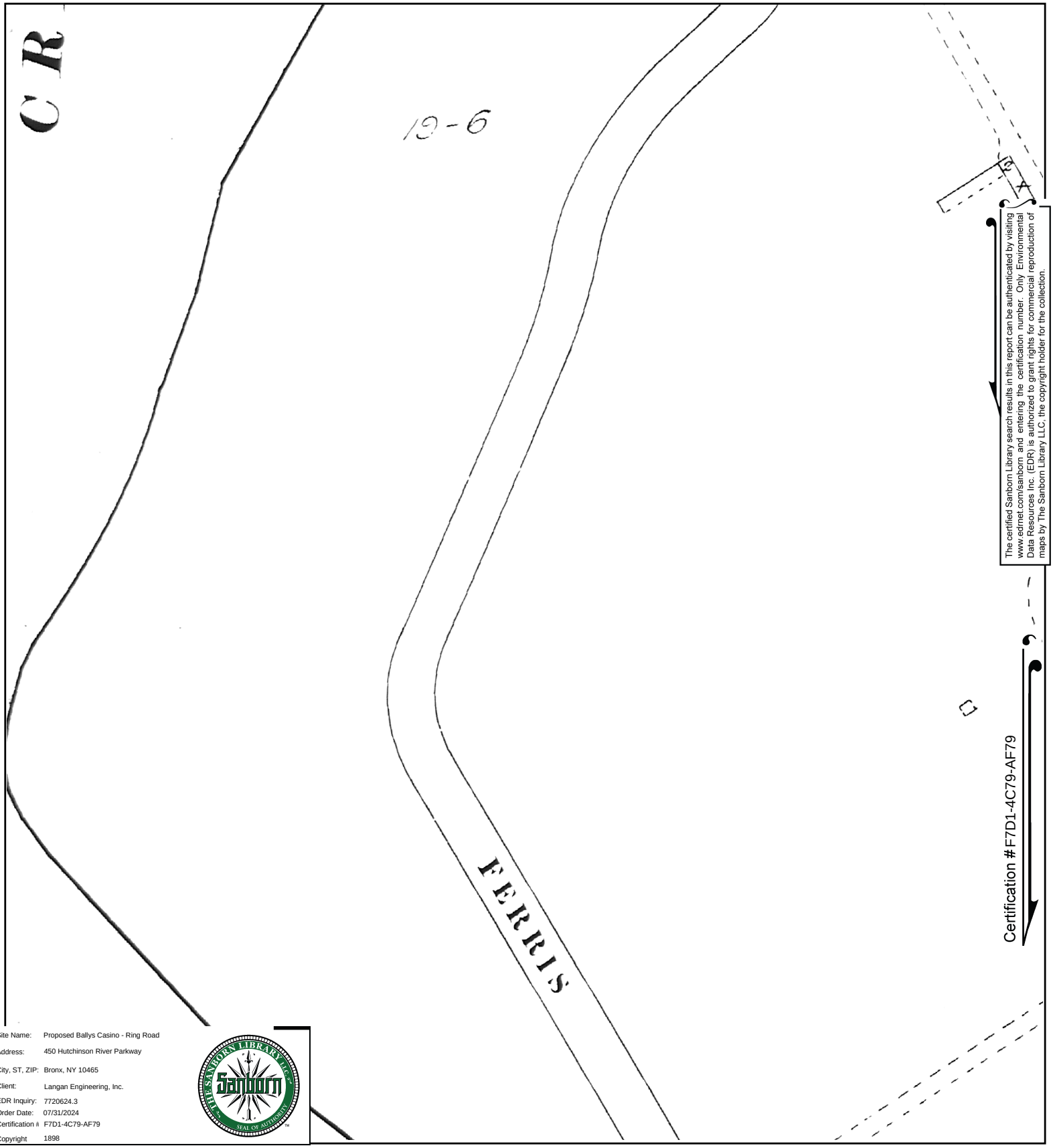


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Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1898 |

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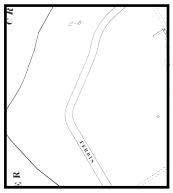

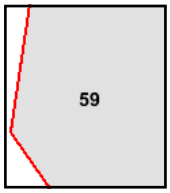


Volume A, Sheet 59

0 Feet 150 300 600

N

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.3

July 31, 2024

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

07/31/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.3

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Langan Engineering, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## *Certified Sanborn Results:*

**Certification #** F7D1-4C79-AF79

**PO #** 170773001

**Project** Prpsd Bally s Casino - Ring Rd

**Maps Provided:**

| | | | |
|---|---|---|---|
| 2007 | 1996 | 1981 | 1898 |
| 2006 | 1995 | 1978 | |
| 2005 | 1993 | 1977 | |
| 2004 | 1992 | 1967 | |
| 2003 | 1991 | 1950 | |
| 2002 | 1988 | 1930 | |
| 2001 | 1986 | 1919 | |
| 1998 | 1983 | 1908 | |

Sanborn® Library search results

Certification #: F7D1-4C79-AF79

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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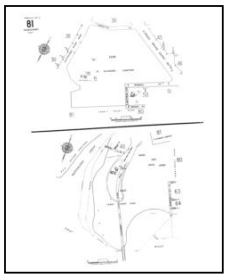
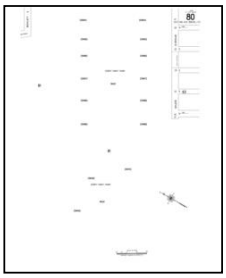
### 2007 Source Sheets

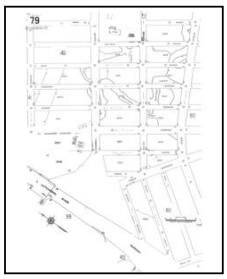


Volume 21, Sheet 81
2007

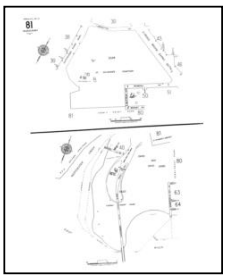


Volume 21, Sheet 80
2007

### 2006 Source Sheets

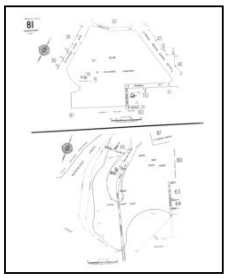


Volume 21, Sheet 79
2006



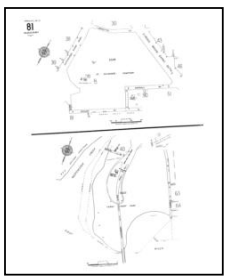
Volume 21, Sheet 81
2006

### 2005 Source Sheets



Volume 21, Sheet 81
2005

### 2004 Source Sheets



Volume 21, Sheet 81
2004

## *Sanborn Sheet Key*

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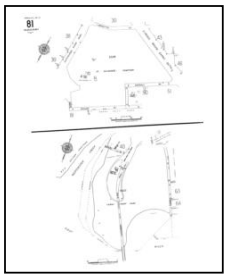
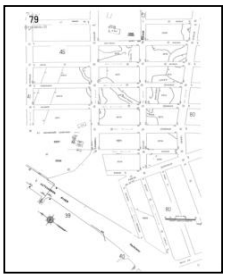
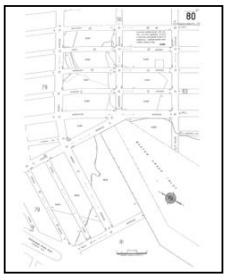


Volume 21, Sheet 81
2003

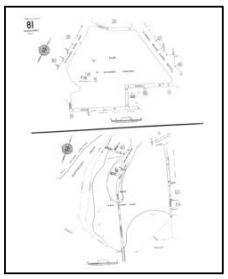


Volume 21, Sheet 79
2003



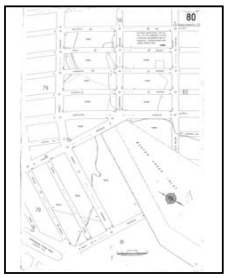
Volume 21, Sheet 80
2003

### 2002 Source Sheets

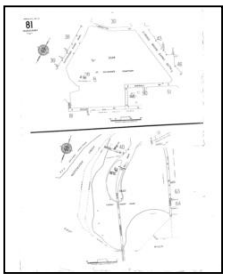


Volume 21, Sheet 81
2002

### 2001 Source Sheets

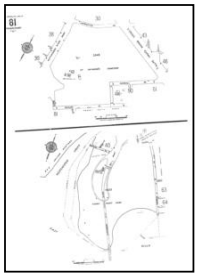


Volume 21, Sheet 80
2001



Volume 21, Sheet 81
2001

### 1998 Source Sheets



Volume 21, Sheet 81
1998

## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

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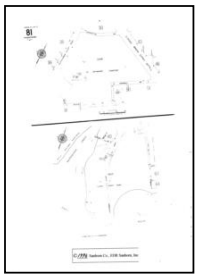
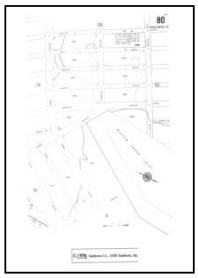


Volume 21, Sheet 81
1996

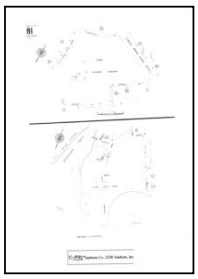


Volume 21, Sheet 80
1996



Volume 21, Sheet 79
1996

### 1995 Source Sheets

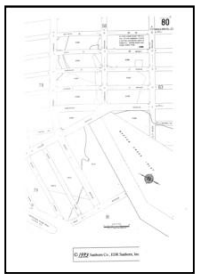


Volume 21, Sheet 81
1995

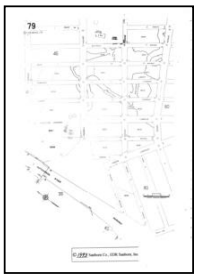
### 1993 Source Sheets



Volume 21, Sheet 81
1993



Volume 21, Sheet 80
1993



Volume 21, Sheet 79
1993

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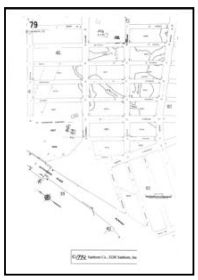
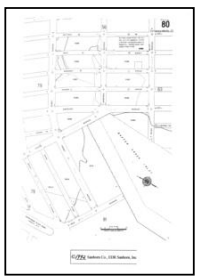
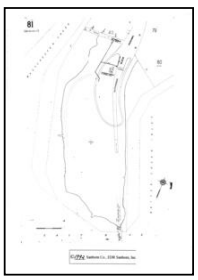


Volume 21, Sheet 79
1992



Volume 21, Sheet 80
1992



Volume 21, Sheet 81
1992

## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

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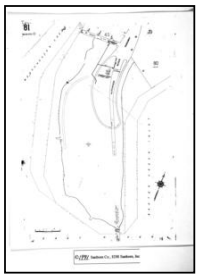
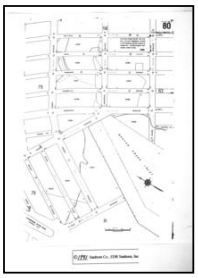


Volume 21, Sheet 81
1991



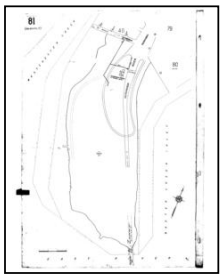
Volume 21, Sheet 80
1991

### 1988 Source Sheets



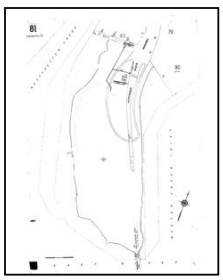
Volume 21, Sheet 81
1988

### 1986 Source Sheets

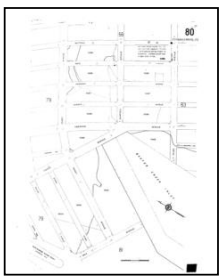


Volume 21, Sheet 81
1986

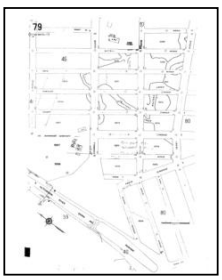
### 1983 Source Sheets



Volume 21, Sheet 81
1983



Volume 21, Sheet 80
1983

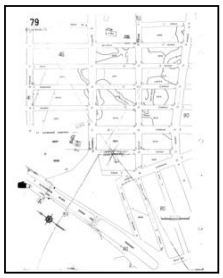


Volume 21, Sheet 79
1983

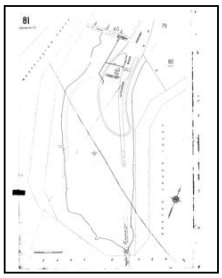
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1981 Source Sheets

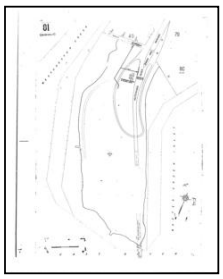


Volume 21, Sheet 79
1981



Volume 21, Sheet 81
1981

### 1978 Source Sheets



Volume 21, Sheet 81
1978

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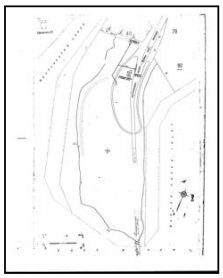

Volume 21, Sheet 81
1977



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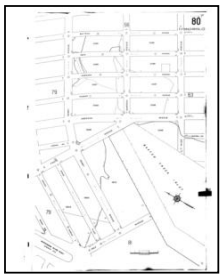
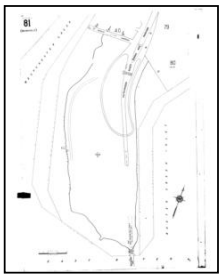
1977

### 1967 Source Sheets



Volume 21, Sheet 80
1967

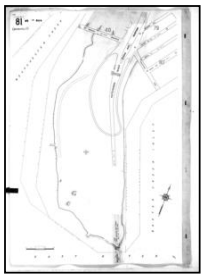


Volume 21, Sheet 81
1967

## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1950 Source Sheets

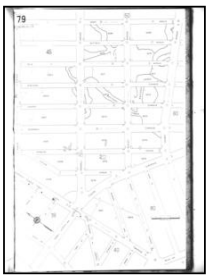


Volume 21, Sheet 81
1950

### 1930 Source Sheets

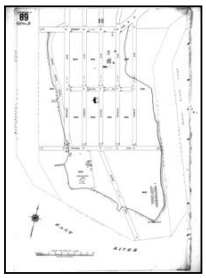


Volume 21, Sheet 81
1930

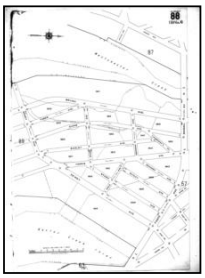


Volume 21, Sheet 79
1930

### 1919 Source Sheets

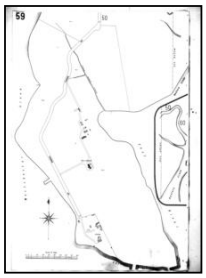


Volume 17, Sheet 89
1919



Volume 17, Sheet 88
1919

### 1908 Source Sheets

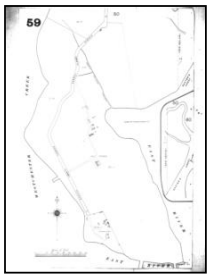


Volume A, Sheet 59
1908

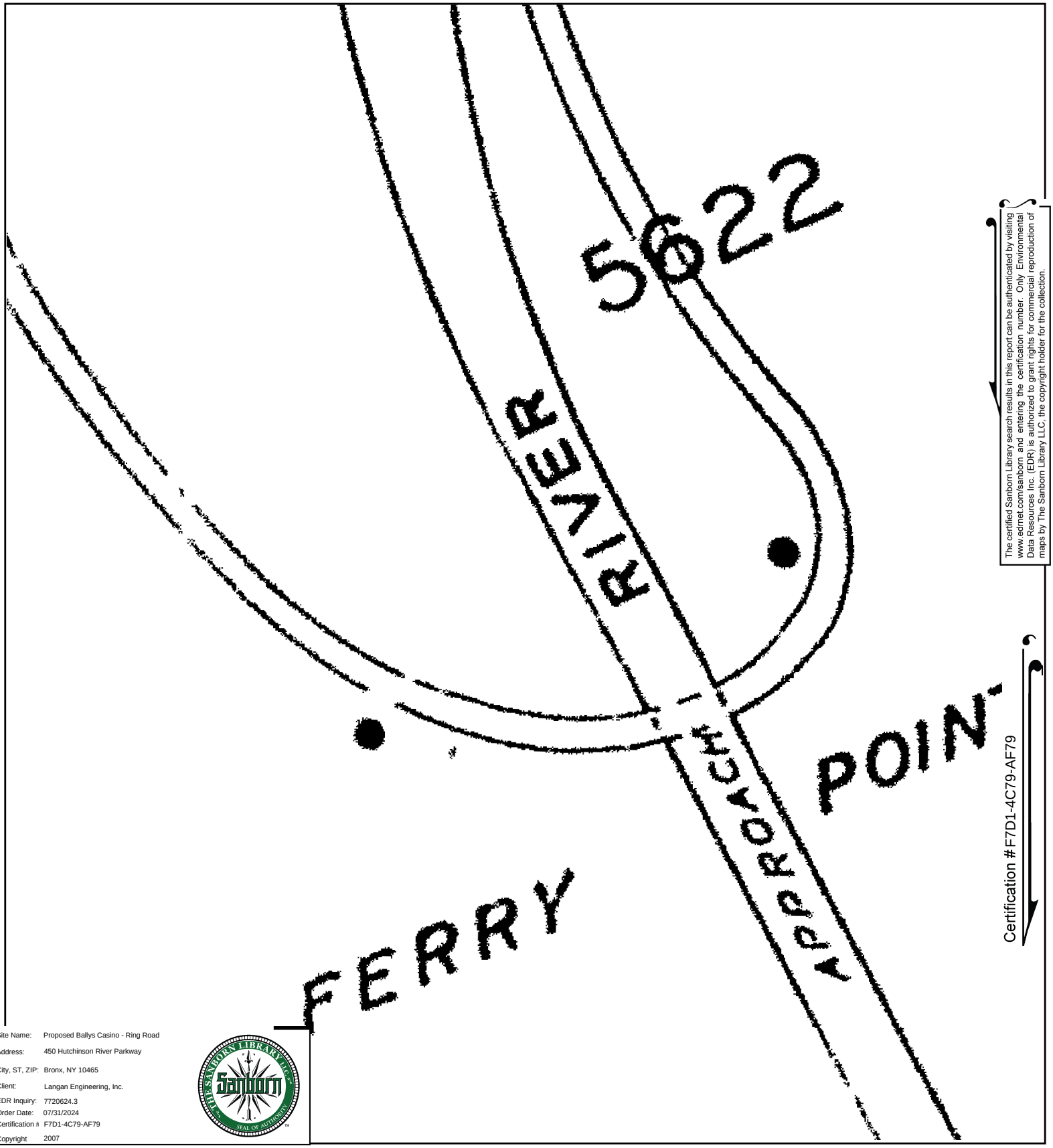
## *Sanborn Sheet Key*

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

### 1898 Source Sheets




Volume A, Sheet 59
1898

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Site Name: Proposed Ballys Casino - Ring Road
Address: 450 Hutchinson River Parkway
City, ST, ZIP: Bronx, NY 10465
Client: Langan Engineering, Inc.
EDR Inquiry: 7720624.3
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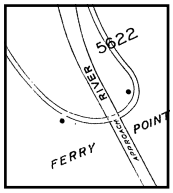


81

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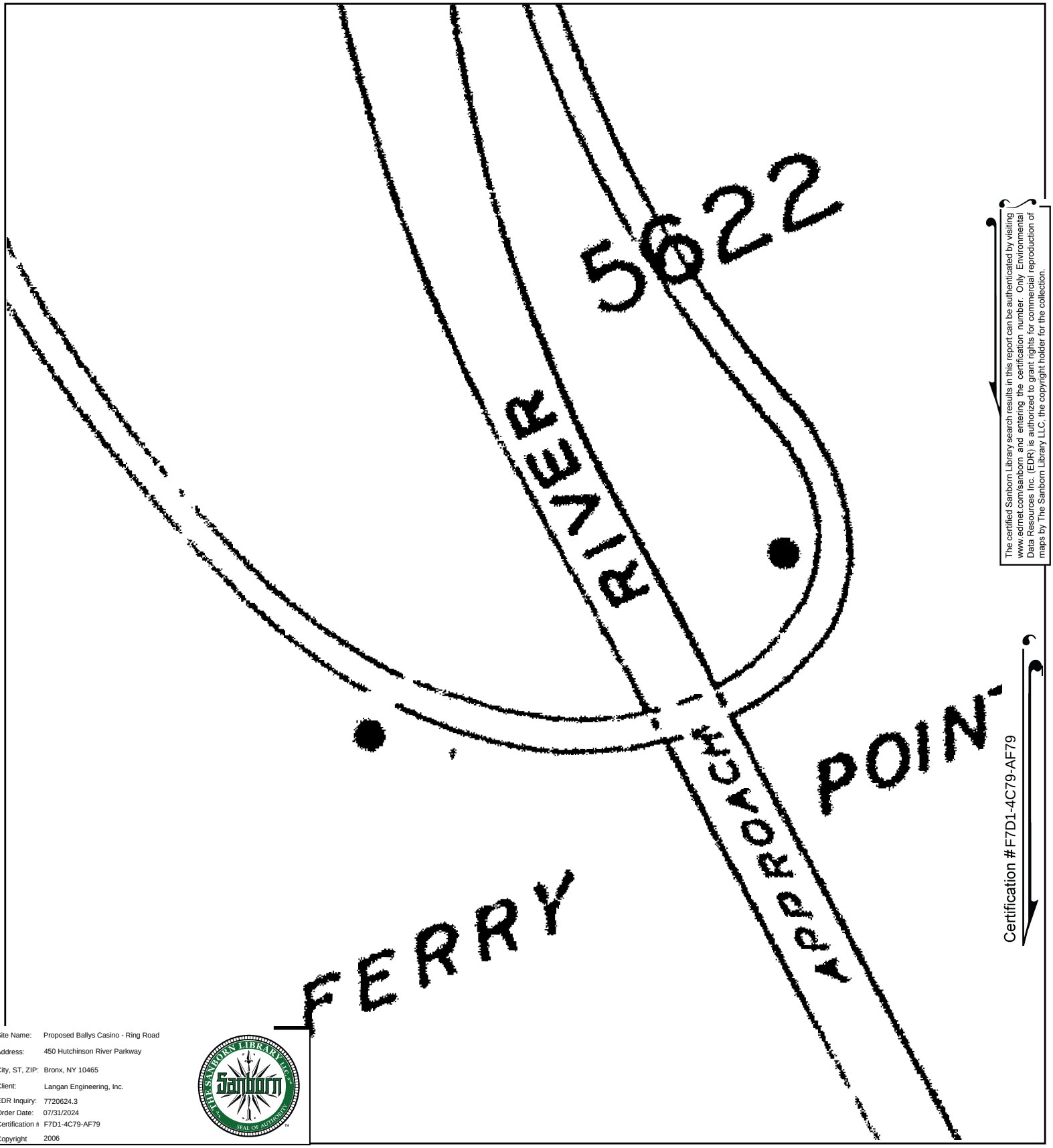
Volume 21, Sheet 81

N

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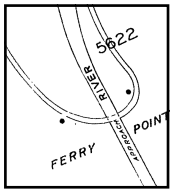


81

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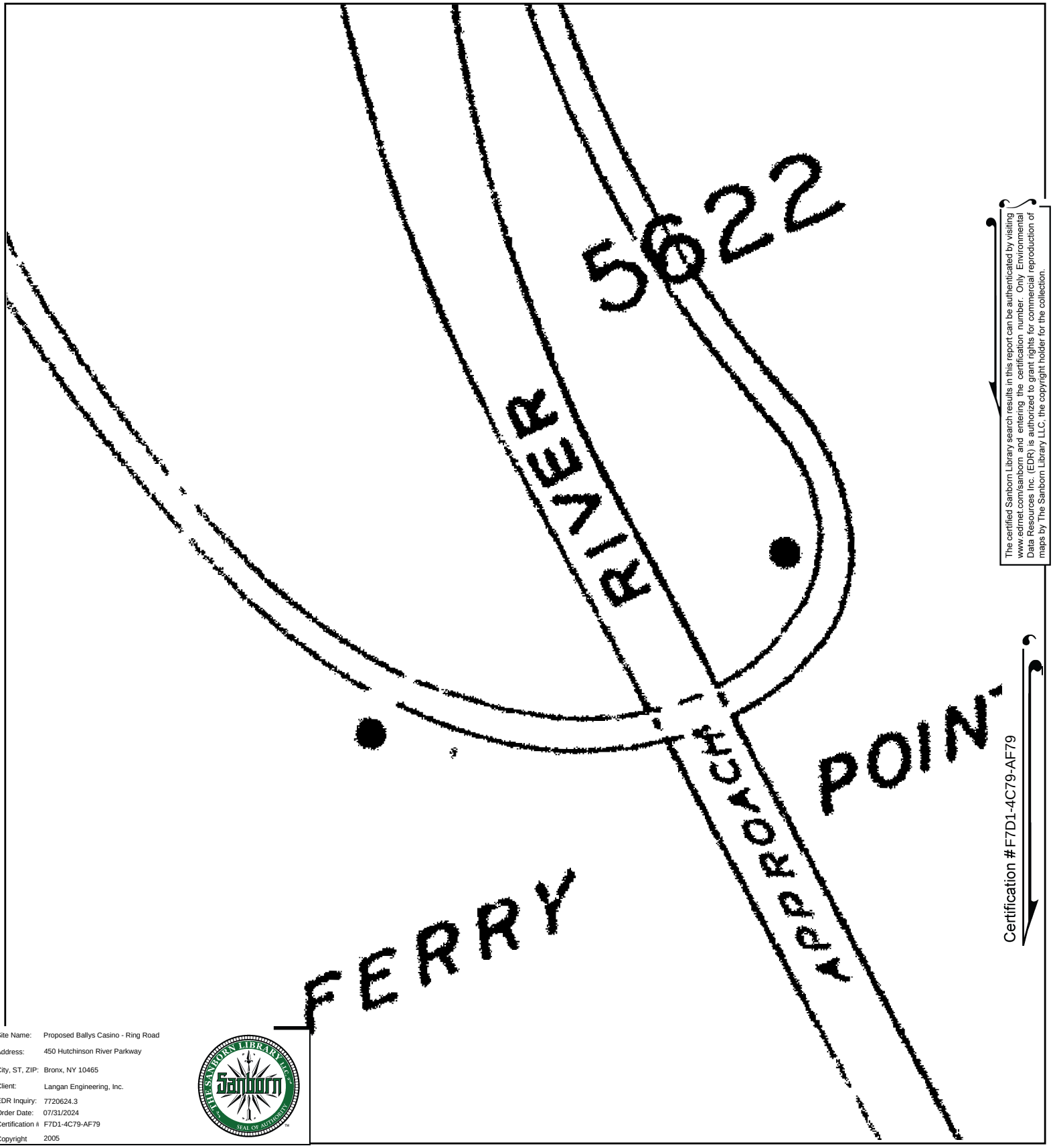
Volume 21, Sheet 79

N

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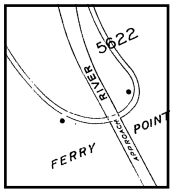


81

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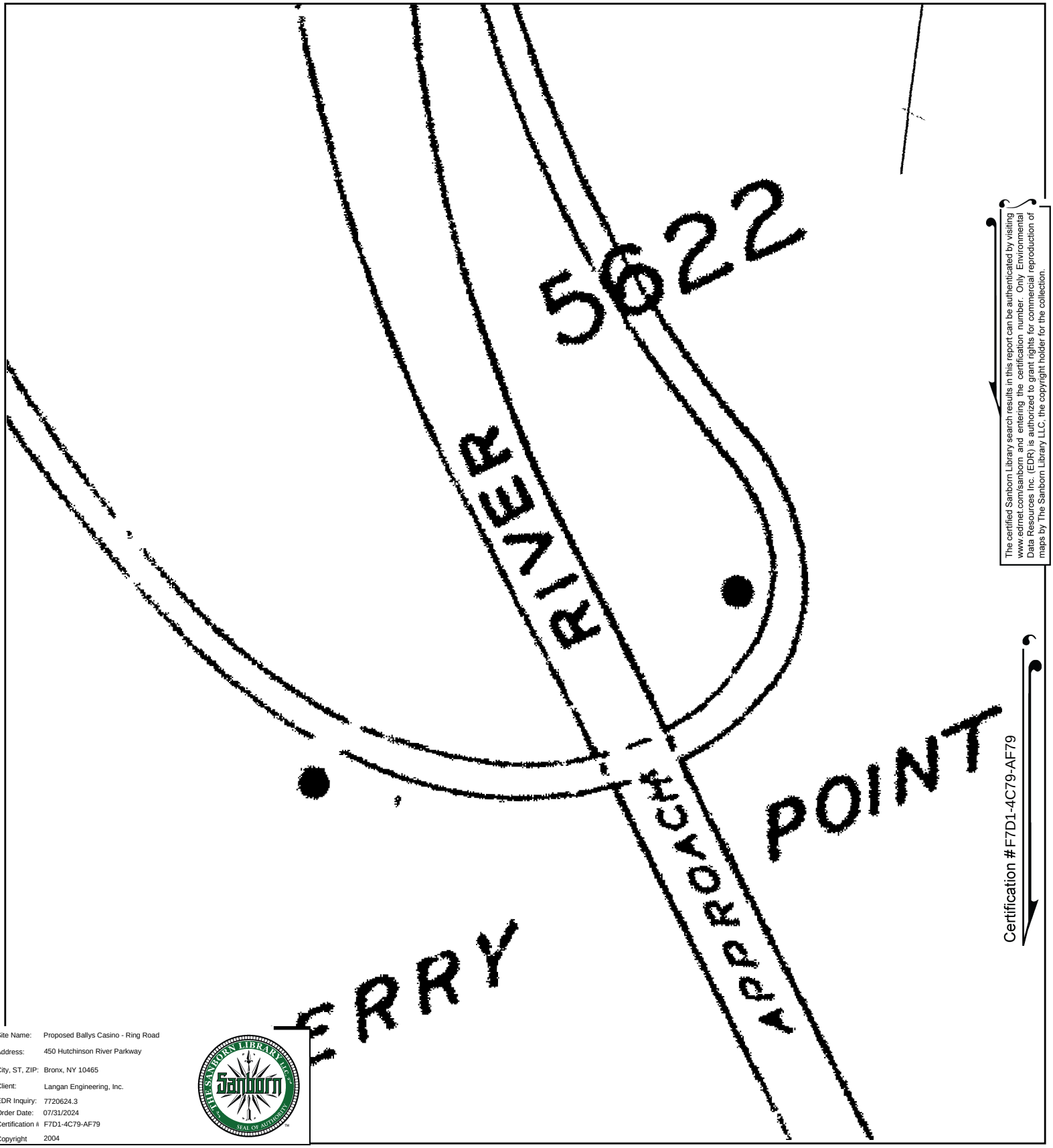
N

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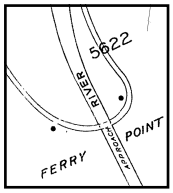


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Volume 21, Sheet 81

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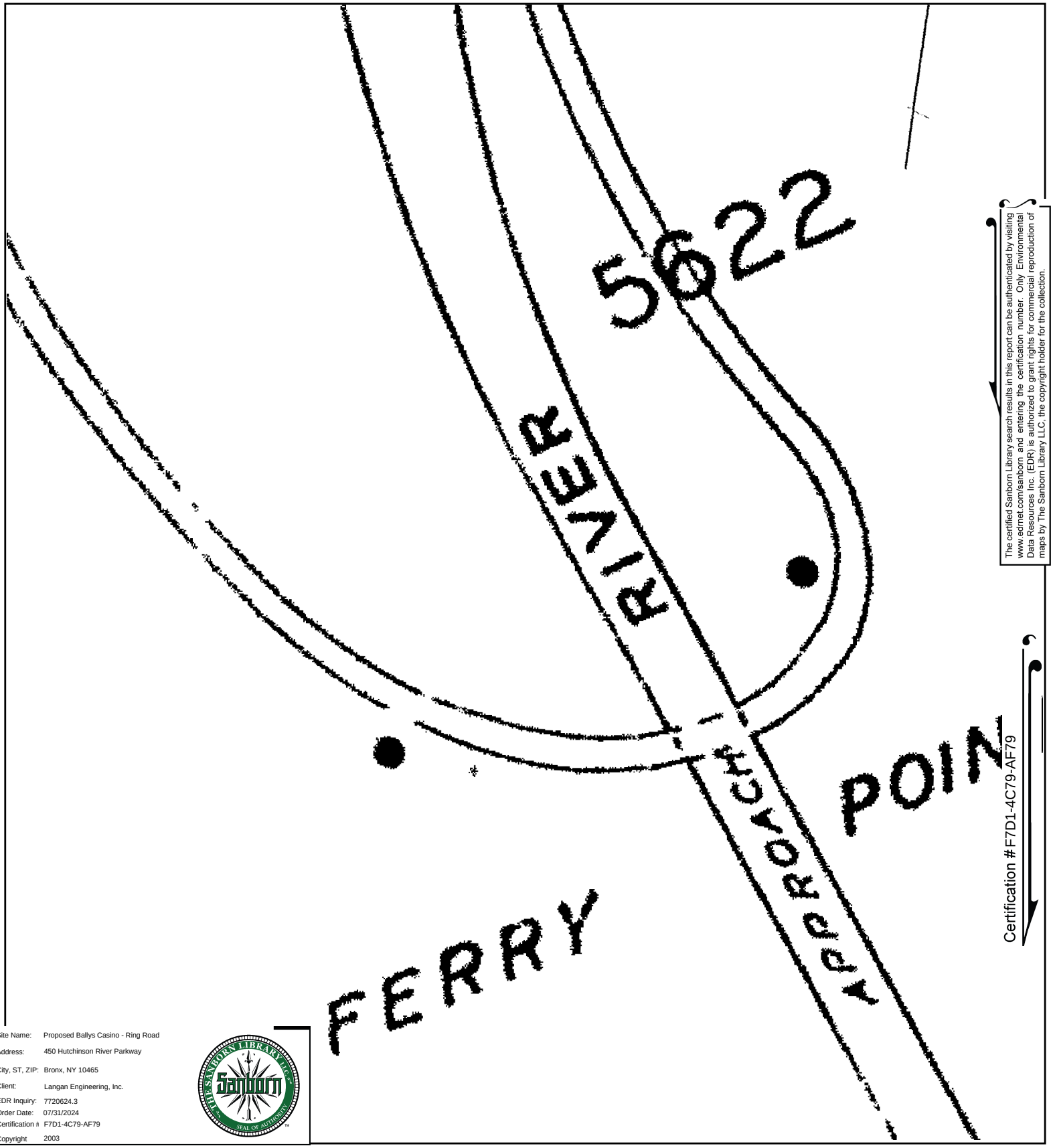


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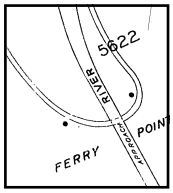


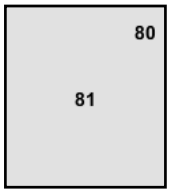


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Volume 21, Sheet 79
Volume 21, Sheet 81

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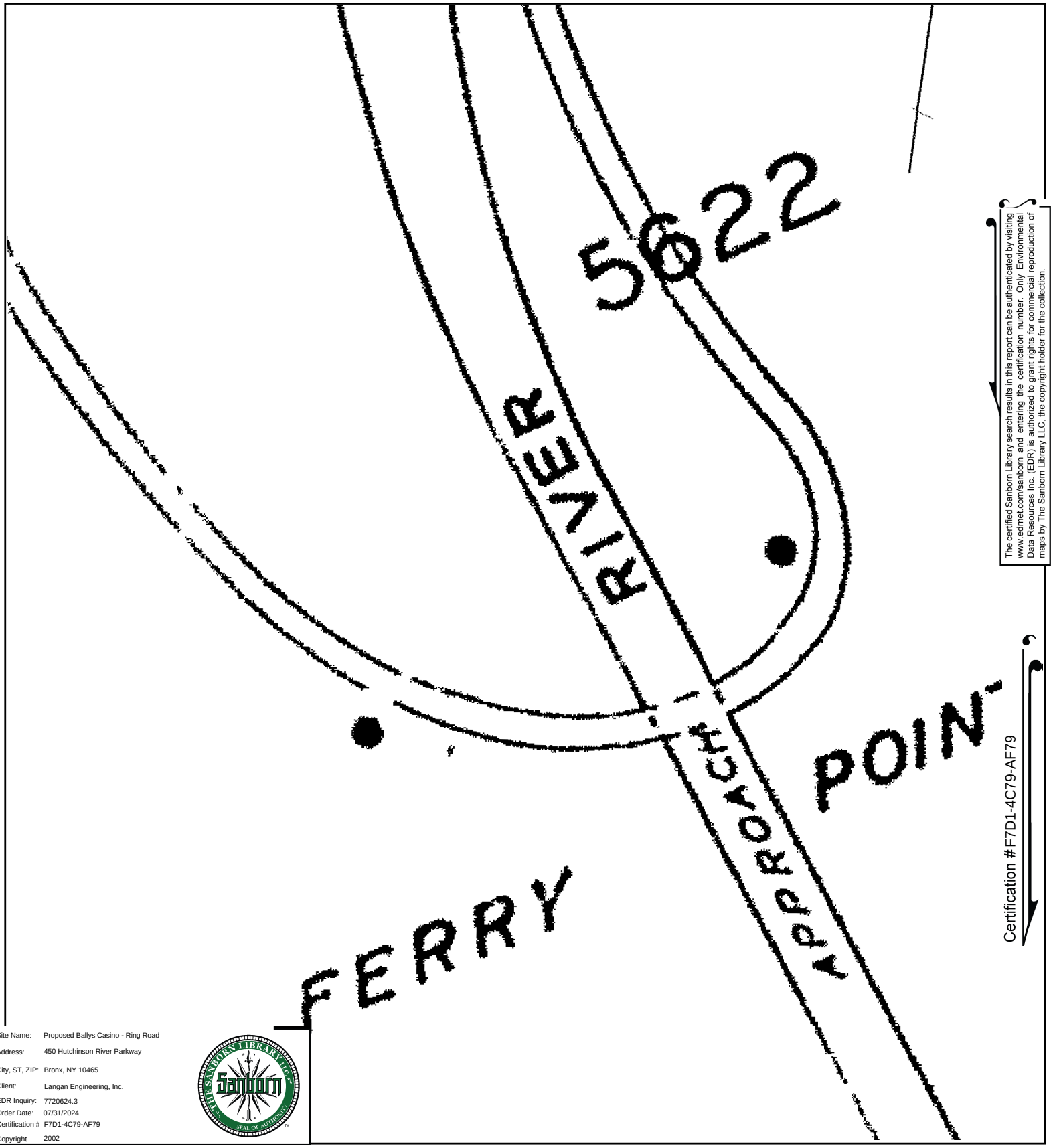


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City, ST, ZIP: Bronx, NY 10465
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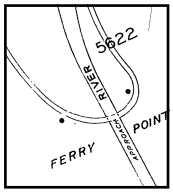


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Volume 21, Sheet 81

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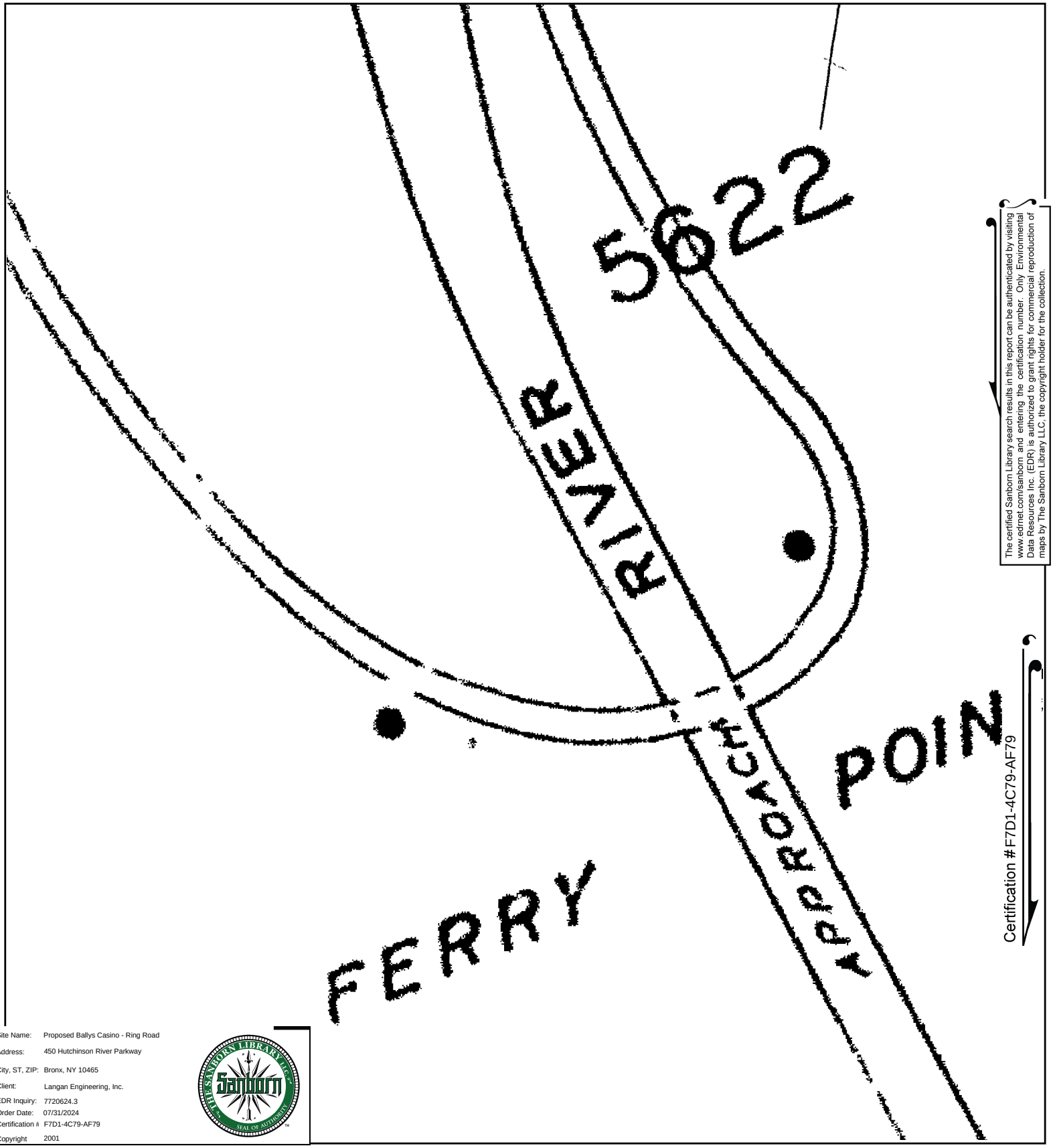


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Client: Langan Engineering, Inc.
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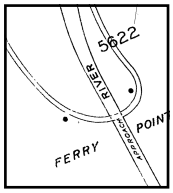


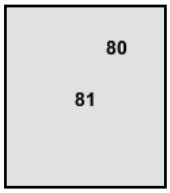


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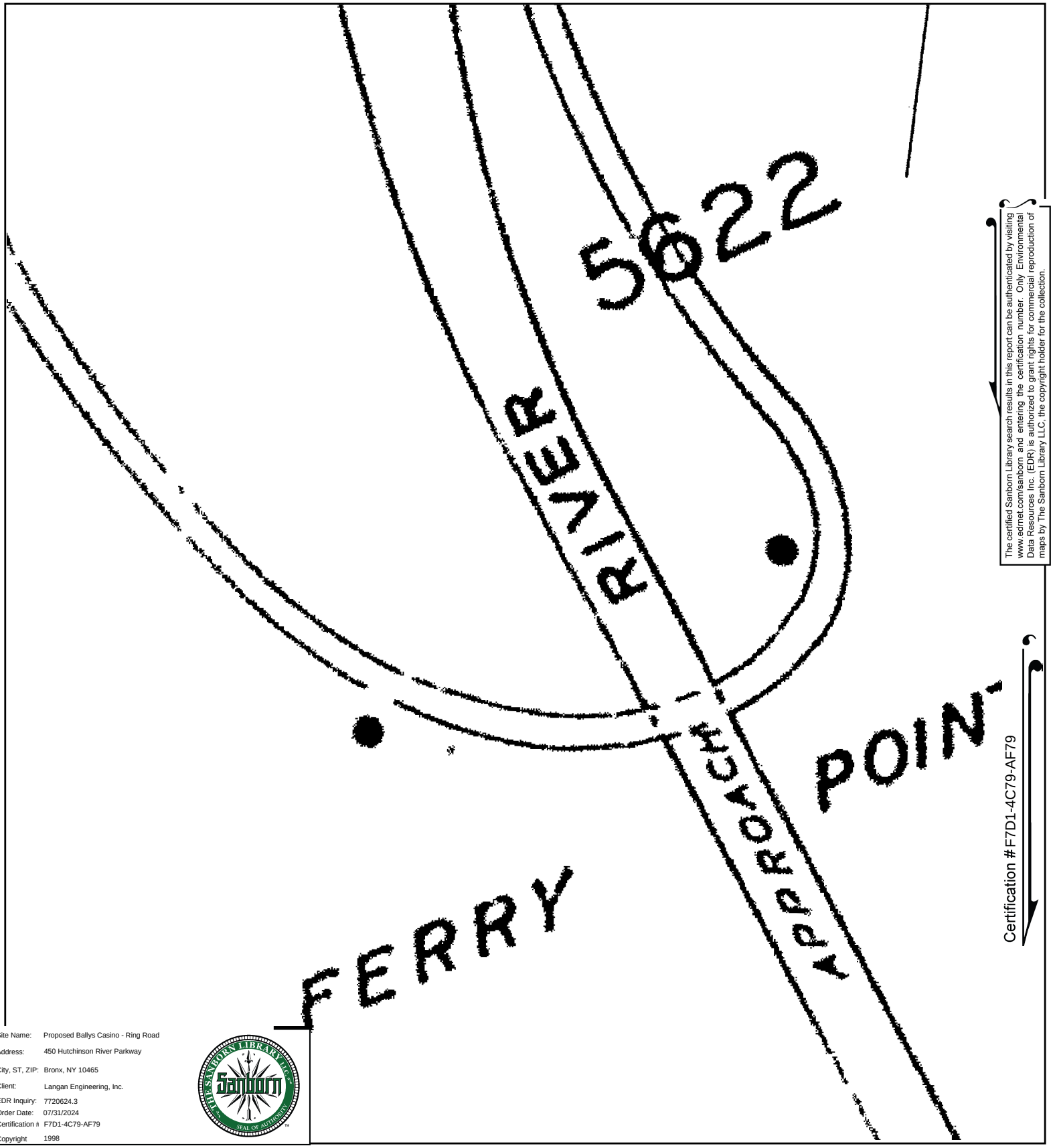
Volume 21, Sheet 80

N

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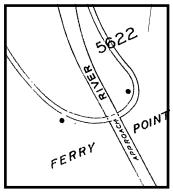


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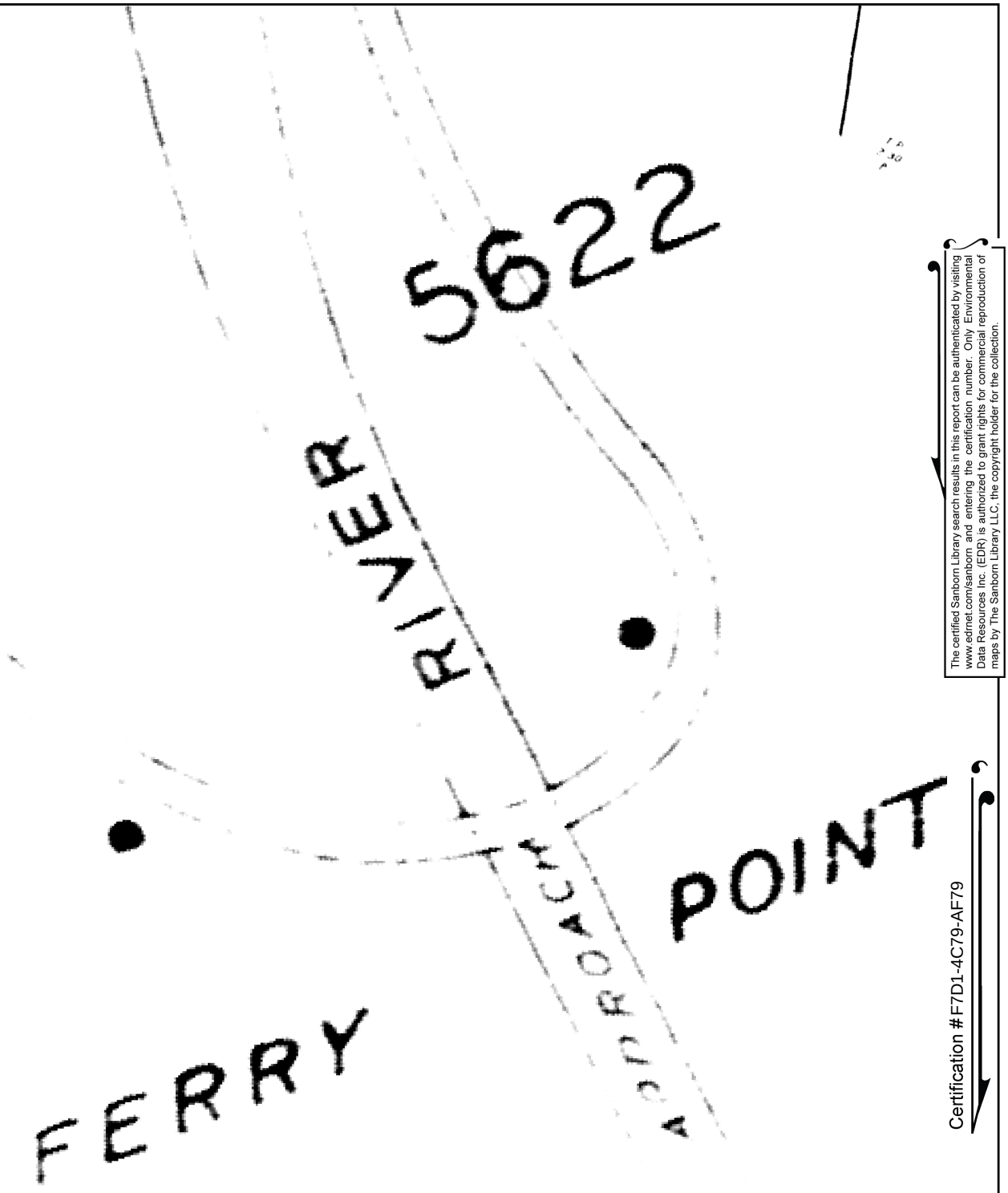


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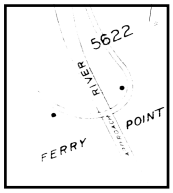


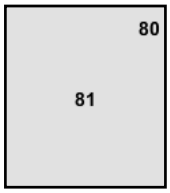


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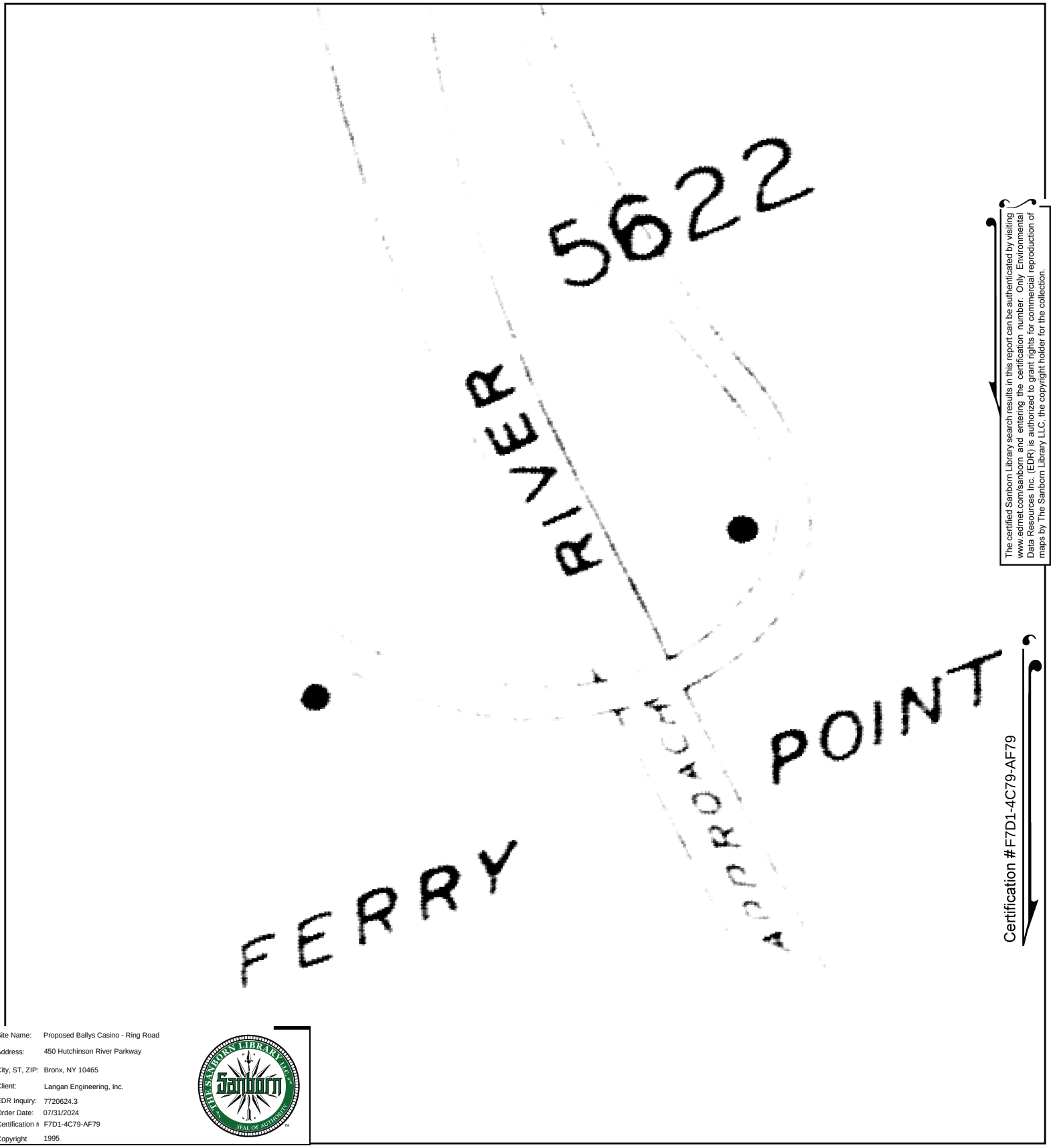


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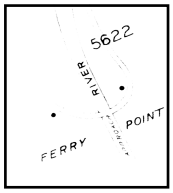


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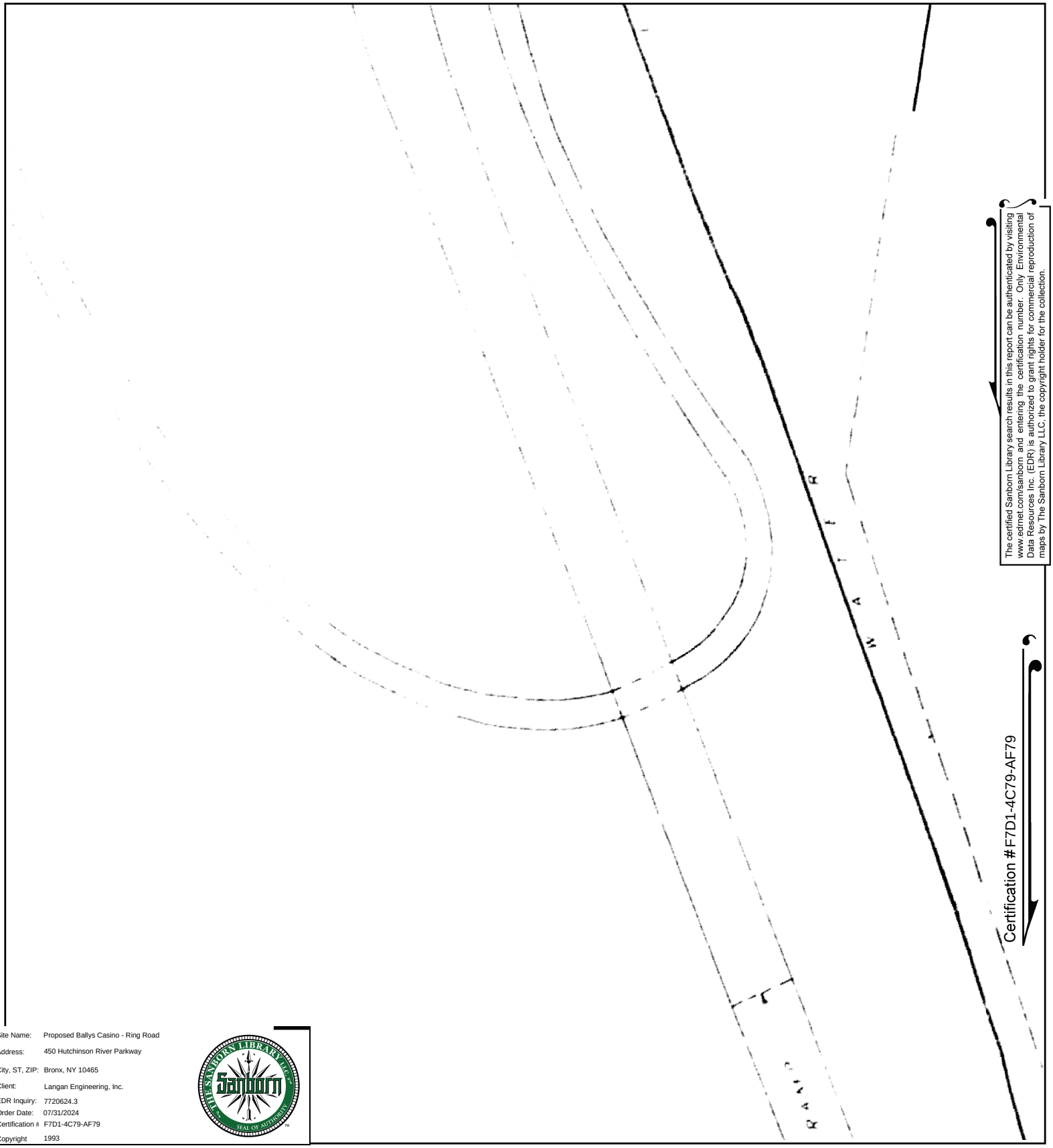

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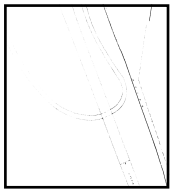

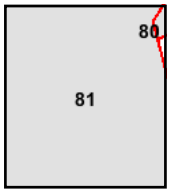


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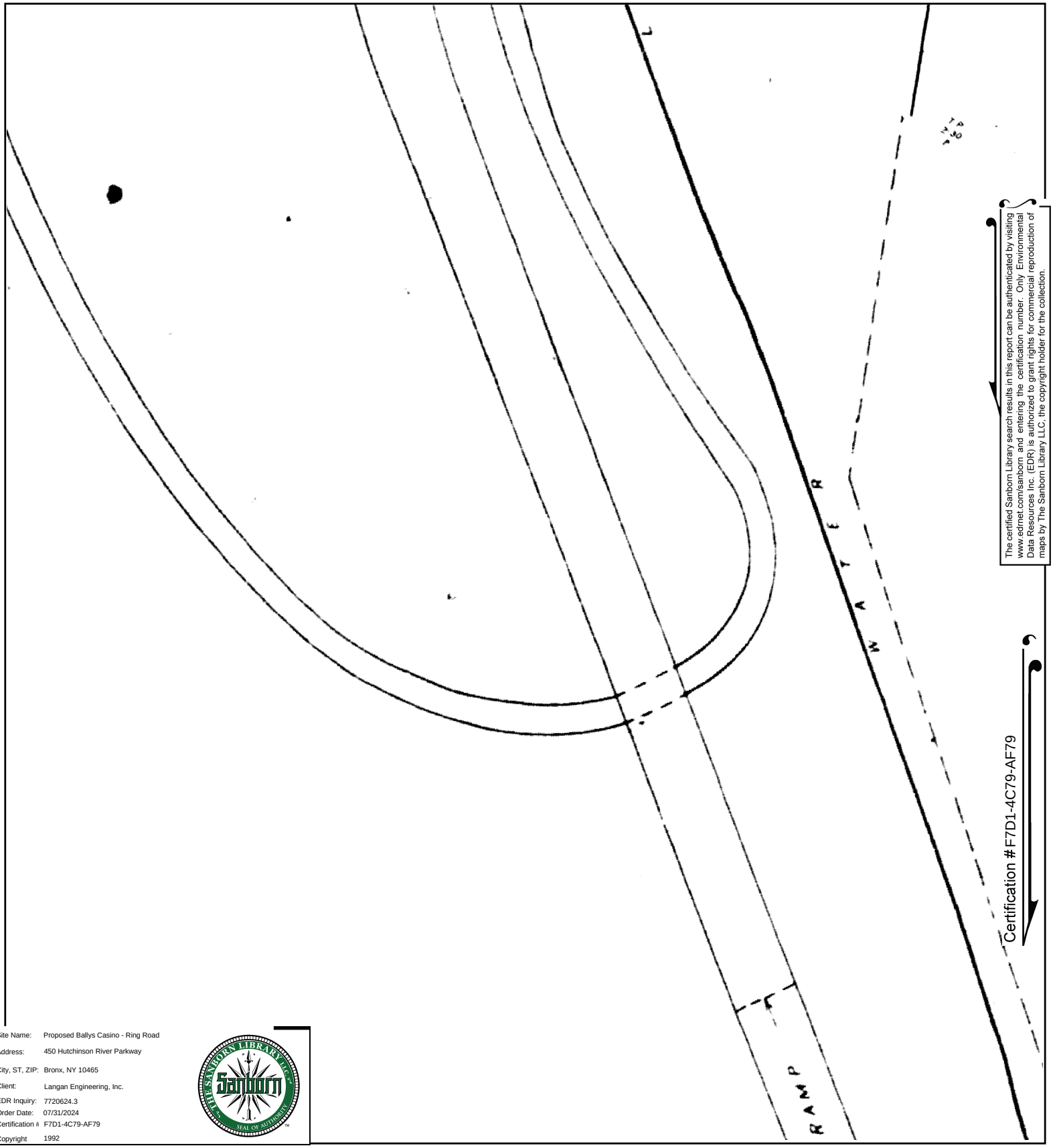


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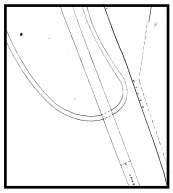

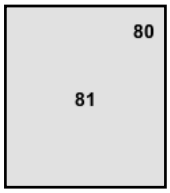


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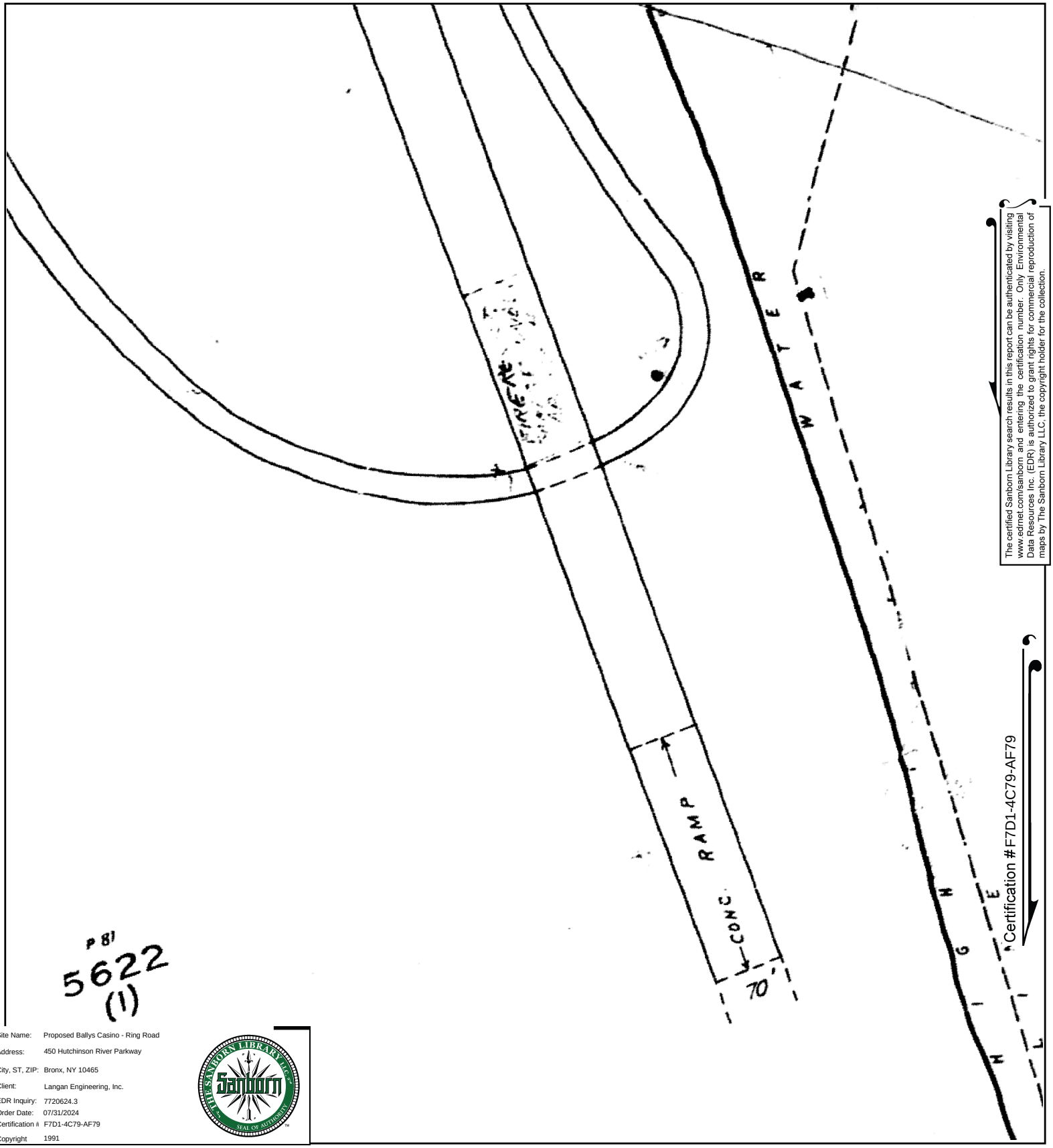


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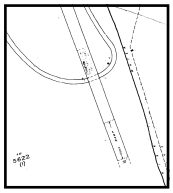

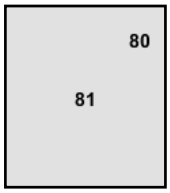


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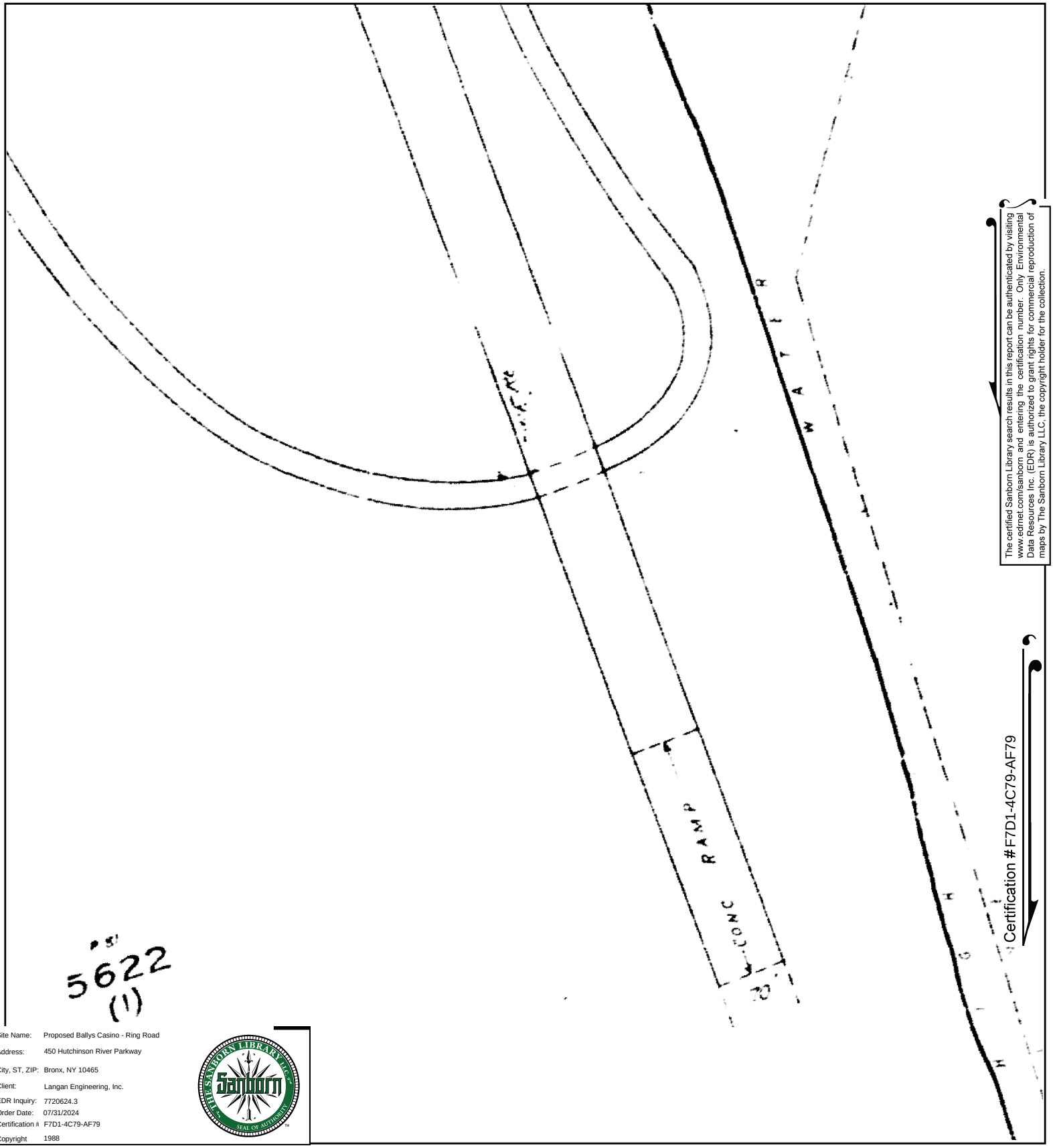


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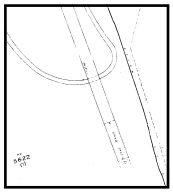

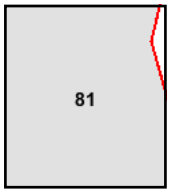


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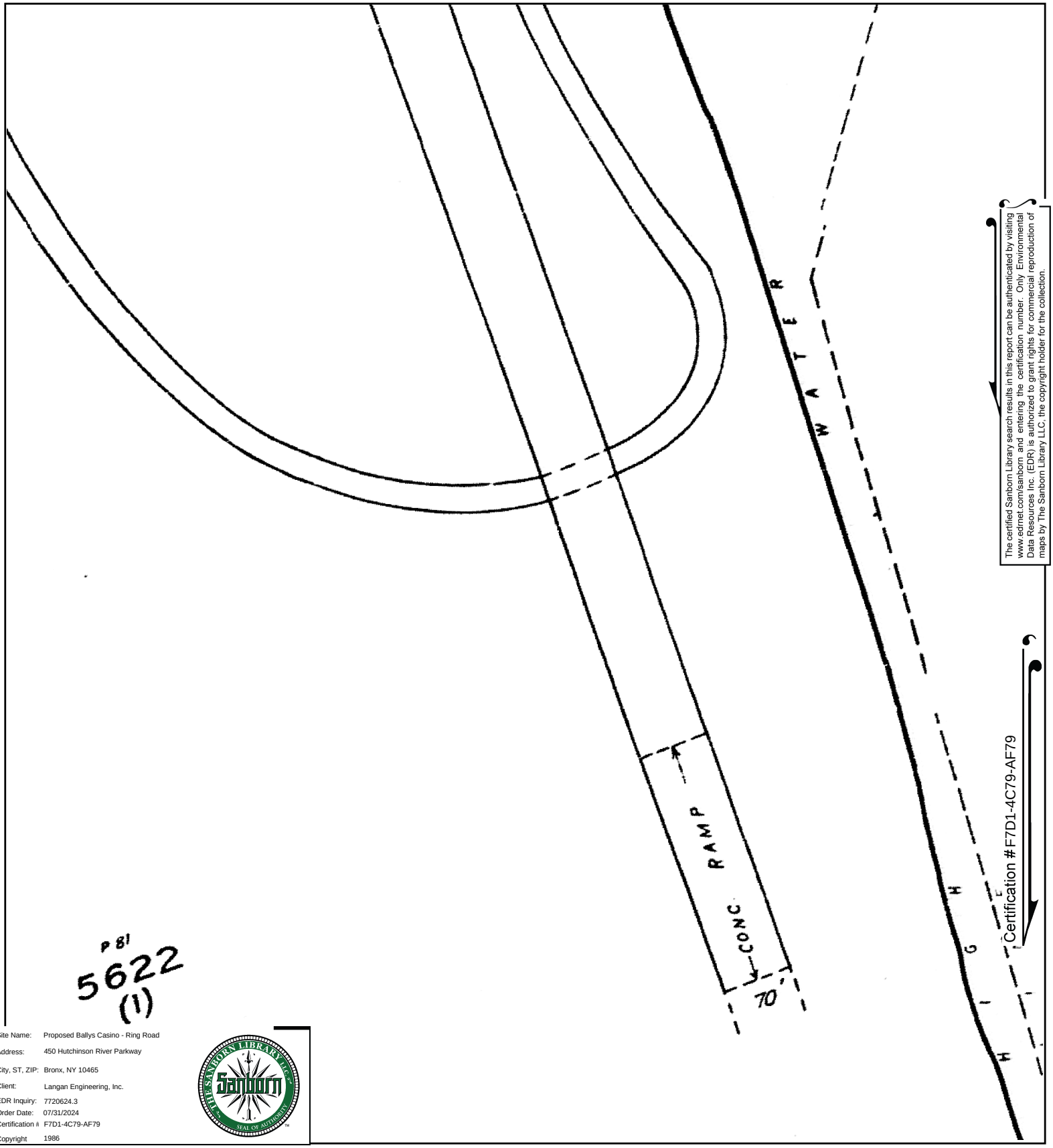


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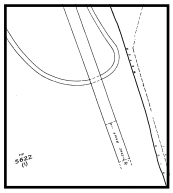

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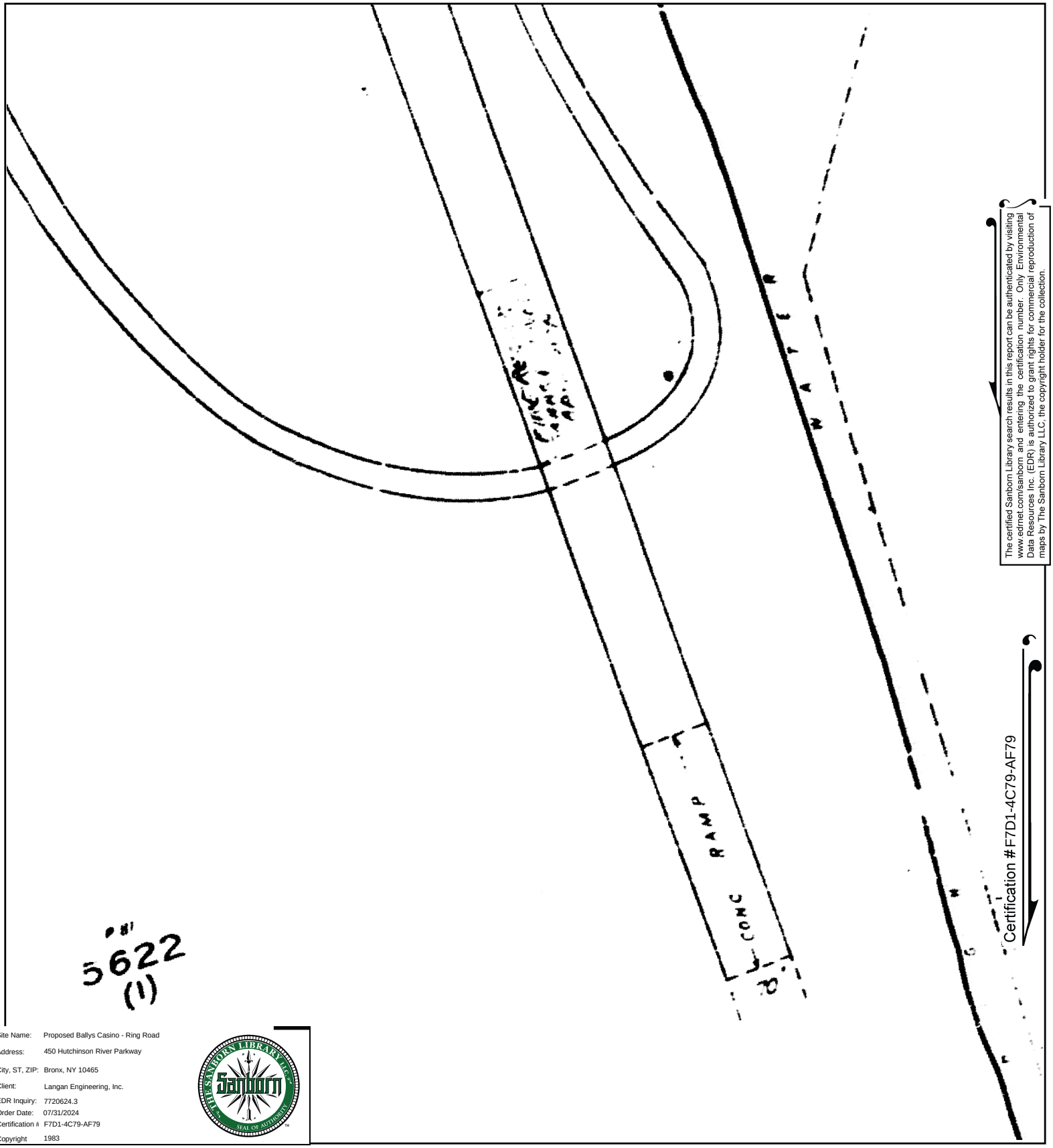


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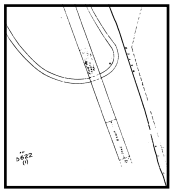

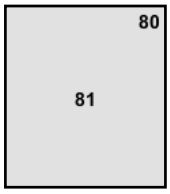


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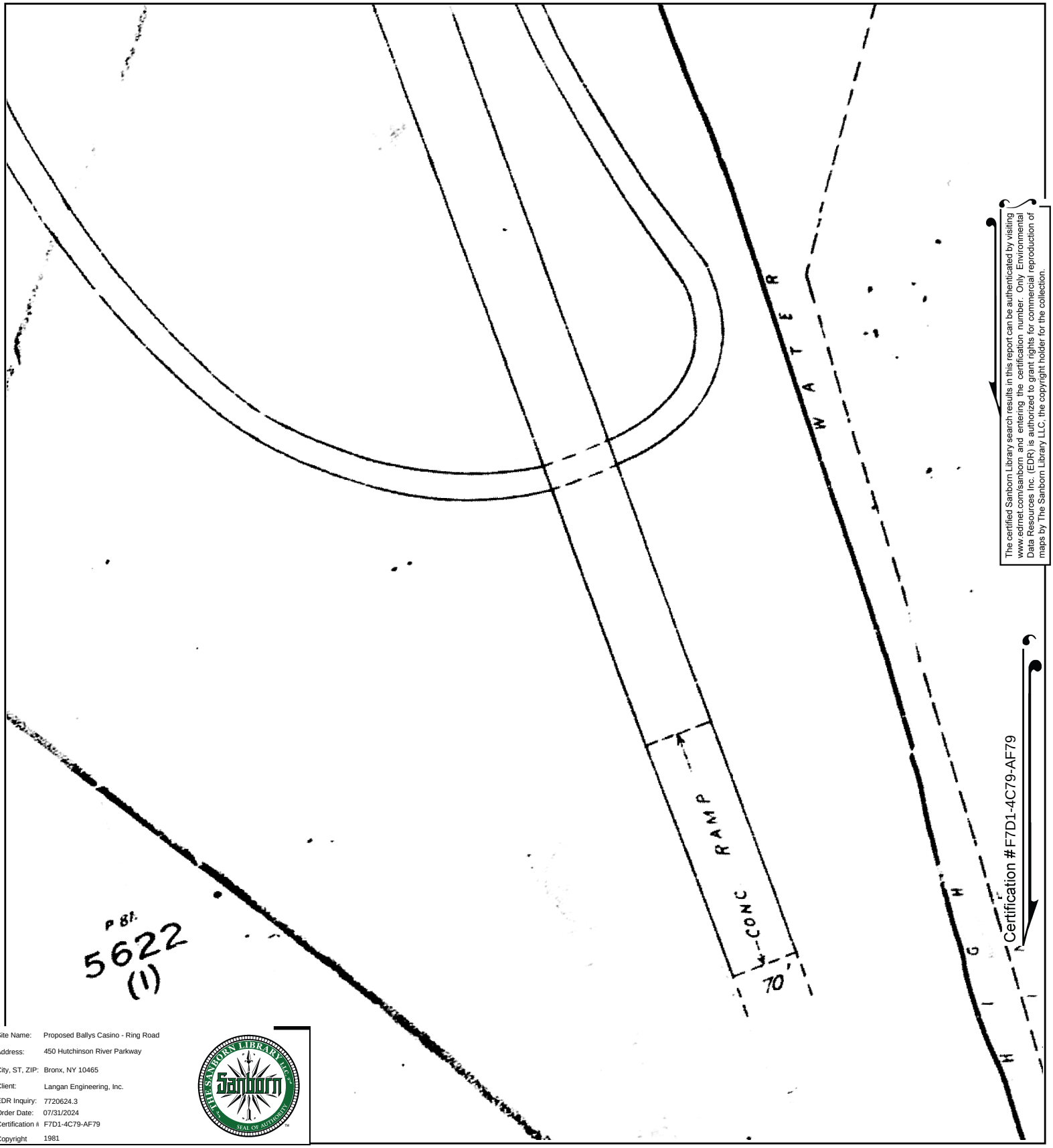


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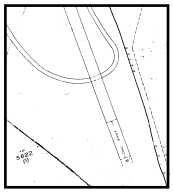

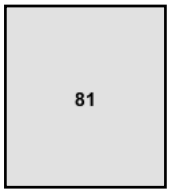


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Volume 21, Sheet 79

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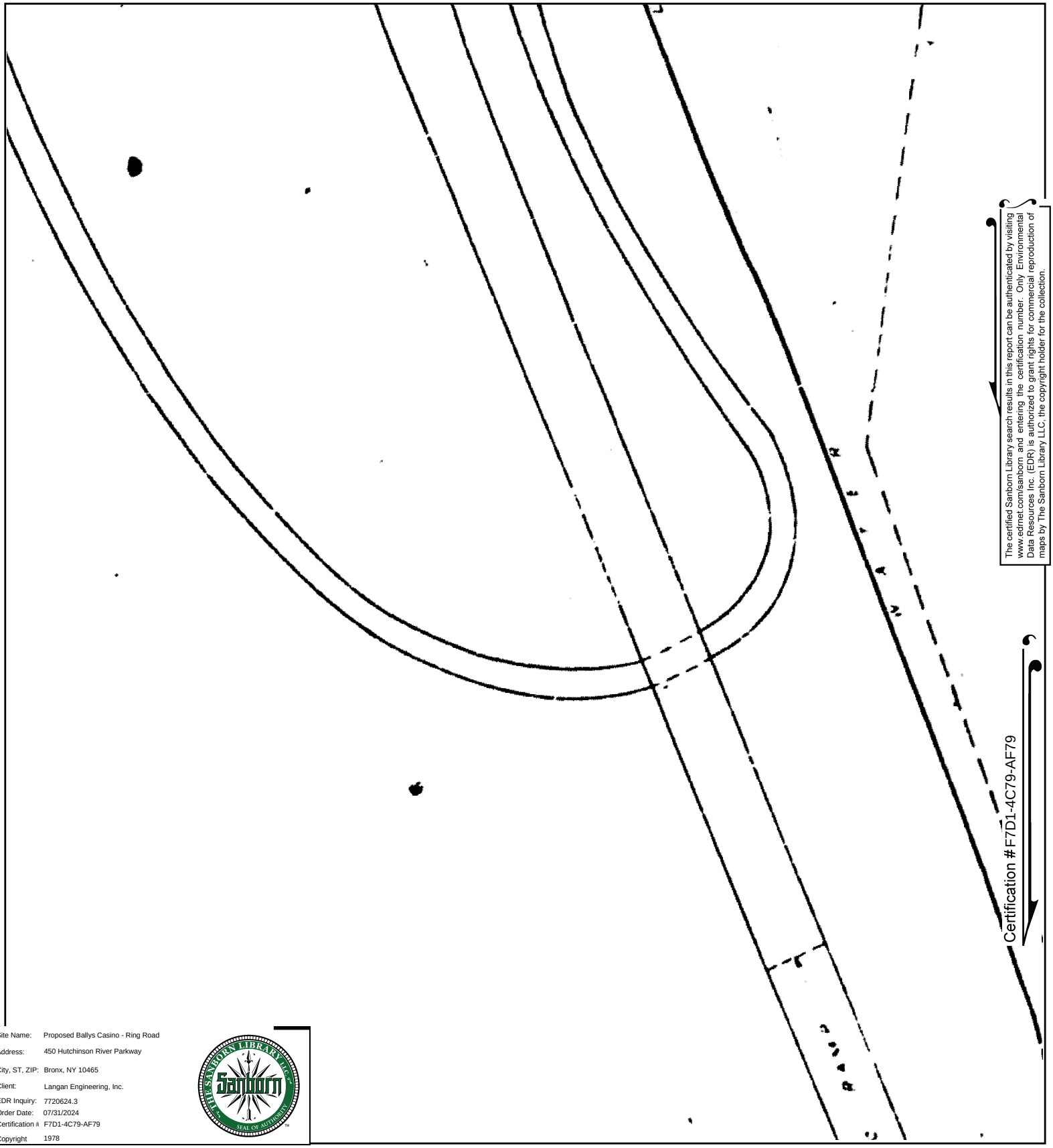

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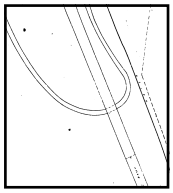

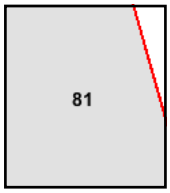


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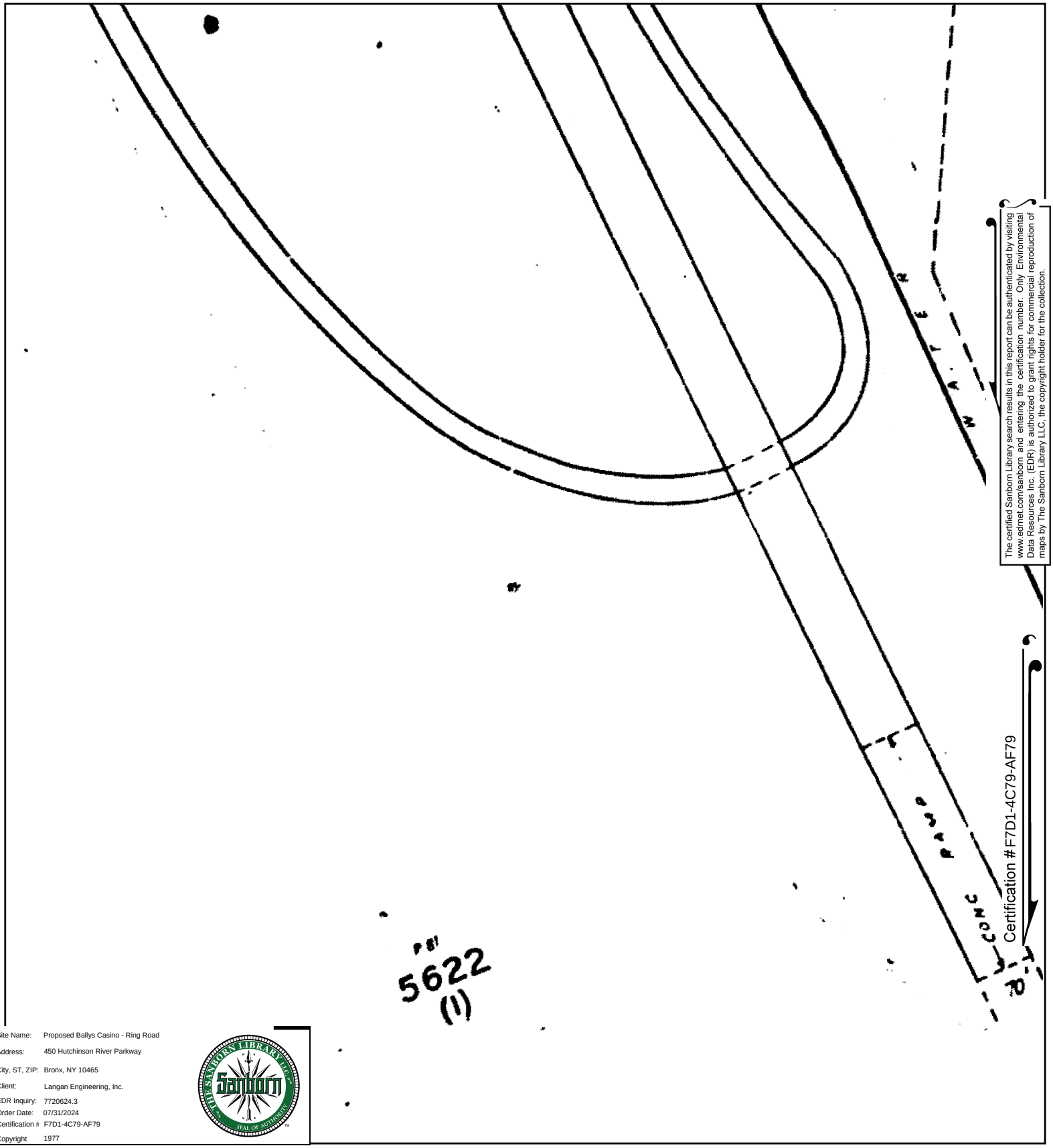


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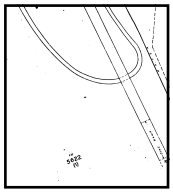

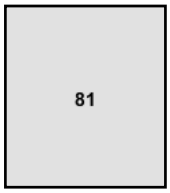


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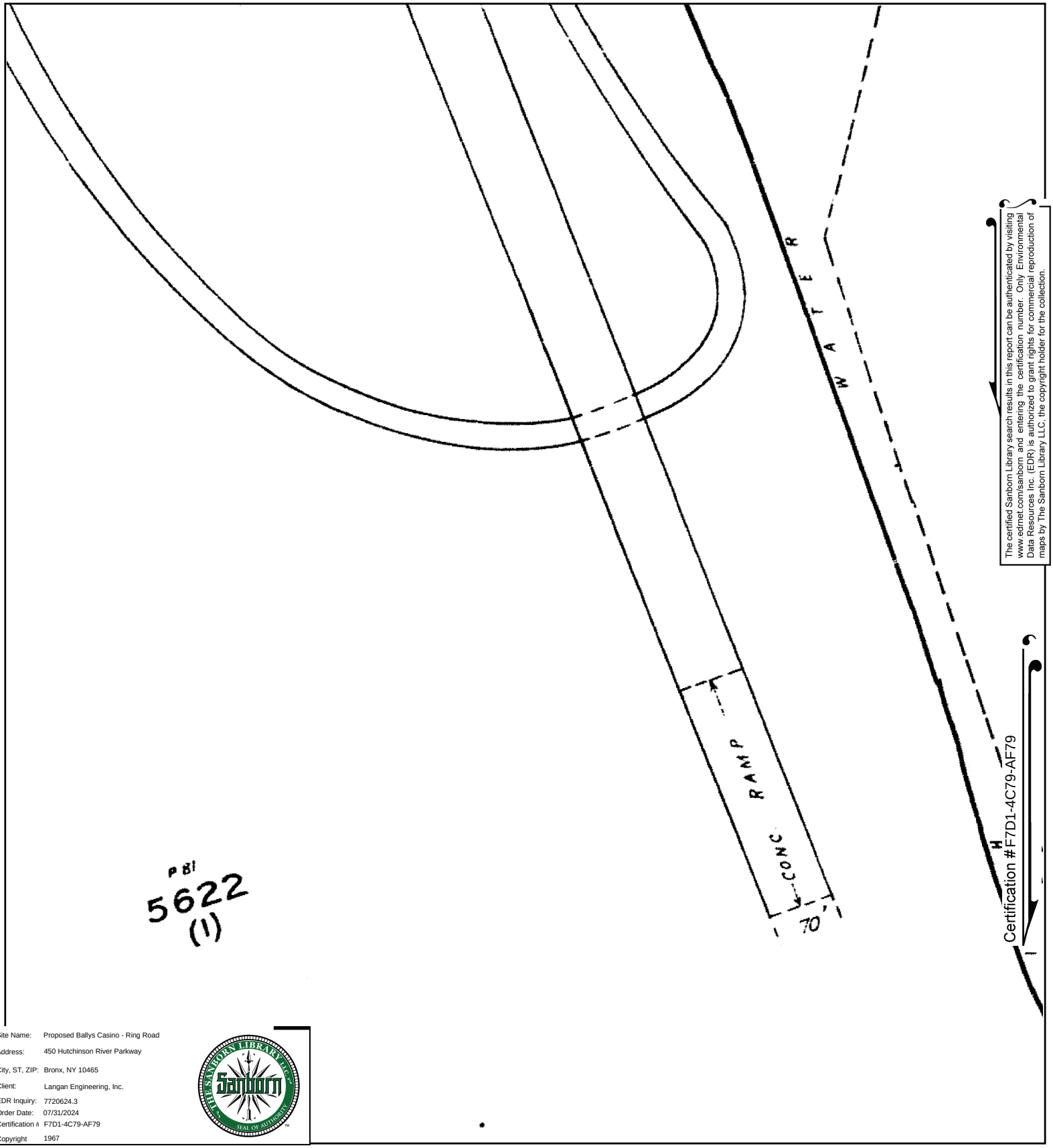


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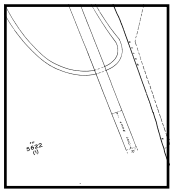

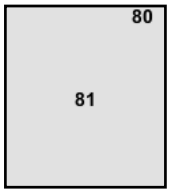


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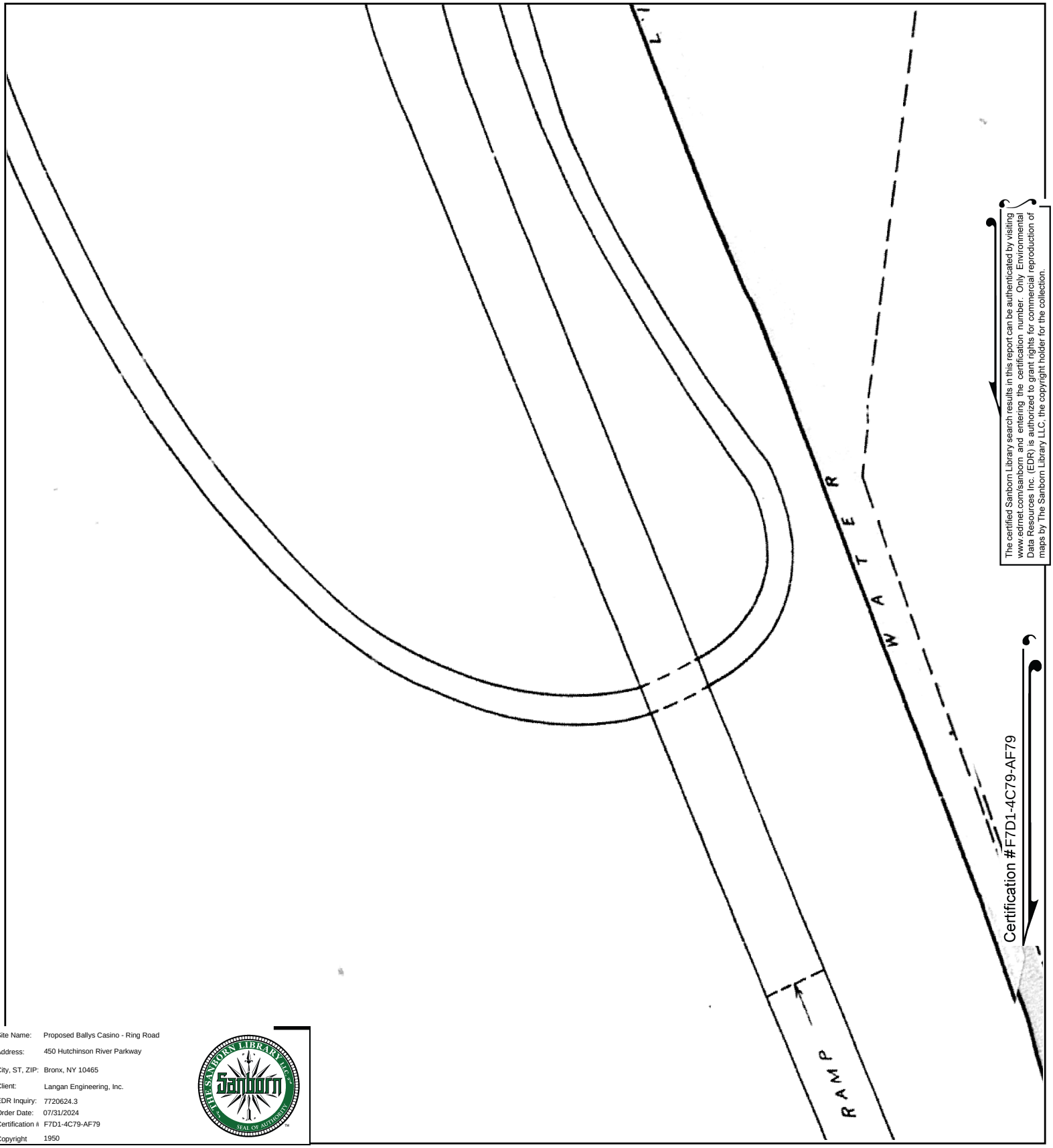


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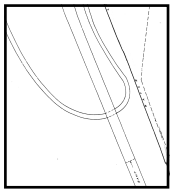

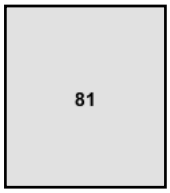


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0 Feet 150 300 600

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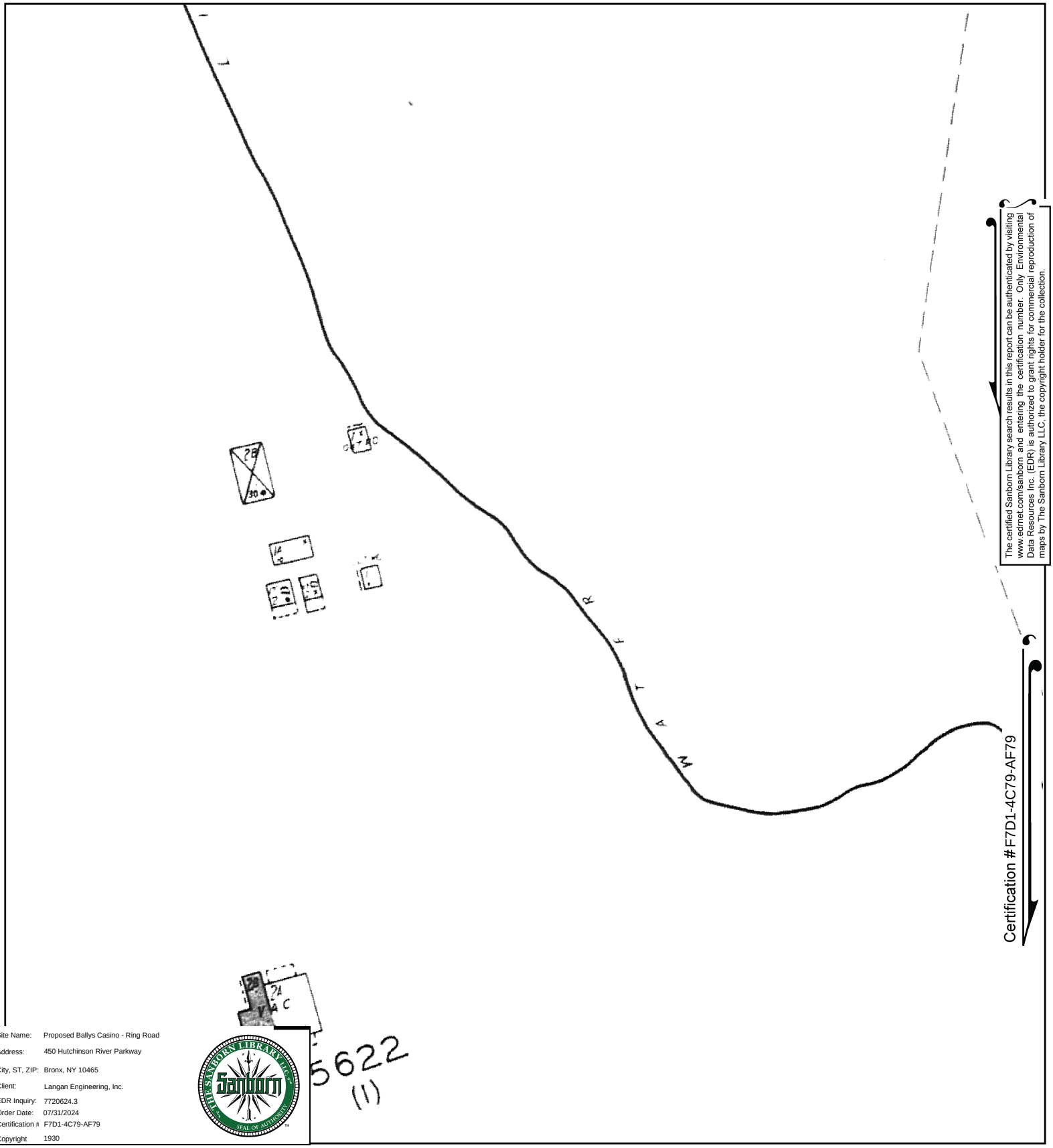


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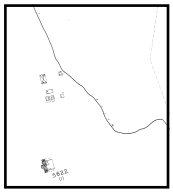
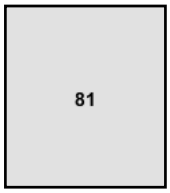
Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1930 |

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

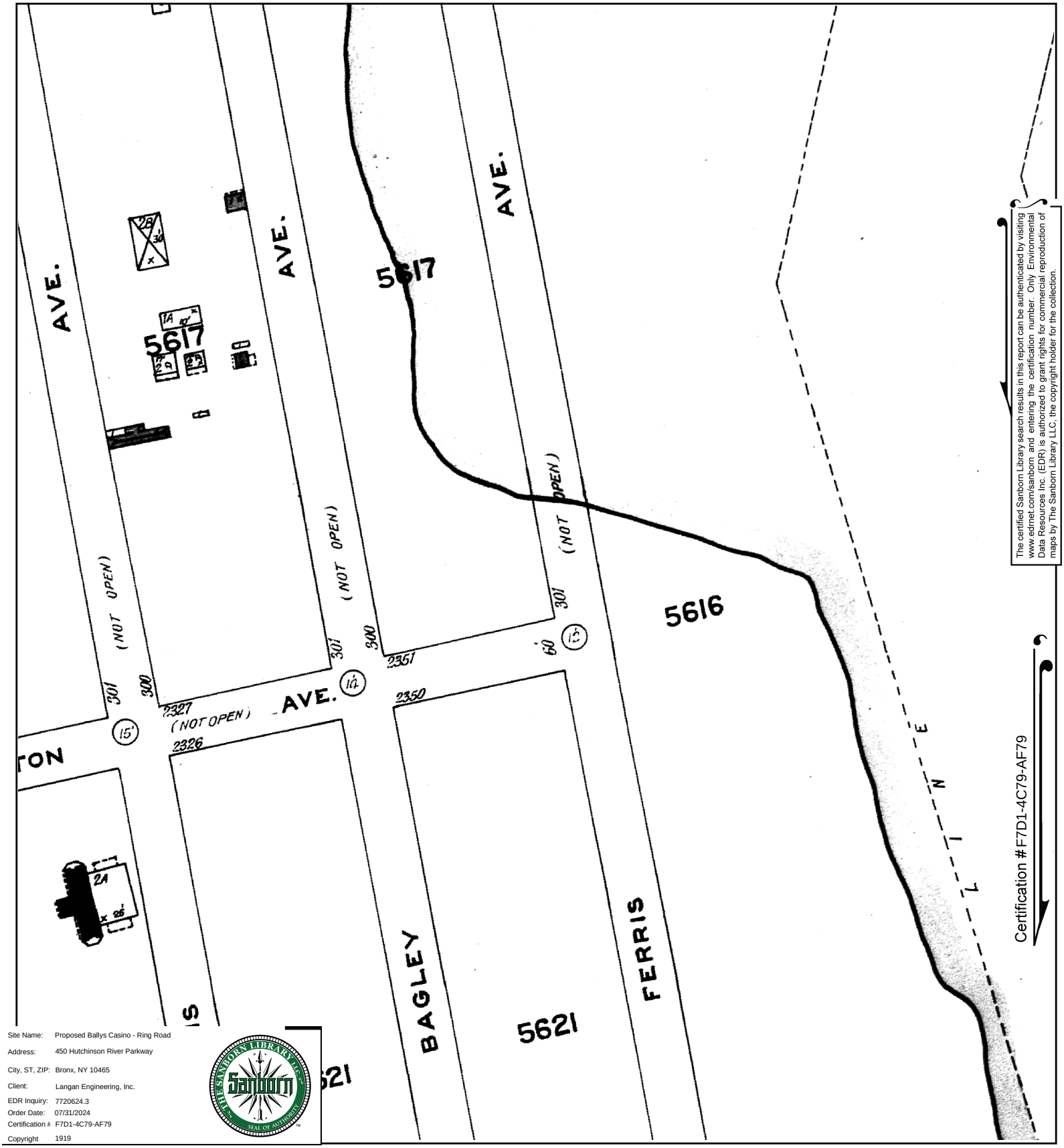





Volume 21, Sheet 79
Volume 21, Sheet 81

0 Feet 150 300 600

N

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Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
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| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification #: | F7D1-4C79-AF79 |
| Copyright | 1919 |

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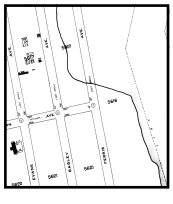
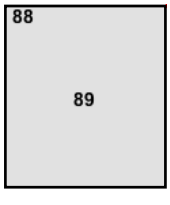
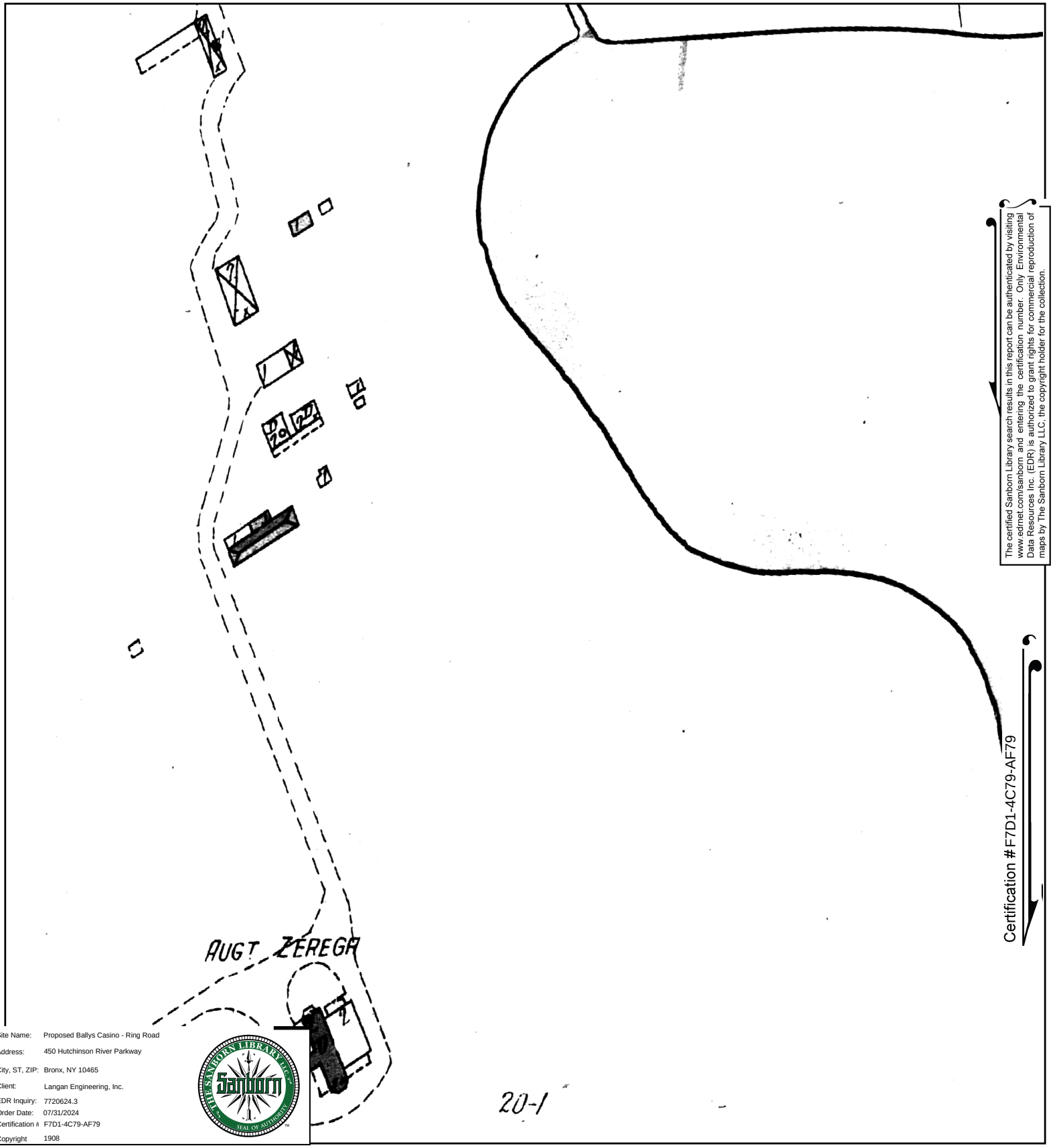





Volume 17, Sheet 88
Volume 17, Sheet 89

N

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Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1908 |

This Certified Sanborn Map combines the following sheets.
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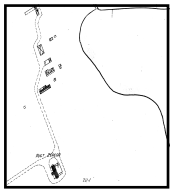
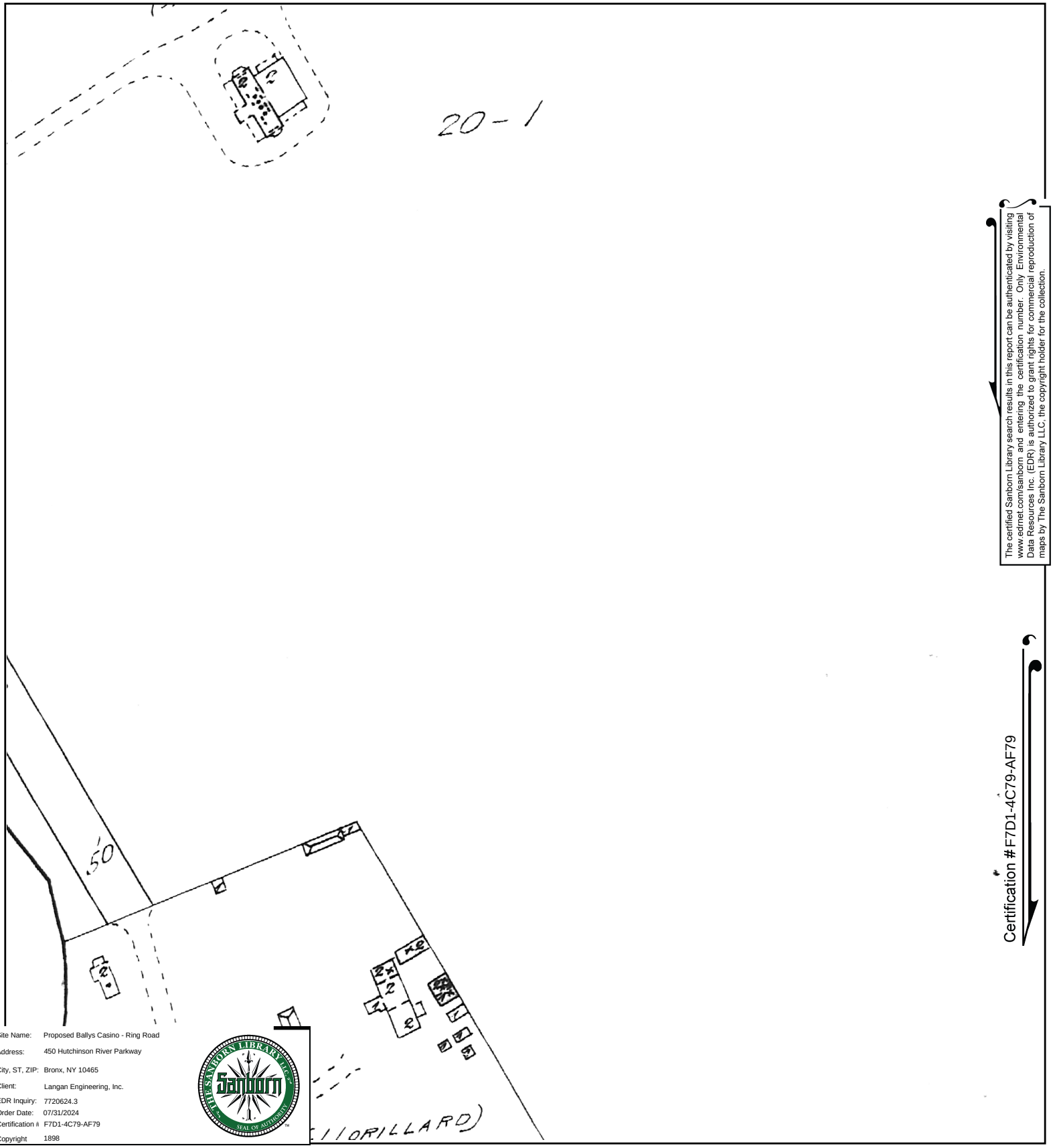


59

Volume A, Sheet 59

0 Feet 150 300 600

N

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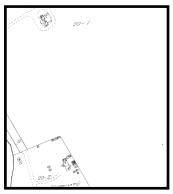
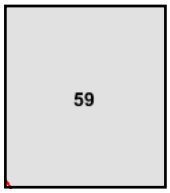
Certification #F7D1-4C79-AF79

| | |
|---|---|
| Site Name: | Proposed Ballys Casino - Ring Road |
| Address: | 450 Hutchinson River Parkway |
| City, ST, ZIP: | Bronx, NY 10465 |
| Client: | Langan Engineering, Inc. |
| EDR Inquiry: | 7720624.3 |
| Order Date: | 07/31/2024 |
| Certification # | F7D1-4C79-AF79 |
| Copyright | 1898 |

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.






Volume A, Sheet 59

0 Feet 150 300 600

N

Proposed Ballys Casino - Ring Road

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.4

July 29, 2024

# EDR Historical Topo Map Report

## with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Historical Topo Map Report

07/29/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.4

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Langan Engineering, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

***Search Results:***

**P.O.#** 170773001

**Project:** Prpsd Bally s Casino - Ring Rd

***Coordinates:***

| | |
|---|---|
| **Latitude:** | 40.813693 40° 48' 49" North |
| **Longitude:** | -73.835803 -73° 50' 9" West |
| **UTM Zone:** | Zone 18 North |
| **UTM X Meters:** | 598186.93 |
| **UTM Y Meters:** | 4518727.59 |
| **Elevation:** | 16.00' above sea level |

**Maps Provided:**

| | |
|---|---|
| 2019 | 1900 |
| 2016 | 1898 |
| 2013 | 1897 |
| 1995 | |
| 1979 | |
| 1966 | |
| 1955 | |
| 1947 | |

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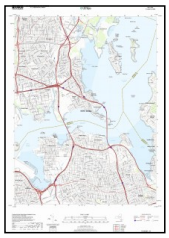
## *Topo Sheet Key*

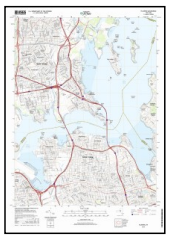
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2019 Source Sheets



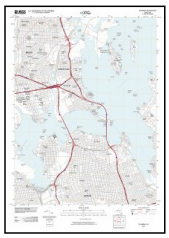
Flushing
2019
7.5-minute, 24000

### 2016 Source Sheets



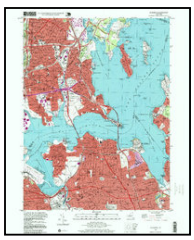
Flushing
2016
7.5-minute, 24000

### 2013 Source Sheets



Flushing
2013
7.5-minute, 24000

### 1995 Source Sheets



Flushing
1995
7.5-minute, 24000
Aerial Photo Revised 1977

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1979 Source Sheets



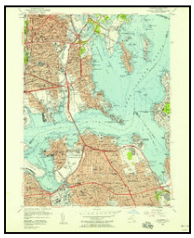
Flushing
1979
7.5-minute, 24000
Aerial Photo Revised 1977

### 1966 Source Sheets



Flushing
1966
7.5-minute, 24000
Aerial Photo Revised 1954

### 1955 Source Sheets



Flushing
1955
7.5-minute, 24000
Aerial Photo Revised 1954

### 1947 Source Sheets



Flushing
1947
7.5-minute, 24000
Aerial Photo Revised 1942

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1900 Source Sheets



Harlem
1900
15-minute, 62500

### 1898 Source Sheets



Harlem
1898
15-minute, 62500

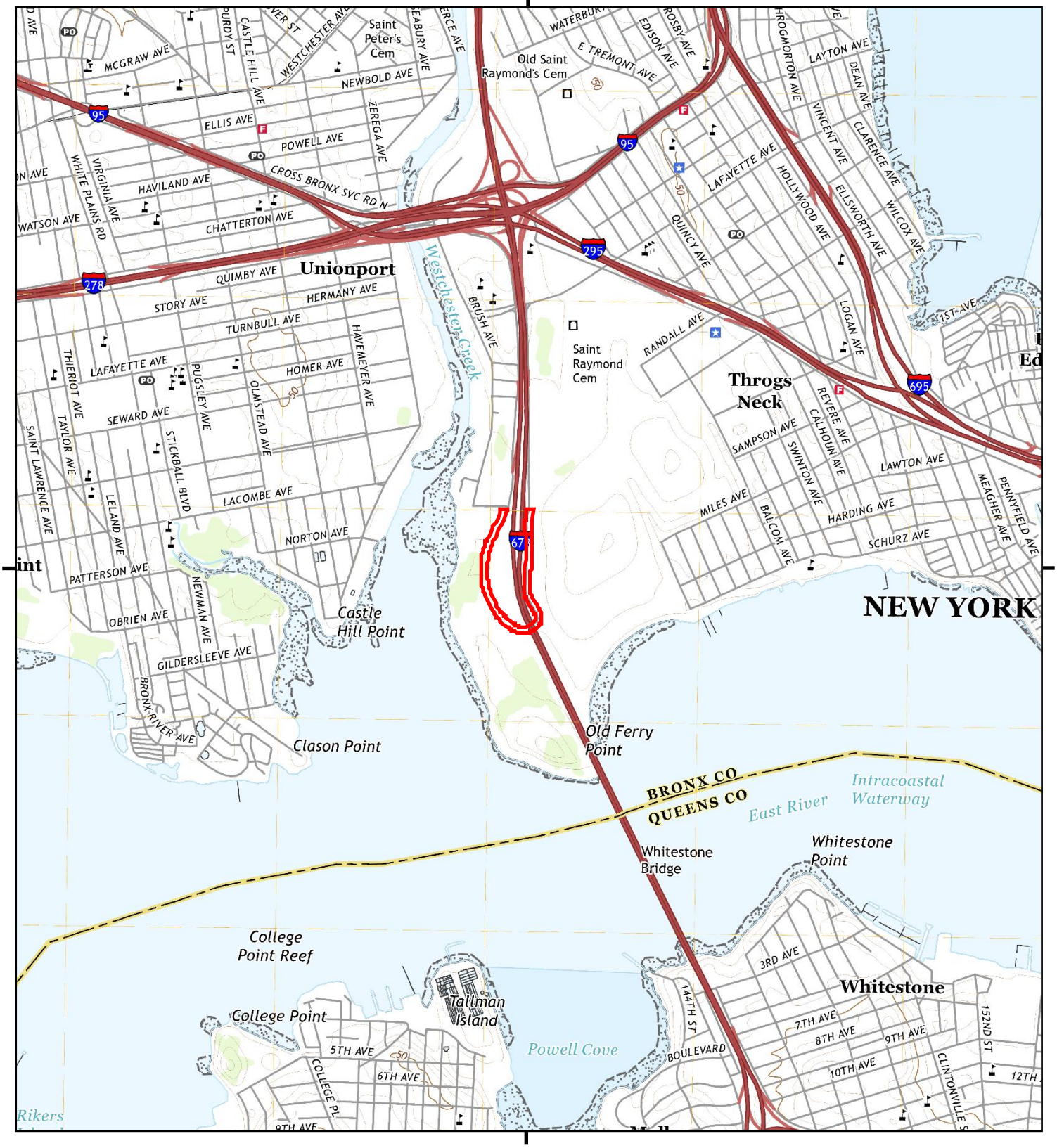
### 1897 Source Sheets



Harlem
1897
15-minute, 62500

# Historical Topo Map

2019




This report includes information from the following map sheet(s).

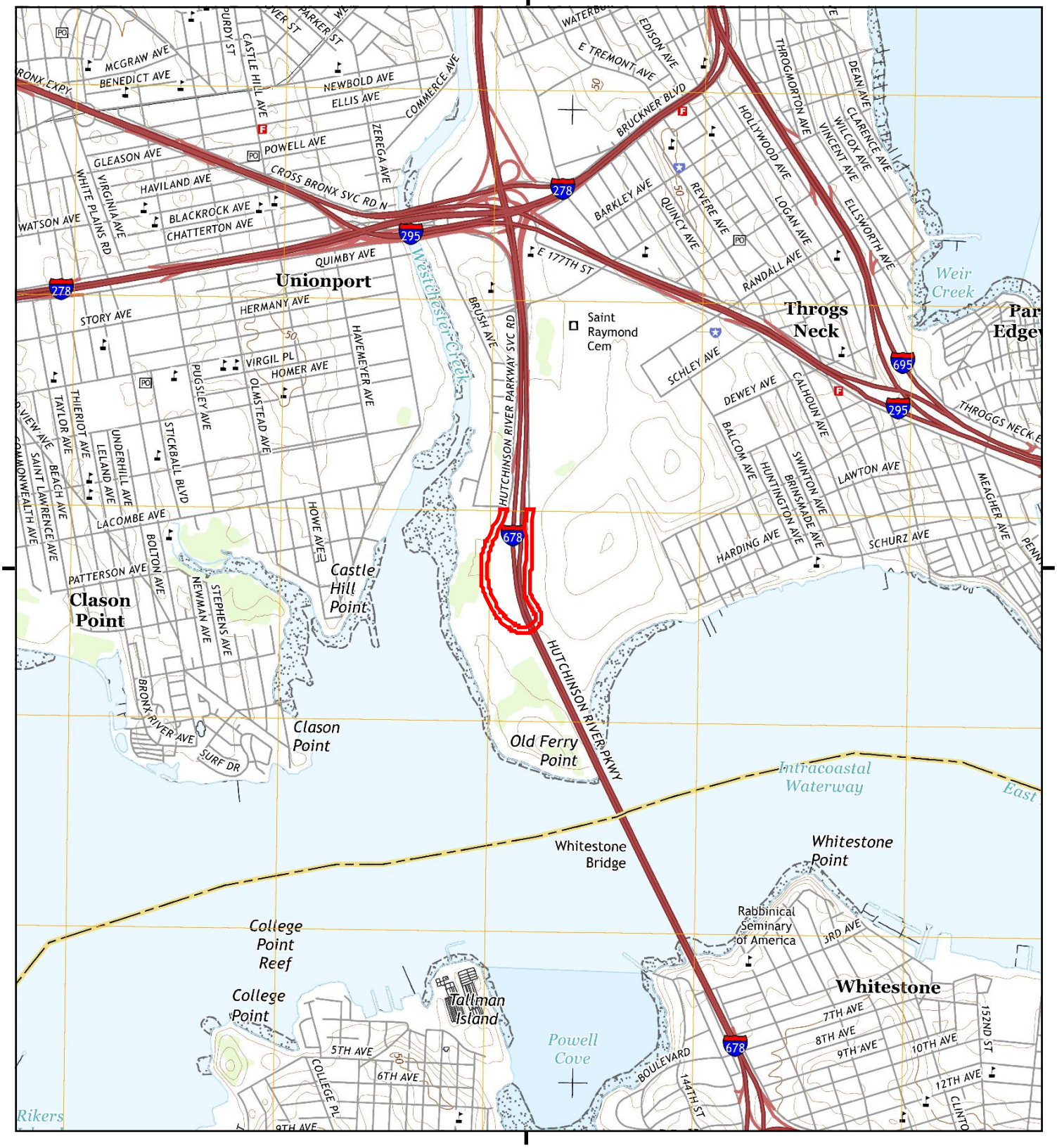
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 2019, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 2016, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N

# Historical Topo Map

2013




This report includes information from the following map sheet(s).

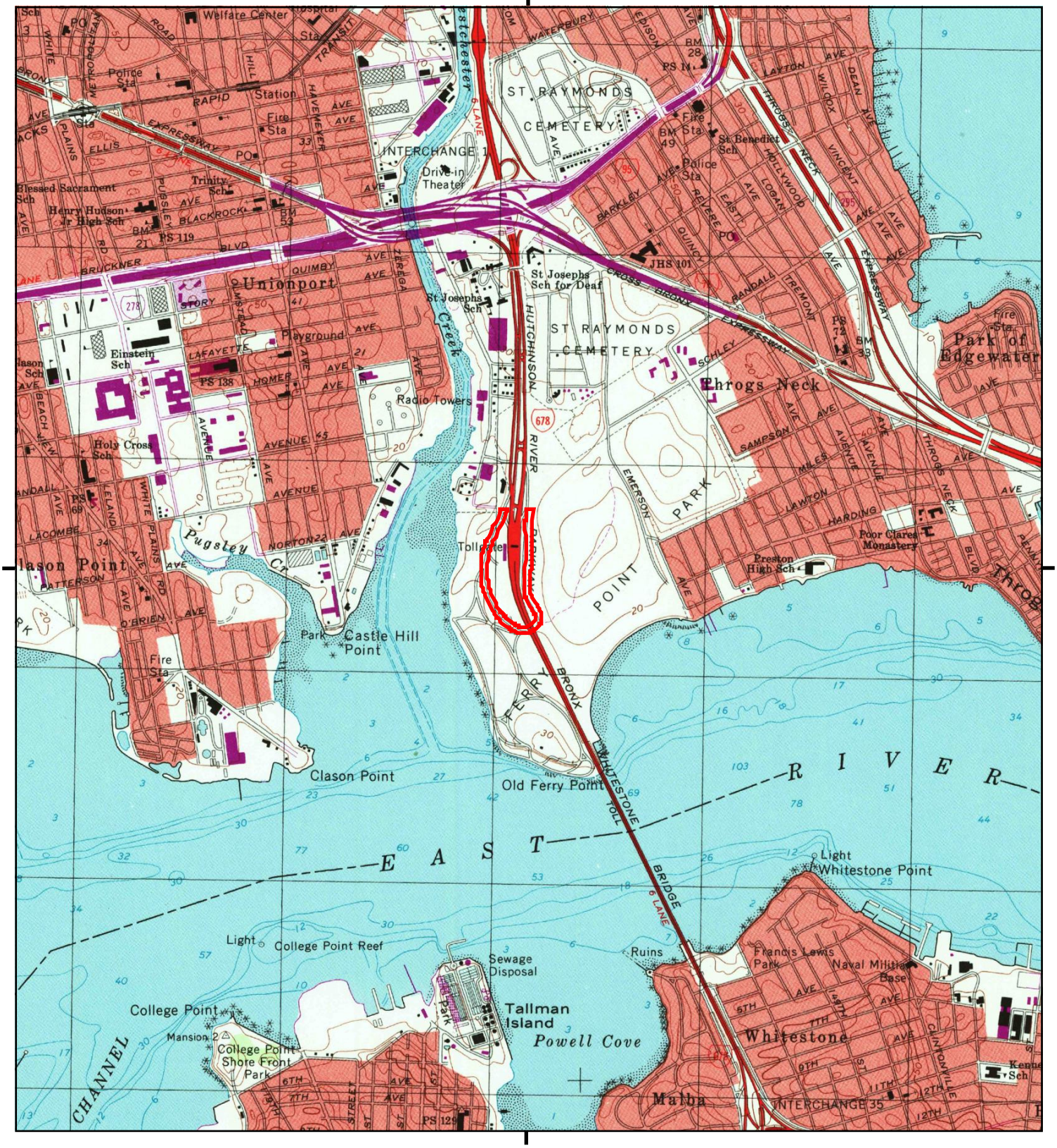
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 2013, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

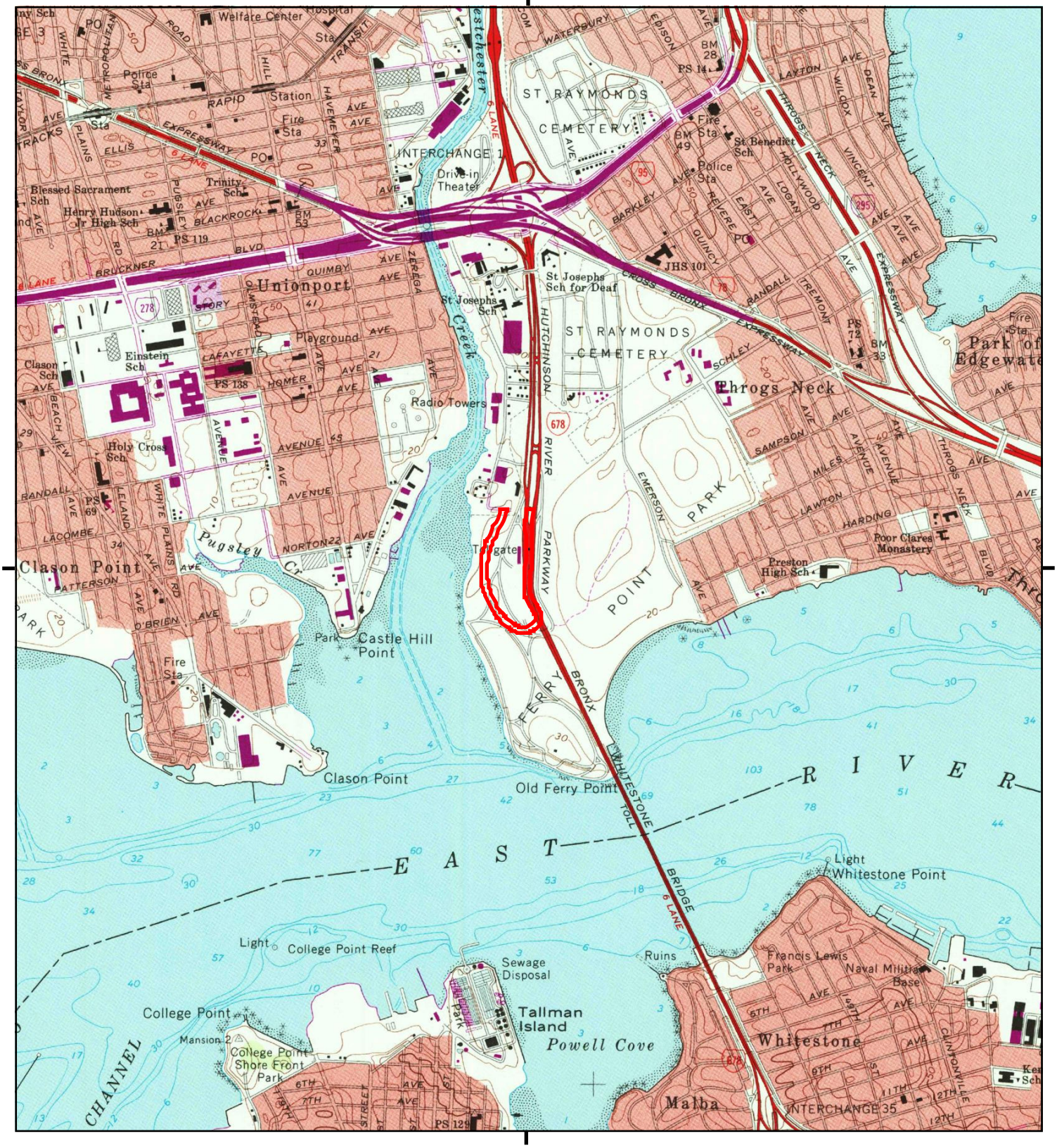
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 1995, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

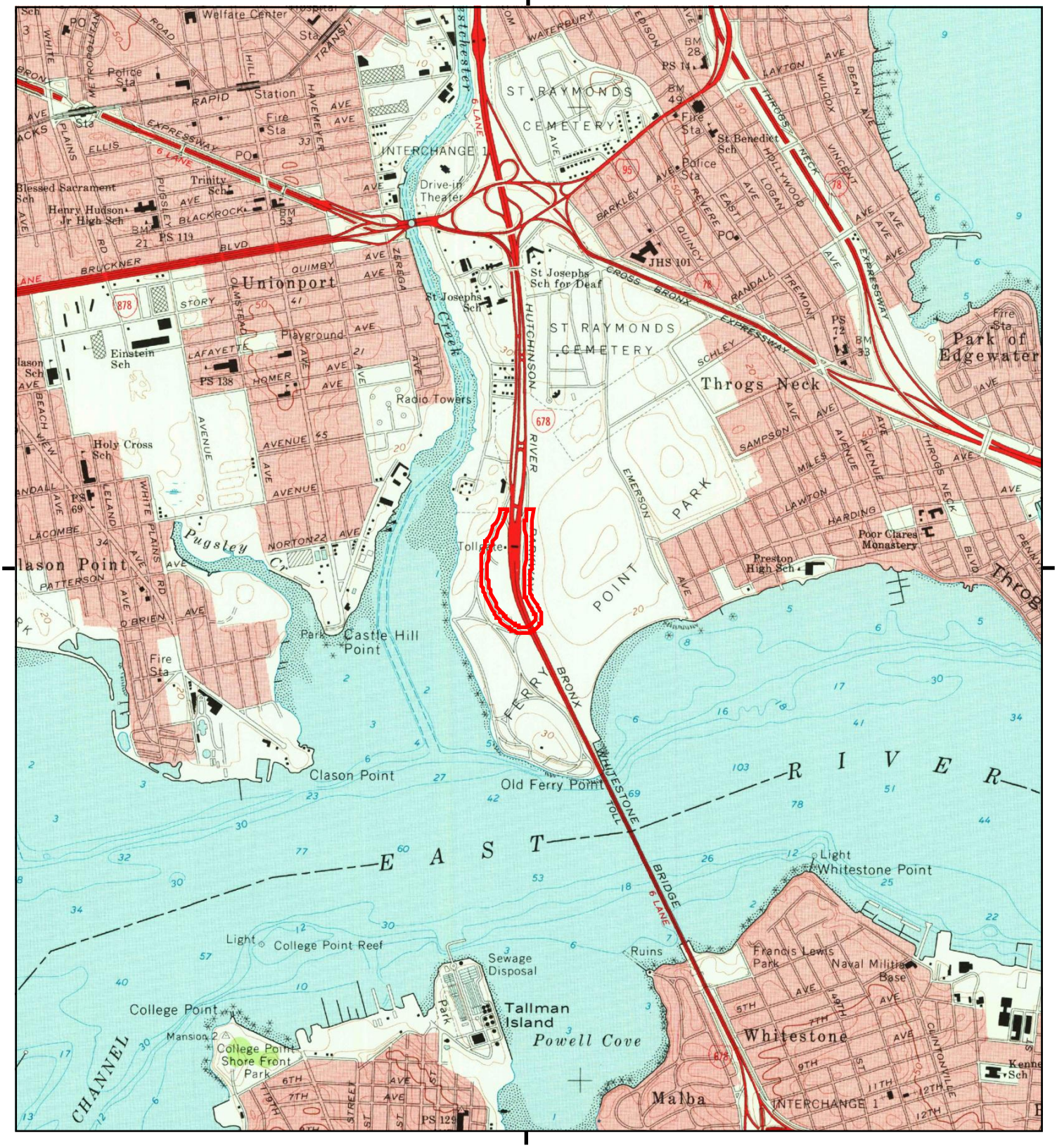
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 1979, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

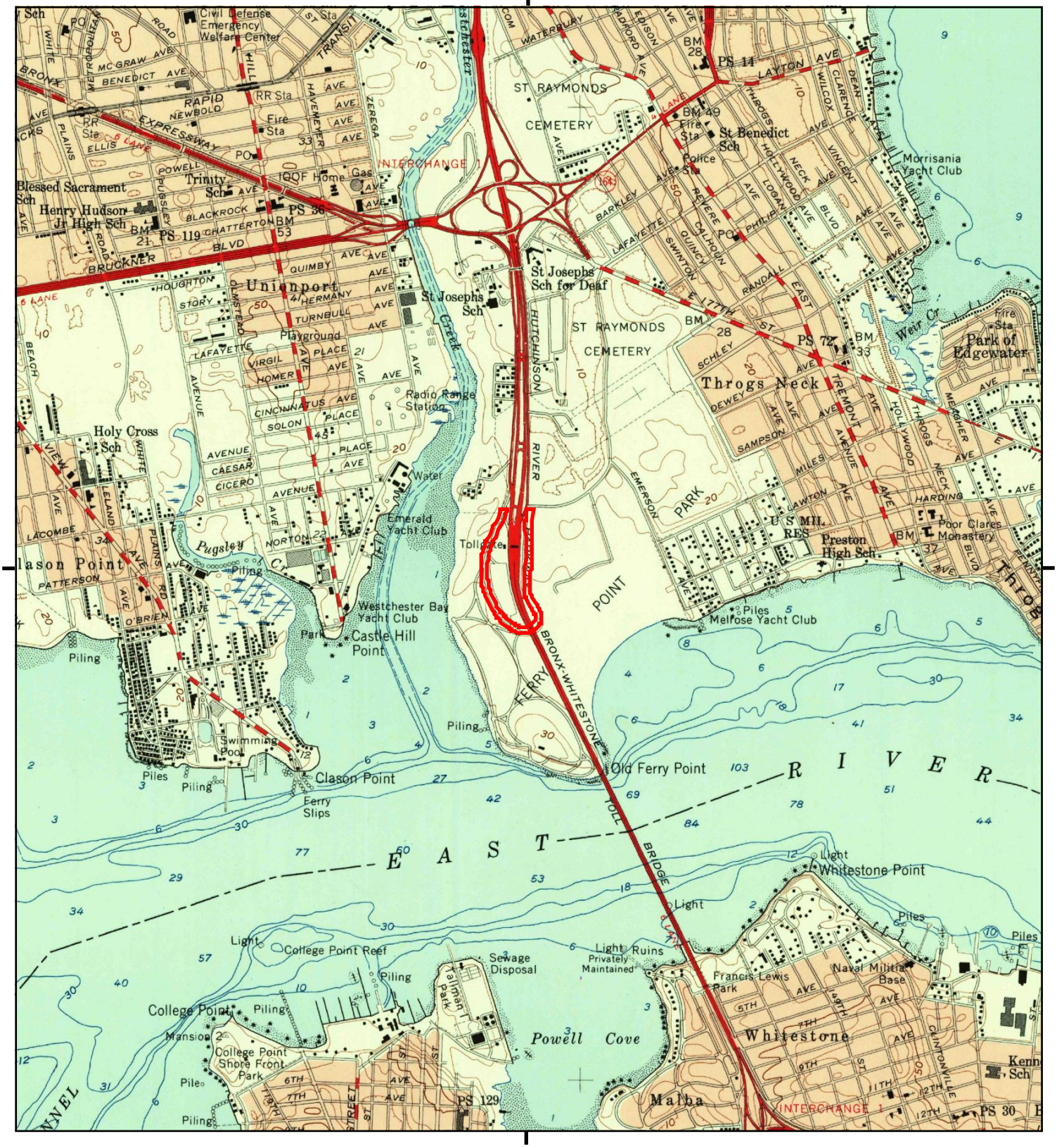
TP, Flushing, 1966, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N

# Historical Topo Map

1955




This report includes information from the following map sheet(s).

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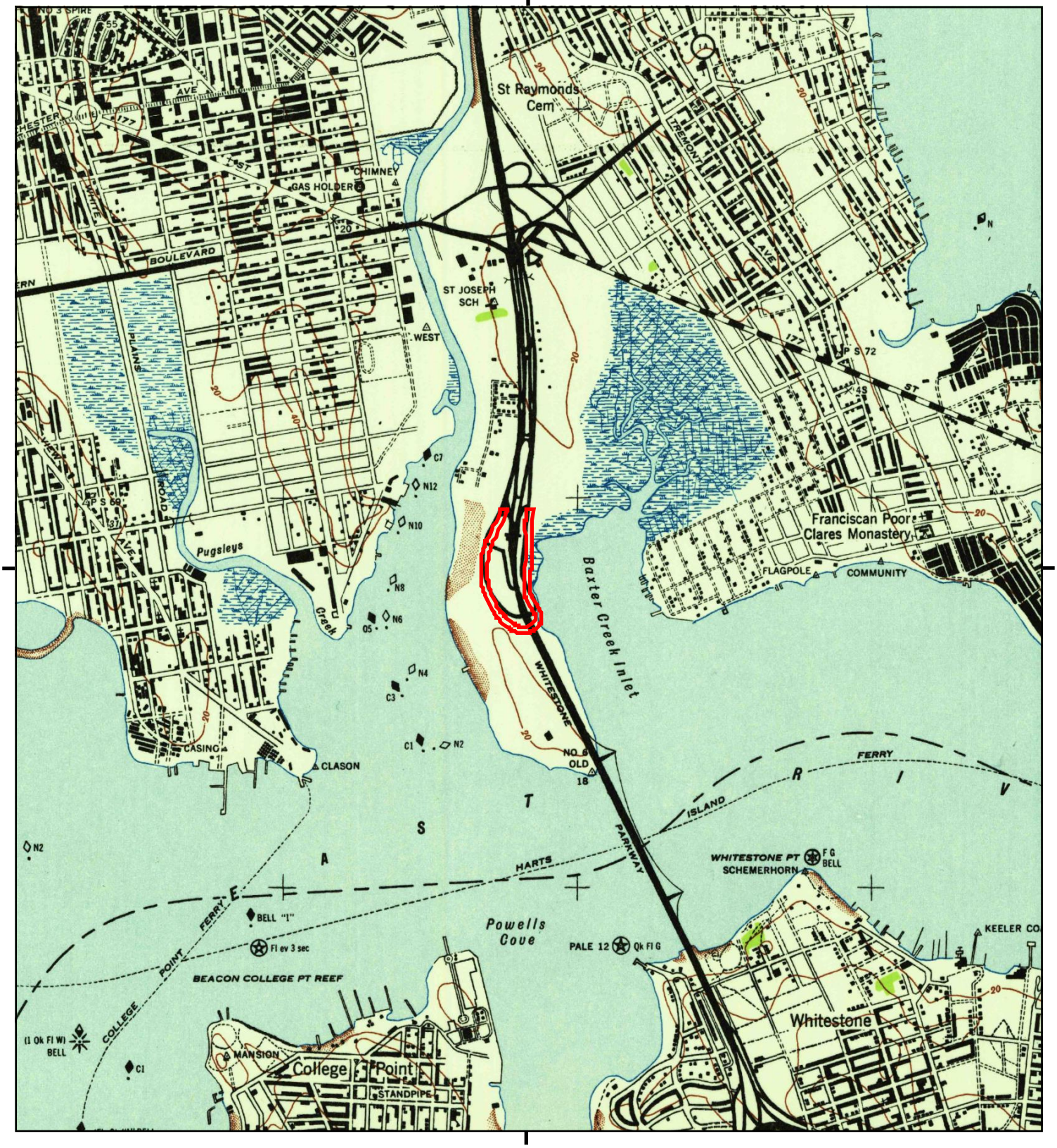
NW N NE
W E
SW S SE

TP, Flushing, 1955, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

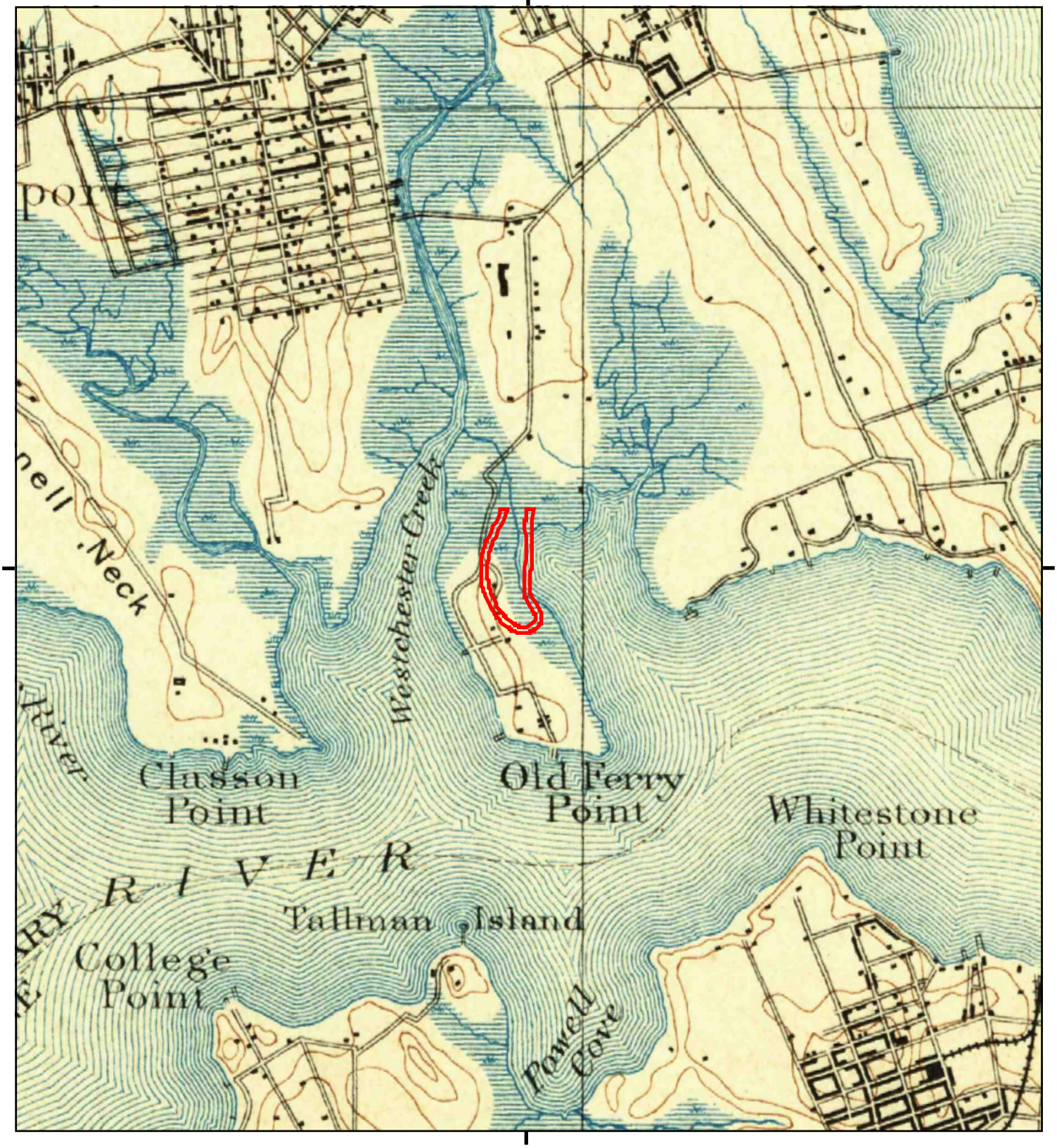
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Flushing, 1947, 7.5-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N

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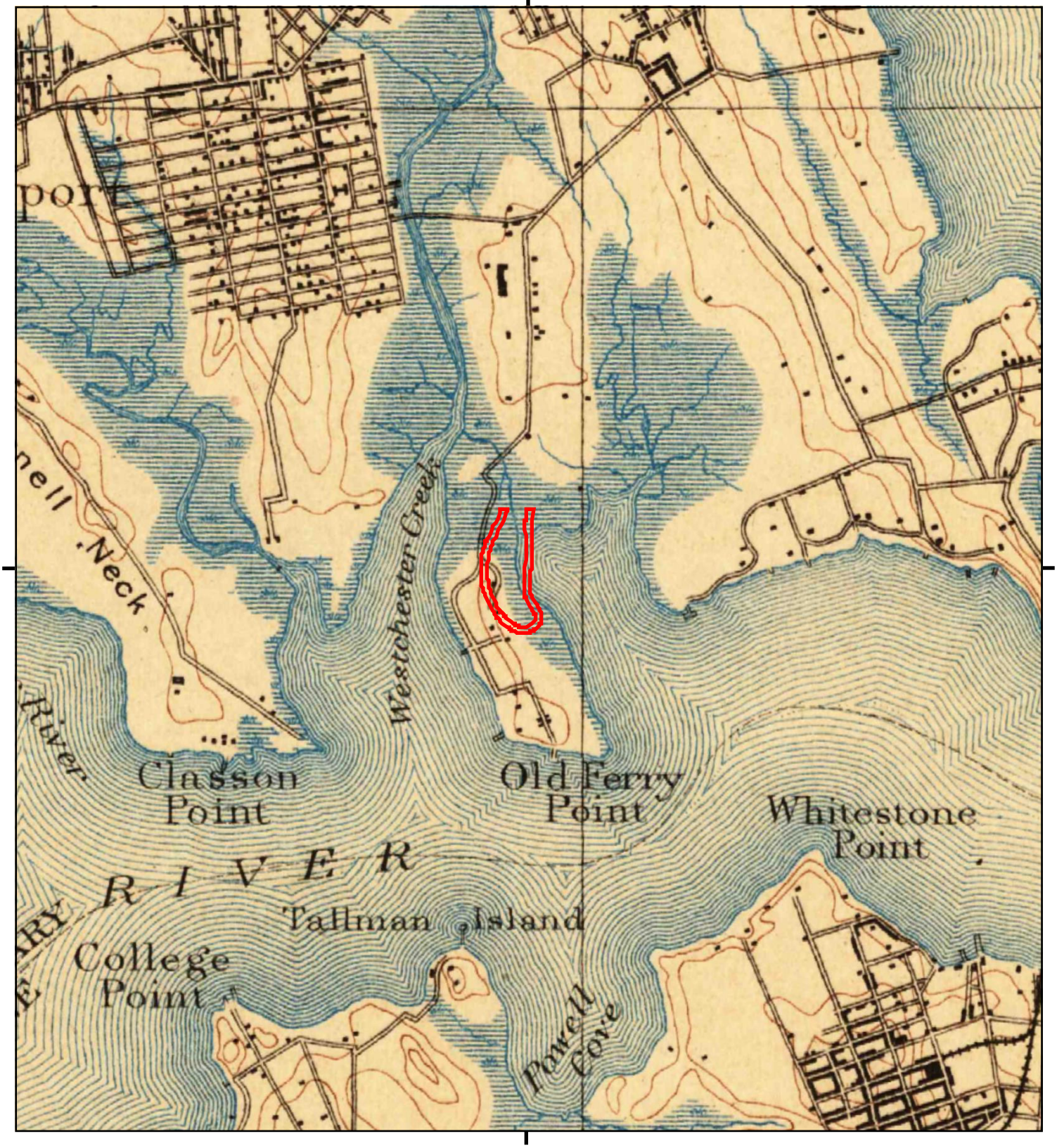
NW N NE
W E
SW S SE

TP, Harlem, 1900, 15-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N

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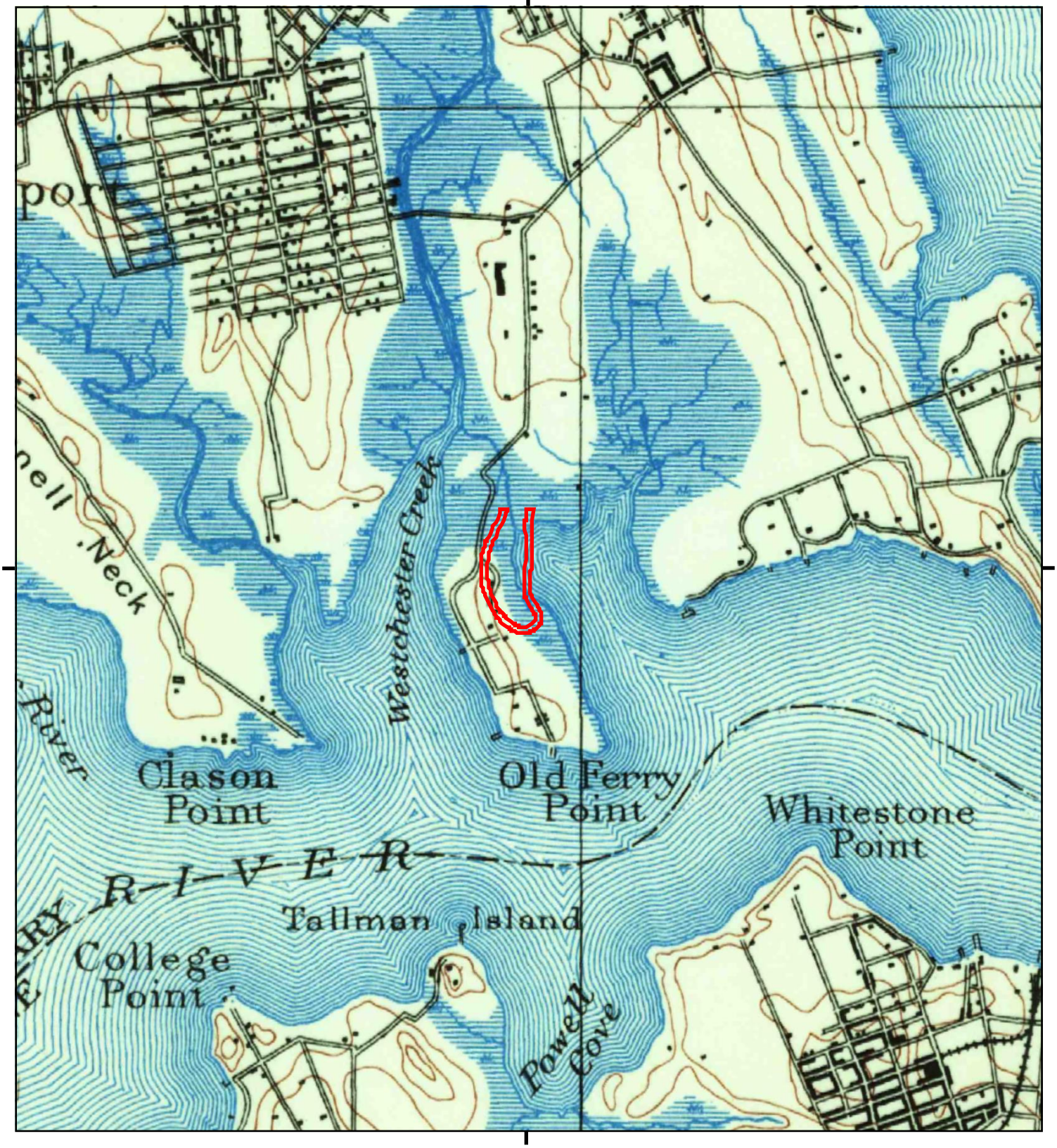
NW N NE
W E
SW S SE

TP, Harlem, 1898, 15-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Harlem, 1897, 15-minute

SITE NAME: Proposed Ballys Casino - Ring Road
ADDRESS: 450 Hutchinson River Parkway
Bronx, NY 10465
CLIENT: Langan Engineering, Inc.

N

**Proposed Ballys Casino - Ring Road**
450 Hutchinson River Parkway
Bronx, NY 10465

Inquiry Number: 7720624.5
July 30, 2024

# The EDR-City Directory Abstract

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR® Environmental Data Resources Inc

# TABLE OF CONTENTS

## SECTION

**Executive Summary**

**Findings**

**City Directory Images**

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

## DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at approximately five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1927 through current. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 2640 feet of the target property.

Summary information obtained is provided in the text of this report.

## RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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## RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

| Year | Source | TP | Adjoining | Text Abstract | Source Image |
|---|---|---|---|---|---|
| 2020 | EDR Digital Archive | - | X | X | - |
| 2017 | Cole Information | - | X | X | - |
| 2014 | Cole Information | - | X | X | - |
| 2010 | Cole Information | - | X | X | - |
| 2005 | Cole Information | - | X | X | - |
| | Hill-Donnelly Information Services | - | X | X | - |
| 2000 | Cole Information | - | X | X | - |
| | Cole Information Services | - | X | X | - |
| 1995 | Cole Information | - | X | X | - |
| 1993 | New York Telephone | - | X | X | - |
| 1992 | Cole Information | - | X | X | - |
| 1983 | New York Telephone | - | X | X | - |
| 1976 | New York Telephone Company | - | X | X | - |
| 1971 | New York Telephone | - | X | X | - |
| 1965 | New York Telephone Company | - | X | X | - |
| 1961 | New York Telephone | - | X | X | - |

# EXECUTIVE SUMMARY

| Year | Source | TP | Adjoining | Text Abstract | Source Image |
|---|---|---|---|---|---|
| 1956 | New York Telephone | - | X | X | - |
| 1949 | New York Telephone | - | X | X | - |
| 1940 | New York Telephone | - | X | X | - |
| 1931 | Manhattan and Bronx Directory Publishing Company Residential Directory | - | X | X | - |
| 1927 | New York Telephone | - | X | X | - |

# EXECUTIVE SUMMARY

## SELECTED ADDRESSES

The following addresses were selected by the client, for EDR to research. An "X" indicates where information was identified.

| *Address* | *Type* | *Findings* |
|---|---|---|
| 500 Hutchinson River Parkway | Client Entered | |
| 492 Hutchinson River Pkwy | Client Entered | |
| 525 Hutchinson River Pkwy | Client Entered | |
| 555 Hutchinson River Pkwy | Client Entered | |
| 545 Brush Ave | Client Entered | |
| 550 Brush Ave | Client Entered | |
| 650 Brush Ave | Client Entered | |
| 699 Brush Ave | Client Entered | |
| 3 Schley Ave | Client Entered | |
| 1 Schley Ave | Client Entered | |

# FINDINGS

## TARGET PROPERTY INFORMATION

### ADDRESS

450 Hutchinson River Parkway
Bronx, NY 10465

### FINDINGS DETAIL

Target Property research detail.

# FINDINGS

## ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

## BRUSH AVE

**500 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | ARKAY ASSOCIATES INC | New York Telephone |
| | BCD MASONRY INC | New York Telephone |
| | DECON MECHANICAL CONTRACTORS | New York Telephone |
| | DECON PLUMBING INC | New York Telephone |
| | JMM MASON INC | New York Telephone |

**509 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | KOFSKY IRA J | New York Telephone |
| 1976 | SULLIVAN WM L | New York Telephone Company |
| 1971 | SULLIVAN WM L | New York Telephone |

**510 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | FABRICAS PEIXE CORP | New York Telephone |
| | SALVATI FOODS PRODS INC | New York Telephone |

**515 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | MILLER MARY | New York Telephone |
| 1983 | ELSASSEI CHAS J | New York Telephone |
| 1976 | ELSASSER CHAS J | New York Telephone Company |
| 1971 | ELSASSER CHAS J | New York Telephone |
| 1965 | ELSASSER CHAS J | New York Telephone Company |

**529 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | BARKER JOHN | New York Telephone |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1993 | MARTIN J | New York Telephone |
| 1976 | DYNAMIC PAINTG & DECRATG CORP | New York Telephone Company |
| | EAST COAST PAINTING CORP | New York Telephone Company |
| 1965 | JENSEN E WM | New York Telephone Company |

**531 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | ASCENZO & SONS INC | New York Telephone Company |
| 1971 | ASCENZO & SONS INC | New York Telephone |

**535 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1965 | ASCENZO & SONS INC | New York Telephone Company |

**536 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1965 | WHITESTONE REALTY CORP | New York Telephone Company |

**550 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | SPIELBERG L & SONS INC | New York Telephone |
| 1983 | SPIELBERG L & SONS INC | New York Telephone |
| 1976 | SPIELBERG L & SONS INC | New York Telephone Company |
| 1971 | SISTO & DIMAIO INC | New York Telephone |
| | SPIELBERG L & SONS INC | New York Telephone |

**666 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | BIG APPLE WRECKING CORP | New York Telephone |

**680 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | CLEARY ANNA MRS | New York Telephone Company |
| 1971 | CLEARY ANNA MRS | New York Telephone |
| 1965 | CLEARY ANNA MRS | New York Telephone Company |

# FINDINGS

**682 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | MURPHY EDWARD V | New York Telephone |
| 1976 | MURPHY EDWARD R | New York Telephone Company |
| | MURPHY MAUREEN | New York Telephone Company |
| 1971 | MURPHY EILEEN V | New York Telephone |
| 1965 | MAC INTYRE ROBT W | New York Telephone Company |

## BRUSH AVE

**500 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CABLE VISION OF NYC | EDR Digital Archive |
| 2010 | MATELL CONTRACTING CO INC | Cole Information |
| 2005 | Matell Contracting Co Inc | Hill-Donnelly Information Services |
| | ANDREW C KATZ & ASSOCIATES | Cole Information |
| 2000 | MATELL CONTRNG CO | Cole Information |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |
| | R & R MECHANICAL INCORPORATED | Cole Information |
| | MATELL CONTRACTING COMPANY INCORPORATED | Cole Information |
| 1995 | DECON PLUMBING INC | Cole Information |
| | MATELL CONTRACTING CO INC | Cole Information |
| | DECON MECHANICAL CONTRACTORS | Cole Information |
| | R & R MECHANICAL INC | Cole Information |
| 1992 | DECON PLUMBING INC | Cole Information |
| | BCD MASONRY INC | Cole Information |
| | JMM MASON INC | Cole Information |
| | ARKAY ASSOCIATES INC | Cole Information |
| | DECON MECHANICAL CONTRACTORS | Cole Information |
| | MITTLEMAN, PHILIP A, ATTY | Cole Information |

**501 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | JOSE NUNEZ | Cole Information |

# FINDINGS

**504 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | h Carey L P A | Hill-Donnelly Information Services |
| 2000 | CAREY LP | Cole Information |
| | CAREY LP | Cole Information |
| 1995 | CARE 4 | Cole Information |

**509 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MICHAEL PEREZ | EDR Digital Archive |
| | ROBERT HERNANDEZ | EDR Digital Archive |
| 2017 | ROBERT HERNANDEZ | Cole Information |
| | DESIRE PEREZ | Cole Information |
| 2014 | TUPAC HERNANDEZ | Cole Information |
| | DESIRE PEREZ | Cole Information |
| 2010 | ANN DELGADO | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | Mercado Crystal V | Hill-Donnelly Information Services |
| 2000 | DAVID MERCADO | Cole Information |
| | RENE MERCADO | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |

**510 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | NCL | Hill-Donnelly Information Services |
| 1995 | FABRICAS PEIXE CORP | Cole Information |
| 1992 | SALVATI FOODS PRODS INC | Cole Information |
| | FABRICAS PEIXE CORP | Cole Information |

**515 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LET ME BUILD LLC | EDR Digital Archive |
| | JAMES MILLER | EDR Digital Archive |
| | DREW ROUBLICK | EDR Digital Archive |
| | JOANNE MILLER | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | DAISY RODRIGUEZ | EDR Digital Archive |
| 2014 | PAUL MILLER | Cole Information |
| 2010 | J MILLER | Cole Information |
| 2005 | PAUL MILLER | Cole Information |
| | Miller Paul | Hill-Donnelly Information Services |
| | Miller Paul | Hill-Donnelly Information Services |
| | Miller Paul Aa | Hill-Donnelly Information Services |
| | Rodriguez Daisy A | Hill-Donnelly Information Services |
| 2000 | KELLY KERNWI | Cole Information |
| | J E MILLER | Cole Information |
| | MARY MILLER | Cole Information |
| | VINCENT POWERS | Cole Information |
| | JOANNE MILLER | Cole Information |
| | KELLY KERWIN | Cole Information |
| 1993 | MILLER Mary | New York Telephone |
| 1992 | MILLER, MARY | Cole Information |
| 1940 | Elsasser G | New York Telephone |
| 1931 | Elasser Gustave fireman | Manhattan and Bronx Directory Publishing Company Residential Directory |

**517 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | JOANNE MILLER | Cole Information |

**528 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1940 | Ritch Sidney C | New York Telephone |
| 1927 | Ritch Sidney C r | New York Telephone |

**529 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHN WEINHEIMER | EDR Digital Archive |
| | ANTHONY MEDICI | EDR Digital Archive |
| | PETER BONIFIGLIO | EDR Digital Archive |
| 2005 | Barker J A | Hill-Donnelly Information Services |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2005 | Martin J AA | Hill-Donnelly Information Services |
| 2000 | J BARKER | Cole Information |
| | J MARTIN | Cole Information |
| 1993 | BARKER John | New York Telephone |
| | MARTIN J | New York Telephone |
| 1992 | BARKER, JOHN | Cole Information |
| | MARTIN, J | Cole Information |

**530 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1940 | Miller Chas H | New York Telephone |

**531 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2000 | OCCUPANT UNKNOWN | Cole Information |
| 1927 | Van Bakel P r | New York Telephone |

**545 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | UPS CUSTOMER CTR | EDR Digital Archive |
| 2005 | UNITED PARCEL SERVICE | Cole Information |

**550 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | D & J INDUSTRIES | EDR Digital Archive |
| | MCG CONSTRUCTION | EDR Digital Archive |
| | WHITESTONE ELECTRIC | EDR Digital Archive |
| | BUTLER FLEET | EDR Digital Archive |
| | LIBERTY MECHANICAL CONTRACTORS | EDR Digital Archive |
| 2017 | BUTLER FLEET | Cole Information |
| | MANAGEMENT IMPORT EXPORT LLC | Cole Information |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |
| | D&J INDUSTRIES | Cole Information |
| 2014 | MANAGEMENT IMPORT EXPORT LLC | Cole Information |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | BUTLER FLEET | Cole Information |
| | D&J INDUSTRIES | Cole Information |
| 2010 | BUTLER FLEET SVC | Cole Information |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |
| | MICHAEL CONTILLO | Cole Information |
| 2005 | Liberty Mechanical Contractors | Hill-Donnelly Information Services |
| | LIBERTY MECHANICAL CONTRACTORS | Cole Information |
| | TOWER PROPERTY MANAGEMENT CO | Cole Information |
| | DECON STORAGE LLC | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| 2000 | LIBERTY MECHI | Cole Information |
| | R & R MACHI INC | Cole Information |
| | KEVIN TAYLOR | Cole Information |
| 1995 | SPIELBERG L & SONS INC | Cole Information |
| 1992 | SPIELBERG L & SONS INC | Cole Information |

**552 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1931 | Hawlett Geo | Manhattan and Bronx Directory Publishing Company Residential Directory |

**630 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 1927 | Miller C H r | New York Telephone |

**650 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | WJD BEVERAGE INC | EDR Digital Archive |
| | BROOK BEVERAGE | EDR Digital Archive |
| | J WILD BEVERAGE CORP | EDR Digital Archive |
| | PEPSI BOTTLING GROUP | EDR Digital Archive |
| 2017 | BUHRE BEVERAGE DISTRIBUTING | Cole Information |
| | J WILD BEVERAGE CORP | Cole Information |
| | PEPSI COLA BOTTLING CO OF NY | Cole Information |
| | PEPSICO | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | BROOK BEVERAGE | Cole Information |
| 2014 | BUHRE BEVERAGE DISTRIBUTING | Cole Information |
| | J WILD BEVERAGE CORPORATION | Cole Information |
| | WEST SIDE BEVERAGE INCORPORATED | Cole Information |
| | PEPSICO | Cole Information |
| | BROOK BEVERAGE | Cole Information |
| | WJD BEVERAGE INCORPORATED | Cole Information |
| 2010 | PEPSI BOTTLING GROUP | Cole Information |
| | BUHRE BEVERAGE DISTRIBUTING | Cole Information |
| | BROOK BEVERAGE | Cole Information |
| | WJD BEVERAGE INC | Cole Information |
| | J WILD BEVERAGE CORP | Cole Information |
| | PEPSICOLA CO | Cole Information |

**680 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RAFAEL CARABALLO | EDR Digital Archive |
| | BROOKE CARABALLO | EDR Digital Archive |
| 2017 | RAFAEL CARABALLO | Cole Information |
| 2014 | ISAAC OCASIO | Cole Information |
| 2010 | JOSE OCASIO | Cole Information |
| 2005 | H Ocasio Jose AA | Hill-Donnelly Information Services |
| | JOSE OCASIO | Cole Information |
| 2000 | JOSE VELEZ | Cole Information |
| | JOSE VELEZ | Cole Information |
| 1992 | VELEZ, JOSE | Cole Information |
| 1931 | Cleary Wm | Manhattan and Bronx Directory Publishing Company Residential Directory |

**682 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | DENIS PINO | Cole Information |
| 2014 | DENIS PINO | Cole Information |
| 2010 | DENNIS PINO | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2005 | H Carrero S A Aa | Hill-Donnelly Information Services |
| | SALVADOR CARRERO | Cole Information |
| 1992 | RIVERA, JOSE | Cole Information |

**699 BRUSH AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | H 0 Penn Machinery Co | Hill-Donnelly Information Services |
| 2000 | CTRPLLR LFT TRCKS | Cole Information Services |
| | H O PENN MACHY CO | Cole Information Services |
| | H O PENN MACHY CO | Cole Information Services |
| | PENCO IND DIV H | Cole Information Services |
| 1993 | CATERPILLAR LIFT TRUCKS | New York Telephone |
| | H O PENN MACHINERY | New York Telephone |
| | H O PENN MACHINERY CO INC | New York Telephone |
| | PENCO INDUSTRIAL DIV OF H O PENN MACHINERY CO INC | New York Telephone |
| 1983 | HO PENN MACHINERY CO INC | New York Telephone |
| | PENN H O MACHINERY CO INC | New York Telephone |

## BRUSH AVE FRNT 1

**550 BRUSH AVE FRNT 1**

| Year | Uses | Source |
|---|---|---|
| 2020 | MICHAEL CONTILLO | EDR Digital Archive |
| | AMANDA CONTILLO | EDR Digital Archive |

## BRUSH AVE FRNT 2

**550 BRUSH AVE FRNT 2**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOSEPH DEGLOMINI | EDR Digital Archive |

## EMERSON AVE

**196 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | HICKSON GLENN | New York Telephone |

# FINDINGS

**198 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | DELVALLE RICHARD | New York Telephone |
| 1983 | CALANO WALTER | New York Telephone |
| 1976 | CALANO WALTER | New York Telephone Company |

**200 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | GALLO PASQUALE | New York Telephone |
| 1983 | GALLO PASQUALE | New York Telephone |
| | NEFF MARTIN | New York Telephone |
| 1976 | ANASTASIO NEIL | New York Telephone Company |
| | GALLO PASQUALE | New York Telephone Company |
| 1971 | ANASTASIO NELI | New York Telephone |
| | GALLO PASQUALE | New York Telephone |

**204 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | ALOISIO VITO | New York Telephone |
| | CODISPOTI SUSAN | New York Telephone |

**232 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | PERSAUD STEVE | New York Telephone |

**236 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | CRISCUOLO LORRAINE | New York Telephone Company |

**238 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | CAMPANELLI JOSEPH J | New York Telephone |
| | LEVANTIS V | New York Telephone |
| 1983 | HEFFERAN GERARD V | New York Telephone |
| 1976 | HEFFERAN GERARD V | New York Telephone Company |
| | MOLINARI MARY P | New York Telephone Company |

# FINDINGS

**244 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | TAKIS THOS | New York Telephone |
| | TRACZ JOHN | New York Telephone |
| 1983 | FRAHER D A | New York Telephone |
| | RUIZ FRANK | New York Telephone |
| | TAKIS THOS | New York Telephone |
| 1976 | HORGAN KENNETH F | New York Telephone Company |
| | TAKIS THOS | New York Telephone Company |

**250 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | GUIDO A | New York Telephone |

**258 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | RASMUSSEN L M | New York Telephone |
| 1983 | RASMUSSEN L M | New York Telephone |
| 1976 | RASMUSSEN WM A | New York Telephone Company |

**264 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | DEVINE D | New York Telephone |
| 1983 | PFUND ERWIN SR | New York Telephone |
| 1976 | PFUND ERWIN SR | New York Telephone Company |
| 1971 | PFUND ERWIN P JR | New York Telephone |

**266 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | BAPTIST PAT | New York Telephone Company |

**272 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | SAVINO DONALD | New York Telephone |
| 1976 | HAYES M | New York Telephone Company |
| 1971 | HAYES M | New York Telephone |

# FINDINGS

**274 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | FERRARI S | New York Telephone |
| 1983 | FERRARI S | New York Telephone |
| 1976 | FERRARI S | New York Telephone Company |

**276 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | A-STEVENS SEWER & DRAIN CLNG | New York Telephone |

**278 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | MALTESE JOHN F | New York Telephone |
| 1976 | MALTESE JOHN F | New York Telephone Company |

## EMERSON AVE

**196 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ESWILDA HERNANDEZ | EDR Digital Archive |
| 2017 | ESWILDA HERNANDEZ | Cole Information |
| 2014 | DANIEL PIROZZI | Cole Information |
| 2010 | DANIEL PIROZZI | Cole Information |
| 2005 | NCL | Hill-Donnelly Information Services |
| | JOANNE OHARE | Cole Information |
| 2000 | J DOHERTY | Cole Information |
| | J DOHERTY | Cole Information |
| 1993 | PIROZZI FRANK | New York Telephone |
| 1992 | PIROZZI, FRANK | Cole Information |
| 1983 | PIROZZI FRANK | New York Telephone |
| 1976 | PIROZZI FRANK | New York Telephone Company |
| 1971 | HARTMANN RAYMOND D | New York Telephone |
| | PIROZZI FRANK | New York Telephone |
| 1965 | HARTMANN RAYMOND D | New York Telephone Company |
| | PIROZZI FRANK | New York Telephone Company |
| 1961 | HASTMANN RAYMOND D | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1961 | PIROZZI FRANK | New York Telephone |
| 1931 | Carney Theo | Manhattan and Bronx Directory Publishing Company Residential Directory |

**198 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MICHAEL DIAZ | EDR Digital Archive |
| | VALLE DEL VALLE | EDR Digital Archive |
| | IVIS BONES | EDR Digital Archive |
| | BERNARDO DEL VALLE | EDR Digital Archive |
| | YVETTE FOY | EDR Digital Archive |
| | IVIS DIAZ | EDR Digital Archive |
| | RUDOLPH GADSON | EDR Digital Archive |
| 2017 | DALE WILLIAMS | Cole Information |
| 2014 | RUDOLPH GADSON | Cole Information |
| 2010 | MELVIN LANGLEY | Cole Information |
| 2005 | Langley M | Hill-Donnelly Information Services |
| | Williams Dale | Hill-Donnelly Information Services |
| | MELVIN LANGLEY | Cole Information |
| 2000 | OCCUPANT UNKNOWN | Cole Information |
| 1993 | DELVALLE Richard | New York Telephone |
| 1992 | DELVALLE, RICHARD | Cole Information |
| 1971 | ATTIS STEPHEN E JR | New York Telephone |
| | MORRIS TERENCE | New York Telephone |
| 1965 | TRUNCALI F J | New York Telephone Company |
| 1961 | MARTZ JOS M | New York Telephone |
| | TRUNCALI F J | New York Telephone |
| 1931 | Keller Walter | Manhattan and Bronx Directory Publishing Company Residential Directory |
| | Schineller Edw | Manhattan and Bronx Directory Publishing Company Residential Directory |

**200 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LUCECITA GUEVARA | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | FRANCISCO GUEVARA | EDR Digital Archive |
| 2017 | ROSALYNN MEJIA | Cole Information |
| 2010 | MARILYN MANSOUR | Cole Information |
| | FRANCISCO GUEVARA | Cole Information |
| | MARILYN COSTA | Cole Information |
| 2005 | FRANCISCO GUEVARA | Cole Information |
| | H Gallo S F Aa | Hill-Donnelly Information Services |
| 2000 | APARTMENTS | Cole Information |
| | MARIO CARO | Cole Information |
| | MAUREEN HUSTON | Cole Information |
| | PASQUAL GALLO | Cole Information |
| | ELLEN CHADWICK | Cole Information |
| 1993 | GALLO Pasquale | New York Telephone |
| 1992 | GALLO, PASQUALE | Cole Information |

**201 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2000 | MARIO CARO | Cole Information |
| | PASQUALE GALLO | Cole Information |

**202 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JULIO RODRIGUEZ | EDR Digital Archive |
| | JENNIE FLORES | EDR Digital Archive |
| | MICHELLE FLORES | EDR Digital Archive |
| 2017 | MICHELLE FLORES | Cole Information |
| 2014 | JENNIE FLORES | Cole Information |
| 2010 | JULIO RODRIGUEZ | Cole Information |
| 2005 | EDUARDO LOPEZ | Cole Information |
| | H Lopez Eduardo A | Hill-Donnelly Information Services |
| 2000 | EDUARDO LOPEZ | Cole Information |
| | EDUARDO LOPEZ | Cole Information |

# FINDINGS

**204 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ASHEEK ALLI | EDR Digital Archive |
| | ANTHONY NAPOLEONIS | EDR Digital Archive |
| | BIBI ALLI | EDR Digital Archive |
| | SHABANA ALLI-ARJUNE | EDR Digital Archive |
| | MARIA NAPOLEONIS | EDR Digital Archive |
| | RAMDEW ARJUNE | EDR Digital Archive |
| | LUZ NAPOLEONIS | EDR Digital Archive |
| 2017 | ASHEEK ALLI | Cole Information |
| | JAY JUNE | Cole Information |
| | SHABANA ARJUNE | Cole Information |
| | MIRIAM RODRIGUEZ | Cole Information |
| 2014 | ASHEEK ALLI | Cole Information |
| | JAY KHAN | Cole Information |
| | DAMARIS PEREZ | Cole Information |
| | JAY JUNE | Cole Information |
| | SHABANA ARJUNE | Cole Information |
| | MIRIAM RODRIGUEZ | Cole Information |
| 2010 | ASHEEK ALLI | Cole Information |
| | SHABANA ARJUNE | Cole Information |
| | RAVI RAMPERSAD | Cole Information |
| 2005 | VICTOR RODRIGUEZ | Cole Information |
| | H Rodriguez Victor A | Hill-Donnelly Information Services |
| 2000 | VICTOR RODRIGUEZ | Cole Information |
| | VICTOR RODRIGUEZ | Cole Information |
| 1976 | CODISPOTI GUIDO | New York Telephone Company |
| 1971 | CODISPOTI GUIDO | New York Telephone |

**230 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SHAYAN TAMAYO | EDR Digital Archive |
| | LINDA FRANCESCHINI | EDR Digital Archive |
| | NIKIELLA ESCAIERA | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | DAMARIS GARCIA | EDR Digital Archive |
| 2017 | SHAYAN TAMAYO | Cole Information |
| 2014 | SHAYAN TAMAYO | Cole Information |
| | DAMARIS GARCIA | Cole Information |
| 2010 | DAMARIS GARCIA | Cole Information |
| 2005 | M SANCHEZ | Cole Information |
| | GARCIA DEMARIS | Cole Information |
| | DAMARIS GARCIA | Cole Information |
| | 232 NCL | Hill-Donnelly Information Services |
| 2000 | OCCUPANT UNKNOWN | Cole Information |

**232 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | FREDDY ROSARIO | EDR Digital Archive |
| | ANDREW DIGIUGNO | EDR Digital Archive |
| | ANGELICA CASTANOS | EDR Digital Archive |
| 2017 | BERNETTA WALKER | Cole Information |
| | ANDREW DIGIUGNO | Cole Information |
| | ANGELICA CASTANOS | Cole Information |
| | JESSICA JOHNSON | Cole Information |
| | JAMES POLITE | Cole Information |
| 2014 | BERNETTA WALKER | Cole Information |
| | DIGIUGNO ANDREW | Cole Information |
| | ANDREW DIGIUGNO | Cole Information |
| | ANGELICA CASTANOS | Cole Information |
| | JAMES POLITE | Cole Information |
| | JESSICA JOHNSON | Cole Information |
| 2010 | ANDREW DIGIUGNO | Cole Information |
| | GIEZI DELEON | Cole Information |
| 2005 | ANDREW DIGIUGNO | Cole Information |
| | GIEZI DELEON | Cole Information |
| | AYANNA TREASURE | Cole Information |
| 2000 | OCCUPANT UNKNOWN | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 1993 | PERSAUD Steve | New York Telephone |
| 1992 | PERSAUD, STEVE | Cole Information |

**236 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | HUMERA ALI | EDR Digital Archive |
| | BIANCA ELIO | EDR Digital Archive |
| | TABINDA RIASAT | EDR Digital Archive |
| | RAJA RIASAT | EDR Digital Archive |
| 2017 | HUMERA ALI | Cole Information |
| | VINCENT ELIO | Cole Information |
| | RAJA RIASAT | Cole Information |
| | SOBIA PARVEEN | Cole Information |
| 2014 | HUMERA ALI | Cole Information |
| | VINCENT ELIO | Cole Information |
| | CHRISTOPHER WHITE | Cole Information |
| | ANN FISS | Cole Information |
| 2010 | ANN FISS | Cole Information |
| | CHRISTOPHER WHITE | Cole Information |
| | ANNETTE DELARA | Cole Information |
| | VINCENT CRISCUOLO | Cole Information |
| 2005 | Buxton William R V | Hill-Donnelly Information Services |
| | Crisuolo L AA | Hill-Donnelly Information Services |
| 2000 | L CRISUOLO 98 863-8115 | Cole Information |
| | L CRISUOLO | Cole Information |

**238 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SABRINA CALDERON | EDR Digital Archive |
| | DANNY MENDEZ | EDR Digital Archive |
| | JAY DANNY | EDR Digital Archive |
| | ELIZABETH GORDILLS | EDR Digital Archive |
| 2017 | LOUIS CARDELLO | Cole Information |
| | SABRINA CALDERON | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | SABRINA CALDERON | Cole Information |
| | JAY DANNY | Cole Information |
| 2010 | DANNY MENDEZ | Cole Information |
| 2005 | DANNY MENDEZ | Cole Information |
| | ELIZABETH GORDILLS | Cole Information |
| | Gordills E v | Hill-Donnelly Information Services |
| 2000 | VICTOR BETANCOURT | Cole Information |
| | VICTOR BETANCOURT | Cole Information |
| 1993 | CAMPANELLI Joseph J | New York Telephone |
| | LEVANTIS V | New York Telephone |
| 1992 | CAMPANELLI, JOSEPH J | Cole Information |

**239 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2000 | OCCUPANT UNKNOWN | Cole Information |

**244 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SYLVIA TAKIS | EDR Digital Archive |
| | THOMAS TAKIS | EDR Digital Archive |
| | THEODORE TAKIS | EDR Digital Archive |
| 2017 | THOMAS TAKIS | Cole Information |
| 2014 | THOMAS TAKIS | Cole Information |
| 2010 | THOMAS TAKIS | Cole Information |
| 2005 | ASSET LINK LLC | Cole Information |
| | THOMAS TAKIS | Cole Information |
| | H Takides Ted A | Hill-Donnelly Information Services |
| | Takis Thomas AV | Hill-Donnelly Information Services |
| 2000 | TED TAKIDES | Cole Information |
| | THOMAS TAKIS | Cole Information |
| | TED TAKIDES | Cole Information |
| | THOMAS TAKIS | Cole Information |
| 1993 | TAKIS Thos | New York Telephone |
| | TAKO Michael % 364 9564 | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1993 | TRACZ John | New York Telephone |
| 1992 | TAKIS, THOS | Cole Information |
| | TRACZ, JOHN | Cole Information |
| 1971 | LAFFERTY RONALD | New York Telephone |
| 1965 | LAFFERTY LOUIS J | New York Telephone Company |
| 1961 | LAFFERTY LOUIS J | New York Telephone |

**245 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 1931 | Farrell Patk | Manhattan and Bronx Directory Publishing Company Residential Directory |

**250 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOSEPH RAMOS | EDR Digital Archive |
| | ANTONIO RAMOS | EDR Digital Archive |
| 2017 | ANGEL WILSON | Cole Information |
| 2014 | DENISE GOMEZ-RAMOS | Cole Information |
| | RAMOS ANTONIO | Cole Information |
| | ANA VAZQUEZ | Cole Information |
| | ANDRE ROBINSON | Cole Information |
| | MARCUS ROSARIO | Cole Information |
| 2010 | ANTONIO RAMOS | Cole Information |
| | ANA VAZQUEZ | Cole Information |
| 2005 | ANTONIO RAMOS | Cole Information |
| | H Ramos A G AA | Hill-Donnelly Information Services |
| 2000 | W G HONEGGER JR | Cole Information |
| | W HONEGGER | Cole Information |
| 1993 | GUIDO A | New York Telephone |
| 1992 | GUIDO, A | Cole Information |

**252 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ANDREW MORALES | EDR Digital Archive |
| | GUY MULLER | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | ANTHONY GENADIO | EDR Digital Archive |
| | CAROL TRIASSI | EDR Digital Archive |
| | MINOO TAVAZOI | EDR Digital Archive |
| 2017 | VIRGINIA PEARCE | Cole Information |
| 2014 | PEARCE VIRGINIA | Cole Information |
| | VIRGINIA PEARCE | Cole Information |
| | ANTHONY GENADIO | Cole Information |
| | DOMENICA GUIDO | Cole Information |
| 2010 | DOMEN PEARCE | Cole Information |
| | ANTHONY GENADIO | Cole Information |
| | DOMENICA GUIDO | Cole Information |
| 2005 | DOMEN PEARCE | Cole Information |
| | h Pearce V AV | Hill-Donnelly Information Services |
| 2000 | CECILIA GONZALEZ | Cole Information |
| | CECILIA GONZALEZ | Cole Information |

**258 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MARIEL QUILES | EDR Digital Archive |
| | QUILES ELADIO | EDR Digital Archive |
| | BRANDON QUILES | EDR Digital Archive |
| | CHRISTOPHER QUILES | EDR Digital Archive |
| 2017 | ELADIO QUILES | Cole Information |
| 2014 | ELADIO QUILES | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| 2005 | HIRAM COLON | Cole Information |
| | H Colon H A | Hill-Donnelly Information Services |
| 2000 | HIRAM COLON | Cole Information |
| 1993 | RASMUSSEN L M | New York Telephone |
| 1992 | RASMUSSEN, L M | Cole Information |
| 1971 | PFUND WM | New York Telephone |
| 1965 | PFUND WM | New York Telephone Company |
| 1961 | PFUND WM | New York Telephone |

# FINDINGS

**264 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LYNN DEVINE | EDR Digital Archive |
| | DENNIS DEVINE | EDR Digital Archive |
| 2014 | DEVINE DENNIS | Cole Information |
| 2010 | DENNIS DEVINE | Cole Information |
| 2005 | KAREN BASMUSSEN | Cole Information |
| | DENNIS DEVINE | Cole Information |
| | KAREN RASMUSSEN | Cole Information |
| | Devine D A | Hill-Donnelly Information Services |
| 2000 | D DEVINE | Cole Information |
| | DEVINE DENNIS | Cole Information |
| | DENNIS DEVINE | Cole Information |
| 1993 | DEVINE D | New York Telephone |
| 1992 | DEVINE, D | Cole Information |
| 1965 | PFUND ERWIN | New York Telephone Company |
| 1961 | PFUND ERWIN | New York Telephone |

**266 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JULES HAMILTON | EDR Digital Archive |
| | LOREEN WALKER | EDR Digital Archive |
| | MARIE HAMILTON | EDR Digital Archive |
| | KYLE HAMILTON | EDR Digital Archive |
| 2017 | MARIE BROWN-HAMILTON | Cole Information |
| | LOREEN WALKER | Cole Information |
| 2014 | JULES HAMILTON | Cole Information |
| | ICILDA HISLOP | Cole Information |
| | LOREEN WALKER | Cole Information |
| 2010 | VICTOR GONZALEZ | Cole Information |
| | JULES HAMILTON | Cole Information |
| | I HISLOP | Cole Information |
| | LOREEN WALKER | Cole Information |
| | MARIE BROWN | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2005 | LOREEN WALKER | Cole Information |
| | Walker Loreen | Hill-Donnelly Information Services |
| 2000 | LAURIE STEWART | Cole Information |
| | LAURIE STEWART | Cole Information |
| 1971 | DUFFY M E | New York Telephone |
| 1965 | FALCIANO THOS L | New York Telephone Company |
| | GAMBOL ROY | New York Telephone Company |
| 1961 | FALCIANO VICTORIA MRS | New York Telephone |
| 1931 | Camerino Wm | Manhattan and Bronx Directory Publishing Company Residential Directory |
| 1927 | Camerino E L r | New York Telephone |

**268 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MARCO LOPEZ | EDR Digital Archive |
| | JOSEPH HERNANDEZ | EDR Digital Archive |
| | MARTHA LOPEZ | EDR Digital Archive |
| | CHRISTOPHER LOPEZ | EDR Digital Archive |
| | KARLA LAGUNA | EDR Digital Archive |
| | LIZZETTE RAMOS | EDR Digital Archive |
| 2017 | MARCO LOPEZ | Cole Information |
| 2014 | MARCO LOPEZ | Cole Information |
| | VICTOR CRAIG | Cole Information |
| | KARLA LAGUNA | Cole Information |
| 2010 | GABRIEL DELGADO | Cole Information |
| | MARCO LOPEZ | Cole Information |
| | KARLA LAGUNA | Cole Information |
| 2005 | RAFAEL CASIANO | Cole Information |
| | MADELINE RIOPEDRE | Cole Information |
| | NCL | Hill-Donnelly Information Services |
| 2000 | H MERCADO JR | Cole Information |
| | H MERCADO | Cole Information |
| | L RAMOS | Cole Information |

# FINDINGS

**270 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RAYMOND CLEMENTZ | EDR Digital Archive |
| | FRANK MATOS | EDR Digital Archive |
| 2017 | RAYMOND CLEMENTZ | Cole Information |
| 2014 | RAYMOND CLEMENTZ | Cole Information |
| 2010 | CARLOS GONZALEZ | Cole Information |
| | FRANK MATOS | Cole Information |
| 2005 | OLGA SHAVEZ | Cole Information |
| | LAWRENCE MATOS | Cole Information |
| | h Gonzalez Carlos v | Hill-Donnelly Information Services |
| 2000 | OLGA SHAVEZ | Cole Information |
| | PETER TORRES | Cole Information |
| | PETER TORRES | Cole Information |
| | OLGA SHAVEZ | Cole Information |

**272 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | DONALD SAVINO | EDR Digital Archive |
| | GRETA CARLUCCI | EDR Digital Archive |
| 2017 | DONALD SAVINO | Cole Information |
| 2014 | DONALD SAVINO | Cole Information |
| 2010 | DONALD SAVINO | Cole Information |
| 2005 | JOHN FRANZ | Cole Information |
| | h Savino Donald AO | Hill-Donnelly Information Services |
| 2000 | GRETA CARLUCCI | Cole Information |
| | GRETA CARLUCCI | Cole Information |
| 1993 | SAVINO Donald | New York Telephone |
| 1992 | SAVINO, DONALD | Cole Information |
| 1965 | HAYES JOS M | New York Telephone Company |
| 1961 | COMERFORD THOS J JR | New York Telephone |

**274 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ENILZA BATISTA | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | RICARDO COLON | EDR Digital Archive |
| | MARTHA LOPEZ | EDR Digital Archive |
| | MARCO LOPEZ | EDR Digital Archive |
| | CHRISTINA LAPIERRE | EDR Digital Archive |
| 2017 | RICARDO COLON | Cole Information |
| 2014 | MARCO LOPEZ | Cole Information |
| 2010 | MARCO LOPEZ | Cole Information |
| 2005 | MARCO LOPEZ | Cole Information |
| | Lopez M L | Hill-Donnelly Information Services |
| 1993 | FERRARI S | New York Telephone |
| 1992 | FERRARI, S | Cole Information |
| 1971 | FERRARI STELLA MRS | New York Telephone |
| 1965 | FERRARI STELLA MRS | New York Telephone Company |
| 1961 | BRAZAITIS PETER J | New York Telephone |
| | FERRARI STELLA MRS | New York Telephone |

**276 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHRISTINA ANNUNZIATA | EDR Digital Archive |
| | FRANCINE PESCE | EDR Digital Archive |
| | DAMARIS RAMIREZ | EDR Digital Archive |
| | FRANCINE ANNUNZIATA | EDR Digital Archive |
| | DOMINIC ANNUNZIATA | EDR Digital Archive |
| 2017 | DOMINIC ANNUNZIATA | Cole Information |
| 2014 | FRAN ANNUNZIATA | Cole Information |
| 2010 | FRAN ANNUNZIATA | Cole Information |
| 2005 | Annunziata Fran A | Hill-Donnelly Information Services |
| | Pesce Gerard 3 AA | Hill-Donnelly Information Services |
| | FRAN ANNUNZIATA | Cole Information |
| 2000 | EVELYN PESCE | Cole Information |
| | FRAN ANNUNZIATA | Cole Information |
| 1995 | A-STEVENS SEWER & DRAIN CLNG | Cole Information |
| 1993 | PESCE GERARD J | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1992 | A-STEVENS SEWER & DRAIN CLNG | Cole Information |
| | PESCE, GERARD J | Cole Information |
| 1983 | PESCE GERARD J | New York Telephone |
| 1976 | PESCE GERARD J | New York Telephone Company |
| 1971 | PESCE GERARD J | New York Telephone |
| 1965 | PESCE GERARD J | New York Telephone Company |
| 1961 | PESCE GERARD J | New York Telephone |

**278 EMERSON AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | HAWA LAMIN | EDR Digital Archive |
| | MARIE HILL | EDR Digital Archive |
| | MARK HILL | EDR Digital Archive |
| | MAGLENSIE MOTLEY | EDR Digital Archive |
| | MIYA HILL | EDR Digital Archive |
| 2017 | MIYA HILL | Cole Information |
| 2014 | MIYA HILL | Cole Information |
| 2010 | MARIE SAINTHILL | Cole Information |
| 2005 | St Hill Marie AA | Hill-Donnelly Information Services |
| | 1562 WHITE PLAINES RD INC | Cole Information |
| | JAMES HILL | Cole Information |
| 2000 | JAMES HILL | Cole Information |
| | JAMES HILL | Cole Information |
| 1992 | MALTESE, IDA | Cole Information |
| 1965 | HICKSON JONN | New York Telephone Company |
| 1961 | HICKSON JOHN | New York Telephone |

## HARDING AVE

**2576 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MARY SAVAGE | EDR Digital Archive |
| | DAVID SAVAGE | EDR Digital Archive |
| | MARGARET DALY | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | DAVID SAVAGE | Cole Information |
| 2014 | DAVID SAVAGE | Cole Information |
| 2010 | DAVID SAVAGE | Cole Information |
| 2000 | MARCIA MEYER | Cole Information |
| | DAVID SAVAGE | Cole Information |
| 1992 | MEYER, RICHD C | Cole Information |
| | LEGATO, JOSEPH | Cole Information |

**2577 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | BARBARA NOVELLINO | EDR Digital Archive |
| | PATRICIA JONAP | EDR Digital Archive |
| 2017 | BARBARA NOVELLINO | Cole Information |
| 2014 | RICHARD ANDERSON | Cole Information |
| 2010 | RICHARD ANDERSON | Cole Information |
| 2005 | RICHARD ANDERSON | Cole Information |
| 2000 | RICHARD ANDERSON | Cole Information |
| 1992 | ANDERSON, GUSTAVE M | Cole Information |

**2578 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | FEONIA JAMES-JONES | EDR Digital Archive |
| | JAMES-JONES FEONIA | EDR Digital Archive |
| 2017 | MARLON JONES | Cole Information |
| 2014 | MARLON JONES | Cole Information |
| 2005 | WILLIAM ORTIZ | Cole Information |
| 2000 | WILLIAM ORTIZ | Cole Information |

**2579 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ELSA SEGUNDO | EDR Digital Archive |
| | CARLOS AQUINO | EDR Digital Archive |
| | CHRISTOPHER BARBOSA | EDR Digital Archive |
| | ANGELA AQUINO | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | CHRIS BARBOSA | Cole Information |
| 2014 | ELSA SEGUNDO | Cole Information |
| | EDITH LOPEZ | Cole Information |
| 2010 | ELSA SEGUNDO | Cole Information |
| | EDITH LOPEZ | Cole Information |
| 2005 | ANTHONY DELGADO | Cole Information |
| | ANTHONY DIAZ | Cole Information |
| 2000 | MARY LILLIS | Cole Information |

**2580 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | VICTORIA ALVARADO | EDR Digital Archive |
| | LINDA ALVARADO | EDR Digital Archive |
| | JAMES ALVARADO | EDR Digital Archive |
| 2017 | JAMES ALVARADO | Cole Information |
| 2014 | JAMES ALVARADO | Cole Information |
| 2010 | JAMES ALVARADO | Cole Information |
| 2005 | JAMES ALVARADO | Cole Information |
| 2000 | CAROL HILL | Cole Information |

**2581 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | BRUNILDA FALCON | EDR Digital Archive |
| 2017 | BRUNILDA FALCON | Cole Information |
| 2014 | ANTHONY MONITTO | Cole Information |
| 2010 | ANTHONY MONITTO | Cole Information |
| 2005 | ANTHONY MONITTO | Cole Information |
| 2000 | MARIA MONITTO | Cole Information |

**2582 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ERIC COLEMAN | EDR Digital Archive |
| 2017 | COLEMAN ERIC | Cole Information |
| 2014 | OCCUPANT UNKNOWN | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| 2000 | THOMAS DOERR | Cole Information |
| 1992 | DOERR, THOMAS G | Cole Information |

**2583 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | EDMUND MCCORMACK | EDR Digital Archive |
| | FRANCIS DOYLE | EDR Digital Archive |
| | NATALIE ROMAN | EDR Digital Archive |
| 2017 | DOMINGO TORRES | Cole Information |
| 2014 | DOYLE FRANCIS | Cole Information |
| 2010 | FRANCIS DOYLE | Cole Information |
| 2005 | FRANCIS DOYLE | Cole Information |
| 2000 | FRANCIS DOYLE | Cole Information |
| 1992 | LOMBARDO, PAUL | Cole Information |

**2584 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CRYSTAL LOPEZ | EDR Digital Archive |
| | CHRISTOPHER GONZALEZ | EDR Digital Archive |
| | OMAR CRUZ | EDR Digital Archive |
| 2017 | MARIVEL SALCEDO | Cole Information |
| 2014 | SUZANNE GONZALEZ | Cole Information |
| 2010 | SUZANNE GONZALEZ | Cole Information |
| 2005 | BELEN GONZALEZ | Cole Information |
| 2000 | MARIO COLON | Cole Information |

**2585 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CLARA ROSADO | EDR Digital Archive |
| | DIANA CLEMENTI | EDR Digital Archive |
| | FAUSTO HENRIQUEZ | EDR Digital Archive |
| 2014 | DIANA CLEMENTI | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | DIANA GRIFFORD | Cole Information |
| 2010 | PATRICK BIASE | Cole Information |
| | DIANA CLEMENTI | Cole Information |
| | DIANA GRIFFORD | Cole Information |
| 2005 | DAVID PETILLO | Cole Information |
| | DIANA GIFFORD | Cole Information |
| | DIANA CLEMENTI | Cole Information |
| | DIANA GRIFFORD | Cole Information |
| 1992 | GIFFORD, MICHAEL | Cole Information |

**2586 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | STEVEN MUHAMMAD | EDR Digital Archive |
| | GISELLA QUIJIJE | EDR Digital Archive |
| | RITA MUHAMMAD | EDR Digital Archive |
| 2017 | STEVEN MUHAMMAD | Cole Information |
| | GISELLA QUIJIJE | Cole Information |
| | MARIA SERRANO | Cole Information |

**2587 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LUCIANO PEDRO | EDR Digital Archive |
| | JOSEFINA MOLINA | EDR Digital Archive |
| | SILVERIO APREA | EDR Digital Archive |
| 2017 | AGUSTINO APREA | Cole Information |
| | JOSEFINA MOLINA | Cole Information |
| 2014 | SILVERIO APREA | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| | SILVERIO APREA | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | MICHAEL KOSINENKO | Cole Information |
| 2000 | A APREA | Cole Information |
| 1992 | KOSINENKO, F | Cole Information |
| | APREA, AGUSTINO | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 1992 | APREA, SILVERIO | Cole Information |

**2589 HARDING AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RAYMOND MIURA | EDR Digital Archive |
| | MAUREEN GRECO | EDR Digital Archive |
| | ANTHONY GRECO | EDR Digital Archive |
| | WILLIAM GRECO | EDR Digital Archive |
| 2017 | RAY MIURA | Cole Information |
| | WILLIAM GRECO | Cole Information |
| 2014 | WILLIAM GRECO | Cole Information |
| 2010 | PATRICIA GRECO | Cole Information |
| | MAUREEN GREGO | Cole Information |
| | SCOTT BABIAK | Cole Information |
| 2005 | PATRICIA GRECO | Cole Information |
| | RICHARD SCHMIDT | Cole Information |
| | SCOTT BABIAK | Cole Information |

## HOSMAR AVE

**277 HOSMAR AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | DE ROSE JOHN | New York Telephone |

## HOSMER AVE

**237 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | PICCININNI MARIE | New York Telephone |
| 1983 | PICCININNI MARIE | New York Telephone |
| 1976 | FERRARI V | New York Telephone Company |
| | PICCININNI MARIE | New York Telephone Company |
| 1971 | JUSITS JOS | New York Telephone |
| 1965 | JUSITS JOS | New York Telephone Company |

# FINDINGS

**245 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1971 | GERRETS HENRY C | New York Telephone |
| 1965 | GERRETS HENRY C | New York Telephone Company |

**246 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1993 | MEURER MARTIN | New York Telephone |
| 1983 | CARRIQUE CONSTANTINO | New York Telephone |
| | MEURER MARTIN | New York Telephone |
| 1976 | MEURER MARTIN | New York Telephone Company |
| 1971 | MEURER MARTIN | New York Telephone |
| 1965 | MEURER MARTIN | New York Telephone Company |
| | ROJAS E L | New York Telephone Company |

**277 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1993 | DEROSE JOHN | New York Telephone |
| 1976 | BAUER ANITA M | New York Telephone Company |
| 1971 | BAUER ANITA M | New York Telephone |
| 1965 | BAUER ANITA M | New York Telephone Company |

**278 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1976 | DE ROSE JOHN | New York Telephone Company |
| 1971 | GRIFFIN GERALD | New York Telephone |
| 1965 | HORAN EUGENE V | New York Telephone Company |

## HOSMER AVE

**237 HOSMER AVE**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 2005 | h Piccininni Marie AA | Hill-Donnelly Information Services |
| 2000 | DOLORES CORRADO | Cole Information |
| 1993 | PICCININNI Marie | New York Telephone |

# FINDINGS

**240 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ANTONIO GARCIA | EDR Digital Archive |
| | MARIA TORRES | EDR Digital Archive |
| | ERIC GARCIA | EDR Digital Archive |
| 2017 | ANTONIO GARCIA | Cole Information |
| | NELIDA RUIZ | Cole Information |
| | MARIA TORRES | Cole Information |
| 2014 | TORRES MARIA | Cole Information |
| | EDDIE ARENAS | Cole Information |
| | MARIA TORRES | Cole Information |
| | ANGEL CHAVEZ | Cole Information |
| | MARIE SMITH | Cole Information |
| 2010 | ORNAN CORCINO | Cole Information |
| | MARIA TORRES | Cole Information |
| 2005 | Corcino Oman v YO | Hill-Donnelly Information Services |

**245 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOACHIM RILEY | EDR Digital Archive |
| | ELBA RILEY | EDR Digital Archive |
| 2014 | JOSEPH RILEY | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| 2005 | H Coppinger R J Sr A | Hill-Donnelly Information Services |
| 2000 | RAYMOND COPPINGER | Cole Information |

**246 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2014 | LINDA CICALE | Cole Information |
| 2010 | LINDA CICALE | Cole Information |
| 2005 | NCL | Hill-Donnelly Information Services |
| 2000 | LUCIEN CHOUINARD | Cole Information |
| 1993 | MEURER Martin | New York Telephone |
| 1992 | MEURER, MARTIN | Cole Information |
| 1940 | Meurer Martin | New York Telephone |

# FINDINGS

**248 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | WEI LIN | EDR Digital Archive |
| | ASHLEY PAGE | EDR Digital Archive |
| | SABRINA PADILLA | EDR Digital Archive |
| 2017 | CHRISITNE GIFF | Cole Information |
| | NORBERTO HIERRO | Cole Information |
| | ZHOU LIN | Cole Information |
| 2014 | CHRISITNE GIFF | Cole Information |
| | JING LIN | Cole Information |
| 2010 | CHEN LEI | Cole Information |
| | ANDREW FELDMAN | Cole Information |
| | JING LIN | Cole Information |
| 2005 | JING LIN | Cole Information |

**250 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | BELKIS PEREZ | EDR Digital Archive |
| | DALILA PEREZ | EDR Digital Archive |
| 2017 | BELKIS PEREZ | Cole Information |
| 2014 | BIANCA MALDONADO | Cole Information |
| | BELKIS PEREZ | Cole Information |
| 2010 | BELKIS PEREZ | Cole Information |
| 2005 | BELKIS PEREZ | Cole Information |

**251 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SAJIT TAXI INC | EDR Digital Archive |
| | SYED SHAMSUZZAMAN | EDR Digital Archive |
| | FARAH SHAMSUZZAMAN | EDR Digital Archive |
| | ANGELA SALAZAR | EDR Digital Archive |
| 2017 | ANGELA SALAZAR | Cole Information |
| 2014 | SYED SHAMSUZZAMAN | Cole Information |
| | ANGELA SALAZAR | Cole Information |
| 2010 | ANGELA DURAN | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | SYED SHAMSUZZAMAN | Cole Information |
| 2005 | JASHIM WORLDWIDE | Cole Information |
| | SYED SHAMSUZZAMAN | Cole Information |
| | JASHIM AHMED | Cole Information |
| | Ahmed Jashim v | Hill-Donnelly Information Services |
| | Jashim Waorldw ide | Hill-Donnelly Information Services |
| | Shamsuzzaman Syed A | Hill-Donnelly Information Services |
| 2000 | SYED SHAMSUZZAMAN | Cole Information |

**252 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ATOLIA MCFARLANE | EDR Digital Archive |
| | MIRTHA MALDONADO | EDR Digital Archive |
| | MEI ZHU | EDR Digital Archive |
| | FANG MEI | EDR Digital Archive |
| | LEI CHEN | EDR Digital Archive |
| 2017 | CUIFEN DONG | Cole Information |
| 2014 | KATHERINE THATCHER | Cole Information |
| 2010 | FANG MEI | Cole Information |
| 2005 | MEI ZHU | Cole Information |
| | h Zhu Mel Fang v | Hill-Donnelly Information Services |

**253 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | DEBORAH FELDMAN | EDR Digital Archive |
| | CHENG CHUEN | EDR Digital Archive |
| | PARISSA SUAREZ | EDR Digital Archive |
| | JOHN CHENG | EDR Digital Archive |
| 2017 | MELISSA GONZALEZ | Cole Information |
| | PARISSA SUAREZ | Cole Information |
| 2014 | MELISSA GONZALEZ | Cole Information |
| | LIEN NGUYEN | Cole Information |
| | CAROLINE BRANCATO | Cole Information |
| | ALFRED ROMAN | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | CAROLINE BRANCATO | Cole Information |
| | MICHAEL HADSHIAN | Cole Information |
| | BRUCE FELDMAN | Cole Information |
| 2005 | CAROLINE BRANCATO | Cole Information |
| | C BRANCTO | Cole Information |
| | ABE MASSA | Cole Information |
| | h Massa Barbara A A | Hill-Donnelly Information Services |
| 2000 | CHRIS VERINI | Cole Information |
| | MICHAEL HADSHIAN | Cole Information |

**254 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | VICTOR GARCIA | EDR Digital Archive |
| | IRENE YUSIM | EDR Digital Archive |
| | STACY GARCIA | EDR Digital Archive |
| | KAREN CHEDDESINGH | EDR Digital Archive |
| | SALVATORE CAPALBO | EDR Digital Archive |
| | MERCEDEZ WILLIAMS | EDR Digital Archive |
| | DELANO WILLIAMS | EDR Digital Archive |
| | FELICIANO RAMIREZ | EDR Digital Archive |
| 2017 | LINDA GARCIA | Cole Information |
| | ROBERT GRIFFIN | Cole Information |
| 2014 | ROBERT GRIFFIN | Cole Information |
| | FELICIANO RAMIREZ | Cole Information |
| 2010 | IRENE YUSIM | Cole Information |
| | ANGEL SOSA | Cole Information |
| 2005 | IRENE YUSIM | Cole Information |
| | SALVATORE CAPALBO | Cole Information |
| | STEVEN ZABSKI | Cole Information |
| | NCL | Hill-Donnelly Information Services |

**255 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | HYACINTH SIMPSON | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2020 | ERROL ANGELL | EDR Digital Archive |
| | CHRISTINA DECLET | EDR Digital Archive |
| | RICHARD REID | EDR Digital Archive |
| 2017 | HYACINTH SIMPSON | Cole Information |
| | JOANNE RIVERA | Cole Information |
| | CHRISTINA DECLET | Cole Information |
| | DOMINIQUE ANGELL | Cole Information |
| 2014 | HYACINTH SIMPSON | Cole Information |
| | DIEGO DEJESUS | Cole Information |
| | PEDRO MARTINEZ | Cole Information |
| | CHRISTINA DECLET | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| 2010 | AHMED MOSTAQUE | Cole Information |
| | HYACINTH SIMPSON | Cole Information |
| | DIEGO DEJESUS | Cole Information |
| | ERNIE OBRIEN | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| | SIMPSON HYACINTH | Cole Information |
| 2005 | AHMED MOSTAQUE | Cole Information |
| | ISABEL MENDEZ | Cole Information |
| | MOHAMMAD AHMED | Cole Information |
| | MASTAQUE AHRIED | Cole Information |
| | Rugs D vo | Hill-Donnelly Information Services |

**256 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ASANTE BRIGHT | EDR Digital Archive |
| | MICHAEL BRIGHT-ASANT | EDR Digital Archive |
| | MARQUISHA MCBEAN | EDR Digital Archive |
| | PATRICK HILL | EDR Digital Archive |
| 2017 | MICHAEL ASANTE | Cole Information |
| | PATRICK HILL | Cole Information |
| 2014 | MICHAEL ASANTE | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2014 | ANGELA JARVIS | Cole Information |
| 2010 | SHAWN JARVIS | Cole Information |
| 2005 | WHEELS PLUS INC | Cole Information |
| | RICKA BLAKE | Cole Information |
| | SHAWN JARVIS | Cole Information |
| | ANGELA SORIANO | Cole Information |
| | Wheels Plus Inc 1 R | Hill-Donnelly Information Services |

**257 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ECO HOME IMPROVEMENT LLC | EDR Digital Archive |
| | JASMIN CLARKE | EDR Digital Archive |
| | DAVID CLARKE | EDR Digital Archive |
| 2017 | BRIAN GRANADOS | Cole Information |
| | CLARKE JASMIN | Cole Information |
| | ANTHONY COLASANTI | Cole Information |
| | RODNEY ROJAS | Cole Information |
| | DAVID HOWARD | Cole Information |
| 2014 | JASMINE GRANADOS | Cole Information |
| | CLARKE JASMIN | Cole Information |
| 2010 | JASMINE GRANADOS | Cole Information |
| | DAVID HOWARD | Cole Information |
| 2005 | JASMIN HOWARD | Cole Information |
| | MICHELLE GOODE | Cole Information |
| | JASMIN CLARKE | Cole Information |
| | NADINE DECOSTA | Cole Information |
| | H Clarke Jasmin v& | Hill-Donnelly Information Services |
| 2000 | DAVID CLARKE | Cole Information |

**258 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | GARCIA ZAIDA | EDR Digital Archive |
| | WILLIAM ROMAN | EDR Digital Archive |
| | LUIS SANTIAGO | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | LUIS SANTIAGO | Cole Information |
| 2014 | GARCIA ZAIDA | Cole Information |
| | JASMIN GALLOWAY | Cole Information |
| | ZAIDA GARCIA | Cole Information |
| | LUIS SANTIAGO | Cole Information |
| 2010 | GARCIA ZAIDA | Cole Information |
| | ZAIDA GARCIA | Cole Information |
| | LUIS SANTIAGO | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| 2005 | GARCIA ZAIDA | Cole Information |
| | JASMIN GALLOWAY | Cole Information |
| | ZAIDA GARCIA | Cole Information |
| | LUIS SANTIAGO | Cole Information |
| | SOULEYMANE TRAORE | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| | H Garcia ZY A | Hill-Donnelly Information Services |

**259 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MILADY LOPEZ | EDR Digital Archive |
| | RUBEN RAHMAN | EDR Digital Archive |
| | FERDOUSI RAHMAN | EDR Digital Archive |
| | IVAN RAHMAN | EDR Digital Archive |
| | ANWARUL AZIM | EDR Digital Archive |
| | MATIUR RAHMAN | EDR Digital Archive |
| 2017 | VICTOR DICKSON | Cole Information |
| | MILADY LOPEZ | Cole Information |
| | TAMARA VASQUEZ | Cole Information |
| 2014 | VICTOR DICKSON | Cole Information |
| | MILADY LOPEZ | Cole Information |
| | QAZI AHMED | Cole Information |
| 2010 | MILADY LOPEZ | Cole Information |
| | ANWARA BEGUM | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | SAMIRA AHMED | Cole Information |
| 2005 | MILADY LOPEZ | Cole Information |
| | ANWARA BEGUM | Cole Information |
| | ANWARUL AZIM | Cole Information |
| | RAHMAN MATIUR | Cole Information |
| | Azim Anwarul v | Hill-Donnelly Information Services |
| | Begum Anwara v | Hill-Donnelly Information Services |
| | Lopez Milady v | Hill-Donnelly Information Services |

**260 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RONALD MANNIELLO | EDR Digital Archive |
| | LISA CORREALE | EDR Digital Archive |
| | ANTHONY CORREALE | EDR Digital Archive |
| | CAROLINA MOREIRA | EDR Digital Archive |
| | TONI RAGUSA | EDR Digital Archive |
| 2017 | RONALD MANNIELLO | Cole Information |
| | JOSEPH RAGUSA | Cole Information |
| | ANTHONY CORREALE | Cole Information |
| | CAROLINA MOREIRA | Cole Information |
| 2014 | RAGUSA JOSEPH | Cole Information |
| | JOSEPH RAGUSA | Cole Information |
| | ANTHONY CORREALE | Cole Information |
| | CAROLINA MOREIRA | Cole Information |
| 2010 | JOSEPH RAGUSA | Cole Information |
| 2005 | JOSEPH RAGUSA | Cole Information |
| | Ragusa Joseph | Hill-Donnelly Information Services |
| | H Ragusa Joseph A | Hill-Donnelly Information Services |

**261 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | LOURDES DIAZ | Cole Information |
| 2014 | CARLOS VELEZ | Cole Information |
| | F MODESTO | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2014 | MODESTO MERCADO | Cole Information |
| 2010 | CARLOS VELEZ | Cole Information |
| | MODESTO MERCADO | Cole Information |
| 2005 | MODESTO MERCADO | Cole Information |
| 2000 | GILBERT FLORES | Cole Information |

**262 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JESSICA MALDONADO | EDR Digital Archive |
| | DARLENE HUERTAS | EDR Digital Archive |
| | DAYMOND NOBLE | EDR Digital Archive |
| | RAMON MALDONADO | EDR Digital Archive |
| | CARMEN HUERTAS | EDR Digital Archive |
| | JUAN DEJESUS | EDR Digital Archive |
| 2017 | DARLENE HUERTAS | Cole Information |
| | DAYMOND NOBLE | Cole Information |
| | RAYMON MALDONADO | Cole Information |
| | JUAN DEJESUS | Cole Information |
| 2014 | DARLENE HUERTAS | Cole Information |
| | DAYMOND NOBLE | Cole Information |
| | RAYMON MALDONADO | Cole Information |
| 2010 | ERIC COLEMAN | Cole Information |
| 2005 | DARLENE HUERTAS | Cole Information |
| | h Ma Tdonado Raymon v | Hill-Donnelly Information Services |

**263 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | YOLANDA MENDEZ | EDR Digital Archive |
| | MELISSA MENDEZ | EDR Digital Archive |
| 2014 | MARIANO GONZALEZ | Cole Information |
| 2005 | MARGOT GONZALEZ | Cole Information |
| | MYRNA MENDEZ | Cole Information |
| 2000 | MELISSA MENDEZ | Cole Information |

# FINDINGS

**264 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | EDWIN HERNANDEZ | EDR Digital Archive |
| 2017 | BASSEY ASANG | Cole Information |
| | JONAH UBONG | Cole Information |
| | UBONG JONAH | Cole Information |
| | LETICIA SANCHEZ | Cole Information |
| 2014 | IVETTE SANTIAGO | Cole Information |
| | MARCOS SANCHEZ | Cole Information |
| | ROBERT SERRONO | Cole Information |
| | GEORGE SINGELAKIS | Cole Information |
| 2010 | MARROS SANCHEZ | Cole Information |
| 2005 | MARROS SANCHEZ | Cole Information |
| | H Sanchez Leticia A | Hill-Donnelly Information Services |

**265 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | DESIREE CHAVIER | EDR Digital Archive |
| | DENISE CHAVIER | EDR Digital Archive |
| | CONSTANCE HILL | EDR Digital Archive |
| | MARIA CHAVIER | EDR Digital Archive |
| 2017 | DENISE CHAVIER | Cole Information |
| 2014 | DENISE CHAVIER | Cole Information |
| 2010 | MARIA CHAVIER | Cole Information |
| 2005 | MARIA CHAVIER | Cole Information |
| | Chavier D A | Hill-Donnelly Information Services |

**266 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ALBERTO MALDONADO | EDR Digital Archive |
| | CHAVEZ GILBERT | EDR Digital Archive |
| | ROSE CHAVEZ | EDR Digital Archive |
| | JADELING CHAVEZ | EDR Digital Archive |
| | CESAR TELLO | EDR Digital Archive |
| | MARLINE CHAVEZ | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | CHRISTIAN VALERO | Cole Information |
| | GILBERT CHAVEZ | Cole Information |
| | FATEMA ZOHORA | Cole Information |
| 2014 | ELBA GARNIER | Cole Information |
| | ELBA MARRERO | Cole Information |
| | GILBERT CHAVEZ | Cole Information |
| | CHAVEZ GILBERT | Cole Information |
| | GILBERTO CHAVEZ | Cole Information |
| | JACQUELINE DUGGINS | Cole Information |
| | YESENIA RIVERA | Cole Information |
| | FATEMA ZOHORA | Cole Information |
| 2010 | GILBERT CHAVEZ | Cole Information |
| | CHAVEZ GILBERT | Cole Information |
| | JACQUELINE DUGGINS | Cole Information |
| | FATEMA ZOHORA | Cole Information |
| | YESENIA RIVERA | Cole Information |
| 2005 | GILBERT CHAVEZ | Cole Information |
| | CHAVEZ GILBERT | Cole Information |
| | YESENIA RIVERA | Cole Information |
| | Rivera Yesenia YO | Hill-Donnelly Information Services |

**267 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | PALOMA FIGUEROA | EDR Digital Archive |
| | BIANCA FIGUEROA | EDR Digital Archive |
| | REYNALDO CHEVER | EDR Digital Archive |
| | REY CHEVERE | EDR Digital Archive |
| | CARLOTA CHEVERE | EDR Digital Archive |
| 2017 | JAIDEN MOORE | Cole Information |
| 2014 | CHEVERE REYNALDO | Cole Information |
| | REYNALDO CHEVERE | Cole Information |
| 2010 | BIANCA FIGUEROA | Cole Information |
| | REYNALDO CHEVERE | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2005 | ROBERT SAVAGE | Cole Information |
| | LEANDRO VELEZ | Cole Information |
| | DIANA DIAZ | Cole Information |
| | REYNALDO CHEVERE | Cole Information |
| | NCL | Hill-Donnelly Information Services |
| 2000 | NELLIE MOLINARES | Cole Information |

**268 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | KHAN WILLIAMS | EDR Digital Archive |
| | DAVID AFRAM | EDR Digital Archive |
| | DOROTHY ABBAN | EDR Digital Archive |
| | GODFRED AFRAM | EDR Digital Archive |
| | ALTHEA YOUNG | EDR Digital Archive |
| | JOSE JARAMILLO | EDR Digital Archive |
| 2017 | PHILLIE DIAZ | Cole Information |
| | LINDA MOLINA | Cole Information |
| | ALTHEA YOUNG | Cole Information |
| | CHEYENNE AFRAM | Cole Information |
| 2014 | ANGELES RODRIGUEZ | Cole Information |
| | DANNY MALDONATO | Cole Information |
| | PHILLIE DIAZ | Cole Information |
| | LINDA MOLINA | Cole Information |
| | DOROTHY ABBAN | Cole Information |
| | ALTHEA YOUNG | Cole Information |
| | C BENNETT | Cole Information |
| | FERNANDO ROMERO | Cole Information |
| 2010 | DANNY MALDONATO | Cole Information |
| | LINDA MOLINA | Cole Information |
| | JUAN LI | Cole Information |
| | GODFRED AFRAM | Cole Information |
| | INDIRA RODRIGUEZ | Cole Information |
| | FERNANDO ROMERO | Cole Information |

# FINDINGS

**269 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CARMEN TORRES | EDR Digital Archive |
| | DANIEL NIEVES | EDR Digital Archive |
| | JONATHAN NIEVES | EDR Digital Archive |
| 2017 | CARMEN TORRES | Cole Information |
| | NIEVES EUFEMIO | Cole Information |
| | JORGE FLORES | Cole Information |
| | JULIA SERRANO | Cole Information |
| 2014 | ROSA FLORES | Cole Information |
| | JUAN NUNEZ | Cole Information |
| | CARMEN TORRES | Cole Information |
| | JULIA SERRANO | Cole Information |
| 2010 | EUFEMIO NIEVES | Cole Information |
| | MELISSA BONTZOLAKES | Cole Information |
| | LIONEL HAMILTON | Cole Information |
| | ROBERT DELGADO | Cole Information |
| 2005 | YOLANDA MENDEZ | Cole Information |
| | EUFEMIO NIEVES | Cole Information |
| | MELISSA BONTZOLAKES | Cole Information |
| | ANTONIO ARROYO | Cole Information |
| | Bontzolakes Melissa v | Hill-Donnelly Information Services |
| | Nieves Eufemio Av | Hill-Donnelly Information Services |
| 2000 | EUFEMIO NIEVES | Cole Information |
| | JUAN CELAYA | Cole Information |
| | BEATRIZ CHAVEZ | Cole Information |

**270 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | IVELISSE ROMERO | EDR Digital Archive |
| | ILEINI ROMERO | EDR Digital Archive |
| | FERNANDO ROMERO | EDR Digital Archive |
| 2017 | FERNANDO ROMERO | Cole Information |
| | LUCAS HERNANDEZ | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | MARIA COLON | Cole Information |
| | FERNANDO ROMERO | Cole Information |
| 2010 | CESAR NATANIEL | Cole Information |
| | FERNANDO ROMERO | Cole Information |
| 2005 | FERNANDO ROMERO | Cole Information |

**271 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LOUISE PILLA | EDR Digital Archive |
| | JOHN PILLA | EDR Digital Archive |
| | GABRIELLE PILLA | EDR Digital Archive |
| 2017 | JOHN PILLA | Cole Information |
| 2014 | MICHAEL PILLA | Cole Information |
| 2010 | MICHAEL PILLA | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | H Pilla Michael | Hill-Donnelly Information Services |
| 2000 | MICHAEL PILLA | Cole Information |

**277 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | THOMASINA DEROSE | EDR Digital Archive |
| | JOHN DEROSE | EDR Digital Archive |
| | DE JOHN | EDR Digital Archive |
| 2017 | RICHARD WOLNER | Cole Information |
| 2014 | JOHN DEROSE | Cole Information |
| 2010 | JOHN DEROSE | Cole Information |
| 2005 | JOHN DEROSE | Cole Information |
| | H Derose J PA as | Hill-Donnelly Information Services |
| 1993 | DEROSE John | New York Telephone |
| 1992 | DEROSE, JOHN | Cole Information |

**278 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ADELSO RAMIREZ | EDR Digital Archive |

| Year | Uses | Source |
|---|---|---|
| 2020 | GLORIA QUINONES | EDR Digital Archive |
| | GLORIA ASENJO | EDR Digital Archive |
| 2017 | LIDIA FERRANDO | Cole Information |
| | GLORIA QUINONES | Cole Information |
| 2014 | LIDIA FERRANDO | Cole Information |
| 2010 | LIDIA FERRANDO | Cole Information |
| 2005 | FRANK COCCA | Cole Information |
| | H Cocca F G A | Hill-Donnelly Information Services |

**295 HOSMER AVE**

| Year | Uses | Source |
|---|---|---|
| 2014 | ANDRIETTE HOLMES | Cole Information |
| 2010 | ANDRIETTE HOLMES | Cole Information |

## HOSMER AVE # 2

**248 HOSMER AVE # 2**

| Year | Uses | Source |
|---|---|---|
| 2020 | JING LIN | EDR Digital Archive |
| | ZHOU LIN | EDR Digital Archive |

## HOSMER AVE # A

**256 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | GINA ASIEDU | EDR Digital Archive |

**257 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | SHARON ROHAN | EDR Digital Archive |

**258 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | JEANETTE SANTIAGO | EDR Digital Archive |

**259 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | ANWARA BEGUM | EDR Digital Archive |
| | ALEXANDER AGYARE | EDR Digital Archive |
| | TAMARA VASQUEZ | EDR Digital Archive |

**269 HOSMER AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | EUFEMIO NIEVES | EDR Digital Archive |

## HOSMER AVE # B

**259 HOSMER AVE # B**

| Year | Uses | Source |
|---|---|---|
| 2020 | IVORY COLES | EDR Digital Archive |
| | MILADY DICKSON | EDR Digital Archive |
| | VICTOR DICKSON | EDR Digital Archive |

**261 HOSMER AVE # B**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHANNIE MERCADO | EDR Digital Archive |
| | EDDY MARCANO | EDR Digital Archive |
| | CATHERINE MERCADO | EDR Digital Archive |
| | MODESTO MERCADO | EDR Digital Archive |
| | ANNETTE MERCADO | EDR Digital Archive |

## HUTCHINSON RIVER PKWY

**400 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2000 | JOYLENE ROWE | Cole Information |

**420 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2014 | GARY SCHOFFNER | Cole Information |
| | KOLU WILLETTE | Cole Information |
| 2010 | KOLU WILLETTE | Cole Information |

# FINDINGS

**460 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2000 | PAUL SCHATZ | Cole Information |

**500 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2014 | LAWS CONSTRUCTION CORPORATION | Cole Information |
| 2005 | LAWS CONSTRUCTION CORP | Cole Information |

**553 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2017 | AHERN PAINTING | Cole Information |
| 2014 | APPLIED PROJECTS COMPANY INCORPORATE | Cole Information |

**555 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2020 | SHANIA NURSE | EDR Digital Archive |
| | KOVANE BOGAN | EDR Digital Archive |
| | ALEXIA MITCHELL | EDR Digital Archive |
| | JULIO RIVERA | EDR Digital Archive |
| | MARIA ZAPATA | EDR Digital Archive |
| | ANGELINA PARRA | EDR Digital Archive |
| | MONNETTE FRANKLIN | EDR Digital Archive |
| | KARINA AVILA | EDR Digital Archive |
| | MARQUIS MOSS | EDR Digital Archive |
| | RONALD FERNANDEZ | EDR Digital Archive |
| | KEYASHA SHABAZZ | EDR Digital Archive |
| | HEMRAJIE RAMHARRACK | EDR Digital Archive |
| | MONA RICHARDS | EDR Digital Archive |
| 2017 | BASIC HOUSING INC | Cole Information |
| | UNICAR UNICAR | Cole Information |
| | CAPRI WHITESTONE MOTEL | Cole Information |
| 2014 | CAPRI WHITESTONE HOTEL | Cole Information |
| | WHITESTONE BRONX MOTEL | Cole Information |
| 2010 | SAMMYS GOURMET | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | CAPRI WHITESTONE MOTEL | Cole Information |
| 2000 | CAPRI WHITESTONE MOTEL | Cole Information |
| | B & S LUNCHEONETTE CORPORATION | Cole Information |
| | BRONX WHITESTONE MOTEL | Cole Information |
| | CAPRI WHITESTONE MOTEL | Cole Information |

**700 HUTCHINSON RIVER PKWY**

| Year | Uses | Source |
|---|---|---|
| 2017 | TRUMP FERRY POINT LLC | Cole Information |
| | TRUMP NATIONAL GOLF CLUB | Cole Information |
| 2014 | TRUMP FERRY POINT LLC | Cole Information |

## HUTCHINSON RIVER PKY

**500 HUTCHINSON RIVER PKY**

| Year | Uses | Source |
|---|---|---|
| 2020 | TRUMP GOLF LINKS FERRY POINT | EDR Digital Archive |
| 2005 | Gannett Fleming Inc 1 P | Hill-Donnelly Information Services |
| | Laws Construction Corp | Hill-Donnelly Information Services |

**553 HUTCHINSON RIVER PKY**

| Year | Uses | Source |
|---|---|---|
| 2020 | AHERN PAINTING | EDR Digital Archive |

**555 HUTCHINSON RIVER PKY**

| Year | Uses | Source |
|---|---|---|
| 2020 | BASIC HOUSING INC | EDR Digital Archive |
| | ATM | EDR Digital Archive |
| 2005 | B & S Luncheonette Corp | Hill-Donnelly Information Services |
| | Greenman Pederson | Hill-Donnelly Information Services |
| | Greenman Pederson | Hill-Donnelly Information Services |
| 2000 | B & S LNCHNTT CORP | Cole Information |
| | CAPRI WHTSTN MTL | Cole Information |
| | KISKA DVLPRS INC | Cole Information |
| | WHTSTN BRONX MTL | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 1995 | B & S LUNCHEONETTE CORP | Cole Information |
| | WHITESTONE BRONX MOTEL | Cole Information |
| | CAPRI WHITESTONE MOTEL | Cole Information |
| 1992 | B & S LUNCHEONETTE CORP | Cole Information |
| | WHITESTONE BRONX MOTEL | Cole Information |
| | CAPRI WHITESTONE MOTEL | Cole Information |

## HUTCHNSNRIVER PKY

**620 HUTCHNSNRIVER PKY**

| Year | Uses | Source |
|---|---|---|
| 1965 | YOUNG SAML H POST AMER LEGION<br>1530 HUTCHNSN RIV PKWY | New York Telephone Company |

## JAY PL

**2471 JAY PL**

| Year | Uses | Source |
|---|---|---|
| 1931 | Gustanson Nils | Manhattan and Bronx Directory Publishing Company Residential Directory |
| | Rella Steph | Manhattan and Bronx Directory Publishing Company Residential Directory |
| 1927 | Quinn J Mrs r | New York Telephone |

**2478 JAY PL**

| Year | Uses | Source |
|---|---|---|
| 1931 | Hattrick John | Manhattan and Bronx Directory Publishing Company Residential Directory |
| | Hattrick Vincent | Manhattan and Bronx Directory Publishing Company Residential Directory |
| 1927 | Hattrick John r | New York Telephone |

**2483 JAY PL**

| Year | Uses | Source |
|---|---|---|
| 1931 | Johnson Emil | Manhattan and Bronx Directory Publishing Company Residential Directory |
| 1927 | Johnson Fred r | New York Telephone |

# FINDINGS

## LACOMBE AVE

**2303 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | SCIACOVELLI PHYLLIS | New York Telephone |

**2311 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | DALIMONTE CAMILLO | New York Telephone |
| 1983 | D ALIMONTE CAMILLO | New York Telephone |
| 1976 | D ALIMONTE CAMILLN | New York Telephone Company |
| 1971 | D ALIMONTE CAMILLO | New York Telephone |
| 1965 | HUTTON ELIZ H MRS | New York Telephone Company |

**2375 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | RIVERA MARTE | New York Telephone |

## LACOMBE AVE

**0 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | Tract 36005:20 odd s | Hill-Donnelly Information Services |
| | Tract 36005:2 even s | Hill-Donnelly Information Services |

**2311 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MELANIE DALIMONTE | EDR Digital Archive |
| | JAMES CORDERO | EDR Digital Archive |
| | NICOLE DALIMONTE | EDR Digital Archive |
| | DORIS DALIMONTE | EDR Digital Archive |
| 2017 | MELANIE ALIMONTE | Cole Information |
| 2014 | DORIS DALIMONTE | Cole Information |
| 2005 | H Dalimonte Camillo AV | Hill-Donnelly Information Services |
| | Sako T v | Hill-Donnelly Information Services |
| 2000 | CAMILLO DALIMONTE | Cole Information |
| | CAMILLO DALIMONTE | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 1993 | DALIMONTE Camillo | New York Telephone |
| 1992 | D'ALIMONTE, CAMILLO | Cole Information |

**2325 LACOMBE AVE**

| Year | Uses | Source |
|---|---|---|
| 2014 | BETTY MCCOY | Cole Information |

## MILES AVE

**2576 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | LISA ROMAN-VASILAKOS | EDR Digital Archive |
| | MINERVA RIVERA | EDR Digital Archive |
| | JOSE CANDELARIA | EDR Digital Archive |
| | EDWIN RODRIGUEZ | EDR Digital Archive |
| 2017 | LISA ROMANVASILKOS | Cole Information |
| | LINDA FRANCESCHINI | Cole Information |
| | EDWIN RODRIGUEZ | Cole Information |
| 2014 | LISA ROMAN-VASILAKOS | Cole Information |
| | JOSE CANDELARIA | Cole Information |
| 2010 | TOM MEYERS | Cole Information |
| | JOSE CANDELARIA | Cole Information |
| 2005 | ROSA MIRANDA | Cole Information |
| | JOAQUIN MELENDEZ | Cole Information |
| | OCCUPANT UNKNOWN | Cole Information |
| | JULISSA SUERO | Cole Information |
| | EDWIN RODRIGUES | Cole Information |
| | EDWIN RODRIGUEZ | Cole Information |
| | AMANDA MATHEWSON | Cole Information |
| | H Rodriguez EL A | Hill-Donnelly Information Services |
| | Tract 36005:110 odd s | Hill-Donnelly Information Services |
| | Tract 36005:132 even s | Hill-Donnelly Information Services |

# FINDINGS

**2578 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHARLENE ESPONDA | EDR Digital Archive |
| | ERIC OCASIO | EDR Digital Archive |
| | TANIA RUIZ | EDR Digital Archive |
| | SAMANTHA COLON | EDR Digital Archive |
| 2017 | NOHELY SUAREZ | Cole Information |
| | TANIA RUIZ | Cole Information |
| 2014 | JOHN LEWIN | Cole Information |
| | EDWIN RODRIGUEZ | Cole Information |
| | CHRISTOPHER LANDESTOY | Cole Information |
| | LUCINDA ATILES | Cole Information |
| | TANIA RUIZ | Cole Information |
| 2010 | EDWIN RODRIGUEZ | Cole Information |
| | CHARLENE ESPONDA | Cole Information |
| | JULIO JOHN | Cole Information |
| | WENDY SANTOS | Cole Information |
| | LUCINDA GARCIA | Cole Information |
| | DANYELLE COLON | Cole Information |
| 2005 | G FERNANDEZ | Cole Information |
| | CHARLENE ESPONDA | Cole Information |
| | Esponda Chardene v | Hill-Donnelly Information Services |
| | Rodriguez Edwin v | Hill-Donnelly Information Services |

**2580 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CARLLENI CESPEDES | EDR Digital Archive |
| | MARIA MORALES | EDR Digital Archive |
| | ALFREDO MARTINEZ | EDR Digital Archive |
| | JASON SCOTT | EDR Digital Archive |
| | AMINATA BAH | EDR Digital Archive |
| | AMPARO CESPEDES | EDR Digital Archive |
| 2017 | MARIA MORLAES | Cole Information |
| | AMARIS GARCIA | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | JASON SCOTT | Cole Information |
| 2014 | AMANDA BROWNTATE | Cole Information |
| | MARIA MORLAES | Cole Information |
| | AMARIS GARCIA | Cole Information |
| | DAVID LICON | Cole Information |
| | JASON SCOTT | Cole Information |
| 2010 | VICTORIA HERNANDEZ | Cole Information |
| | DESTINY ATILES | Cole Information |
| | AMARIS GARCIA | Cole Information |
| | ELAINE PETRIZZI | Cole Information |
| | JASON SCOTT | Cole Information |
| | KENIA RAMOS | Cole Information |
| | DAVID LICON | Cole Information |
| | BOVI DELLE | Cole Information |
| 2005 | JOANNE PICCININNI | Cole Information |
| | MADELINE GIACCHETTO | Cole Information |
| | ELAINE PETRIZZI | Cole Information |
| | KENIA RAMOS | Cole Information |
| | Glacchetto M v | Hill-Donnelly Information Services |
| | Ramos Kenia v | Hill-Donnelly Information Services |

**2582 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHN LEWIN | EDR Digital Archive |
| | LETISHA COHEN | EDR Digital Archive |
| | PRESTON CHAPLIN | EDR Digital Archive |
| | PRESTASIA COHEN | EDR Digital Archive |
| | MAGDA PEREZ | EDR Digital Archive |
| | CASSANDRA COHEN | EDR Digital Archive |
| | AUTUMN RICHARDSON | EDR Digital Archive |
| | ANTHONY NAZARIO | EDR Digital Archive |
| 2017 | LETISHA COHEN | Cole Information |
| 2014 | JUDITH TAYLOR | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | SAMARA LEBRON | Cole Information |
| 2010 | JOHN LEWIN | Cole Information |
| 2005 | VICTOR FAUSTO | Cole Information |
| | MAURO PICCININNI | Cole Information |
| | CARRIE GREENE | Cole Information |
| | PICCININNI MAURO | Cole Information |
| | 2584 NCL | Hill-Donnelly Information Services |

**2584 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | THOMAS ASANTE | EDR Digital Archive |
| | SONIA VELEZ | EDR Digital Archive |
| | NADINE PEDROSO | EDR Digital Archive |
| | GONZALO CORRIDORI | EDR Digital Archive |
| | ESTHER OBIRI | EDR Digital Archive |
| | JEROME PEDROSO | EDR Digital Archive |
| 2017 | THOMAS ASANTE | Cole Information |
| | DAVID FELLI | Cole Information |
| | JOYCE COLLIER | Cole Information |
| | TOMAS BATISTA | Cole Information |
| 2014 | JOYCE COLLIER | Cole Information |
| | CHRISTIN LOPEZ | Cole Information |
| 2010 | DAVID FELLI | Cole Information |
| | JOYCE COLLIER | Cole Information |
| | LEONARD PEDROSO | Cole Information |
| 2005 | JOYCE COLLIER | Cole Information |
| | DONALD DELLEBOVI | Cole Information |

**2585 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2010 | MAGDA PEREZ | Cole Information |
| 2005 | MAGDA PEREZ | Cole Information |

# FINDINGS

**2586 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JULIEN STEWART | EDR Digital Archive |
| | KYLE EDWARD | EDR Digital Archive |
| | KASSIE MARAJAH | EDR Digital Archive |
| | RON EDWIN | EDR Digital Archive |
| | JULIET DESOUZA | EDR Digital Archive |
| | ASHELY VEGA | EDR Digital Archive |
| 2017 | JULIEN STEWART | Cole Information |
| | STEWART HENRY | Cole Information |
| | JULIET DESOUZA | Cole Information |
| | BEE STARR | Cole Information |
| 2014 | JULIEN STEWART | Cole Information |
| | STEWART HENRY | Cole Information |
| | JULIET DESOUZA | Cole Information |
| 2010 | JULIEN STEWART | Cole Information |
| 2005 | J JASMINE | Cole Information |
| | h Jasmine J | Hill-Donnelly Information Services |

**2588 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOSE QUINTERO | EDR Digital Archive |
| | SANTIAGO ZABALA | EDR Digital Archive |
| | XIOMARA ZABALA | EDR Digital Archive |
| | VICTOR PINALES | EDR Digital Archive |
| 2017 | JULIO SANTOS | Cole Information |
| | MAYORIS PRESBOT | Cole Information |
| 2014 | BILLY MORALES | Cole Information |
| | GENEVA ORTIZ | Cole Information |
| | LAYDA NEGRIN | Cole Information |
| | MAYORIS PRESBOT | Cole Information |
| 2010 | ROSA CUEVAS | Cole Information |
| | ZABALA SANTIAGO | Cole Information |
| | SANTIAGO ZABALA | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2005 | LAYDA NEGRIN | Cole Information |
| | h Negnrin Layda v | Hill-Donnelly Information Services |

**2590 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | YOLANDA FONTANEZ | EDR Digital Archive |
| | CHANTEL RODRIGUEZ | EDR Digital Archive |
| | KHALIL SIKANDER | EDR Digital Archive |
| | ANGEL MUNIZ | EDR Digital Archive |
| 2017 | YOLANDA FONTANEZ | Cole Information |
| | CHANTEL RODRIGUEZ | Cole Information |
| | ABNER MUNIZ | Cole Information |
| | GEORGE LAMB | Cole Information |
| 2014 | YOLANDA FONTANEZ | Cole Information |
| | CHANTEL RODRIGUEZ | Cole Information |
| | GEORGE LAMB | Cole Information |
| 2010 | JUSTO MENDEZ | Cole Information |
| 2005 | ROBERT CANATORE | Cole Information |
| | JUSTO MENDEZ | Cole Information |
| | ROBERT CANTATORE | Cole Information |
| | H Cantatore R | Hill-Donnelly Information Services |

**2600 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | GREGORY PASSALACQUA | EDR Digital Archive |
| | JULIAN PASSALACQUA | EDR Digital Archive |
| | ALONIA WHITE | EDR Digital Archive |
| | SARAH PASBALAQUA | EDR Digital Archive |
| | NADINE PASSALACQUA | EDR Digital Archive |
| 2017 | GREGORY PASSALACQUA | Cole Information |
| | JULIAN PASSALACQUA | Cole Information |
| 2014 | GREGORY PASSALACQUA | Cole Information |
| | DAVID SALA | Cole Information |
| 2010 | FREDRICK RENODE | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | D SALA | Cole Information |
| 2005 | GREGORY PASSALACQUA | Cole Information |
| | JOSEPH ROCCHIO | Cole Information |

**2602 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | STANFORD JONES | EDR Digital Archive |
| | SHENIQUE JONES | EDR Digital Archive |
| | TERRELL SKINNER | EDR Digital Archive |
| | MICHAEL JONES | EDR Digital Archive |
| | ANIKA RICHARDSON | EDR Digital Archive |
| 2017 | MICHAEL JONES | Cole Information |
| 2014 | MIG INTERNATIONAL | Cole Information |
| | Z STANFORD | Cole Information |
| | MICHAEL JONES | Cole Information |
| 2010 | STANFORD JONES | Cole Information |
| | Z STANFORD | Cole Information |
| | ANIKA RICHARDSON | Cole Information |
| 2005 | STANFORD JONES | Cole Information |
| | Z STANFORD | Cole Information |
| | GEORGE LAMB | Cole Information |
| | h Lamb George AV | Hill-Donnelly Information Services |

**2604 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | GOLAM RAHMAN | EDR Digital Archive |
| | NAZIFA RAHMAN | EDR Digital Archive |
| | NIXA ROSADO | EDR Digital Archive |
| | G RAHMAN | EDR Digital Archive |
| | REYNALDO ROSADO | EDR Digital Archive |
| 2017 | GOLAM RAHMAN | Cole Information |
| | RAHMAN GOLAM | Cole Information |
| | ROBERT ROSADO | Cole Information |
| 2014 | GOLAM RAHMAN | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | RAHMAN GOLAM | Cole Information |
| 2010 | E BONILLA | Cole Information |
| | GOLAM RAHMAN | Cole Information |
| | RAHMAN GOLAM | Cole Information |
| 2005 | E BONILLA | Cole Information |
| | GOLAM RAHMAN | Cole Information |
| | RAHMAN GOLAM | Cole Information |
| | Bonilla E v | Hill-Donnelly Information Services |
| | Rahman Gulam AO | Hill-Donnelly Information Services |

**2606 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | AMANDA LLOYD | EDR Digital Archive |
| | AMERICO NARDIS | EDR Digital Archive |
| | CHASTIDY MATEO | EDR Digital Archive |
| | NICKOLA FRANCIS | EDR Digital Archive |
| | MARTIN CONTRERAS | EDR Digital Archive |
| | DEBBIE FRANCIS | EDR Digital Archive |
| 2017 | LOAY ALZADEN | Cole Information |
| | SEAN ALBINO | Cole Information |
| | AMERICO NARDIS | Cole Information |
| | FRED LANDO | Cole Information |
| | DEBBIE FRANCIS | Cole Information |
| 2014 | SEAN ALBINO | Cole Information |
| | AMERICO NARDIS | Cole Information |
| | DOLORES HAMES | Cole Information |
| | FRED LANDO | Cole Information |
| | DAWNETTE MCNEIL | Cole Information |
| | NICHOLAS BORSANI | Cole Information |
| 2010 | DOLORES HAMES | Cole Information |
| | DAWNETTE MCNEIL | Cole Information |
| 2005 | DAWNETTE MCNEIL | Cole Information |
| | Mcneil Dawnette | Hill-Donnelly Information Services |

# FINDINGS

**2608 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MERGING MARKETS REALTY CORP | EDR Digital Archive |
| | TAHEERAH MAHDI | EDR Digital Archive |
| | MICHELLE RODRIGUEZ | EDR Digital Archive |
| | S RODRIGUEZ | EDR Digital Archive |
| | SONIA RODRIGUEZ | EDR Digital Archive |
| | SANTIAGO VAZQUEZ | EDR Digital Archive |
| | SHEILA RODRIGUEZ | EDR Digital Archive |
| | CELSA VAZQUEZ | EDR Digital Archive |
| 2017 | TAHEERAH MAHDI | Cole Information |
| | SHIELA RODRIGUEZ | Cole Information |
| | ALFONSO RODRIGUEZ | Cole Information |
| 2014 | MICHELLE NOEMI | Cole Information |
| | ALFONSO RODRIGUEZ | Cole Information |
| 2005 | NATIONAL URBAN REALTORS ASCTN | Cole Information |
| | MERGING MARKETS REALTY CORP | Cole Information |
| | ALFONSO RODRIGUEZ | Cole Information |
| | Cruz A v | Hill-Donnelly Information Services |

**2610 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | DEBORAH CORDERO | EDR Digital Archive |
| | ALFONSO AMELIO | EDR Digital Archive |
| | ADDVOA AMANKWAAH | EDR Digital Archive |
| | JOSEPH CORDERO | EDR Digital Archive |
| | JESSE ODUARAN | EDR Digital Archive |
| 2017 | DEBORAH CORDERO | Cole Information |
| | ERICKA BELLO | Cole Information |
| 2014 | ARLENE OLIVARES | Cole Information |
| | ADAOBI EZE | Cole Information |
| | EDDIE OYOLA | Cole Information |
| 2010 | STEPHANIE PAEZ | Cole Information |
| | ALFONSO AMELIO | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2005 | MAGNUM MEDIA GROUP INC | Cole Information |
| | MICHAEL ALLEN | Cole Information |
| | ALFONSO AMELIO | Cole Information |
| | JESSE ODUARAN | Cole Information |
| | Allen Michael v | Hill-Donnelly Information Services |
| | Oduaran Jesse v | Hill-Donnelly Information Services |
| 1961 | KRUPP JOHN G | New York Telephone |

**2612 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | SARA PIERCE | EDR Digital Archive |
| | NIESHA SOLLA | EDR Digital Archive |
| | HAROLD ROSENBAUM | EDR Digital Archive |
| | BRENDA PORTELA | EDR Digital Archive |
| | RALPH DIXON | EDR Digital Archive |
| | JOSHUA ROSENBAUM | EDR Digital Archive |
| 2017 | JOSEPH OBRIEN | Cole Information |
| | CRISEL CALPOTURA | Cole Information |
| | BRENDA PORTELA | Cole Information |
| 2014 | CATHERINE CALPOTURA | Cole Information |
| | JOSEPH OBRIEN | Cole Information |
| | MICHAEL PAGAN | Cole Information |
| 2010 | CRISEL CALPOTURA | Cole Information |
| | HAROLD ROSENBAUM | Cole Information |
| 2005 | KRISTI GOURDINE | Cole Information |
| | Gourdine Kristi v | Hill-Donnelly Information Services |

**2614 MILES AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | IRMA ORTIZ | EDR Digital Archive |
| | BRENDA ORTIZ | EDR Digital Archive |
| 2017 | IRMA ORTIZ | Cole Information |
| 2014 | CRUZ ORTIZ | Cole Information |
| 2010 | JOSE ORTIZ | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2005 | JOSE ORTIZ | Cole Information |

## SCHLEY AVE

**2604 SCHLEY AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | WILKERSON CHILDRES B | New York Telephone |

**2616 SCHLEY AVE**

| Year | Uses | Source |
|---|---|---|
| 1971 | MALAVE MARIA | New York Telephone |

## SCHLY AVE

**2604 SCHLY AVE**

| Year | Uses | Source |
|---|---|---|
| 1993 | WILKERSON Childres B | New York Telephone |

## YZNAGA PL

**520 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1993 | SHAW ELIZABETH | New York Telephone |
| 1976 | ROBINSON RUTH | New York Telephone Company |
| | ROBINSON RUTH | New York Telephone Company |
| 1971 | DEMARCO JOSEPH | New York Telephone |
| 1965 | BOEHM VALENTINE | New York Telephone Company |

**525 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1983 | MURRAY I | New York Telephone |

**526 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1993 | ARNTSEN JOHN R | New York Telephone |
| 1983 | ARNTSEN JOHN R | New York Telephone |
| 1976 | ARNTSEN JOHN R | New York Telephone Company |

| Year | Uses | Source |
|---|---|---|
| 1971 | ARNTSEN JOHN R | New York Telephone |
| 1965 | ARSTSEN JOHN R | New York Telephone Company |

**527 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1976 | JONES JOHN W | New York Telephone Company |
| 1971 | PESCE NELLIE MRS | New York Telephone |
| 1965 | PESCE FRANK A | New York Telephone Company |

**534 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1983 | FIORE A | New York Telephone |
| 1976 | FIORE A | New York Telephone Company |
| 1971 | FIORE A | New York Telephone |
| 1965 | FIORE A | New York Telephone Company |

**536 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1983 | FIORE DOMINICK | New York Telephone |
| 1976 | FIORE DOMINICK | New York Telephone Company |
| 1971 | FIORE DAMINICK | New York Telephone |
| 1965 | FIORE DOMINICK | New York Telephone Company |

**641 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1983 | REGINA JOHN | New York Telephone |
| 1976 | REGINA JOHN | New York Telephone Company |
| 1971 | REGINA JOHN | New York Telephone |
| 1965 | REGINA JOHN | New York Telephone Company |

## YZNAGA PL

**520 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2020 | CLIFFCO LI INC | EDR Digital Archive |
| | FERRY POINT INDUSTRIES | EDR Digital Archive |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2017 | FERRY POINT INDUSTRIES | Cole Information |
| | CLIFFCO II INC | Cole Information |
| 2014 | FERRY POINT INDUSTRIES | Cole Information |
| | CLIFFCO II INCORPORATED | Cole Information |
| 2010 | CJB EQUIPMENT RENTAL CORP | Cole Information |
| | C F | Cole Information |
| 1993 | SHAW Elizabeth | New York Telephone |
| 1992 | SHAW, ELIZABETH | Cole Information |
| 1940 | Baxter Mary A | New York Telephone |
| | Mc Evily Gloria Mrs | New York Telephone |

**525 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2017 | TIJUANA MURRAY | Cole Information |
| 2014 | TIJUANA MURRAY | Cole Information |
| 2010 | JEANNINE FERRANDI | Cole Information |
| 2005 | TERRY MURRAY | Cole Information |
| | H Murray I AA | Hill-Donnelly Information Services |
| 2000 | I MURRAY | Cole Information |
| | IDA MURRAY | Cole Information |
| 1992 | MURRAY, I | Cole Information |
| 1940 | Mulvihill Susan J | New York Telephone |
| 1931 | Mulvihill Chris H R | Manhattan and Bronx Directory Publishing Company Residential Directory |

**526 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2005 | 534 536 NCL | Hill-Donnelly Information Services |
| 2000 | JOHN R ARMTSEN | Cole Information |
| | JOHN ARNTSEN | Cole Information |
| 1993 | ARNTSEN John R | New York Telephone |
| 1992 | ARNTSEN, JOHN R | Cole Information |
| 1931 | Hoffman Raymond | Manhattan and Bronx Directory Publishing Company Residential Directory |

**527 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2005 | CLIFFORD FERRANDI | Cole Information |
| 2000 | C FERRANDI | Cole Information |

**530 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1940 | Bader M | New York Telephone |

**534 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2005 | NESTOR PINO | Cole Information |
| 2000 | A RORE | Cole Information |
| | ANGELO FIORE | Cole Information |
| 1992 | FIORE, A | Cole Information |

**536 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2005 | FRANK SALAMONE | Cole Information |
| 2000 | CANNADY SORTS SVCS | Cole Information |
| | G B C REALTY CORP | Cole Information |
| | PHASE I ASSOC INC | Cole Information |
| | D FIORE | Cole Information |
| | DOMENICK FIORE | Cole Information |
| | DONNA FIORE | Cole Information |
| 1992 | FIORE, D | Cole Information |
| 1940 | Baxter Walter C | New York Telephone |

**570 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 2000 | EXPLO POWDER INC | Cole Information |

**641 YZNAGA PL**

| Year | Uses | Source |
|---|---|---|
| 1992 | REGINA, JOHN | Cole Information |
| 1940 | Meichner Wm | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1931 | Meichner Wm | Manhattan and Bronx Directory Publishing Company Residential Directory |

## YZNAGA STREET PL

**520 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | BOEHM VALENTINE | New York Telephone |

**526 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | SIMMONDS JOSEPHINE E MRS | New York Telephone |

**527 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | PESCE FRANK A | New York Telephone |

**534 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | FIORE A | New York Telephone |

**536 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | FIORE DOMINICK | New York Telephone |

**641 YZNAGA STREET PL**

| Year | Uses | Source |
|---|---|---|
| 1961 | REGINA JOHN | New York Telephone |

## ZEREGA AVE

**430 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | NASSETTA JOS | New York Telephone Company |
| 1971 | NASSETTA JOS | New York Telephone |
| 1965 | NASSETTA JOS | New York Telephone Company |

**432 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | DEFIORE SAM | New York Telephone |
| 1976 | DEFIORE SAM | New York Telephone Company |
| 1971 | DEFIORE SAM | New York Telephone |
| | MASCIA MARY MRS | New York Telephone |
| | MURPHY JOS G | New York Telephone |
| 1965 | DEFIORE SAM | New York Telephone Company |
| | HARDEN HAZEL | New York Telephone Company |
| | MASCIAN TONY | New York Telephone Company |

**450 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1976 | COTT CORP | New York Telephone Company |
| | IDEAL DISTRIBTRS | New York Telephone Company |
| 1971 | COTT CORP | New York Telephone |
| | IDEAL DISTRIBTRS | New York Telephone |
| 1965 | COTT CORP | New York Telephone Company |
| | IDEAL DISTRIBTRS | New York Telephone Company |

**455 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | HINES GEO | New York Telephone |
| 1976 | GERENA JOSE | New York Telephone Company |
| 1971 | GERENA JOSE | New York Telephone |
| | HINES GEO | New York Telephone |
| 1965 | HINES GEO | New York Telephone Company |
| | HOY CHAS A | New York Telephone Company |

**489 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1965 | REIMER HAROLD JR | New York Telephone Company |

**500 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1971 | DELBALSO CONST CORP | New York Telephone |

## ZEREGA AVE

**420 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | HUDSON RSS SRVCS | Cole Information |
| 2014 | HUDSON RSS SRVCS | Cole Information |
| 1993 | MIGOYA CONSTR CORP | New York Telephone |
| 1992 | MIGOYA CONSTR CORP | Cole Information |

**426 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JO-LO BUS CO | EDR Digital Archive |

**427 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | RAHEEM ROSS | EDR Digital Archive |
| | CIARRA BLASINI | EDR Digital Archive |
| | JEFFREY SCHWARTZ | EDR Digital Archive |
| 2017 | RAHEEM ROSS | Cole Information |
| | HERMAN GARMENT | Cole Information |
| | JOHNNY BLASINI | Cole Information |
| 2014 | OCCUPANT UNKNOWN | Cole Information |
| | MAILYN OCASIO-GOYTIA | Cole Information |
| | PRENTIS PRICHETT | Cole Information |
| | OLGA GOYTIA | Cole Information |
| | JOHNNY BLASINI | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | HECTOR CAMARA | Cole Information |
| | ELLIOT LOCICERO | Cole Information |
| | EVARISTO HERNANDEZ | Cole Information |
| | JEFFREY SCHWARTZ | Cole Information |

**428 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | LOGAN REALTY | Cole Information |

# FINDINGS

**429 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHASTITY HAMILTON | EDR Digital Archive |
| | JANI ELLIS | EDR Digital Archive |
| | MILTON SILVERA | EDR Digital Archive |
| | GEORGE LETT | EDR Digital Archive |
| | YVETTE ROSAS | EDR Digital Archive |
| | NICOLA HOUDHAN | EDR Digital Archive |
| 2017 | JORGE ELLIS | Cole Information |
| | YVETTE ROSAS | Cole Information |
| | CHASTITY CRUZ | Cole Information |
| | NICOLA HOUDHAN | Cole Information |
| | TAIF DAVIS | Cole Information |
| 2014 | MILTON SILVERA | Cole Information |
| | JORGE ELLIS | Cole Information |
| | YVETTE ROSAS | Cole Information |
| | TAIF DAVIS | Cole Information |
| | NICOLA HOUDHAN | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| | GEORGE LETT | Cole Information |
| | MILTON SILVERA | Cole Information |
| 2005 | OCCUPANT UNKNOWN | Cole Information |
| | RAYLYN OCASIO | Cole Information |
| | MILTON SILVERA | Cole Information |
| | TAIF DAVIS | Cole Information |

**430 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2000 | SONIA COGLITORE | Cole Information |
| 1956 | BUBEL WM | New York Telephone |
| 1949 | BRIDGE VIEW BOAT HAULAGE CO | New York Telephone |
| | WHITE CAPS BOATS CO | New York Telephone |

# FINDINGS

**431 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHARLES FALCOM | EDR Digital Archive |
| | JULIUS LEWIS | EDR Digital Archive |
| | ODETTE MCCARTNEY | EDR Digital Archive |
| | MILZA NIETO | EDR Digital Archive |
| | JAMES LOGAN | EDR Digital Archive |
| | CARLOS TORRENS | EDR Digital Archive |
| | MATTIE LIBURD | EDR Digital Archive |
| | DILIA TRAVIESO | EDR Digital Archive |
| 2017 | JULIUS LEWIS | Cole Information |
| | MATTIE LIBURD | Cole Information |
| | JONATAN MOTA | Cole Information |
| 2014 | L ODETTE | Cole Information |
| | BRITTANY MARTINEZ | Cole Information |
| | JOHNNY BLASINI | Cole Information |
| | MATTIE LIBURD | Cole Information |
| 2010 | L ODETTE | Cole Information |
| | JOHNNY BLASINI | Cole Information |
| | MATTIE LIBURD | Cole Information |
| 2005 | MILZA AULLA | Cole Information |
| 1992 | FRANQUI, LORRAINE C | Cole Information |

**432 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | MANUEL DOMENECH | EDR Digital Archive |
| | BELKIS DOMENECH | EDR Digital Archive |
| | ADIRIAN BANNISTER | EDR Digital Archive |
| | RAFAEL MALDONADO | EDR Digital Archive |
| 2017 | ELSY VALESQUEZ | Cole Information |
| | BELKIS DOMENECH | Cole Information |
| 2014 | MANUEL DOMENECH | Cole Information |
| | ELSY VALESQUEZ | Cole Information |
| | D CORA | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | RAFAEL MALDONADO | Cole Information |
| 2010 | LOGAN BUS CO INC | Cole Information |
| | GRANDPAS & BOBBYS BUS CO | Cole Information |
| | GINA DIAZ | Cole Information |
| 2005 | CAROLE GALLINA | Cole Information |
| | PATRICIA LANGERT | Cole Information |
| | Gallina Carol A | Hill-Donnelly Information Services |
| 2000 | RAILROAD MAINTENANCE CORPORATION | Cole Information |
| | KLOSK MICHAEL J ATTORNEY | Cole Information |
| 1995 | RAILROAD MAINTENANCE CORP | Cole Information |
| | KLOSK, MICHAEL J, ATTY | Cole Information |
| | RAILROAD MAINTNCE CORP | Cole Information |
| | LAWRENCE CONTRACTORS LTD | Cole Information |
| 1993 | KLOSK MICHAEL J ATTY | New York Telephone |
| | LAWRENCE CONTRACTORS LTD | New York Telephone |
| | RAILROAD MAINTENANCE CORP | New York Telephone |
| | RAILROAD MAINTNCE CORP | New York Telephone |
| | TPK CONSTR | New York Telephone |
| | DE FIORE ROSE | New York Telephone |
| | DE FIORE Rose | New York Telephone |
| 1992 | RAILROAD MAINTENANCE CORP | Cole Information |
| | KLOSK, MICHAEL J, ATTY | Cole Information |
| | RAILROAD MAINTNCE CORP | Cole Information |
| | LAWRENCE CONTRACTORS LTD | Cole Information |
| | TPK CONSTR | Cole Information |
| | DE FIORE, ROSE | Cole Information |
| 1983 | LAWRENCE CONTRACTORS LTD | New York Telephone |
| | LAWRENCE CONTRACTORS LTD | New York Telephone |
| | RAILROAD MAINTENANCE CORP | New York Telephone |
| 1976 | LAWRENCE CONTRACTORS LTD | New York Telephone Company |
| | RAILR0D MAINTENANCE CORP | New York Telephone Company |
| 1961 | SEATON SIDNEY W | New York Telephone |

| Year | Uses | Source |
|---|---|---|
| 1956 | AL S MARINE SALES & SVCE | New York Telephone |
| | BORNEMANN RITA MRS | New York Telephone |

**433 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | NIJA LESLIE | EDR Digital Archive |
| | JESSIE SCOTT | EDR Digital Archive |
| | RUEBEN ORTIZ | EDR Digital Archive |
| | LINDA CASTANON | EDR Digital Archive |
| | PHILLIP GUBISH | EDR Digital Archive |
| | EYITEMI OGHOGHO | EDR Digital Archive |
| | TAHMID CHOUDHURY | EDR Digital Archive |
| | DEJON PILLMAN | EDR Digital Archive |
| | YESENIA SCALICE | EDR Digital Archive |
| | TEANETTE WEAVER | EDR Digital Archive |
| | CHANTAL CASTANON | EDR Digital Archive |
| | JESSICA LOPEZ | EDR Digital Archive |
| | LINDA MALDONADO | EDR Digital Archive |
| | FARHANA CHOUDHURY | EDR Digital Archive |
| | MICHAEL WEAVER | EDR Digital Archive |
| | YESENIA RODRIGUEZ | EDR Digital Archive |
| | STIRTON PATTERSON | EDR Digital Archive |
| 2017 | JESSIE SCOTT | Cole Information |
| | CARL CASTANON | Cole Information |
| | SEAN PATTERSON | Cole Information |
| | CLARIBEL REYNOSO | Cole Information |
| | EDDY MARTE | Cole Information |
| | JESSIE SCALICE | Cole Information |
| | FARHANA CHOUDHURY | Cole Information |
| 2014 | JOSEPHINE LANDESTOY | Cole Information |
| | RUEBEN ORTIZ | Cole Information |
| | CARL CASTANON | Cole Information |
| | CLARIBEL REYNOSO | Cole Information |

# FINDINGS

| Year | Uses | Source |
|---|---|---|
| 2014 | ZAMAL AHMED | Cole Information |
| | ORLANDO RIVERA | Cole Information |
| | SOLANGE VELEZ | Cole Information |
| 2010 | CHANTAL CASTANON | Cole Information |
| | MOKBUL CHOUDHURY | Cole Information |
| | ANGELA VELEZ | Cole Information |
| 2005 | JOSEPHINE LANDESTOY | Cole Information |
| | IRBIA FONSECA | Cole Information |
| | GRACIALINA VELEZ | Cole Information |
| | JACK SCALICE | Cole Information |

**435 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JEFFREY SCHWARTZ | EDR Digital Archive |
| 2017 | ISABEL HERNANDEZ | Cole Information |
| | FREDY GUERRERO | Cole Information |
| 2014 | OCCUPANT UNKNOWN | Cole Information |
| | JENNIFER MATOS | Cole Information |
| | ISABEL HERNANDEZ | Cole Information |
| | FREDY GUERRERO | Cole Information |
| 2010 | OCCUPANT UNKNOWN | Cole Information |
| | AVROM GOLD | Cole Information |
| | ORIN HENDRICKS | Cole Information |
| | ISABEL HERNANDEZ | Cole Information |
| | EMMANUELA GIALLEGO | Cole Information |
| 2005 | MICHAEL LIBURD | Cole Information |
| | ORIN HENDRICKS | Cole Information |
| | ISABEL HERNANDEZ | Cole Information |
| | JEFFREY SCHWARTZ | Cole Information |
| | Liburd Mattle v | Hill-Donnelly Information Services |
| | Ortiz Carmen v | Hill-Donnelly Information Services |

# FINDINGS

**437 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | AMANDA SAXON | EDR Digital Archive |
| | JOHN DERAFFELE | EDR Digital Archive |
| | JENNIFER GUZMAN | EDR Digital Archive |
| | YOLANDA SASTRE | EDR Digital Archive |
| 2017 | ISRAEL GUZMAN | Cole Information |
| | WILFREDO TORRES | Cole Information |
| | DANIELLE KUVERUA | Cole Information |
| | CHAYENNE THOMPSON | Cole Information |
| 2014 | MARIBEL GONELL | Cole Information |
| | CRUZ MILLAN | Cole Information |
| 2010 | FRANCISCO MACIAS | Cole Information |
| | R BOWMAN | Cole Information |
| | NGURIMUJE UANINI | Cole Information |
| | AMANDA SAXON | Cole Information |
| | JOHN DERAFFELE | Cole Information |
| 2005 | R BOWMAN | Cole Information |
| | NGERIMO MIEZE | Cole Information |
| | Bowman R v V | Hill-Donnelly Information Services |

**439 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHN DERAFFELE | EDR Digital Archive |
| | AMBA FRALIN | EDR Digital Archive |
| | MELANIE MALERO | EDR Digital Archive |
| | CHERYL VANNOY | EDR Digital Archive |
| 2017 | ANDREW LEBRON | Cole Information |
| | JOHN DERAFFELE | Cole Information |
| | DORIS WHITE | Cole Information |
| | PETER CONSTANTINO | Cole Information |
| | CECILLE WALLACE | Cole Information |
| | ZUALMY DISLA | Cole Information |
| | NICOLE WHITE | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2014 | ANDREW LEBRON | Cole Information |
| | JOHN DERAFFELE | Cole Information |
| | A BLOUNT | Cole Information |
| | AVROM GOLD | Cole Information |
| | JACK WHITE | Cole Information |
| | PETER CONSTANTINO | Cole Information |
| | TARA HOWARD | Cole Information |
| | CECILLE WALLACE | Cole Information |
| 2010 | LINDA CLINKSSCALES | Cole Information |
| | JACK WHITE | Cole Information |
| | PETER CONSTANTINO | Cole Information |
| 2005 | LINDA CLINKSSCALES | Cole Information |
| | JACK WHITE | Cole Information |
| | Blount Eveyin v | Hill-Donnelly Information Services |
| | Clinkscales Linda Av | Hill-Donnelly Information Services |
| | White Jack A | Hill-Donnelly Information Services |

**450 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | ATM | EDR Digital Archive |
| | GVC LI | EDR Digital Archive |
| | GBC | EDR Digital Archive |
| | GVC LTD | EDR Digital Archive |
| | GVC | EDR Digital Archive |
| | MICHAEL LAVALLIE | EDR Digital Archive |
| | NIKITA LAVALLIE | EDR Digital Archive |
| | GERRI LAVALLIE | EDR Digital Archive |
| 2017 | GVC LTD | Cole Information |
| | G V C | Cole Information |
| | GVC II | Cole Information |
| 2014 | G V C | Cole Information |
| | GVC II | Cole Information |
| 2010 | GBC LTD | Cole Information |

| Year | Uses | Source |
|---|---|---|
| 2010 | GVC II | Cole Information |
| 2005 | GBC | Hill-Donnelly Information Services |
| | GBC LTD | Hill-Donnelly Information Services |
| | Lavalle Micheal | Hill-Donnelly Information Services |
| | GVC | Cole Information |
| | Q T MINIBUS OF THE BRONX | Cole Information |
| 2000 | QT MINI BUS OF THE BRONX | Cole Information |
| | GVC | Cole Information |
| 1995 | CRYSTAL CHEMICAL CORP | Cole Information |
| 1993 | BASF CORP | New York Telephone |
| 1992 | BASF CORP | Cole Information |
| 1983 | LIMBACHR PAINT & COLOR WORKS INC | New York Telephone |

**455 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | NCL | Hill-Donnelly Information Services |
| | Tract 36005:102 N/A | Hill-Donnelly Information Services |
| 2000 | JORGE CRUZ | Cole Information |
| 1993 | CRUZ WENDELL | New York Telephone |
| | CRUZ Wendell | New York Telephone |
| 1992 | CRUZ, WENDELL | Cole Information |
| 1956 | CONTE LOUIS | New York Telephone |
| | FRANCO CARMELO | New York Telephone |

**487 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2010 | HOUSES ZEREGA | Cole Information |
| 2005 | HOUSES ZEREGA | Cole Information |

**489 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1956 | CONVERTINO MICHL | New York Telephone |
| | PERROTTI PAT | New York Telephone |
| 1940 | Lynch J | New York Telephone |

# FINDINGS

**492 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1940 | Reimer Harold | New York Telephone |

**493 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1956 | SACKS CELIA MRS GROCRY | New York Telephone |

**500 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2005 | VERIZON | Cole Information |
| 1961 | DEL BALSO CONST CORP | New York Telephone |
| | DELPHI CONST CO INC | New York Telephone |
| 1956 | DEL BALSO CONST CORP | New York Telephone |
| | DELPHI CONST CO INC | New York Telephone |
| 1949 | DEL BALSA CONST CORP | New York Telephone |
| 1940 | Del Balso Asphalt Corp | New York Telephone |
| | Del Balso Constr Corp | New York Telephone |

**501 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2014 | KEL MAR DESIGNS INCORPORATED | Cole Information |
| | KE MAR DESIGNS INCORPORATED | Cole Information |

**507 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1956 | FAUST JOS L | New York Telephone |

**530 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | GVC I | Cole Information |
| | GVC | Cole Information |
| 2014 | GVC I | Cole Information |
| | GVC | Cole Information |
| 2010 | GVC | Cole Information |
| | GVC LTD | Cole Information |

# FINDINGS

**535 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2020 | NY ROAD RUNNERS CLUB | EDR Digital Archive |

**537 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2010 | JASON LAGUNA | Cole Information |
| 2005 | JASON LAGUNA | Cole Information |

**570 ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 2017 | EXPLO POWDER INC | Cole Information |
| 2014 | EXPLO POWDER INCORPORATED | Cole Information |
| 2005 | EXPLO POWDER INC | Cole Information |
| 2000 | EXPLO POWDER INCORPORATED | Cole Information |
| 1995 | EXPLO POWDER INC | Cole Information |
| 1992 | EXPLO INC | Cole Information |
| | VINOCON INC | Cole Information |

**493A ZEREGA AVE**

| Year | Uses | Source |
|---|---|---|
| 1983 | CO-OP SECURITY L | New York Telephone |

## ZEREGA AVE # 3

**431 ZEREGA AVE # 3**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHNNY BLASINI | EDR Digital Archive |

**435 ZEREGA AVE # 3**

| Year | Uses | Source |
|---|---|---|
| 2020 | MICHAEL LIBURD | EDR Digital Archive |

## ZEREGA AVE # A

**433 ZEREGA AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | MOKBUL CHOUDHURY | EDR Digital Archive |

# FINDINGS

**435 ZEREGA AVE # A**

| Year | Uses | Source |
|---|---|---|
| 2020 | ISABEL HERNANDEZ | EDR Digital Archive |

## ZEREGA AVE # B

**429 ZEREGA AVE # B**

| Year | Uses | Source |
|---|---|---|
| 2020 | KEICY RODRIGUEZ | EDR Digital Archive |

## ZEREGA AVE # C

**429 ZEREGA AVE # C**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHASTITY CRUZ | EDR Digital Archive |

**435 ZEREGA AVE # C**

| Year | Uses | Source |
|---|---|---|
| 2020 | JOHANNA INFANTE | EDR Digital Archive |

**437 ZEREGA AVE # C**

| Year | Uses | Source |
|---|---|---|
| 2020 | CHAYENNE THOMPSON | EDR Digital Archive |
| | TIFFANY THOMPSON | EDR Digital Archive |

## ZERESA AVE

**500 ZERESA AVE**

| Year | Uses | Source |
|---|---|---|
| 1965 | DEL BALSO CONST CORP | New York Telephone Company |

# FINDINGS

## ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 0 LACOMBE AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 1 Schley Ave | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1927 |
| 196 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 196 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 198 EMERSON AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 200 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 259 HOSMER AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 259 HOSMER AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE # A | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 259 HOSMER AVE # B | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2590 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 260 HOSMER AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 260 HOSMER AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 260 HOSMER AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 260 HOSMER AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2600 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2602 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 SCHLEY AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2604 SCHLY AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| 2606 MILES AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2606 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2606 MILES AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 2606 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2608 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 2608 MILES AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 261 HOSMER AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 261 HOSMER AVE # B | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 2610 MILES AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 2616 SCHLEY AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 267 HOSMER AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 268 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| 268 EMERSON AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 269 HOSMER AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 269 HOSMER AVE # A | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 276 EMERSON AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| 276 EMERSON AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 277 HOSMAR AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 278 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 278 EMERSON AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| 295 HOSMER AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 3 Schley Ave | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 400 HUTCHINSON RIVER PKWY | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 420 HUTCHINSON RIVER PKWY | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

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| 420 HUTCHINSON RIVER PKWY | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 429 ZEREGA AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 429 ZEREGA AVE # B | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 429 ZEREGA AVE # C | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 430 ZEREGA AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 431 ZEREGA AVE # 3 | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 433 ZEREGA AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 433 ZEREGA AVE # A | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 435 ZEREGA AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 435 ZEREGA AVE # A | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 435 ZEREGA AVE # C | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 437 ZEREGA AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 437 ZEREGA AVE # C | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 455 ZEREGAAVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 460 HUTCHINSON RIVER PKWY | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 489 ZEREGAAVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1931, 1927 |
| 492 Hutchinson River Pkwy | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 492 ZEREGAAVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1931, 1927 |
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| 500 Hutchinson River Parkway | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 500 HUTCHINSON RIVER PKWY | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 680 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 680 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1927 |
| 680 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
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| 680 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 680 BRUSH AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 680 BRUSH AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 680 BRUSH AVE | 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 680 BRUSH AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

# FINDINGS

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 682 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2017, 2014, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2017, 2014, 2010, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 682 BRUSH AVE | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 699 Brush Ave | 2020, 2017, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 699 BRUSH AVE | 2020, 2017, 2014, 2010, 1995, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 700 HUTCHINSON RIVER PKWY | 2020, 2014, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |
| 700 HUTCHINSON RIVER PKWY | 2020, 2017, 2010, 2005, 2000, 1995, 1993, 1992, 1983, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

## TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 450 Hutchinson River Parkway | 2020, 2017, 2014, 2010, 2005, 1995, 1992, 1976, 1971, 1965, 1961, 1956, 1949, 1940, 1931, 1927 |

**Proposed Ballys Casino - Ring Road**

450 Hutchinson River Parkway

Bronx, NY 10465

Inquiry Number: 7720624.11

July 30, 2024

# The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

07/30/24

**Site Name:**

Proposed Ballys Casino - Ring
450 Hutchinson River Parkway
Bronx, NY 10465
EDR Inquiry # 7720624.11

**Client Name:**

Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001
Contact: Kaitlyn Gioia

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

***Search Results:***

| Year | Scale | Details | Source |
|---|---|---|---|
| 2019 | 1"=500' | Flight Year: 2019 | USDA/NAIP |
| 2015 | 1"=500' | Flight Year: 2015 | USDA/NAIP |
| 2011 | 1"=500' | Flight Year: 2011 | USDA/NAIP |
| 2006 | 1"=500' | Flight Year: 2006 | USDA/NAIP |
| 1994 | 1"=500' | Acquisition Date: April 08, 1994 | USGS/DOQQ |
| 1985 | 1"=500' | Flight Date: March 16, 1985 | USDA |
| 1980 | 1"=500' | Flight Date: July 25, 1980 | NOAA |
| 1974 | 1"=500' | Flight Date: September 15, 1974 | NOAA |
| 1966 | 1"=500' | Flight Date: February 23, 1966 | USGS |
| 1962 | 1"=500' | Flight Date: January 16, 1962 | EDR Proprietary Aerial Viewpoint |
| 1954 | 1"=500' | Flight Date: January 08, 1954 | USGS |
| 1951 | 1"=500' | Flight Date: April 20, 1951 | EDR Proprietary Aerial Viewpoint |
| 1924 | 1"=500' | Flight Date: July 01, 1924 | FAIR |

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INQUIRY #: 7720624.11

YEAR: 2019

= 500'

N

EDR



INQUIRY #: 7720624.11

YEAR: 2015

= 500'

N

EDR



INQUIRY #: 7720624.11

YEAR: 2011

= 500'

N

EDR



INQUIRY #: 7720624.11

YEAR: 2006

= 500'

N

EDR



INQUIRY #: 7720624.11

YEAR: 1994

= 500'

N

EDR



INQUIRY #: 7720624.11

YEAR: 1985

= 500'

N

EDR



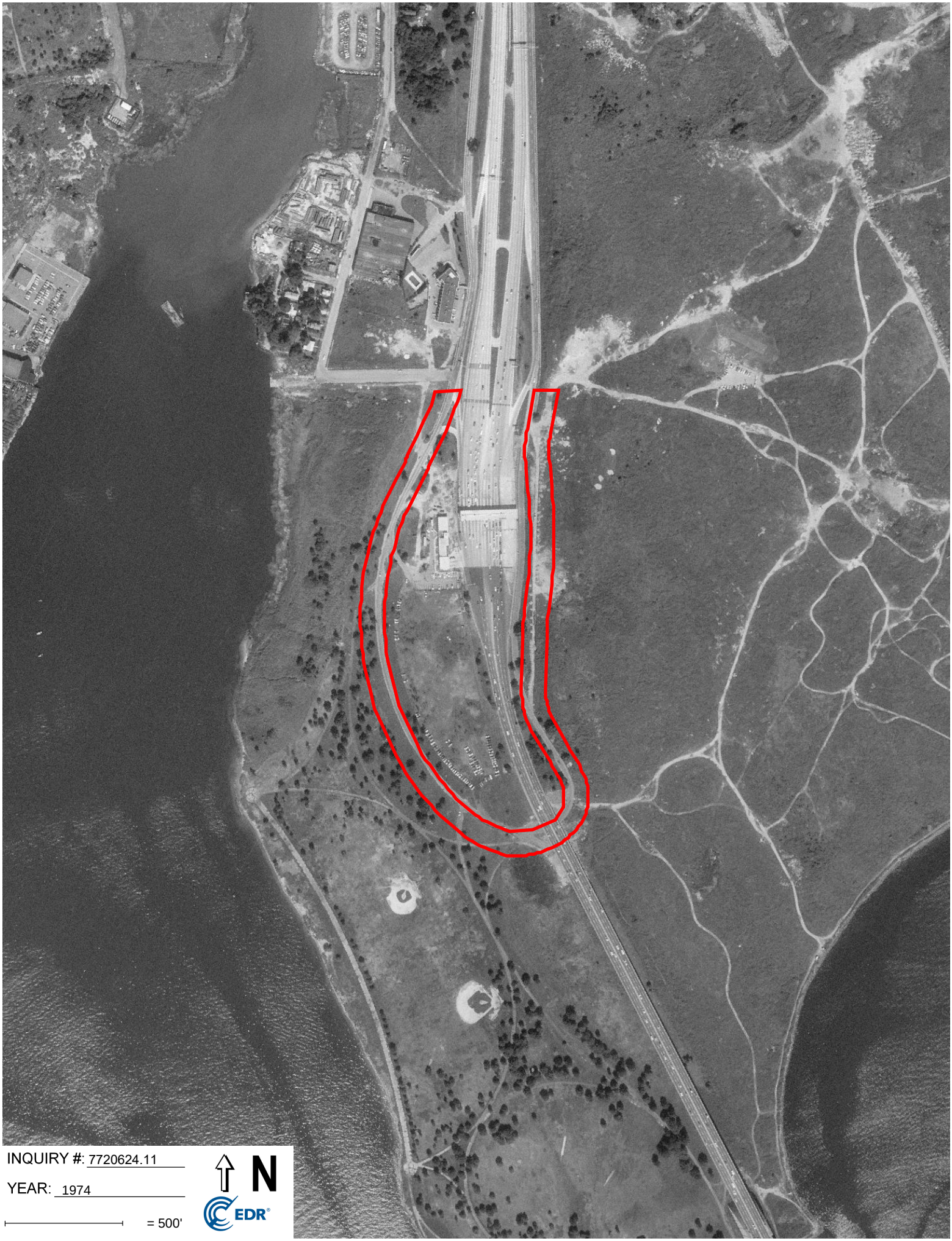
INQUIRY #: 7720624.11

YEAR: 1980

= 500'

N

EDR



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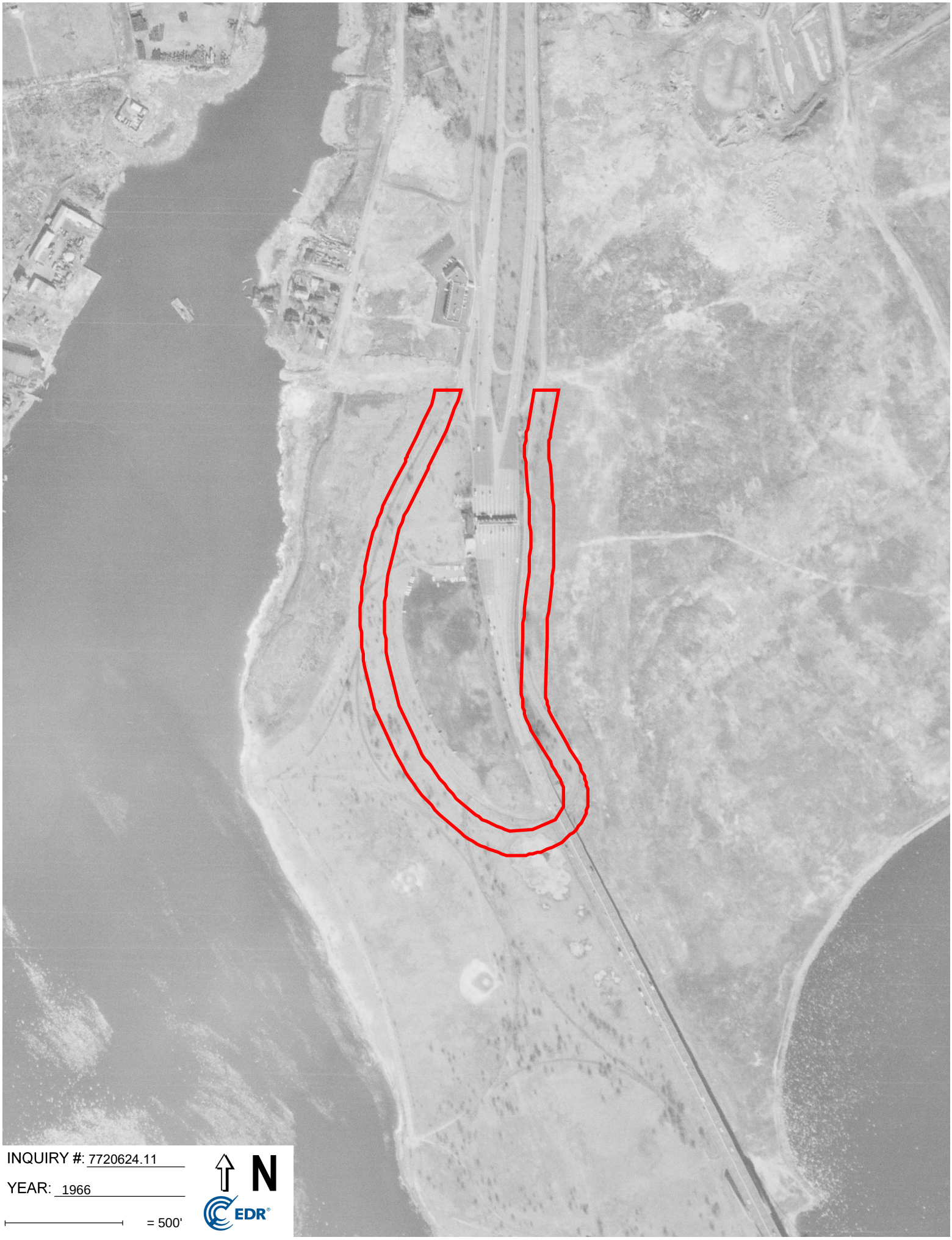
EDR



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YEAR: 1966

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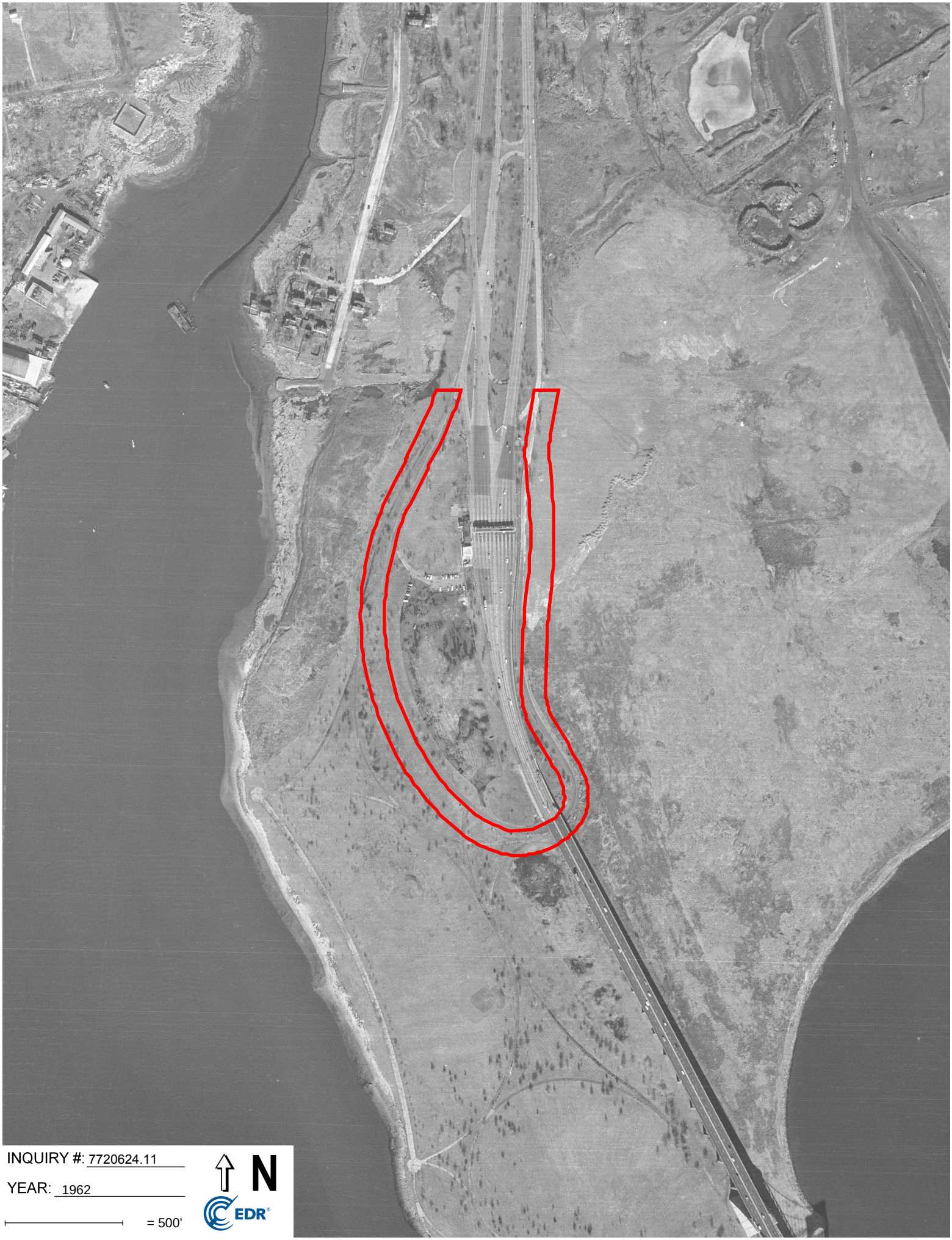
EDR



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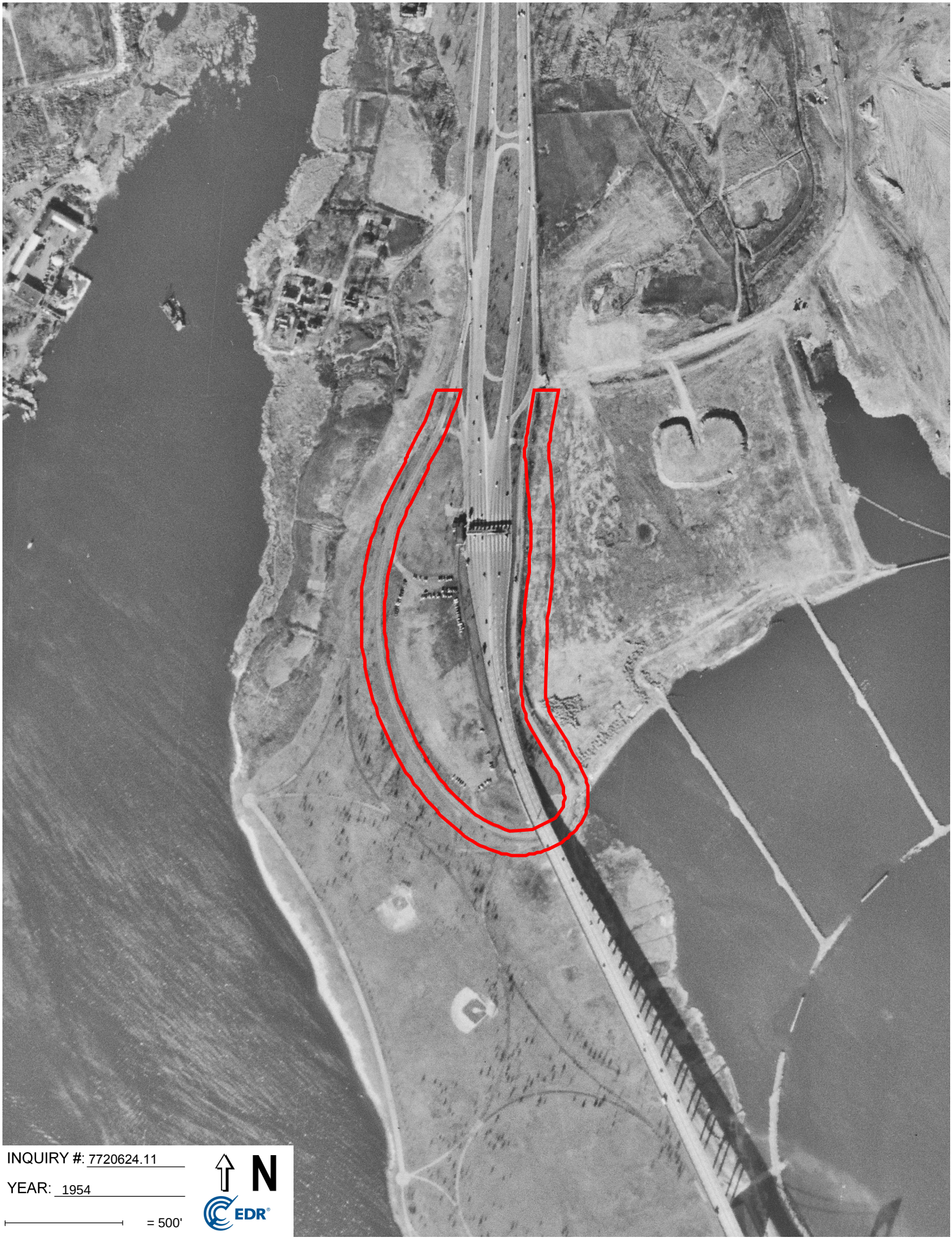
YEAR: 1962

= 500'

N

EDR



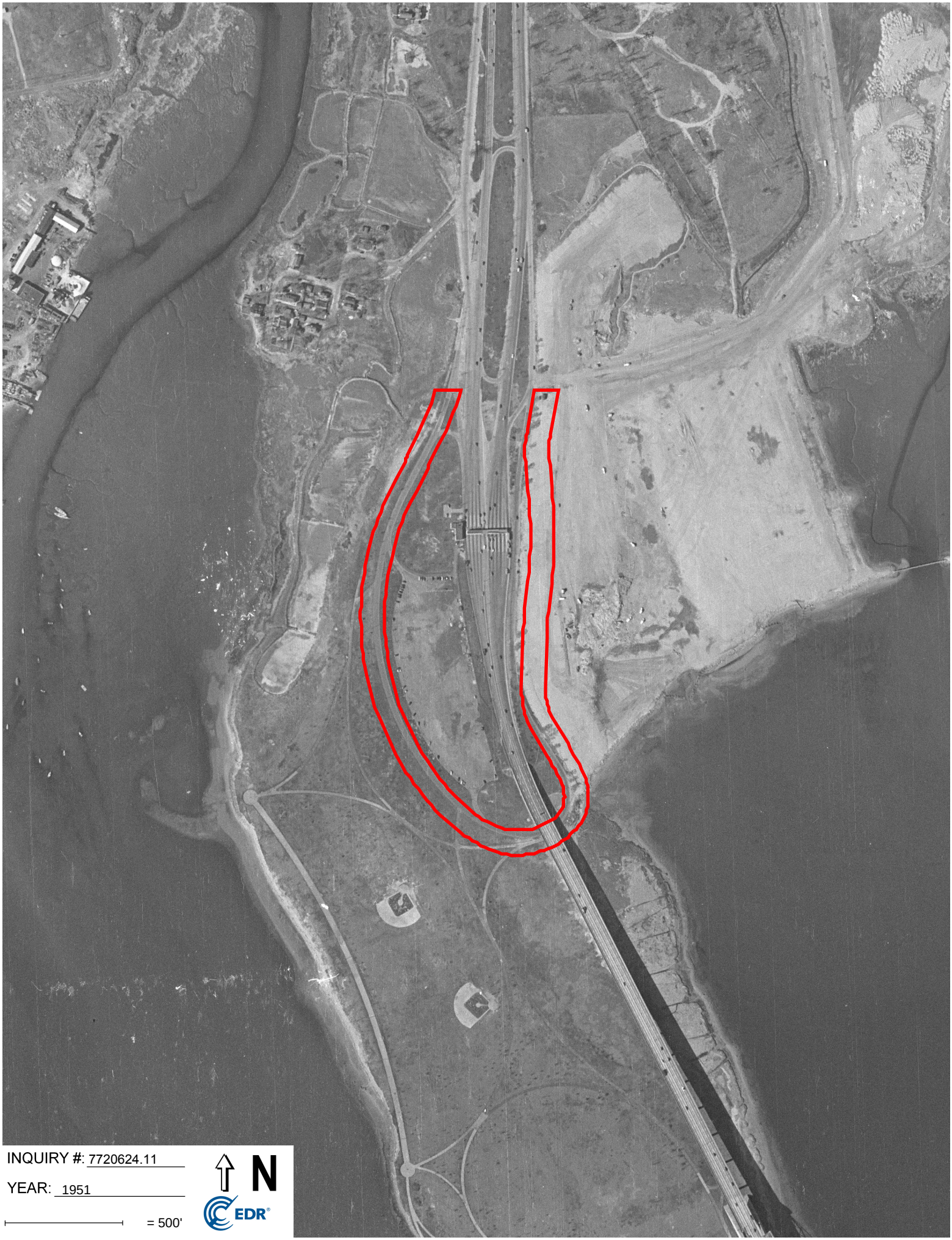
INQUIRY #: 7720624.11

YEAR: 1954

= 500'

N

EDR



INQUIRY #: 7720624.11

YEAR: 1951

= 500'

N

EDR



INQUIRY #: 7720624.11

YEAR: 1924

= 500'

N

EDR

# Appendix G Resumes of Environmental Professionals

# BRIAN GOCHENAUR, QEP

## ASSOCIATE PRINCIPAL

## ENVIRONMENTAL SCIENTIST

Mr. Gochenaur is an environmental project manager with 20 years of experience in environmental due diligence, site investigation and remediation, fuel oil storage tank investigation and removal, soil vapor intrusion assessments, in-situ remedial technology, spill closure, vapor barrier and sub-slab depressurization system design and construction, emergency response, environmental and geotechnical site investigations, and health and safety monitoring. He has extensive experience with the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup, Voluntary Cleanup and Spill Programs and New York City Department of Environmental Protection (NYCDEP) "E" Designated and New York City Voluntary Cleanup Program (BCP) sites. His areas of expertise include Phase I Environmental Site Assessments, Phase II Site Investigations, and environmental consulting and oversight on large scale construction projects.



**EDUCATION**

B.S., Environmental Science
University of Florida

**PROFESSIONAL REGISTRATION**

Qualified Environmental Professional (QEP) certified by the Institute of Professional Environmental Practice

40-Hour OSHA (HAZWOPER)

**SELECTED PROJECTS**

- 440 Washington Street, E-Designated services, New York, NY
- 3514 Surf Avenue, Tall Residential and Retail Building, Brooklyn, NY
- ARO 242 West 53, Tall Residential Building, New York, NY
- NY Aquarium Shark Exhibit, Soil Characterization and Excavation Oversight, Coney Island Neighborhood, Brooklyn, NY
- 60 West Street, Site Investigation and Redevelopment, Brooklyn, NY
- 535 4th Avenue, BCP Auto Repair Cleanup and Redevelopment, Brooklyn, NY
- 1525 Bedford Avenue, BCP Gas Station Cleanup and Redevelopment, Brooklyn, NY
- 220 Eleventh Avenue, Residential Building, New York, NY
- 432 Rodney Street, Residential Building, Brooklyn, NY
- 563 Sackett Street, Brooklyn, NY
- 362 West 125th Street, Residential Building, New York, NY
- Bedford Armory Redevelopment, Brooklyn, NY
- 268 West Street, BCP Redevelopment of Former Commercial and Industrial Site, New York, NY
- 110 125th Street, Soil Excavation and Remediation, New York, NY
- Former Roseland Ballroom Redevelopment, Soil Characterization and Excavation Oversight, New York, NY
- 42 Crosby Street, "E" Designated Site Investigation and Remediation, New York, NY
- New York School Construction Authority, Various Locations, In-House Environmental Consulting, Five Boroughs of New York City
- EZ Serve Portfolio, GE Capital, Various Phase II Site Investigations, FL, GA, LA, and MS
- Beth Elohim Child Daycare Center, Lead Based Paint Abatement, Brooklyn, NY
- Price Battery, Environmental Protection Agency (EPA) Lead Fallout Superfund Site, Hamburg, PA

- Clark Portfolio, GE Capital, Various Phase II Locations, MI, IL, ID, and OH
- Tops Plaza Portfolio, Prudential Real Estate Investors, Various Phase II Locations, NY
- Cingular Wireless Portfolio, Cingular Wireless, Various Locations Phase I and II Locations, WA
- Queens Center Mall Expansion, Remedial Oversight, Elmhurst, NY
- Soka Gakkai International-USA, Cultural Center, Brooklyn, NY
- 1752 Shore Parkway, Environmental Remediation, Brooklyn, NY
- Bedford Union Armory, NYS Brownfield Cleanup Program, Brooklyn, NY
- NYCEDC Manhattan Greenway – Harlem River, New York, NY
- 445 Gerard Avenue, Residential Building, Bronx, NY
- Towne Gardens North, Residential Building, Buffalo, NY

# LAMEES ESMAIL, EIT

## PROJECT ENGINEER

## ENVIRONMENTAL ENGINEERING

Ms. Esmail is a civil and environmental engineer with four years of experience supporting environmental oversight and remediation projects in New York City. She has performed environmental field work including preparing daily inspection reports, photo documentation of work, and reviewing contractor submittals. She currently performs site research, manages field oversight, reviews/approves contractor submittals, prepares reports, and is involved with remedial design, implementation and project management.

Prior to joining Langan, Ms. Esmail gained three years of experience supporting environmental permitting and erosion and sedimentation control primarily for linear overhead transmission line projects. Types of permits included state land disturbance approvals and Army Corps of Engineers Section 10 Pre-Construction Notifications. Ms. Esmail also has experience aiding with the siting of new substation properties, using ArcGIS and AutoCAD to compile data for potential sites.



**EDUCATION**

B.S., Civil Engineering (Environmental Concentration)
George Washington University

**PROFESSIONAL REGISTRATION**

Engineer in Training (EIT) in NC

**SELECTED PROJECTS**

- Con Edison Partial Replacement of 345KV Feeders M51 & M52 Feasibility Study, New York, NY
- 220 Eleventh Avenue, Hudson Arts Building, New York, NY
- 50 Hudson Yards, Supertall Office Building, New York, NY
- 215 North 10th Street, Brooklyn, NY
- 320 West 135th Street, New York, NY
- 163 Varick Street, New York, NY
- 39 West 23rd Street, New York, NY
- 1 Huron Street, Brooklyn, NY
- Bedford Armory, Brooklyn, NY
- 1607 Surf Avenue, Brooklyn, NY
- 414 Gerard Avenue, Bronx, NY
- 445 Gerard Avenue, Bronx, NY
- 326-350 Rockaway Avenue, Brooklyn, NY
- 197-201 Canal Street, Staten Island, NY
- 475 Bay Street, Staten Island, NY
- Astoria Steel, Queens, NY
- 99 Hudson Boulevard, New York, NY
- 4650 Broadway, New York, NY
- 12-57 57th Street, Brooklyn, NY
- 805-825 Atlantic Avenue, Brooklyn, NY
- Various Phase I Environmental Site Assessments (ESAs) in NYC

## SELECTED PUBLICATIONS, REPORTS, AND PRESENTATIONS

Esmail, L., “Transmission Line Erosion Control and Construction Specifications”, Duke Energy Progress Transmission Erosion and Sedimentation Control Seminar, Raleigh, NC, November 2016.

# KAITLYN GIOIA

## SENIOR STAFF SCIENTIST

## ENVIRONMENTAL ENGINEERING

Ms. Gioia is an Environmental Scientist with the New York City team. Ms. Gioia graduated in 2016 from Adelphi University with a B.A. in Environmental Studies. Ms. Gioia's experiences include project management, leading field work, exposure to an assortment of environmental pollutants, remedial action procedures, & Phase I and Phase II Environmental Assessments. Ms. Gioia has performed Asbestos Hazard and Emergency Response Act (AHERA) inspections and evaluations in schools and State Pollutant Discharge Elimination System (SPDES) sampling for power plants and commercial facilities.



### SELECTED PROJECTS

- 80-100 Flatbush Avenue, Brooklyn, NY
- 250 Water Street, New York, NY
- 35-01 & 35-09 Northern Boulevard, Long Island City, NY
- 23-15 44th Road, Long Island City, NY
- South Randalls Due Diligence, New York, NY
- 595-647 Smith Street, Brooklyn, NY
- Willets Point Redevelopment, Flushing, NY
- President Street Properties, Brooklyn, NY
- 475 Bay Street, Staten Island, NY
- Confidential Project, Queens, NY
- 137 Kings Highway, Brooklyn, NY
- 111 Willow Avenue, Bronx, NY
- 560 Degraw Street, Brooklyn, NY
- 122 Fifth Avenue, New York, NY
- Insurance Claim Oversight, White Plains, NY*
- Subrogation Potential Investigation, Lindenhurst, NY*
- Brookhaven National Lab, Brookhaven, NY*
- Far Rockaway Vault Sampling, Far Rockaway, NY*
- East Islip School District AHERA Inspection, East Islip, NY*
- UPRS SPDES Sampling, Uniondale, NY*
- 550 Stewart Avenue Phase I and II, Garden City, NY*
- Riverhead to Canal Cable Expansion, Riverhead, NY*
- Noise Dosimetry Study, Queens, NY*
- School District Lead in Water Sampling, Yonkers, Kings Park, and Baldwin, NY*
- Potable Water Sampling, New York, NY*
- DCF Remediation Oversight, Malverne, West Hempstead, and Port Washington, NY*
- AOP Pilot Testing, Garden City Park, Franklin Square, and Port Washington, NY*

### EDUCATION

B.A., Environmental Studies
Adelphi University

### PROFESSIONAL REGISTRATION

OSHA 40-Hour

OSHA10-Hour

NYS Department of Labor, Asbestos Inspector License

USEPA Lead Based Paint Inspector License

NYSDEC Class A/B Operator of Underground Storage Tank Systems

NYSDEC 4-Hour Erosion and Sediment Control Contractor Training 2021

**Projects represent experience with a previous firm*

## SELECTED PUBLICATIONS, REPORTS, AND PRESENTATIONS

"Fecundity and Embryonic Development of Spiny Dogfish in the Northwest Atlantic Ocean" Transactions of the American Fisheries Society 2019.

Dutton J., Fisher NS., Gioia KA., Madigan DJ., "Tissue Distribution of Mercury in Female Spiny Dogfish (Squalus Acanthias)" Society of Environmental Toxicology and Chemistry South-Central Regional Meeting 2016, Fort Worth, TX.

Dutton J., Fisher NS., Gioia KA., Madigan DJ., "Maternal Transfer of Mercury in Spiny Dogfish" 12th International Congress on The Biology of Fish 2016, San Marcos, TX.

Dutton J., Fisher NS., Gioia KA., Madigan DJ., "Mercury Bioaccumulation and Maternal Transfer in Spiny Dogfish (Squalus Acanthias)" 33rd Annual Meeting of The American Elasmobranch Society/Joint Meeting of Ichthyologists and Herpetologists 2017, Austin, TX.

# Appendix C Health and Safety Plan

# HEALTH AND SAFETY PLAN

# for

# PROPOSED BALLY'S CASINO – RING ROAD
# at FERRY POINT PARK
# Bronx, New York 10465

***Prepared for***

**Bally's Corporation**
**100 Westminster Street**
**Providence, Rhode Island**

***Prepared by:***

**Langan Engineering, Environmental, Surveying**
**Landscape Architecture and Geology**
**21 Penn Plaza**
**360 West 31st Street, 8th Floor**
**New York, New York 10001**

**September 2024**
**Langan Project No. 170773001**

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# 1.0 INTRODUCTION

## 1.1 General

This HEALTH AND SAFETY PLAN (HASP) was developed to address disturbance of known and reasonably anticipated subsurface contaminants and comply with Occupational Safety and Health Administration (OSHA) Standard 29 Code of Federal Regulation (CFR) 1910.120(b)(4), Hazardous Waste Operations and Emergency Response during anticipated site work for the property consisting of an approximately 19-acre portion of Ferry Point Park (FPP) that is part of Bronx Block 5622, Lot 1 (the "Site").

This HASP provides the minimum requirements for implementing site operations during future remedial measures. All contractors performing work on this site must implement their own HASP that, at a minimum, adheres to this HASP. The contractor is responsible for their own health and safety and that of their subcontractors. Langan personnel will implement this HASP while onsite.

The content of this HASP may change or undergo revision based upon additional information made available to health and safety personnel, monitoring results, or changes in the work plan.

## 1.2 Site Location and Background

The site is an approximately 9.85-acre, U-shaped section of Ferry Point Park that primarily serves as a park thoroughfare and public recreation space, and is identified on the New York City Bronx Borough Tax Map as part of Block 5622, Lot 1. The site is improved with an uninterrupted, circular roadway, referred to as Ring Road. Ring Road is a one-lane, one-way, asphalt-paved roadway and is bordered on either side by concrete curbing, metal guardrails, and grass shoulders. The remainder of the site includes vegetated areas and footpaths associated with Ferry Point Park. The section of Ring Road comprising the site totals about 1 mile.

The majority of the site was part of Westchester Creek and the Baxter Creek Inlet (now the East River) before infilling and development of Ferry Point Park in the 1940s. By 1947, the site and surrounding area had been infilled to create new land, and Ring Road had been constructed. Improvements to the site continued through 2015, when adjoining park and golf course construction were completed, and the subject property appeared as it does today. A site location map is provided as Figure 1.

## 1.3 Summary of Work Tasks

### 1.3.1 Geophysical Investigation - Underground Utility Clearance Policy

Prior to the commencement of intrusive field activities (i.e., soil borings); Langan will follow the Langan Underground Utility Clearance Policy including retaining a geophysical consultant to conduct a geophysical survey using ground penetrating radar (GPR) and electromagnetic detection equipment. The objective of the survey will be to identify any underground storage tank (UST) structures, drains, underground utilities, and other subsurface anomalies that may be encountered during the investigation. During this time Langan personnel will inspect the site and confirm investigation locations are both accessible and free of potential utility or other known or suspected subsurface structures.

### 1.3.2 "Soft-Dig" Clearance of Borehole Locations

If there is no geophysical survey for utility clearance or the results of the geophysical survey are inconclusive at specific locations subject to intrusive work, or otherwise in compliance with Langan's Underground Utility Clearance Policy, the drilling contractor may "soft-dig" each proposed drilling location or a separate contractor may be retained to "soft-dig" the locations to confirm they are free of utilities or other known or suspected subsurface structures. The dimensions of each location should extend to a depth of 5-feet and be about 1.5 times the anticipated diameter of the borehole when drilled. Langan personnel will confirm that the "soft dig" activities are completed to these specifications.

### 1.3.3 Day Lighting Excavation and Soil Screening

Langan may retain an excavation contractor to daylight buried unidentified structures. The purpose of the daylighting is to confirm if these structures are subsurface structures of concern (USTs, utilities sewer lines, storm water drains, electrical, gas or other utility line as well as other artifacts pertinent to the work plan). The excavation contractor will contact the appropriate utility mark-out authority and make available to their staff the verification number and effective dates.

The excavation contractor will employ "soft dig" methods in accordance with the Langan Underground Utility Clearance Policy when excavating. Langan may screen excavated soil for visual, olfactory, and instrumental indicators suggestive of a potential chemical or petroleum release. Instrument screening for the presence of volatile organic compounds (VOC) may be performed with a duly calibrated photoionization detector (PID). Contractors will notify Langan personnel if they identify indications suggestive of a potential chemical or petroleum release. Contaminated material shall be handled, and property disposed in accordance with federal, state and city regulations, criteria, and guidelines.

### 1.3.4 Soil Investigation and Sampling

Langan will retain a drilling contractor to advance soil borings to a depth below grade surface (bgs) specified in the work plan. Borings will be installed at the approximate locations indicated in Langan's work plan but may be moved in the field based on utility clearance and accessibility. The drilling contractor will contact the appropriate utility mark-out authority and make available to their drilling staff the verification number and effective dates. Langan will record the verification number and effective dates from the drillers. Langan will also note the location of marked out utilities on the site plan and scan the data into the project folder.

Langan personnel will screen soil for visual, olfactory, and instrumental indicators suggestive of a potential petroleum release. Instrument screening for the presence of VOC may be performed with a duly field calibrated PID (or equivalent). Langan personnel will collect soil samples from the proposed soil boring locations following the sampling plan outlined in the work plan. The borings will be filled with clean soil cuttings, clean sand or bentonite grout and capped at grade to match the surrounding surface after samples are collected.

Soil samples will be submitted to a specific lab per the work plan or to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory and analyzed in accordance with work plan specifications.

### 1.3.5 Groundwater Investigation and Sampling

Selected soil borings will be converted into groundwater monitoring wells and sampled to evaluate groundwater quality. Groundwater samples will be collected from one or more of the new and if available, pre-existing monitoring wells in accordance with the Langan Low Flow Groundwater Sampling SOP (SOP #12). Groundwater samples will be submitted to an approved laboratory and analyzed for constituents as specified in the work plan. Temporary monitoring wells will be plugged and abandoned during the investigation in the manner defined in Section 1.3.2 for soil boring. Permanent monitoring wells will be completed with a road box set in concrete. Permanent monitoring wells will be eventually backfilled and abandoned in accordance with State and Local regulations.

Groundwater samples will be submitted to a NYSDOH ELAP-certified laboratory and analyzed in accordance with work plan specifications.

### 1.3.6 Groundwater/Product Gauging

Langan may gauge one or more of the observation/monitoring wells to collect synoptic head data or determine the presence of product. When gauging, Langan may also survey head

space VOCs within the well using a duly calibrated PID. When collected, gauging data will be based on the northernmost point at top of casing (TOC) using an interface probe (IP) capable of determining the presence of free product in the monitoring well as light non-aqueous phase liquid (LNAPL) at the top of the water column. If gauging for dense non-aqueous phase liquid (DNAPL) at the base of the monitoring well, the IP may not be appropriate. The field engineer will coordinate with the project team to devise an alternative method to gauge the thickness of DNAPL at base of the well. Langan will decontaminate gauging equipment between wells as required by the work plan.

### 1.3.7 Product Bailing

Langan may remove free product from on-site monitoring wells as part of this HASP or subsequent SMP activities. Langan will may use a bailer, peristaltic pump or submersible as determined by the work plan. Langan will record the volume of product and groundwater recovered. Recovered product and groundwater will be drummed in accordance with procedures outlined in the work plan.

### 1.3.8 Sub Slab or Soil Vapor Point Installation and Sampling

Langan (or its contractor) will install one or more sub-slab or soil vapor points at selected locations. If installed, the sub-slab points will be set at or just below the bottom of the slab in accordance with the work plan. The sub-slab points may be installed using an electric hammer drill to advance small diameter borings through the concrete (or equivalent) slab as defined in the work plan. The borings will terminate in and sample from the gravel substrate below the slab. Conditions in the field may require adjustment of sampling locations.

Langan personnel (or contractor) may install VaporPin® vapor points (or equivalent) in accordance with the manufacturer's instructions. If no point is used, Langan (or contractor) will set a sampling tube defined as an open-ended Teflon™-lined polyethylene tubing (or equivalent tubing as approved by the project manager [PM]). The sampling tube will be set either within the base of the concrete slab or within the support gravel underlying the slab.

When using the VaporPin® or equivalent, the installation sleeve will provide the necessary annulus seal required for subsequent sampling. However, if a sampling tube as defined above is use, the annulus at the top of the concrete slab will be filled with bentonite or food grade clay to seal the slab. A sand pack is not required for sub-slab vapor sampling. Unless specified by the work plan, the sub slab points are temporary and will be pulled after the sampling event and the hole will be patched at grade with material similar to the surrounding surface.

Langan personnel will confirm that the soil vapor points (implants) are 2-inches in length

constructed of polyethylene material and are connected to the surface by Teflon™-line polyethylene material (equivalent materials for the point and tubing are acceptable as approved by the PM). The annulus around the implant will be filled with clean sand to 6-inches above the implant. A 1-foot bentonite slurry will be applied to the top of the sand up to seal the sampling points. The remaining soil vapor point annulus may be backfilled with clean cuttings are sand to grade. Unless specified by the work plan, the vapor points are temporary and will be pulled after the sampling event and the hole will be patched at grade with material similar to the surrounding surface.

Vapor samples will be collected in accordance with following guidance including Final Guidance for Evaluating Soil Vapor Intrusion published by the New York State Department of Health (NYSDOH) in October 2006, Langan's Sub-Slab Vapor Sampling SOP (SOP #14) and as specified in the work plan. In addition, ambient air and indoor air samples may be collected for use as a comparison sample. As part of the indoor air sampling program, Langan personnel may complete a building inventory inspection. The inspection may take place prior to the commencement of actual field sampling. Vapor samples may be submitted to a NYSDOH ELAP-certified laboratory and analyzed in accordance with work plan specifications.

### 1.3.9 Test Pits

Langan may retain an excavation contractor to advance test pits to a depth below grade surface (bgs) specified in the work plan. Locations will be based on the results of the geophysical survey, the site inspection and document review. The excavation contractor is responsible for all permits and will contact the appropriate utility mark-out authority and make available to their staff the verification number and effective dates.

The excavation contractor may be required to use a bladed equipped excavation bucket. Langan personnel will confirm this and observe the test pit excavation noting foundation and soil attributes as required by the work plan. Langan personnel may collect soil samples for geotechnical evaluation. The excavation will be filled with soil cuttings after the observations are completed and samples are collected.

Soil samples, if collected, will be submitted to a geotechnical laboratory to be analyzed in accordance with work plan specifications.

### 1.3.10 Geotechnical Soil Boring

Langan may retain a geotechnical drilling contractor to advance geotechnical soil borings to a depth bgs specified in the work plan. Borehole locations may on shore or advanced from a barge. The locations may be based on the results of the geophysical investigation, site inspection and

document review. The drilling contractor will contact the appropriate utility mark-out authority and make available to their drilling staff the verification number and effective dates.

Langan will observe the borehole advancement and record appropriate geotechnical data including the results of Standard Penetration Tests (SPT), soil and stratigraphic identification and other data as required by the work plan. One or more borings may be completed as observation wells to be completed as specified in the work plan. All soil borings will be filled with clean soil cuttings after the subsurface exploration is completed.

Langan personnel may collect soil samples for geotechnical evaluation. Soil samples may be submitted to a geotechnical laboratory to be analyzed in accordance with work plan specifications.

### 1.3.11 Waste Characterization - Soil Investigation and Sampling

Langan will undertake a waste characterization investigation in accordance with the work plan. Langan may retain a drilling contractor to complete to advancing soil borings to a depth below grade surface (bgs) as specified in the work plan. If advanced, borings will be installed at the approximate locations indicated in Langan's work plan but may be moved in the field based on utility clearance and accessibility. The drilling contractor, or Langan is no contractor is retained, will contact the appropriate utility mark-out authority, and make available to their drilling staff the verification number and effective dates. Langan will record the verification number and effective dates from the drillers. Langan will also note the location of marked out utilities on the site plan and scan the data into the project folder.

Langan personnel will screen soil for visual, olfactory, and instrumental indicators suggestive of a potential petroleum release. Instrument screening for the presence of VOCs may be performed with a duly field calibrated PID. Langan personnel will collect soil samples from following the waste classification sampling plan outlined in the work plan. If advanced, borings will be filled with clean soil cuttings, clean sand or bentonite grout and capped at grade to match the surrounding surface after samples are collected.

Soil samples will be submitted to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory and analyzed in accordance with work plan specifications.

Vapor samples will be collected in accordance with following guidance including Final Guidance for Evaluating Soil Vapor Intrusion published by the New York State Department of Health (NYSDOH) in October 2006, Langan's Sub-Slab Vapor Sampling SOP (SOP #14) and as specified in the work plan. In addition, ambient air and indoor air samples may be collected for use as a

comparison sample. As part of the indoor air sampling program, Langan personnel may complete a building inventory inspection. The inspection may take place prior to the commencement of actual field sampling. Vapor samples may be submitted to a NYSDOH ELAP-certified laboratory and analyzed in accordance with work plan specifications.

### 1.3.12 Demolition of Current Site Features

Langan will observe the demolition and removal of current site features as defined in the work plan. All soils and debris excavated or disturbed at the site will be either transported off site for disposal at an approved facility or reused on the site. Personnel conducting activities will report to Langan when encountering impacted historic fill, petroleum impacted material or impacted groundwater and shall abide to the provisions of this HASP.

### 1.3.13 Storm water Pollution Prevention Inspection

If required and in accordance with the work plan, Langan personnel with Storm Water Pollution Prevention (SWPPP) inspection credentials will conduct SWPPP inspections. Langan will observe the stormwater pollution prevention system install to document that the install is in accordance with the work plan and take appropriate measures if impacted soil is observed during excavation.

### 1.3.14 Excavation

Langan personnel will screen excavated material for visual, olfactory, and instrumental indicators suggestive of a potential chemical or petroleum release. Instrument screening for the presence of volatile organic compounds (VOC) may be performed with a duly calibrated Photoionization detector (PID). Contractors will excavate for utilities, foundation components and potential grading using heavy equipment and hand tools. Contractors will notify Langan personnel if they identify indications of a potential chemical or petroleum release. Contaminated material must be handled, and property disposed in accordance with federal, state and city regulations, criteria, and guidelines.

### 1.3.15 Soil Screening

As part of future excavation activities, the Langan personnel will report when they have observed visual and olfactory indications of possible soil impact. Langan personnel will also report concentrations of VOCs or methane above background when using a properly calibrated handheld PID and flame ionization detector (FID), or equivalent.

### 1.3.16 Soil Sampling

Soil samples (waste characterization, excavation endpoint, delineation, or quality assurance/quality control [QA/QC]) may be collected during construction, as required. Langan personnel will coordinate with the contractor in sampling soil (in accordance with the Site Management Plan [SMP], where applicable). If stockpile soil sampling is required from above ground level, suitable excavation equipment (i.e., excavator, front end loader) should be used to collect the sample.

Soil samples will be submitted to a NYSDOH ELAP-certified laboratory and analyzed in accordance with work plan specifications.

### 1.3.17 Stockpiling

As part of future excavation activities, potentially impacted soil may be stockpiled pending laboratory analysis and determining proper off-site disposal. Visibly contaminated soil, if encountered, must be segregated, and stockpiled on at least 10 millimeters of plastic sheeting; reusable soil and fill must be segregated and stockpiled separately from unusable fill, concrete and other debris; the stockpiles must be kept covered with 6 millimeters thick plastic sheeting; the plastic sheeting covering the stockpiles must be anchored firmly in place by weights, stakes, or both; the Contractor must maintain the plastic sheeting.

### 1.3.18 Characterization of Excavated Material

When required by the work plan, Langan personnel will characterize excavated soil or clean backfill in accordance with Langan standards.

### 1.3.19 Construction Activity Inspections and Observations

Langan will observe construction activities including the general oversight, observation of landscaping activities, and other select observation, project management, and supervision as specified in the work plan or in accordance with the construction documents, or special inspection requirements administered by the New York City Department of Buildings. Materials used for construction will be inspected by Langan for conformance to the design documents.

### 1.3.20 Support of Excavation (SOE)

Langan personnel will perform observational and inspection activities in support of excavation. These activities include drilling of soil pilings and tiebacks and other activities specified in the work plan.

### 1.3.21 Observation/Monitoring Well Plugging and Abandonment

At an unspecified future date, the observation/monitoring wells will be abandoned. Plugging and abandonment will be in accordance with federal and state requirements. Langan may retain a drilling contractor to complete the plugging and abandonment activities. The contractor will contact the appropriate utility mark-out authority and make available to their field staff the verification number and effective dates. Langan may observe the plugging and abandonment of one or more observation/monitoring wells to document that the plugging and abandonment activities were completed in accordance with the work plan and regulations.

### 1.3.22 QA/QC Sampling

Samples for quality assurance/quality control [QA/QC] may also be collected and submitted to an approved laboratory and analyzed in accordance with work plan specifications. Information regarding the QA/QC samples including required method of analysis may be included in the same COC as the soil samples unless otherwise instructed by the work plan.

### 1.3.23 Excavation Backfill

Areas of the site that were over-excavated may be backfilled to development grade (i.e., the grade required to complete construction of the foundation and sidewalk extension). Imported material should meet specifications defined in the work plan or consist of clean fill that meets the 6 New York Codes, Rules and Regulations (NYCRR) Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives (UU SCOs) or other acceptable fill material such as virgin stone from a permitted mine or quarry or recycled concrete aggregate (RCA), from a New York State Department of Environmental Conservation (NYSDEC)-registered facility in compliance with 6 NYCRR Part 360 registration and permitting requirements for the period of RCA acquisition. Imported RCA must be derived from recognizable and uncontaminated concrete.

### 1.3.24 Decommissioning and Removal of Underground Storage Tank

If an underground storage tank (UST) is encountered, a UST decommissioning and removal contractor shall furnish all labor and materials, equipment and incidentals required for the proper decontamination, removal, and closure of any UST in accordance with federal, state and local regulations. Langan personnel will monitor VOCs with a calibrated PID downwind from the UST excavation and record the PID readings.

### 1.3.25 Construction Dewatering

Construction dewatering may be required, the dewatering contractor shall be responsible for handling contaminated dewatering fluids in accordance with federal, state and local regulations.

Dewatering fluids are likely to be discharged to the local sanitary sewer system after treatment and under approved regulatory permit. Alternatively, the contractor may provide containerized storage to allow for testing of groundwater prior to, and after, treatment and before disposal. If required, Langan field personnel may sample dewatering treatment system liquids from either a discharge standpipe or a storage tank. Dewatering samples will be submitted to an ELAP-certified laboratory for analysis.

### 1.3.26 Installation of Vapor/Moisture Barrier

Langan will observe and document the installation of a vapor and/or moisture barrier as defined by the work plan. The installation of the vapor/moisture barrier is to be completed by a properly licensed contractor as specified in the work plan. Langan will inspect the vapor barrier installation to assess whether the installation is in accordance with specifications in the work plan.

### 1.3.27 Communication Pilot Test Oversight

Langan will oversee the contractor installation of sub-slab monitoring points, the assembling of the vapor manifold with blower and the start-up of the pilot test for the sub-slab vapor remediation system. These activities are to be done in accordance with the work plan. The installation and assembly activities are to be performed by the contractor in accordance with the construction documents. Materials used for construction will be inspected by Langan for conformance to the design documents.

### 1.3.28 Concrete Coring & Excavation

Langan may retain a contractor to excavate the concrete slab at selected locations for installing the remedial system. Prior to the commencement of intrusive field activities; the contractor will contact the appropriate utility mark-out authority and make available to their staff the verification number and effective dates. The contractor may be required to undertake minimal excavation to meet the design criteria of the work plan.

Langan will observe excavated soil for visual, olfactory, and instrumental indicators suggestive of a potential petroleum release. Instrument screening for the presence of volatile organic compounds (VOCs) may be performed with PID. Langan may collect soil samples if directed by the project manager or as part of the work plan. Soil samples will be submitted to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory and analyzed in accordance with work plan specifications.

### 1.3.29 Installation of Sub-Slab Depressurization (SSD) System

Langan will retain contractors to install the components of the proposed SSD system.

Components include:

- Sub-slab piping;
- Above-ground piping; and
- Roof Mounted Blower.

As well electrical and structural components that will provide power or brace/support the SSD system components.

### 1.3.30 Sub-Slab Depressurization System Inspection

Once active, Langan will perform periodic inspections of the SSD system in accordance with work plan or site management plan (SMP) or as directed by the PM. Inspections will include:

- An assessment of the condition of the SSD system including the four roof-mounted components;
- Collection of vacuum and VOC readings at each of the permanent vapor monitoring points; and
- Collection of flow rate and VOC readings at the effluent at designated points sampling ports in the system.

All work will be duly documented in the O&M work logs and included as required in the O&M reports.

### 1.3.31 Equipment Decontamination

Before the start of the day's sampling and after sampling each run, sampling equipment will be decontaminated by the decontamination process outlined Attachment B - Decontamination Procedures. Decontamination wastes and purge water will be temporarily stored on site pending analytical results.

### 1.3.32 Management of Investigative-Derived Waste

The investigative-derived waste (IDW) generated during this investigation will be contained in DOT-approved 55-gallon drums. The drums will be temporarily stored on the site or as directed by the client representative. All drums will be filled between to two-thirds full to allow easy maneuvering during drum pickup and disposal. Drum labels are to be provided by Langan (Environmental Closet). All drums will be labeled as "IDW Pending Analysis" until sample data are reported from the laboratory. Drum labels will include date filled and locations where waste was generated along with the standard information required by the labels in accordance with the

Langan SOP09, Drum Labeling.

Closed top drums are to be used to store liquids. Debris, including plastic sheeting, polyethylene tubing, personal protection equipment (PPE), decontamination debris, etc. will be segregated from and disposed in large heavy duty garbage bags and disposed of at the site. Excess unused glassware should be returned to the lab along with the last day of collection samples.

### 1.3.33 Drum Sampling

Langan personnel may collect drum samples, as required, prior to off-site drum disposal. Samples will be placed into laboratory-supplied batch-certified clean glassware and submitted to an approved laboratory and analyzed in accordance with work plan specifications, if required.

### 1.3.34 Surveying

Surveying activities may be completed by Langan. Surveying will be conducted by licensed surveyors.

## 2.0 IDENTIFICATION OF KEY PERSONNEL/HEALTH AND SAFETY PERSONNEL

The following briefly describes the health and safety (H&S) designations and general responsibilities that may be employed for this site. The titles have been established to accommodate the project needs and requirements and ensure the safe conduct of site activities. The H&S personnel requirements for a given work location are based on the proposed site activities.

### 2.1 Langan Project Manager

The Langan Environmental Project Manager (PM) is Brian Gochenaur, the Langan Geotechnical PM is Art Alzamora, and the Langan Site/Civil PM is Chris Vitolano, their responsibilities include:

- Ensuring that this HASP is developed, current, and approved prior to on-site activities.
- Ensuring that the tasks in the project are performed in a manner consistent with Langan's comprehensive *Construction Health and Safety Program for Hazardous Waste Operations* and this HASP.

### 2.2 Langan Corporate Construction Health and Safety Manager

The Langan Corporate Construction Health and Safety Manager is Tony Moffa. His responsibilities include:

- Updating the *Construction Health and Safety Program for Hazardous Waste Operations*.
- Assisting the site Construction Health and Safety Officer (HSO) with the development of the HASP, updating HASP as dictated by changing conditions, job site inspection results, etc., and approving changes to this HASP.
- Assisting the HSO in the implementation of this HASP and conducting Jobsite Safety Inspections and assisting with communication of results and correction of shortcomings found.
- Maintaining records on personnel (medical evaluation results, training and certifications, accident investigation results, etc.).

## 2.3 Langan Site Health & Safety Officer

The Langan site HSO is William Bohrer. His responsibilities include:

- Participating in the development and implementation of this HASP.
- When on-site, assisting the Langan Field Team Leader in conducting Tailgate Safety Meetings and Jobsite Safety Inspections and correcting any shortcomings in a timely manner.
- Ensuring that proper PPE is available, worn by employees, and properly stored and maintained.
- Controlling entry into and exit from the site contaminated areas or zones.
- Monitoring employees for signs of stress, such as heat stress, fatigue, and cold exposure.
- Monitoring site hazards and conditions.
- Knowing (and ensuring that all site personnel also know) emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.
- Resolving conflicts that may arise concerning safety requirements and working conditions.
- Reporting all incidents, injuries, and near misses to the Langan Incident/Injury Hotline immediately and the client representative.

## 2.4 Langan Field Team Leader Responsibilities

The Langan Field Team Leader (FTL) is to be determined prior to the start of field activities. The Field Team Leader's responsibilities include:

- The management of the day-to-day site activities and implementation of this HASP in the field.
- Participating in and/or conducting Tailgate Safety Meetings and Jobsite Safety Inspections and correcting any shortcomings in a timely manner.

- When a Community Air Monitoring Operating Program (CAMP) is part of the scope, the FTL will set up and maintain community air monitoring activities and instruct the responsible contractor to implement organic vapor or dust mitigation when necessary.
- Overseeing the implementation of activities specified in the IRMWP.

### 2.5 Contractor Responsibilities

The contractor must develop and implement their own HASP for their employees, their subcontractors, and consultants. The contractor is responsible for their own health and safety and that of their subcontractors. Contractors operating on the site must designate their own FTL, HSO, and Construction Health and Safety Manager (HSM). The contractor's HASP will be at least as stringent as this HASP. The contractor must be familiar with and abide by the requirements outlined in their own HASP. A contractor may elect to adopt Langan's HASP as its own provided that it has given written notification to Langan, but where Langan's HASP excludes provisions pertinent to the contractor's work (i.e., confined space entry); the contractor must provide written addendums to this HASP. Additionally, the contractor must:

- Ensure their employees are trained in the use of all appropriate PPE for the tasks involved.
- Notify Langan of any hazardous material brought onto the job site or site-related area, the hazards associated with the material, and must provide a material safety data sheet (MSDS) or safety data sheet (SDS) for the material.
- Have knowledge of, understand, and abide by all current federal, state, and local health and safety regulations pertaining to the work.
- Ensure their employees handling hazardous materials, if identified at the Site, have received current training in the appropriate levels of 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response* (HAZWOPER) if hazardous waste is identified at the Site.
- Ensure their employees handling hazardous materials, if identified at the Site, have been fit-tested within the year on the type of respirator they will wear; and
- Ensure all air monitoring is in place pertaining to the health and safety of their employees as required by OSHA 1910.120; and
- All contractors must adhere to all federal, state, and local regulatory requirements.

## 3.0 TASK/OPERATION SAFETY AND HEALTH RISK ANALYSES

A Task-Hazard Analysis (Table 1) was completed for general construction hazards that may be encountered at the Site. The potential contaminants that might be encountered during the field activities and the exposure limits are listed in Table 2 complete inventory of MSDS/SDS for chemical products used on site is included in Attachment E.

## 3.1 Specific Task Safety Analysis

### 3.1.1 Geophysical Survey

Langan personnel are not permitted to operate or otherwise handle the geophysical equipment including any downhole geophysical equipment subsequently used to survey boreholes. When boring locations are surveyed with surface geophysical equipment, the locations of the borings as well as utilities and other artifacts that may interfere with the subsurface investigation are to be marked with indelible paint, flags, or color tape (when marking indoor locations that the client has specifically requested not be marked with indelible paint). This information must also be added to the site map. When applying paint, proper PPE including at a minimum hand protection should be used.

### 3.1.2 "Soft Dig" Clearance of Borehole Locations

"Soft-Dig" clearance will be completed by the contractor. Langan personnel are not permitted to operate or otherwise handle the contractor's equipment. Langan will update the site map to include the locations of the cleared borehole locations as well as utilities and other artifacts that may interfere with the subsurface investigation.

### 3.1.3 Daylighting Test Pit

Excavation daylighting must abide by OSHA excavation standards (Part 1926.651) and conform to the Langan Underground Utility Clearance Policy. Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. Sampling the soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate excavation equipment. This task is to be completed by the excavation contractor.

### 3.1.4 Indoor Drilling and Excavation

The work scope may require indoor excavation where there may not be adequate ventilation sufficient to safely operate any rig or excavation equipment powered by an internal combustion engine. Where possible, all such work should be done by equipment powered by electricity. If such equipment is used and must be directly wired to the buildings electrical system or to an independent system, this work must be completed by a licensed electrician in accordance with all electrical codes applicable to the work.

Indoor work which is to be completed with equipment powered by an internal combustion engine must incorporate air monitoring of carbon monoxide (CO) using calibrated air monitoring equipment (MultiRAE or equivalent). In addition, the work plan should incorporate mitigation for venting engine exhaust fumes directly to the outdoors and for circulating fresh air into the work area.

The OSHA Time Weighted Average (TWA) Permissible Exposure Limit (PEL) for CO from 50 to 35 parts per million (ppm). Langan will monitor CO with a suitable monitoring device. If CO levels exceed 5 ppm, Langan will instruct contractors to begin mitigation measures. These measures are at a minimum:

- Increase air circulation using industrial size fans to bring additional fresh air into the building or vent exhaust to the outside.
- Modify the passive exhaust method being used to increase venting circulation by using wider diameter tubing or sealing tubing connections; or
- Modify the work schedule where the rig is turned off to allow time for CO levels to fall back to background.

All work must cease if CO levels reach 35 ppm. The Langan engineer is to report to the PM and H&S officer when an action level is reached.

### 3.1.5 Outdoor Air Monitoring

Langan and its contractors will continuously self-monitor for the lower explosion limit (LEL) using, at a minimum, a personal LEL single gas monitor. When excavating in an enclosed space such as a trench or similar excavation, Langan and its contractors will monitor ambient air in the excavation using a four-gas meter including oxygen, hydrogen sulfide, carbon monoxide and LEL or a five-gas meter having an additional sensor for VOCs.

When any alarm is sounded, Langan and its contractors are to evacuate to the designated muster point and Langan is to notify the site's designated incident commander or foreman.

### 3.1.6 Soil Investigation and Sampling

Sampling the soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate drilling or excavation equipment nor open sampling devices (acetate liners, sonic sample bags, etc.). These tasks are to be completed by the driller or excavation contractor.

### 3.1.7 Groundwater Investigation and Sampling

Sampling groundwater requires the donning of chemical resistant gloves in addition to the standard PPE and cut resistant gloves when cutting sampling-tubing to length. Langan personnel are not to operate drilling equipment nor assemble or install monitoring well equipment. These tasks are to be completed by the driller contractor.

### 1.3.8 Groundwater/Product Gauging

Gauging product requires additional safety considerations including the presence of VOCs and protection of both field cloths and property. Langan will monitor air for VOCs using a duly calibrated PID. Langan will don protective clothing including Tyvek® over-cloths, as necessary. To protect property, Langan will work set a plastic barrier to protect floors or protect landscaping and use absorbent pads as necessary to collect pooled product. If sampling for PFAS from the same well, Langan will complete the product check first, if the well can be sampled without including product, Langan will remove the Tyvek® material from the well head vicinity.

### 3.1.9 Product Recovery Well Bailing

Langan may bail free product from monitoring wells. Free product bailing requires the donning of Tyvek™ suits, Tyvek™ boots and chemical resistant gloves in addition to the standard PPE and cut resistant gloves when cutting sampling-tubing to length. In addition, Langan will place plastic sheeting around the recovery well head to control spillage during product recovery. Langan will also keep on hand and readily available product absorbing pads to use as needed.

### 3.1.10 Electrical Pumps

Langan may use an electric pump to collect product from the recovery wells or to sample groundwater. Langan will inspect the electric pump and control box prior to use and specifically note the condition of the electrical connectors, pump, control box and the electrical cord. The electrical connection must be a grounded and connect to the power source using a functional three prong grounded plug. The power source must be a Ground Fault Circuit Interrupter (GFI or GFCI) receptacle.

### 3.1.11 Vapor Investigation and Sampling

Sampling vapor requires the donning of work gloves in addition to the standard PPE when assembling the Summa™ canister with the regulator and cut resistant gloves when cutting sampling- or silicone-tubing to length. Langan personnel are not to operate contractor equipment

nor assemble or install the contractor vapor point sampling equipment unless instructed by the work plan. When not instructed by the work plan, these tasks are to be completed by the contractor.

### 3.1.12 Additional Vapor Screening

Langan personnel may prescreen vapor samples for volatile organic compounds (VOCs), methane, hydrogen sulfide and lower explosion limit (LEL) conditions using duly calibrated devices design to screen vapor for these parameters. Langan personnel may also perform atmospheric screening for LEL. Results of the screening may be used in determining which soil vapor samples will be submitted for analysis.

Work activities will immediately cease, and the work area is to be evacuated if the MultiRAE returns a reading of 10% of the LEL (an alarm will sound). Langan personnel will contact the Langan PM. Instrument action levels for monitored gases are provided in Table 4.

### 3.1.13 Waste Characterization – Soil Investigation and Sampling

Sampling the soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate drilling or excavation equipment nor open sampling devices (acetate liners, sonic sample bags, etc.). These tasks are to be completed by the driller or excavation contractor.

### 3.1.14 Test Pit

Excavation test pits must abide by OSHA excavation standards (Part 1926.651). Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. Sampling the soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate excavation equipment. This task is to be completed by the excavation contractor.

### 3.1.15 Geotechnical Soil Boring Investigation

Handling soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate drilling equipment nor open sampling devices (split spoons, acetate liners, sonic sample bags, etc.). These tasks are to be completed by the drilling

contractor.

### 3.1.16 Storm Water Pollution Prevention Inspection

When performing SWPPP inspections, Langan personnel will don all required PPE and maintain awareness to site traffic and site activities. If using a cell phone or tablet application to record the pertinent data, the engineer will do so in an area protected from site traffic and activities. Certain types of inspections may require additional PPE and safety training including fall protection and open water hazards.

### 3.1.17 Building Demolition

Langan will not be entering demolition areas nor perform any monitoring activities. The contractor will perform all work and monitoring under their own HASP following their own work plan.

### 3.1.18 Soil Investigation and Sampling

Sampling the soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate drilling or excavation equipment nor open sampling devices (acetate liners, sonic sample bags, etc.). These tasks are to be completed by the driller or excavation contractor.

### 3.1.19 Excavation and Soil Screening

Langan personnel will observe excavation and SOE activities including the general oversight, observation of landscaping activities, and other select observation project management and supervision as specified in the work plan or in accordance with the construction documents, or special inspection requirements administered by the DOB. Materials used for construction may be inspected by Langan personnel for conformance to the design documents. Prior to entering excavation, Langan personnel will ensure that excavation shoring conforms to proper shoring/benching/sloping techniques, at a minimum that soil and equipment is kept at least 2 feet from the edge of the excavation, that there is no water in the excavation, and that a competent person has inspected excavation prior to allow persons to enter. When entering excavation via a ladder, Langan personnel will only use ladders that are properly situated in accordance with the Ladder section of the HASP.

### 3.1.20 Soil Sampling

Sampling the soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate drilling or excavation equipment nor open sampling

devices (acetate liners, sonic sample bags, etc.). These tasks are to be completed by the driller or excavation contractor.

### 3.1.21 Stockpile Sampling

The Langan personnel are not to scale or climb stockpiles. If the soil sampling plan requires sampling from the stockpile above ground level, samples are to be obtained using suitable excavation equipment operated by the contractor (i.e., front end loader).

### 3.1.22 Construction Dewatering

If required, Langan may sample dewatering treatment system liquids from either the direct discharge standpipe or from a sample port or valve built into the storage tank, Langan will don the necessary PPE including nitrile gloves and if necessary, facial splash guard. Sample ports and valves may only be sampled if they are accessible at ground level. Sampling from heights over 6 feet is prohibited unless Langan field personnel are fully accredited in fall protection and is wearing approved fall protection safety apparatus. The discharge samples will be submitted to an ELAP-certified laboratory for analysis in accordance with the work plan.

### 3.1.23 Construction Activity Inspection

Langan personnel will conduct inspections as specified in the work plan. Langan may record the data the work plan requires. All future repair work to the engineering controls will be done exclusively by the contractor following their own health and safety specifications outlined in their HASPs. Other activities assigned to Langan as part of work activities are limited to inspection and observations as specified in the SMP or future work pans. Langan personnel are not to operate or assist in the operation of equipment used in construction activities unless defined as part of an inspection or observation in the work plan.

### 3.1.24 Removal of Underground Storage Tank

If UST excavation and removal activity is initiated, Langan personnel will conduct air monitoring for lower explosion limit (LEL) conditions within the UST excavation itself. This task is to be performed using calibrated air monitoring equipment designed to sound an audible alarm when atmospheric concentrations of VOCs are within 10% of the LEL. In normal atmospheric oxygen concentrations, the LEL monitoring may be done with a Wheatstone bridge/catalytic bead type sensor (i.e., MultiRAE). However, in oxygen depleted atmospheres (confined space), only an LEL designed to work in low oxygen environments may be used. Best practices require that the LEL monitoring unit be equipped with a long sniffer tube to allow the LEL unit to remain outside the UST excavation. Langan personnel are not to enter the UST excavation nor enter an excavated UST.

In addition to monitoring LEL, Langan personnel will monitor atmospheric VOC concentrations directly downwind of the UST excavation in accordance with standard CAMP procedures using calibrated air monitoring equipment.

### 3.1.25 Installation of the Vapor/Moisture Barrier

Specifically trained contractors are to install the vapor/moisture barrier. Langan personnel are there only to observe and record the data required in the work plan. Installation and assemblage of the vapor barrier is to be done exclusively by the contractor following their own health and safety specific HASP.

### 3.1.26 Concrete Coring & Excavation

Langan personnel are not permitted to operate or otherwise handle the contractor equipment. All electrical equipment and cords must be visually inspected. If the equipment housing appears damage or the electrical cords worn, they must be removed from use and replaced before the designated task continues. The contractor will use a Ground Fault Interrupter Circuit (GFIC) as a safety precaution.

### 3.1.27 Installation of Sub-Slab Depressurization (SSD) System

Unless specifically permitted by the work plan, Langan will not assist the contractor in installing components of the SSD system. Langan will observe and record pertinent information as required by the work plan. Langan employees are required to have completed fall protection training before completing any work from heights including roof work.

### 3.1.28 Operations and Maintenance

Langan will don standard PPE including hand and hearing protection when performing remedial system operations and maintenance activities. When and where necessary, Langan will implement lock-out/tag-out protocols. Waste generated during operations and maintenance will be contained as specified in this HASP and in the work plan. As required, Langan may sample drums generated as specified in this HASP and the work plan. Specific Safety Data Sheets (SDS) for chemical and consumables related to the operations and maintenance of the SSD system will be kept in the HASP Attachment I with the Operations and Maintenance manual (on-site).

### 3.1.29 Backfilling of Excavated Areas to Development Grade

The backfilling contractor will provide their employees with equivalent PPE to protect them from the specific hazards likely to be encountered on-site. Selection of the appropriate PPE must take into consideration: (1) identification of the hazards or suspected hazards; (2) potential exposure

routes; and (3) the performance of the PPE construction (materials and seams) in providing a barrier to these hazards. Langan personnel may survey backfilling material with a calibrated PID; however, as they are not permitted to climb the material delivery truck, the contractor must provide samples from each truck as required.

### 3.1.30 Support of Excavation

Langan personnel will inspect elements of the SOE including tiebacks in accordance with specification in the work plan and record the data the work plan and/or contract documents require. The installation of the soil pilings, tiebacks and other SOE activities are to be done exclusively by the contractor following their own health and safety specifications outlined in their HASPs. Other activities assigned to Langan as part of the SOE are limited to inspection and observations as specified in the work plan and/or contract documents. Langan personnel are not to operate or assist in the operation of equipment used in the SOE unless defined as part of an inspection or observation in the work plan and/or contract documents.

### 3.1.31 Drum Sampling

Drilling fluid, rinse water, grossly contaminated soil samples, and cuttings will be containerized in 55-gallon drums for disposal off-site. Each drum must be labeled in accordance with the Langan Drum Labeling Standard Operating Procedure (SOP09). Sampling drums requires the donning of work gloves when opening the drums and chemical resistant gloves when sampling in addition to standard PPE.

## 3.2 Radiation Hazards

No radiation hazards are known or expected at the site.

## 3.3 Physical Hazards

Physical hazards, which may be encountered during site operations for this project, are detailed in Table 1.

### 3.3.1 Explosion

No explosion hazards are expected for the scope of work at this site.

### 3.3.2 Heat Stress

The use of Level C protective equipment, or greater, may create heat stress. Monitoring of personnel wearing personal protective clothing should commence when the ambient

temperature is 72°F or above. Table 6 presents the suggested frequency for such monitoring. Monitoring frequency should increase as ambient temperature increases or as slow recovery rates are observed. Refer to Table 7 to assist in assessing when the risk for heat-related illness is likely. To use this table, the ambient temperature and relative humidity must be obtained (a regional weather report should suffice). Heat stress monitoring should be performed by the HSO or the FTL, who must be able to recognize symptoms related to heat stress.

To monitor the workers, be familiar with the following heat-related disorders and their symptoms:

- **Heat Cramps:** Painful spasms of arm, leg, or abdominal muscles, during or after work
- **Heat Exhaustion:** Headache, nausea, dizziness; cool, clammy, moist skin; heavy sweating; weak, fast pulse; shallow respiration, normal temperature
- **Heat Stroke**: Headache, nausea, weakness, hot dry skin, fever, rapid strong pulse, rapid deep respirations, loss of consciousness, convulsions, coma. *This is a life-threatening condition***.**

Do not permit a worker to wear a semi-permeable or impermeable garment when they are showing signs or symptoms of heat-related illness.

To monitor the worker, measure:

- **Heart rate:** Count the radial pulse during a 30-second period as early as possible in the rest period. If the heart rate exceeds 100 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third and keep the rest period the same. If the heart rate still exceeds 100 beats per minute at the next rest period, shorten the following work cycle by one-third. A worker cannot return to work after a rest period until their heart rate is below 100 beats per minute.
- **Oral temperature:** Use a clinical thermometer (3 minutes under the tongue) or a similar device to measure the oral temperature at the end of the work period (before drinking). If oral temperature exceeds 99.6°F (37.6°C), shorten the next work cycle by one-third without changing the rest period. A worker cannot return to work after a rest period until their oral temperature is below 99.6°F. If oral temperature still exceeds 99.6°F (37.6°C) at the beginning of the next rest period, shorten the following cycle by one-third. Do not permit a worker to wear a semi-permeable or impermeable garment when oral temperature exceeds 100.6°F (38.1°C).

Prevention of Heat Stress - Proper training and preventative measures will aid in averting loss of worker productivity and serious illness. Heat stress prevention is particularly important because once a person suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat-related illnesses. To avoid heat-stress the following steps should be taken:

- Adjust work schedules.
- Mandate work slowdowns as needed.
- Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.
- Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods.
- Maintain worker's body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must equal the amount of water lost in sweat, i.e., eight fluid ounces (0.23 liters) of water must be ingested for every eight ounces (0.23 kilograms [kg]) of weight lost. The normal thirst mechanism is not sensitive enough to ensure that enough water will be drunk to replace lost sweat. When heavy sweating occurs, encourage the worker to drink more. The following strategies may be useful:
    - Maintain water temperature 50$^{O}$ to 60$^{O}$F (10$^{O}$ to 16.6$^{O}$C).
    - Provide small disposal cups that hold about four ounces (0.1 liters).
    - Have workers drink 16 ounces (0.5 liters) of fluid (preferably water or dilute drinks) before beginning work.
    - Urge workers to drink a cup or two every 15 to 20 minutes, or at each monitoring break. A total of 1 to 1.6 gallons (4 to 6 liters) of fluid per day are recommended, but more may be necessary to maintain body weight.
    - Train workers to recognize the symptoms of heat-related illness.

### 3.3.3 Cold-Related Illness

If work on this project begins in the winter months, thermal injury due to cold exposure can become a problem for field personnel. Systemic cold exposure is referred to as hypothermia. Local cold exposure is called frostbite.

- **Hypothermia -** Hypothermia is defined as a decrease in the patient core temperature below 96$^{O}$F. The body temperature is normally maintained by a combination of central (brain and spinal cord) and peripheral (skin and muscle) activity. Interference with any of these mechanisms can result in hypothermia, even in the absence of what normally is considered a "cold" ambient temperature. Symptoms of hypothermia include shivering, apathy, listlessness, sleepiness, and unconsciousness.
- **Frostbite -** Frostbite is both a general and medical term given to areas of local cold injury. Unlike systemic hypothermia, frostbite rarely occurs unless the ambient temperatures are less than freezing and usually less than 20$^{O}$F. Symptoms of frostbite are a sudden blanching or whitening of the skin; the skin has a waxy or white appearance and is firm to the touch; tissues are cold, pale, and solid.

Prevention of Cold-Related Illness - To prevent cold-related illness:

- Educate workers to recognize the symptoms of frostbite and hypothermia.
- Identify and limit known risk factors:
- Assure the availability of an enclosed, heated environment on or adjacent to the site.
- Assure the availability of dry changes of clothing.
- Assure the availability of warm drinks.
- Start (oral) temperature recording at the job site:
- At the FSO or Field Team Leader's discretion when suspicion is based on changes in a worker's performance or mental status.
- At a worker's request.
- As a screening measure, two times per shift, under unusually hazardous conditions (e.g., wind-chill less than 20$^{O}$F, or wind-chill less than 30$^{O}$F with precipitation).
- As a screening measure whenever anyone worker on the site develops hypothermia.

Any person developing moderate hypothermia (a core temperature of 92$^{O}$F) cannot return to work for 48 hours.

### 3.3.4 Noise

Work during the proposed activities may be conducted at locations with high noise levels from the operation of equipment. Hearing protection will be used, as necessary.

### 3.3.5 Hand and Power Tools

The use of hand and power tools can present a variety of hazards, including physical harm from being struck by flying objects, being cut, or struck by the tool, fire, and electrocution. All hand and power tools should be inspected for health and safety hazards prior to use. If deemed unserviceable/un-operable, notify the supervisor and tag equipment out of service. Ground Fault Circuit Interrupters (GFCIs) are required for all power tools requiring direct electrical service.

### 3.3.6 Slips, Trips, and Fall Hazards

Care should be exercised when walking at the site, especially when carrying equipment. The presence of surface debris, uneven surfaces, pits, facility equipment, and soil piles contribute to tripping hazards and fall hazards. To the extent possible, all hazards should be identified and marked on the site, with hazards communicated to all workers in the area.

### 3.3.7 Utilities (Electrocution and Fire Hazards)

*3.3.7.1 Utility Clearance*

The possibility of encountering underground utilities poses fire, explosion, and electrocution hazards. All excavation work will be preceded by a review of available utility drawings and by notification of the subsurface work to N.Y. One –Call--Center.

*3.3.7.2 Lockout-Tagout*

The potential adverse effects of electrical hazards include burns, arc flashes, and electrocution, which could result in serious injury including death. Therefore, there is a procedure that establishes the requirements for the lockout/tag out (LOTO) of energy isolating devices in accordance with the OSHA electrical lockout and tagging requirements as specified in 29CFR1910.147 and 29 CFR 1926.417. This procedure will be used to ensure that all machines and equipment are isolated from potentially hazardous energy. If possible, equipment that could cause injury due to unexpected energizing, start-up, or release of stored energy will be locked/tagged, before field personnel performs work activities.

The facility owner/operator/representative is to be the authorized person that will initiate and perform the LOTO in accordance with applicable rules and practices. Inerting of electrical power sources is to be completed by an authorized and licensed electrician. Langan personnel will follow LOTO protocols and practices including adding a separate lock/signature to the LOTO chain in accordance with said protocols and practices.

**SPECIAL NOTE:** Project personnel will assume that all electrical equipment at the surface, subsurface, and overhead locations are energized until equipment has been designated and confirmed as de-energized by a utility company representative. Langan will notify the designated utility representative prior to working adjacent to this equipment and will verify that the equipment is energized or de-energized in the vicinity of the work location. No project work shall be performed by Langan personnel or subcontractors near energized electrical lines or equipment.

The FTL shall accompany the designated facility owner/operator/representative or authorized/licensed electrician in surveying to locate and identify all energy-isolating devices. Langan will note which switches, valves or other isolating devices are used for inerting the equipment and how they are set assuring LOTO. The lockout/tagout procedure involves, but is not limited to, electricity, motors, steam, natural gas, compressed air, hydraulic systems, digesters, sewers, etc.

### 3.3.8 Adequate Lighting

Indoor or night activities must be done under adequate lighting conditions. The Langan field engineer must be able to clearly see the equipment, all controls and have sufficient lighting to detail color labels. Battery operated lights are sufficient provided they cast a wide enough field to provide the required lighting and there are back-up batteries and emergency flashlights available. Electrically powered lights are suitable provided the electrical source is equipped with a ground fault interrupt circuit (GFIC) and the extensions cords are visually inspected and not used if they show cracked or missing insulation. If a generator is supplying the electricity, it must be outdoors and properly vented.

### 3.3.9 Physical Hazard Considerations for Material Handling

There are moderate to severe risks associated with moving heavy objects at the Site. The following physical hazards should be considered when handling materials at the Site:

- Heavy objects will be lifted and moved by mechanical devices rather than manual effort whenever possible.
- The mechanical devices will be appropriate for the lifting of moving tasks and will be operated only by trained and authorized personnel.
- Objects that require special handling or rigging will only be moved under the guidance of a person who has been specifically trained to move such objects.
- Lifting devices will be inspected, certified, and labeled to confirm their weight capacities. Defective equipment will be taken out of service immediately and repaired or destroyed.
- The wheels of any trucks being loaded or unloaded will be choked to prevent movement. Outriggers will be fully extended on a flat, firm surface during operation.
- Personnel will not pass under a raised load, nor will a suspended load be left unattended.
- Personnel will not be carried on lifting equipment unless it is specifically designed to carry passengers.
- All reciprocating, rotating, or other moving parts will be guarded at all times.
- Accessible fire extinguishers, currently (monthly) inspected, will be available in all mechanical lifting devices.
- Verify all loads/materials are secure before transportation.

Material handling tasks that are unusual or require specific guidance will need a written addendum to this HASP. The addendum must identify the lifting protocols before the tasks are performed. Upon approval, the plan must be reviewed with all affected employees and documented. Any deviation from a written plan will require approval by the Langan HSM.

### 3.3.10 Hearing Conservation

Under the construction industry standard, the maximum permissible occupational noise exposure is 90 A-weighted decibels (dbA) (8-hour TWA), and noise levels in excess of 90 dbA must be reduced through feasible administrative and engineering controls (20 CFR 1926.52). Hearing protection is required when working within 15 feet of vacuum extraction equipment and drill rigs.

### 3.3.11 Open Water

Employees working over or near water, where the danger of drowning exists, must be provided with U.S. Coast Guard-approved life jackets or buoyant work vests. Prior to and after each use, the buoyant work vests or life preservers must be inspected for defects that would alter their strength or buoyancy. Defective units must not be used.

And should a worker fall into the water, OSHA requires (29 CFR 1926.106(c)) that ring buoys with at least 90 feet of the line must be provided and readily available for emergency rescue operations. The distance between ring buoys must not exceed 200 feet. Another remedial action required by OSHA (29 CFR 1926.106(d)) is the use of lifesaving skiffs.

OSHA requires that at least one lifesaving skiff must be immediately available at locations where employees are working over or adjacent to water and must include the following provisions.

- The skiff must be in the water or capable of being quickly launched by one person.
- At least one person must be present and specifically designated to respond to water emergencies and operate the skiff at all times when there are employees above water.
- When the operator is on break another operator must be designated to provide requisite coverage when there are employees above water.
- The designated operator must either have the skiff staffed at all times or have someone remain in the immediate area such that the operator can quickly reach the skiff and perform rescue services.
- The skiff operator may be assigned other tasks provided the tasks do not interfere with the operator's ability to quickly reach the skiff.
- A communication system, such as a walkie-talkie, must be used to inform the skiff operator of an emergency and to inform the skiff operator where the skiff is needed.
- The skiff must be equipped with both a motor and oars.

With regard to the number of skiffs required and the appropriate maximum response time, the following factors must be evaluated:

- The number of work locations where there is a danger of falling into water.
- The distance to each of those locations.

- Water temperature and currents.
- Other hazards such as, but not limited to, rapids, dams, and water intakes.

Other regulations that present H&S practices and PPE for work on or near water include: 29 CFR 1910, Subpart T (401 – 440)

## 3.4 Biological Hazards

### 3.4.1 Animals

There is a possibility of encountering wildlife including reptiles, rodents, and other small and medium-size mammals. Langan personnel are to avoid interacting with any wildlife.

### 3.4.2 Insects

Ticks and other biting or stinging insects may be encountered during site operations. Langan personnel should take necessary precautions including donning long sleeve shirts and insecticide to prevent bites and stings. After fieldwork, Langan personnel should perform a complete visual inspection of their clothing to insure they are not inadvertently harboring ticks. If they do observe a tick bite, they are to contact the HSM or HSO and report the event.

### 3.4.3 Plants

Poisonous plants may be encountered during site operations. Langan personnel should take necessary precautions including donning long sleeve shirts and applying preventative poison Ivy/Sumac lotion to prevent or limit the effects of exposure. If after fieldwork, Langan employees do observe a reaction to poisonous plant exposure, they are to contact the HSM or HSO and report the event.

### 3.4.4 Mold

This section is restricted to subsurface investigations where sampling soil, groundwater, soil or sub-slab vapor or ambient air in an indoor environment with slight to moderate mold impact. Mold exposure symptoms include nasal stuffiness, eye irritation, or wheezing.

The Langan field engineer is required to don a ½ face respirator with a minimum p-100 particulate filter and Tyvek™ type overclothing before entering mold impacted indoor work area. The Langan field engineer must be medically cleared and have been properly fitted for a respirator before donning one.

## 3.5 Additional Safety Analysis

### 3.5.1 Presence of Non-Aqueous Phase Liquids (NAPL)

Special care and PPE should be considered when NAPL is observed as NAPL is a typically flammable fluid and releases VOCs known to be toxic and/or carcinogenic. If NAPL is present in a monitoring well, vapors from the well casing may contaminate the work area breathing zone with concentrations of VOCs potentially exceeding health and safety action levels. In addition, all equipment used to monitor or sample NAPL (or ground water from wells containing NAPL) must be intrinsically safe. Equipment that directly contacts NAPL must also be resistant to organic solvents.

At a minimum, a PID should be used to monitor for VOCs when NAPL is observed. If NAPL is expected to be observed in an excavation or enclosed area, air monitoring must be started using calibrated air monitoring equipment designed to sound an audio alarm when atmospheric concentrations of VOC are within 10% of the LEL. In normal atmospheric oxygen concentrations, the LEL monitoring may be done with a Wheatstone bridge/catalytic bead type sensor (i.e., MultiRAE). However, in oxygen-depleted atmospheres (confined space), only an LEL designed to work in low-oxygen environments may be used. Best practices require that the LEL monitoring unit be equipped with a long sniffer tube to allow the LEL unit to remain outside the UST excavation.

When NAPL is present, Langan personnel are required to use disposable nitrile gloves at all times to prevent skin contact with contaminated materials. They should also consider having available a respirator and protective clothing (Tyvek® overalls), especially if NAPL is in abundance and there are high concentrations of VOCs.

All contaminated disposables including PPE and sampling equipment must be properly disposed of in labeled 55-gallon drums.

## 3.6 Job Safety Analysis

A Job Safety Analysis (JSA) is a process to identify existing and potential hazards associated with each job or task so these hazards can be eliminated, controlled, or minimized. A JSA will be performed at the beginning of each workday, and additionally whenever an employee begins a new task or moves to a new location. All JSAs must be developed and reviewed by all parties involved. A blank JSA form and documentation of completed JSAs are in Attachment G.

# 4.0 PERSONNEL TRAINING

## 4.1 Basic Training

Completion of an initial 40-hour HAZWOPER training program as detailed in OSHA's 29 CFR 1910.120(e) is required for all employees working on a site engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances, health hazards, or safety hazards as defined by 29 CFR 1910.120(a). Annual 8-hour refresher training is also required to maintain competencies to ensure a safe work environment. In addition to these training requirements, all employees must complete the OSHA 10-hour Construction Safety and Health training and supervisory personnel must also receive eight additional hours of specialized management training. Training records are maintained by the HSM.

## 4.2 Initial Site-Specific Training

Training will be provided to specifically address the activities, procedures, monitoring, and equipment for site operations at the beginning of each field mobilization and the beginning of each discrete phase of work. The training will include the site and facility layout, hazards, and emergency services at the site, and will detail all the provisions contained within this HASP. For a HAZWOPER operation, training on the site must be for a minimum of 3 days. Specific issues that will be addressed include the hazards described in Section 3.0.

## 4.3 Tailgate Safety Briefings

Before starting work each day or as needed, the Langan HSO will conduct a brief tailgate safety meeting to assist site personnel in conducting their activities safely. Tailgate meetings will be documented in Attachment H. Briefings will include the following:

- Work plan for the day.
- Review of safety information relevant to planned tasks and environmental conditions.
- New activities/tasks being conducted.
- Results of Jobsite Safety Inspection Checklist.
- Changes in work practices.
- Safe work practices; and
- Discussion and remedies for noted or observed deficiencies.

# 5.0 MEDICAL SURVEILLANCE

All personnel who will be performing fieldwork involving potential exposure to toxic and hazardous substances (defined by 29 CFR 1910.120(a)) will be required to have passed an initial baseline medical examination, with follow-up medical exams thereafter, consistent with 29 CFR

1910.120(f). Medical evaluations will be performed by, or under the direction of, a physician board-certified in occupational medicine.

Additionally, personnel who may be required to perform work while wearing a respirator must receive medical clearance as required under CFR 1910.134(e), *Respiratory Protection*. Medical evaluations will be performed by, or under the direction of, a physician board-certified in occupational medicine. Results of medical evaluations are maintained by the HSM.

## 5.1 Mercury Monitoring

Langan includes medical monitoring for mercury during the initial baseline and annual physical.

## 5.2 Coronavirus

**General Preventative Measures**

Field personnel must follow general proper hygiene measures while in the field including:

- Avoid touching eyes, nose, and mouth.
- Cover coughs or sneezes with tissue and throw in the trash.
- Wash hands often with soap and water for 20 seconds after going to the bathroom, before eating, after blowing nose, coughing, or sneezing.
- Use hand sanitizer with at least 60% alcohol if soap and water are not available.
- Avoid physical contact with other people (e.g., no handshakes).
- Maintain a safe distance of at least six feet from other people (social distancing).
- Wear face coverings when around other workers to minimize the spread of COVID-19. (May be required in certain states or locations.)

**Construction Trailers**

Employees should avoid the use of shared construction trailers or where employees cannot maintain a safe distance (minimum 6 feet) from other workers. If trailer use is needed, areas such as desks, phones, chairs, and other common areas, should be cleaned and disinfected before and after use. Protocols should be developed to minimize trailer use to essential personnel, restrict use from any workers who are ill or showing symptoms of being ill, use face coverings and ensure a safe distance of six feet can be established between workers.

**Communication**

Include Coronavirus topics and prevention topics in daily tailgate meetings to ensure Coronavirus awareness is communicated daily. Discussions can focus on general topics including social

distancing, prevention measures for field personnel, signs and symptoms, and recent news on the Coronavirus. Site-specific topics should include minimizing face-to-face contact, disinfecting/sterilizing field equipment, use of PPE to reduce exposure, site security, use of face coverings, and other potential exposure issues/concerns.

**Sick/Ill Workers**

No Langan employee is permitted to be onsite when ill and/or showing potential symptoms of the Coronavirus. Symptoms of the Coronavirus may appear 2-14 days after exposure and can range from mild to severe. The most common symptoms include fever, fatigue, dry cough, shortness of breath chills, repeated shaking with chills, muscle pain, headache, sore throat, or new loss of taste or smell. If an employee or subcontractor is observed being ill or exhibiting symptoms of Coronavirus, employees must immediately utilize their Stop Work Authority and contact their project manager to address the situation. If an employee observes another worker onsite exhibiting symptoms of Coronavirus, immediately utilize Stop Work Authority, notify their project manager, and site construction manager or safety officer. Work should resume when the safety and health of Langan and subcontractors is adequately addressed.

## 6.0 PERSONAL PROTECTIVE EQUIPMENT

### 6.1 Levels of Protection

Langan will provide PPE to Langan employees to protect them from the specific hazards they are likely to encounter on-site. Directly hired contractors will provide their employees with equivalent PPE to protect them from the specific hazards likely to be encountered on-site. Selection of the appropriate PPE must take into consideration: (1) identification of the hazards or suspected hazards; (2) potential exposure routes; and (3) the performance of the PPE construction (materials and seams) in providing a barrier to these hazards.

Human exposure to contaminants found in the subsurface can occur through three primary routes:

- Inhalation of gases, vapors, dust, or mists is a common route of exposure. Chemicals can enter and irritate the airways and the lungs. They can become deposited in the airways or can be absorbed through the lungs into the bloodstream.
- Direct contact of contaminants with the skin or eyes is a common route of exposure. Some substances are absorbed through the skin and can enter the bloodstream. Broken, cut, or cracked skin will allow substances to enter the body more easily.
- Ingestion or swallowing of food, drink, or other substances is the third route of exposure. Chemicals that get in or on food, utensils, or hands can be ingested. Substances can be

absorbed into the blood.

Based on anticipated site conditions and the proposed work activities to be performed at the site, Level D protection will be used. The upgrading/downgrading of the level of protection will be based on continuous air monitoring results as described in Section 6.0 (when applicable). The decision to modify standard PPE will be made by the site HSO or FTL after conferring with the PM. The levels of protection are described below.

**Level D Protection (as needed)**

- Safety glasses with side shields or chemical splash goggles
- Safety boots/shoes
- Coveralls (Tyvek® or equivalent)
- Hard hat
- Long sleeve work shirt and work pants
- Nitrile gloves
- Hearing protection
- Reflective safety vest

**Level D Protection (Modified, as needed)**

- Safety glasses with side shields or chemical splash goggles
- Safety boots/shoes (toe-protected)
- Disposable chemical-resistant boot covers.
- Coveralls (poly-coated Tyvek or equivalent to be worn when contact with wet contaminated soil, groundwater, or non-aqueous phase liquids is anticipated)
- Hard hat
- Long sleeve work shirt and work pants
- Nitrile gloves
- Hearing protection (as needed)
- Personal floatation device (for work within 5 ft of the water)
- Reflective traffic vest

**Level C Protection (as needed)**

- Full or Half face, air-purifying respirator, with NIOSH approved High-Efficiency Particulate Air (HEPA) filter.
- Inner (latex) and outer (nitrile) chemical-resistant gloves
- Safety glasses with side shields or chemical splash goggles
- Chemical-resistant safety boots/shoes

- Hard hat
- Long sleeve work shirt and work pants
- Coveralls (Tyvek® or equivalent)
- Hearing protection (as needed)
- Reflective safety vest

The action levels used in determining the necessary levels of respiratory protection and upgrading to Level C are summarized in Table 4. The written Respiratory Protection Program is maintained by the HSM and is available if needed. The monitoring procedures and equipment are outlined in Section 6.0 (when applicable).

### 6.2 Respirator Fit-Test.

All Langan employees who may be exposed to hazardous substances at the work site must be in possession of a full or half face piece air-purifying respirator and have been successfully fit-tested within the past year. Fit-test records are maintained by the HSM.

### 6.3 Respirator Cartridge Change-Out Schedule

Respiratory protection is required to be worn when certain action levels (Table 2) are reached. A respirator cartridge change-out schedule has been developed to comply with 29 CFR 1910.134. The respirator cartridge change-out schedule for this project is as follows:

- Cartridges must be removed and disposed of at the end of each shift when cartridges become wet or the wearer experiences a breakthrough, whichever occurs first.
- If the humidity exceeds 85%, then cartridges must be removed and disposed of after 4 hours of use.

Respirators must not be stored at the end of the shift with contaminated cartridges left on. Cartridges must not be worn on the second day, no matter how short the time period was the previous day they were used.

## 7.0 AIR QUALITY MONITORING AND ACTIONS LEVELS

### 7.1 Monitoring During Site Operations

Atmospheric air monitoring results may be collected and used to provide data to determine when exclusion zones need to be established and when certain levels of personal protective equipment are required. For all instruments, there are Site-specific action-level criteria that are used in making field health and safety determinations. Other data, such as the visible presence of contamination or the steady state nature of air contaminant concentration, are also used in making field health and safety decisions. Therefore, the HSO may establish an exclusion zone

or require a person to wear a respirator even though atmospheric air contaminant concentrations are below established HASP action levels.

During site work involving disturbance of petroleum-impacted or fill material, real-time air monitoring may be conducted for methane and VOCs. A MultiRAE LEL/Oxygen (O2) meter and FID will be used to monitor the LEL of methane, and a PID and/or FID will be used to monitor concentrations of VOCs at personnel breathing-zone height. Air monitoring will be the responsibility of the HSO or designee. Air monitoring may be conducted during intrusive activities associated with the completion of excavation, debris removal, and soil grading. All manufacturers' instructions for instrumentation and calibration will be available onsite.

Subcontractors' air monitoring plans must be equal to or more stringent than the Langan plan.

An air monitoring calibration log is provided in Attachment D of this HASP.

### 7.1.1 Volatile Organic Compounds

Monitoring with a PID, such as a MiniRAE 2000 (10.6v) or equivalent may occur during intrusive work in the Areas of Concern (AOCs). Colorimetric Indicator Tubes for benzene may be used as a backup for the PID if measurements remain above background monitor every 2 hours. The HSO will monitor the employee's breathing zone at least every 30 minutes, or whenever there is any indication that concentrations may have changed (odors, visible gases, etc.) since the last measurement. If VOC levels are observed above 5 ppm for longer than 5 minutes or if the site PPE is upgraded to Level C, the HSO will begin monitoring the site perimeter at a location downwind of the AOC every 30 minutes in addition to the employee breathing zone. Instrument action levels for monitored gases are provided in Table 4.

### 7.1.2 Metals

Based upon the site historical fill, there is a potential for the soils to contain Polycyclic Aromatic Hydrocarbons (PAHs) and metals. During invasive procedures which have the potential for creating airborne dust, such as excavation of dry soils, a real-time airborne dust monitor such as a Mini-Ram may be used to monitor for air particulates. The HSO will monitor the employee's breathing zone at least every 30 minutes, or whenever there is any indication that concentrations may have changed (appearance of visible dust) since the last measurement. If dust levels are observed to be greater than 0.100 milligrams per cubic meter ($mg/m^3$) or visible dust is observed for longer than 15 minutes or if the site PPE is upgraded to Level C, the HSO will begin monitoring the site perimeter at a location downwind of the AOC every 30 minutes in addition to the employee breathing zone. Instrument action levels for dust monitoring are provided in Table 4.

### 7.1.3 Methane

During soil excavation or other intrusive activities, direct reading air monitoring may be performed in the excavation area to determine exposure to workers. Monitoring with an LEL/O2 meter and FID may occur during intrusive work in the AOCs. The HSO will monitor the employee's breathing zone at least hourly during intrusive activities. If LEL levels are observed above 20% the professional engineer (PE) or their designee will stop work and evacuate the area; warn others; and determine source of readings and take corrective actions. The Contractor will be responsible for mitigating explosive gas levels.

## 7.2 Monitoring Equipment Calibration and Maintenance

Instrument calibration must be documented and included in a dedicated safety and health logbook or on separate calibration pages of the field book. All instruments must be calibrated before and after each shift. Calibration checks may be used during the day to confirm instrument accuracy. Duplicate readings may be taken to confirm individual instrument responses.

All instruments must be operated in accordance with the manufacturers' specifications. Manufacturers' literature, including an operation manual for each piece of monitoring equipment, will be maintained on-site by the HSO for reference.

## 7.3 Determination of Background Levels

Background (BKD) levels for VOCs, dust, and methane will be established prior to intrusive activities within the AOC at an upwind location. A notation of BKD levels will be referenced in the daily monitoring log. BKD levels are a function of prevailing conditions. BKD levels will be taken in an appropriate upwind location as determined by the HSO.

Table 4 lists the instrument action levels.

# 8.0 COMMUNITY AIR MONITORING PROGRAM

Community air monitoring may be conducted in compliance with local standards. If conducted, Langan will implement the generic CAMP outlined below amended to comply with local conditions or standards:

Monitoring for dust and odors will be conducted during all ground intrusive activities by the FTL. Continuous monitoring of the perimeter of the work zones for odor, VOCs, and dust may be required for all ground intrusive activities such as soil excavation and handling activities. The work zone is defined as the general area in which machinery is operating in support of remediation activities. A portable PID will be used to monitor the work zone and for periodic monitoring for VOCs during activities such as soil and groundwater sampling and soil excavation.

The site perimeter will be monitored for fugitive dust emissions by visual observations as well as instrumentation measurements (if required). When required, particulate or dust will be monitored continuously with real-time field instrumentation that will meet, at a minimum, the local standards or, default to the performance standards below:

If VOC monitoring is required, the following actions will be taken based on VOC levels measured:

- If total VOC levels exceed 5 ppm above background for the 15-minute average at the perimeter, work activities will be temporarily halted and monitoring continued. If levels readily decrease (per instantaneous readings) below 5 ppm above background, work activities will resume with continued monitoring.
- If total VOC levels at the downwind perimeter of the hot zone persist at levels in excess of 5 ppm above background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps work activities will resume provided that the total organic vapor level is 200 feet downwind of the hot zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm above background for the 15-minute average.
- If the total VOC level is above 25 ppm at the perimeter of the hot zone, activities will be shut down.

If dust monitoring with field instrumentation is required, the following actions will be taken based on instrumentation measurements:

- If the downwind particulate level is 100 micrograms per cubic meter (µg/m$^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression must be employed. Work may continue with dust suppression techniques provided that downwind particulate matter less than 10 microns (PM10) levels do not exceed 150 µg/m$^3$ above the background level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM10 levels are greater than 150 µg/m$^3$ above the background level, work must be stopped, and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM10 concentration to within 150 µg/m$^3$ of the upwind level and in preventing visible dust migration.

## 8.1 Dust Suppression Techniques

Preventative measures for dust generation may include wetting site fill and soil, construction of

an engineered construction entrance with a gravel pad, a truck wash area, covering soils with tarps, and limiting vehicle speeds to five miles per hour.

Work practices to minimize odors and vapors include limiting the time that the excavations remain open, minimizing stockpiling of contaminated-source soil, and minimizing the handling of contaminated material. Offending odor and organic vapor controls may include the application of foam suppressants or tarps over the odor or VOC source areas. Foam suppressants may include biodegradable foams applied over the source material for short-term control of the odor and VOCs.

If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include direct load-out of soils to trucks for off-site disposal; use of chemical odorants in spray or misting systems; and use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-site conditions or proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

## 9.0 WORK ZONES AND DECONTAMINATION

### 9.1 Site Control

Work zones are intended to control the potential spread of contamination throughout the site and to assure that only authorized individuals are permitted into potentially hazardous areas.

Any person working in an area where the potential for exposure to site contaminants exists will only be allowed access after providing the HSO with proper training and medical documentation.

**Exclusion Zone (EZ)** - All activities which may involve exposure to site contaminants, hazardous materials, and/or conditions should be considered an EZ. Decontamination of field equipment will also be conducted in the Contaminant Reduction Zone (CRZ) which will be located on the perimeter of the EZ. The EZ and the CRZ will be delineated by cones, tapes, or other means. The HSO may establish more than one EZ where different levels of protection may be employed, or different hazards exist. The size of the EZ must be determined by the HSO allowing adequate space for the activity to be completed, field members, and emergency equipment.

## 9.2 Contamination Zone

### 9.2.1 Personnel Decontamination Station

Personal hygiene, coupled with diligent decontamination, will significantly reduce the potential for exposure.

### 9.2.2 Minimization of Contact with Contaminants

During the completion of all site activities, personnel should attempt to minimize the chance of contact with contaminated materials. This involves a conscientious effort to keep "clean" during site activities. All personnel should minimize kneeling, splash generation, and another physical contact with contamination as PPE is intended to minimize accidental contact. This may minimize the degree of decontamination required and the generation of waste materials from site operations.

Field procedures will be developed to control spray and runoff and to ensure that unprotected personnel working nearby are not affected.

### 9.2.3 Personnel Decontamination Sequence

Decontamination may be performed by removing all PPE used in EZ and placing it in drums/trash cans at the CRZ. Baby wipes should be available for wiping hands and face. Drums/trash cans will be labeled by the field crews in accordance with all local, state, and federal requirements. Management plans for contaminated PPE, and tools are provided below.

### 9.2.4 Emergency Decontamination

If circumstances dictate that contaminated clothing cannot be readily removed, then remove gross contamination and wrap injured personnel with clean garments/blankets to avoid contaminating other personnel or transporting equipment. If the injured person can be moved, he/she will be decontaminated by site personnel as described above before emergency responders handle the victim. If the person cannot be moved because of the extent of the injury (a back or neck injury), provisions must be made to ensure that emergency response personnel will be able to respond to the victim without being exposed to potentially hazardous atmospheric conditions. If the potential for inhalation hazards exists, such as with open excavation, this area will be covered with polyethylene sheeting to eliminate any potential inhalation hazards. All emergency personnel should be immediately informed of the injured person's condition, and potential contaminants, and provided with all pertinent data.

### 9.2.5 Hand-Held Equipment Decontamination

Hand-held equipment includes all monitoring instruments as stated earlier, samples, hand tools, and notebooks. The hand-held equipment is dropped at the first decontamination station to be decontaminated by one of the decontamination team members. These items must be decontaminated or discarded as waste prior to removal from the CRZ.

To aid in decontamination, monitoring instruments can be sealed in plastic bags or wrapped in polyethylene. This will also protect the instruments against contaminants. The instruments will be wiped clean using wipes or paper towels if contamination is visually evident. Sampling equipment, hand tools, etc. will be cleaned with non-phosphorous soap to remove any potentially contaminated soil and rinsed with deionized water. All decontamination fluids will be containerized and stored on-site pending waste characterization sampling and appropriate off-site disposal.

### 9.2.6 Heavy Equipment Decontamination

All heavy equipment and vehicles arriving at the work site will be free from contamination from offsite sources. Any vehicles arriving to work that are suspected of being impacted will not be permitted on the work site. Potentially contaminated heavy equipment will not be permitted to leave the EZ unless it has been thoroughly decontaminated and visually inspected by the HSO or his designee.

## 9.3 Support Zone

The support zone or cold zone will include the remaining areas of the job site. Break areas and support facilities (including equipment storage and maintenance areas) will be located in this zone. No equipment or personnel will be permitted to enter the cold zone from the hot zone without passing through the decontamination station in the warm zone (if necessitated). Eating, smoking, and drinking will be allowed only in this area.

## 9.4 Communications

The following communications equipment will be utilized as appropriate.

- Telephones - A cellular telephone will be located with the HSO for communication with the HSM and emergency support services/facilities.

- Hand Signals - Hand signals must be used by field teams, along with the buddy system. The entire field team must know them before operations commence and their use covered during site-specific training. Typical hand signals are the following:

| Hand Signal | Meaning |
|---|---|
| Hand gripping throat | Out of air, cannot breathe |
| Grip your partner's wrists or place both hands around the waist | Leave immediately without debate |
| Hands on top of head | Need assistance |
| Thumbs up | OK; I am all right; I understand |
| Thumbs down | No; negative |
| Simulated "stick" break with fists | Take a break; stop work |

### 9.5 The Buddy System

When working in teams of two or more, workers will use the "buddy system" for all work activities to ensure that rapid assistance can be provided in the event of an emergency. This requires work groups to be organized such that workers can remain close together and maintain visual contact with one another. Workers using the "buddy system" have the following responsibilities:

- Provide his/her partner with assistance.
- Observe his/her partner for signs of chemical or heat exposure.
- Periodically check the integrity of his/her partner's PPE.
- Notify the HSO or other site personnel if emergency service is needed.

## 10.0 NEAREST MEDICAL ASSISTANCE

The address and telephone number of the nearest hospital:

Montefiore Jack D. Weller Hospital/Einstein Campus
1825 Eastchester Road
Bronx, New York
718-904-2800

A map with directions to the hospital is shown in Figure 2. This information will either be posted prominently at the site or will be available to all personnel all of the time. Further, all field personnel, including the HSO & FTL, will know the directions to the hospital.

## 11.0 STANDING ORDERS/SAFE WORK PRACTICES

The standing orders, which consist of a description of safe work practices that must always be followed while on-site by Langan employees and contractors, are shown in Attachment A. The site HSO and FTL each have the responsibility for enforcing these practices. The standing orders

will be posted prominently at the site or are made available to all personnel at all times. Those who do not abide by these safe work practices will be removed from the site.

## 12.0 SITE SECURITY

No unauthorized personnel must be permitted access to the work areas.

## 13.0 UNDERGROUND UTILITIES

As provided in Langan's Underground Utility Clearance Guidelines, the following safe work practices should be followed by Langan personnel and the contractor before and during subsurface work in accordance with federal, state, and local regulations:

- Obtain available utility drawings from the property owner/client or operator.
- Provide utility drawings to the project team.
- In the field, mark the proposed area of subsurface disturbance (when possible).
- Ensure that the utility clearance system has been notified.
- Ensure that utilities are marked before beginning subsurface work.
- Discuss subsurface work locations with the owner/client and contractors.
- Obtain approval from the owner/client and operators for proposed subsurface work locations.
- Use safe digging procedures when applicable.
- Stay at least 10 feet from all equipment performing subsurface work.

## 14.0 SITE SAFETY INSPECTION

The Langan HSO or alternate will check the work area daily, at the beginning and end of each work shift, or more frequently to ensure safe work conditions. The HSO or alternate must complete the Jobsite Safety Inspection Checklist, found in Attachment F. Any deficiencies must be shared with the FTL, HSM, and PM and will be discussed at the daily tailgate meeting.

## 15.0 HAND AND POWER TOOLS

All hand- and electric-power tools and similar equipment must be maintained in a safe operating condition. All electric-power tools must be inspected before initial use. Damaged tools must be removed immediately from service or repaired. Tools must be used only for the purpose for which they were designed. All users must be properly trained in their safe operation.

# 16.0 EMERGENCY RESPONSE

## 16.1 General

This section establishes procedures and provides information for use during a project emergency. Emergencies happen unexpectedly and quickly, and require an immediate response; therefore, contingency planning and advanced training of staff is essential. Specific elements of emergency support procedures that are addressed in the following subsections include communications, local emergency support units, and preparation for medical emergencies, first aid for injuries incurred on site, record keeping, and emergency site evacuation procedures. In case of emergency, in addition to 911, call *WorkCare - Incident Intervention®* at 1-888-479-7787 to report their injuries. For all other communications, contact the Langan Incident Hotline at **973-560-4699** as soon as possible.

Should outside assistance be needed for accidents, fire, or release of hazardous substances, the emergency numbers will be available and posted at the site (Table 5) where a readily accessible telephone is made available for emergency use.

Also, in the event of an incident where a team member becomes exposed or suffers from an acute symptom from contact with site materials and has to be taken to a hospital, a short medical data sheet (Attachment C) for that individual will be made available to the attending physician. The medical data sheet will include the following:

- Name, address, home phone
- Age, height, weight
- Name of person to be notified in case of an accident.
- Allergies
- Particular sensitivities
- Does he/she wear contact lenses?
- Short checklist of previous illness
- Name of personal physician and phone
- Name of company physician and phone
- Prescription and non-prescription medications currently used.

An incident reporting form is included in Attachment C.

## 16.2 Responsibilities

### 16.2.1 Construction Health and Safety Officer (HSO)

The HSO is responsible for ensuring that all personnel are evacuated safely, and that machinery and processes are shut down or stabilized in the event of a stop work order or evacuation. The

HSO is responsible for ensuring the HSM is notified of all incidents, all injuries, near misses, fires, spills, releases, or equipment damage. The HSO is required to immediately notify the HSM of any fatalities or catastrophes (three or more workers injured and hospitalized) so that the HSM can notify OSHA within the required time limit.

### 16.2.2 Emergency Coordinator

The HSO or their designated alternate will serve as the Emergency Coordinator. The Emergency Coordinator is responsible for ensuring that all personnel are evacuated safely, and that machinery and processes are shut down or stabilized in the event of a stop work order or evacuation. They are also responsible for ensuring the HSM is notified of all incidents, all injuries, near misses, fires, spills, releases, or equipment damage. The Emergency Coordinator is required to immediately notify the HSM of any fatalities or catastrophes (three or more workers injured and hospitalized.

The Emergency Coordinator must locate emergency phone numbers and identify hospital routes prior to beginning work on the sites. The Emergency Coordinator must make necessary arrangements to be prepared for any emergencies that could occur.

The Emergency Coordinator is responsible for implementing the Emergency Response Plan.

### 16.2.3 Site Personnel

Project site personnel are responsible for knowing the Emergency Response Plan and the procedures contained herein. All personnel are expected to notify the Emergency Coordinator of situations that could constitute a site emergency. Project site personnel, including all subcontractors, will be trained in the Emergency Response Plan.

## 16.3 Communications

Once an emergency situation has been stabilized, the injured Langan personnel should contact *WorkCare - Incident Intervention®* at 1-888-479-7787 to report their injuries. For all other communications, contact the Langan Incident Hotline at **973-560-4699** as soon as possible.

## 16.4 Local Emergency Support Units

In order to be able to deal with any emergency that might occur during investigative activities at the site, the Emergency Notification Numbers (Table 5) will be posted and provided to all personnel conducting work within the EZ.

Figure 2 shows the hospital route map. Outside emergency number 911 and local ambulance should be relied on for response to medical emergencies and transport to emergency rooms. Always contact first responders when there are serious or life-threatening emergencies on the

site. Project personnel are instructed not to drive injured personnel to the Hospital. In the event of an injury, provide first aid and keep the injured party calm and protected from the elements, and treat for shock when necessary.

### 16.5 Pre-Emergency Planning

Langan will communicate directly with administrative personnel from the emergency room at the hospital to determine whether the hospital has the facilities and personnel needed to treat cases of trauma resulting from any of the contaminants expected to be found on the site. Instructions for finding the hospital will be posted conspicuously in the site office and each site vehicle.

### 16.6 Emergency Medical Treatment

The procedures and rules in this HASP are designed to prevent employee injury. However, if an injury occurs, no matter how slight, it will be reported to the HSO immediately. First-aid equipment will be available on-site at the following locations:

- First Aid Kit: Contractor Vehicles
- Emergency Eye Wash: Contractor Vehicles

During the site safety briefing, project personnel will be informed of the location of the first aid station(s) that has been set up. Some injuries, such as severe cuts and lacerations or burns, may require immediate treatment. First-aid instructions provided from off-site doctors or paramedics, before an emergency-response squad arrives at the site or before the injured person can be transported to the hospital, will be followed closely. Only in non-emergency situations may an injured person be transported to an urgent care facility. Due to hazards that may be present at the site and the conditions under which operations are conducted, an emergency may develop. Emergencies can be characterized as injury or acute chemical exposure to personnel, fire or explosion, environmental release, or hazardous weather conditions.

### 16.8 Emergency Site Evacuation Routes and Procedures

All project personnel will be instructed on proper emergency response procedures and locations of emergency telephone numbers during the initial site safety meeting. If an emergency occurs as a result of the site investigation activities, including but not limited to fire, explosion, or significant release of toxic gas into the atmosphere, the Langan Project Manager will be verbally notified immediately. All heavy equipment will be shut down and all personnel will evacuate the work areas and assemble at the nearest intersection to be accounted for and to receive further instructions.

If an emergency arises, the FTL will implement an immediate evacuation of all project personnel due to immediate or impending danger. The FTL will also immediately communicate with the contractor to coordinate any needed evacuation of the property.

The FTL or Site Supervisor will give necessary instructions until the Designated Incident Commander (IC) assumes control. After the emergency has been resolved, the FTL or Site Supervisor will coordinate with the IC and indicate when staff should resume their normal duties. If dangers are present for those at the designated assembly point, another designated location of assembly will be established.

It will be the responsibility of the FTL or Site Supervisor to report a fire or emergency, assess the seriousness of the situation, and initiate emergency measures until the arrival of the local fire fighters or other first responders, should they be necessary. The FTL, working with emergency responders, may also order the closure of the Site for an indefinite period as long as it is deemed necessary.

Under no circumstances will incoming visitors be allowed to proceed to the area of concern once an emergency evacuation has been implemented. Visitors or other persons present in the area of the emergency must be instructed to evacuate the area. The FTL will ensure that access roads are not obstructed and will remain on-site to provide stand-by assistance upon the arrival of emergency personnel.

If it is necessary to temporarily control traffic in the event of an emergency, those persons controlling traffic will wear proper reflection warning vests until the arrival of police or fire personnel.

### 16.8.1 Designated Assembly Locations

All personnel will evacuate the site and assemble at a designated assembly location. The assembly location will be designated by Langan personnel and discussed during each shift's pre-job safety briefing.

### 16.8.2 Accounting for Personnel

All contractor and subcontractor supervisors are responsible for the accounting of all personnel assembled at the designed assembly area. The Designated Incident Commander must be notified if personnel are not found.

## 16.9 Fire Prevention and Protection

In the event of a fire or explosion, procedures will include immediately evacuating the site and notification of the Langan Project Manager of the investigation activities. Portable fire

extinguishers will be provided at the work zone. The extinguishers located in the various locations should also be identified prior to the start of work. No personnel will fight a fire beyond the stage where it can be put out with a portable extinguisher (incipient stage).

### 16.9.1 Fire Prevention

Fires will be prevented by adhering to the following precautions:

- Good housekeeping and storage of materials.
- Storage of flammable liquids and gases away from oxidizers.
- Shutting off engines to refuel.
- Grounding and bonding metal containers during transfer of flammable liquids.
- Use of UL approved flammable storage cans.
- Fire extinguishers rated at least 10 pounds ABC located on all heavy equipment, in all trailers and near all hot work activities.

The person responsible for the control of fuel source hazards and the maintenance of fire prevention and/or control equipment is the HSO.

## 16.10 Significant Vapor Release

Based on the proposed tasks, the potential for a significant vapor release is low. However, if a release occurs, the following steps will be taken:

- Move all personnel to an upwind location. All non-essential personnel must evacuate.
- Upgrade to Level C Respiratory Protection.
- Downwind perimeter locations must be monitored for volatile organics.
- If the release poses a potential threat to human health or the environment in the community, the Emergency Coordinator must notify the Langan Project Manager.
- Local emergency response coordinators will be notified.

## 16.11 Overt Chemical Exposure

The following are standard procedures to treat chemical exposures. Other, specific procedures detailed on the Material Safety Data Sheet (MSDS) will be followed, when necessary.

**SKIN AND EYE**: Use copious amounts of soap and water from eye-wash kits and portable hand-wash stations.

**CONTACT**: Wash/rinse affected areas thoroughly, then provide appropriate medical attention. Skin must also be rinsed for 15 minutes if contact with caustics, acids, or hydrogen peroxide occurs. Affected items of clothing must also be removed from contact with skin.

Providing wash water and soap will be the responsibility of each individual contractor or subcontractor on-site.

### 16.12 Decontamination during Medical Emergencies

If emergency lifesaving first aid and/or medical treatment is required, normal decontamination procedures may need to be abbreviated or omitted. The HSO or designee will accompany contaminated victims to the medical facility to advice on matters involving decontamination when necessary. The outer garments can be removed if they do not cause delays, interfere with treatment, or aggravate the problem. Respiratory equipment must always be removed. Protective clothing can be cut away. If the outer contaminated garments cannot be safely removed on site, a plastic barrier placed between the injured individual and clean surfaces should be used to help prevent contamination of the inside of ambulances and/or medical personnel. Outer garments may then be removed at the medical facility. No attempt will be made to wash or rinse the victim if his/her injuries are life threatening unless it is known that the individual has been contaminated with an extremely toxic or corrosive material which could also cause severe injury or loss of life to emergency response personnel. For minor medical problems or injuries, normal decontamination procedures will be followed.

### 16.13 Adverse Weather Conditions

In the event of adverse weather conditions, the HSO will determine if work will continue without potentially risking the safety of all field workers. Some of the items to be considered prior to determining if work should continue are:

- Potential for heat stress and heat-related injuries.
- Potential for cold stress and cold-related injuries.
- Treacherous weather-related working conditions (hail, rain, snow, ice, high winds).
- Limited visibility (fog).
- Potential for electrical storms.
- Earthquakes.
- Other major incidents.

Site activities will be limited to daylight hours, or when suitable artificial light is provided, and acceptable weather conditions prevail. The HSO will determine the need to cease field operations or observe daily weather reports and evacuate, if necessary, in case of severe inclement weather conditions.

## 16.14 Spill Control and Response

All small spills/environmental releases must be contained as close to the source as possible. Whenever possible, the MSDS will be consulted to assist in determining proper waste characterization and the best means of containment and cleanup. For small spills, sorbent materials such as sand, sawdust, or commercial sorbents should be placed directly on the substance to contain the spill and aid recovery. Any acid spills should be diluted or neutralized carefully prior to attempting recovery. Berms of earthen or sorbent materials can be used to contain the leading edge of the spills. All spill containment materials will be properly disposed of. An exclusion zone of 50 to 100 feet around the spill area should be established depending on the size of the spill.

All contractor vehicles must have spill kits on them with enough material to contain and absorb the worst-case spill from that vehicle. All vehicles and equipment must be inspected prior to being admitted on-site. Any vehicle or piece of equipment that develops a leak will be taken out of service and removed from the job site.

The following seven steps must be taken by the Emergency Coordinator:

1. Determine the nature, identity, and amounts of major spills.
2. Make sure all unnecessary persons are removed from the spill area.
3. Notify the HSO immediately.
4. Use proper PPE in consultation with the HSO.
5. If a flammable liquid, gas, or vapor is involved, remove all ignition sources, and use non-sparking and/or explosion-proof equipment to contain or clean up the spill (diesel-only vehicles, air-operated pumps, etc.)
6. If possible, try to stop the leak with the appropriate material.
7. Remove all surrounding materials that can react or compound with the spill.

In addition to the spill control and response procedures described in this HASP, Langan personnel will coordinate with the designated project manager relative to spill response and control actions. Notification to the Project Manager must be immediate and, to the extent possible, include the following information:

- Time and location of the spill.
- Type and nature of the material spilled.
- Amount spilled.
- Whether the spill has affected or has a potential to affect a waterway or sewer.
- A brief description of affected areas/equipment.
- Whether the spill has been contained.

- Expected time of cleanup completion. If spill cleanup cannot be handled by Langan's on-site personnel alone, such fact must be conveyed to the Project Manager immediately.

Langan field personnel must notify the project manager when they observe a spill or encounter conditions suggesting one might have occurred.

### 16.15 Emergency Equipment

The following minimum emergency equipment must be kept and maintained on site:

- Industrial first aid kit.
- Fire extinguishers (one per site).

### 16.16 Restoration and Salvage

After an emergency, prompt restoration of utilities, fire protection equipment, medical supplies, and other equipment will reduce the possibility of further losses. Some of the items that may need to be addressed are:

- Refilling fire extinguishers.
- Refilling medical supplies.
- Recharging eyewashes and/or showers.
- Replenishing spill control supplies.

### 16.17 Documentation

Immediately following an incident or near miss, unless emergency medical treatment is required, either the employee or a coworker must contact the Langan Incident/Injury Hotline at 1-(800)-9-LANGAN (extension 4699) and the client representative to report the incident or near miss. For emergencies involving personnel injury and/or exposure, the HSO and affected employee will complete and submit an Employee Exposure/Injury Incident Report (Attachment C) to the Langan Corporate Construction Health and Safety Manager as soon as possible following the incident.

## 17.0 SPECIAL CONDITIONS

This guideline contains information and requirements for special conditions that may not be routinely encountered.

### 17.1 Scope

The guideline applies to the specific projects identified within this document. Additional provisions will be addressed in each Site-Specific Health and Safety Plan (HASP), as needed.

## 17.2 Responsibilities

Site Personnel - All site personnel must be alert to safety hazards on work sites and take action to minimize such hazards. Personnel must utilize the buddy system, watch for inappropriate behavior, and be alerted to changes in site conditions.

Construction Health and Safety Officer (HSO) - The HSO is responsible for considering these procedures in the development of site-specific HASPs. The HSO must schedule frequent "tail gate" safety briefings to enhance safety awareness and discuss potential problems.

## 17.3 Procedures

The procedures outlined below must be followed when such conditions are encountered.

### 17.3.1 Ladders

Langan safety procedures must be used to ensure employee safety when using ladders in the office or work sites. All ladders must be coated or repaired to prevent injury to the employee from punctures or lacerations and to prevent snagging or clothing. Any wood ladders used must have an opaque covering except for identification or warning labels, which may be placed on one face only of a side rail.

#### *17.3.1.1 Ladder Use*

Employees must only use ladders for the purposes they were designed for and must not be used as scaffolding. Ladders will be maintained and inspected prior to use for slip hazards including oil and grease. Employees must use ladders only on stable and level surfaces unless the ladder is secured to prevent displacement. Ladders should not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement. Ladders should not be used in locations where they could be displaced by workplace activities or traffic. Ladder rungs, cleats and steps must be parallel, level and uniformly spaced when the ladder is in the use position.

Employees should not be carrying anything including equipment that could cause injury if there was a fall while utilizing the ladder. The top and bottom of the ladder area must remain clear while in use. When ascending and descending the ladder, employees must face the ladder.

Ladders must not be loaded beyond the maximum intended load for which they were built or the manufacturer's rated capacity.

*17.3.1.2 Portable Ladders*

Rungs, cleats, and steps for portable ladders and fixed ladders must be spaced not less than 10 inches apart, nor more than 14 inches apart, as measured between center lines of the rungs, cleats, and steps. When used to access an upper landing surface, the ladder side rails must extend at least three feet above the upper landing surface to which the ladder is used to gain access. If this is not possible, due to the length of the ladder, then the top of the ladder must be secured at its top to a rigid support.

*17.3.1.3 Step Stools*

Rungs, cleats, and steps of step stools must not be less than 8 inches apart, nor more than 12 inches apart, as measured between center lines of the rungs, cleats, and steps.

*17.3.1.4 Extension Ladders*

Rungs, cleats, and steps of the base section of extension trestle ladders must be spaced not less than 8 inches apart, nor more than 18 inches apart, as measured between center lines of the rungs, cleats, and steps. The rung spacing on the extension section of the extension trestle ladder must not be less than 6 inches nor more than 12 inches, as measured between the center lines of the rungs, cleats and steps. Ladders must be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder (the distance along the ladder between the foot and the top support).

*17.3.1.5 Inspection*

Ladders will be inspected for visible detects periodically, prior to utilization or after any occurrence that could have negatively affected the ladder. Portable ladders with defects including broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty components must not be used. The ladder will be immediately marked as defective, tagged as "Do Not Use" or blocked from being used and removed from service until repaired.

### 17.3.2 First Aid/Cardiopulmonary Resuscitation (CPR)

Langan field and office personnel will be encouraged to be trained in First Aid and Cardiopulmonary Resuscitation (CPR). Training will be provided free of charge by Langan to all employees. Employees will receive a training certificate that will be kept on file with the Health & Safety Coordinator (HSC). Training and certification will be provided by a credited provider such as American Red Cross or equivalent.

#### *17.3.2.1 Emergency Procedures*

Prior to site work, the Langan employees certified in first aid and CPR will be identified in the site-specific HASP. Langan will endear to have at least one employee at a job site trained and able to render first aid and CPR. The site-specific HASP will contain first aid information on both potential chemical and physical hazards. Emergency procedures to be followed in case of injury or illnesses are provided in the HASP. The HASP will include emergency contact information including local police and fire departments, hospital emergency rooms, ambulance services, on-site medical personnel, and physicians. The HASP will also include directions and contact information for the nearest emergency facility in case immediate medical attention is required. The emergency contact information will be conspicuously posted at the worksite. Employees that are injured and require immediate medical attention must call either 911 or the local posted emergency contacts. Employees should use ambulatory services to transport injured workers to the nearest facility for emergency medical care. In areas where 911 is not available, the telephone numbers of physicians, hospitals, or ambulances must be conspicuously posted.

#### *17.3.2.2 First Aid Supplies*

First aid supplies are readily available to all Langan employees when required. First aid kits are located in each Langan office. Portable first aid kits are available for employees to use at work sites. First aid kits should consist of items needed to treat employees for potential chemical and physical injuries. At a minimum, first aid kits should contain items to allow basic first aid to be rendered. Where the eyes or body of an employee may be exposed to corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body must be provided within the work area for immediate emergency use including eye wash.

First aid kits will be weatherproof with individually sealed packages of each item. All portable first aid kits must be inspected by Langan employees before and after use to ensure all used items are replaced. When out in the field, employees must check first aid kits weekly to ensure used items are replaced.

### 17.3.3 Hydrogen Sulfide

Langan employees with the potential to be exposed to hydrogen sulfide while at work sites must have training in hydrogen sulfide awareness. The training will include the identification of areas where employees could be exposed to hydrogen sulfide, health effects, permissible exposure limits, first aid procedures, and personnel protective equipment. Langan employees could be exposed to hydrogen sulfide while at job sites including petroleum refineries, hazardous waste treatment, storage and disposal facilities, uncontrolled hazardous waste sites, and remediation projects.

#### *17.3.3.1 Characteristics*

Hydrogen sulfide is a colorless gas with a strong odor of rotten eggs that is soluble in water. Hydrogen sulfide is used to test and make other chemicals. It is also found as a by-product of chemical reactions, such as in sewer treatment. It is a highly flammable gas and a dangerous fire hazard. Poisonous gases are produced in fires including sulfur oxides. Hydrogen sulfide is not listed as a carcinogen.

#### *17.3.3.2 Health Effects*

Hydrogen Sulfide can affect employees if inhaled or through contact with skin or eyes. Acute (or short-term) health effects of hydrogen sulfide exposure include irritation of the nose and throat, dizziness, confusion, headache, and trouble sleeping. Inhalation of hydrogen sulfide can irritate the lungs causing coughing and/or shortness of breath. Higher levels of exposure can cause a build-up of fluid in the lungs (pulmonary edema), a medical emergency, with severe shortness of breath.

Chronic (or long-term) health effects of low levels of exposure to hydrogen sulfide can cause pain and redness of the eyes with blurred vision. Repeated exposure may cause bronchitis with cough, phlegm, and shortness of breath.

#### *17.3.3.3 Protective Clothing and Equipment*

Respirators are required for those operations in which employees will be exposed to hydrogen sulfide above OSHA permissible exposure level. The maximum OSHA permissible exposure limit (PEL) for hydrogen sulfide is 20 parts of hydrogen sulfide vapor per million parts of air (20 ppm) for an 8-hour workday and the maximum short-term exposure limit (STEL) is 10 ppm for any 10-minute period.

Where employees are exposed to levels up to 100 parts of hydrogen sulfide vapor per million parts of air (100 ppm), the following types of respiratory protection are allowed:

- Any powered, air-purifying respirator with cartridge(s).
- Any air-purifying, full-facepiece respirator (gas mask) with a chin style, front- or back-mounted canister.
- Any supplied air system with escape self-contained breathing apparatus, if applicable; and,
- Any self-contained breathing apparatus with a full facepiece.

Respirators used by employees must have joint Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (NIOSH) seal of approval. Cartridges or canisters must be replaced before the end of their service life, or the end of the shift, whichever

occurs first. Langan employees that have the potential to be exposed to hydrogen sulfide will be trained in the proper use of respirators. Respirator training is discussed under– Langan's Respiratory Protection Program.

Employees with potential exposure to hydrogen sulfide, or when required by the client, will wear a portable hydrogen sulfide gas detector. The detector should have an audible, visual, and vibrating alarm. The detector may also provide detection for carbon monoxide, sulfur dioxide, and oxygen-deficient atmospheres. The hydrogen sulfide monitor will, at a minimum, be calibrated to detect hydrogen sulfide at a level of 20 parts of hydrogen sulfide vapor per million parts of air (20 ppm). Many portable gas detectors will have factory defaults with a low-level alarm at 10 ppm and a high-level alarm at 15 ppm. Langan employees must consult clients to determine if any site-specific threshold levels exist.

If the hydrogen sulfide gas detector sounds and employees are not wearing appropriate respiratory protection, employees must immediately vacate the area and meet at the assigned emergency location. Langan employees may not re- enter the site without proper respiratory protection and approval from the client or property owner if needed.

Employees must wear PPE to prevent eye and skin contact with hydrogen sulfide. Employees must wear appropriate protective clothing including boots, gloves, sleeves, and aprons, over any parts of their body that could be exposed to hydrogen sulfide. Non-vented, impact-resistant goggles should be worn when working with or exposed to hydrogen sulfide.

*17.3.3.4 Emergency and First Aid Procedures*

**Eye and Face Exposure**

If hydrogen sulfide comes in contact with eyes, it should be washed out immediately with large amounts of water for 30 minutes, occasionally lifting the lower and upper eye lids. Seek medical attention immediately.

**Skin Exposure**

If hydrogen sulfide contaminates clothing or skin, remove the contaminated clothing immediately and wash the exposed skin with large amounts of water and soap. Seek medical attention immediately. Contaminated clothing should either be disposed of or washed before wearing again.

**Breathing**

If a Langan employee or other personnel breathe in hydrogen sulfide, immediately get the exposed person to fresh air. If breathing has stopped, artificial respiration should be started. Call for medical assistance or a doctor as soon as possible.

**Safety Precautions**

Hydrogen sulfide is a highly flammable gas and a dangerous fire hazard. Containers of hydrogen sulfide may explode in a fire situation. Poisonous gases are produced during fires.

Langan employees should contact property owners and operators prior to conducting work onsite to be aware of any site-specific contingency plans, identify where hydrogen sulfide is used at the facility, and be informed about additional safety rules or procedures.

### 17.3.4 Fire Protection/Extinguishers

Langan field personnel that have been provided with portable fire extinguishers for use at worksites will be trained to familiarize employees with general principles of fire extinguisher use and hazards associated with the incipient stage of firefighting. Training will be provided prior to the initial assignment for field work and annually thereafter.

Portable fire extinguishers must be visually inspected monthly and subjected to an annual maintenance check. Langan will retain records of the annual maintenance date.

### 17.3.5 Overhead lines

When field work is performed near overhead lines, the lines must be de-energized and grounded, or other protective measures must be provided before the work commences. If overhead lines are to be de-energized, arrangements must be made with the client, property owner, or organization that operates or controls the electric circuits involved to de-energize and ground them. If protective measures, such as guarding, isolating, or insulating, are provided, these precautions must prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools, or equipment.

When unqualified Langan personnel are working in an elevated position near overhead lines, the location must be such that the person and the longest conductive object they may contact cannot come closer to any unguarded, energized overhead line than the following distances:

1. For voltages to ground 50 kilovolts (kV) or below - 10 feet; and
2. For voltages to ground over 50kV - 10 feet, plus 4 inches for every 10kV over 50kV.

As previously indicated, Langan does not retain qualified employees to perform work on energized equipment.

*17.3.5.1 Vehicle and Equipment Clearance*

Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines must be operated so that a clearance of 10 feet is maintained. If the voltage of the overhead lines is higher than 50kV, the clearance must be increased by 4 inches for every 10kV over that voltage.

If any of the following discussed conditions occur, the clearance may be reduced.

- If the vehicle is in transit with its structure lowered, the clearance may be reduced to 4 ft. If the voltage is higher than 50kV, the clearance must be increased to 4 inches for every 10 kV over that voltage.
- If insulating barriers are installed to prevent contact with the lines, and if the barriers are rated for the voltage of the line being guarded and are not a part of or an attachment to the vehicle or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier.

Employees standing on the ground may not contact the vehicle or mechanical equipment or any of its attachments unless the employee is using protective equipment rated for the voltage, or the equipment is located so that no uninsulated part of its structure (that portion of the structure that provides a conductive path to employees on the ground) can come closer to the overhead line than permitted.

If any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines is intentionally grounded, employees working on the ground near the point of grounding may not stand at the grounding location whenever there is a possibility of overhead line contact. Additional precautions, such as the use of barricades or insulation, must be taken to protect employees from hazardous ground potentials, depending on earth resistivity and fault currents, which can develop within the first few feet or more outward from the grounding point.

### 17.3.6 Trade Secret

Langan employees could potentially be provided trade secret information by the client or property owner when site-specific information is provided about highly hazardous chemicals. Trade secret means any confidential formula, pattern, process, device, information, or compilation of information that is used in an employer's business, and that allows the employer to obtain an advantage over competitors who do not know or use it. Langan employees understand that this

information should be kept confident and if required, may enter into a confidentiality agreement with the client.

### 17.3.7 Bloodborne Pathogens

Langan employees that can anticipate exposure to blood or other potentially infectious material while at work sites must have training in bloodborne pathogens. Applicable employees would include those trained in first aid and serving a designated role as an emergency medical care provider. Bloodborne pathogens are pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include but are not limited to, hepatitis B virus and human immunodeficiency virus.

#### *17.3.7.1 Training*

Langan employees with potential occupational exposure to blood or other potentially infectious material must participate in a training program. Training must be conducted prior to the initial assignment where there would be potential for exposure and annually thereafter within one year of previous training. The training program will be provided to Langan employees at no cost to them and during working hours.

Langan will ensure the training program must consist of the following:

- An accessible copy of the regulatory text of 29 CFR 1910.1030 and an explanation of its contents.
- A general explanation of the epidemiology and symptoms of bloodborne diseases.
- An explanation of the modes of transmission of bloodborne pathogens.
- An explanation of Langan's exposure control plan and how the employee can obtain a copy of the written plan.
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- An explanation of the use and limitations of personal protective equipment (PPE) to prevent and reduce exposure.
- Information on the types, proper use, location, removal, handling, and disposal of PPE.
- An explanation of the basis for the selection of PPE.
- Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.

- Information on the post-exposure evaluation and determining whether the employer is required to provide for the employee following an exposure incident.
- An explanation of the signs and labels and/or color coding required by paragraph 29 CFR 1910.1030(g)(1); and
- An opportunity for interactive questions and answers with the person conducting the training session.

Langan will develop and implement a written Exposure Control Plan, which will be designed to eliminate or minimize employee exposure to bloodborne pathogens. The Exposure Control Plan will contain the following elements:

- An exposure determination for employees.
- The schedule and method of implementation for Methods of Compliance (29 CFR 191.1030(d)), Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up (29 CFR 1910.1030(f)), Communication of Hazards to Employees (29 CFR 1910.1030(g)) and (h) Recordkeeping (29 CFR 1910.1030(h)).
- The procedure for the evaluation of circumstances surrounding exposure incidents.
- Ensure a copy of the Exposure Control Plan will be accessible to employees; and,
- The Exposure Control Plan must be reviewed and updated at least annually.

Langan employees with occupational exposure to bloodborne pathogens include any employees trained in first aid that would be expected to provide emergency medical care. This determination is made without regard to the use of PPE, which could eliminate or minimize exposure.

Universal precautions must be observed to prevent contact with blood or other potentially infectious materials. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for bloodborne pathogens. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids must be considered potentially infectious materials.

Work practice controls must be used to eliminate or minimize employee exposure, if applicable. Since Langan employees will have occupational exposure only during the rendering of first aid, personnel protective equipment will be utilized to reduce or minimize exposure. PPE that could be available to Langan personnel when administering first aid includes safety glasses, gloves, and Tyvek suits or sleeves. PPE and first aid kits will be provided to employees at no cost to them.

Langan employees that render first aid in office areas will have access to hand-washing facilities or restrooms. For first aid rendered at field locations, first aid kits will contain an appropriate antiseptic hand cleanser and clean cloth/paper towels or antiseptic towelettes. After using

antiseptic hand cleansers or towelettes, employees must wash their hands with soap and running water as soon as feasible.

After administering first aid, potentially infectious materials, including towels, personnel protective equipment, clothes, and bandages, must be placed in a container, which prevents leakage during collection, handling, processing, storage, transport, or shipping. All PPE will be disposed of after use. Any equipment or working surfaces which was been exposed to blood or potentially infectious materials due to an injury will be decontaminated prior to reuse.

Langan will make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident. These services will be available to the employee at no cost to them through a medical provider.

#### *17.3.7.2 Recordkeeping*

Langan will maintain training and medical records for each employee with occupational exposure to blood or potentially infectious materials. Medical and training records will be maintained by Langan's H&S Department.

Training records will include the following:

- Dates of the training sessions.
- Contents or a summary of the training sessions.
- Names and qualifications of persons conducting the training; and
- Names and job titles of all persons attending the training sessions.

Training records must be maintained for 3 years from the date on which the training occurred. Medical records will be preserved and maintained for the duration of employment plus 30 years.

All records will be made available upon request to employees, the Assistant Secretary of Labor for Occupational Safety and Health, and the Director of the National Institute for Occupational Safety and Health Director of OSHA for examination and copying. Medical records must have written consent from the employee before releasing.

If Langan ceases to do business, all records must be transferred to the successor employer. The successor employer must receive and maintain these records.

If there will not be a successor, Langan will notify current employees of their rights to access records at least three months prior to the cessation of business.

## 18.0 RECORDKEEPING

The following is a summary of required health and safety logs, reports, and recordkeeping.

### 18.1 Field Change Authorization Request

Any changes to the work to be performed that are not included in the HASP will require an addendum that is approved by the Langan project manager and Langan HSM to be prepared. Approved changes will be reviewed with all field personnel at a safety briefing.

### 18.2 Medical and Training Records

Copies or verification of training (40-hour, 8-hour, supervisor, site-specific training, documentation of three-day on-the-job training (OJT)), and respirator fit-test records) and medical clearance for site work and respirator use will be maintained in the office and available upon request. Records for all subcontractor employees must also be available upon request. All employee medical records will be maintained by the HSM.

### 18.3 Onsite Log

A log of personnel on-site each day will be kept by the HSO or designee.

### 18.4 Daily Safety Meetings ("Tailgate Talks")

Completed safety briefing forms will be maintained by the HSO.

### 18.5 Exposure Records

All personal monitoring results, laboratory reports, calculations, and air sampling data sheets are part of an employee exposure record. These records will be maintained by the HSO during site work. At the end of the project, they will be maintained according to 29 CFR 1910.1020.

### 18.6 Hazard Communication Program/MSDS-SDS

Material safety data sheets (MSDS) Safety Data Sheets (SDS) have been obtained for applicable substances and are included in this HASP (Attachment D). Langan's written hazard communication program, in compliance with 29 CFR 1910.1200, is maintained by the HSM.

### 18.7 Documentation

Immediately following an incident or near miss, unless emergency medical treatment is required, either the employee or a coworker must contact the Langan incident/injury hotline at 1-800-952-6426, extension 4699, and the Project Manager to report the incident or near miss. The Project Manager will contact the client or client representative. A written report must be completed and

submitted HSM within 24 hours of the incident. For emergencies involving personnel injury and/or exposure, the employee will complete and submit the Langan incident/injury report to the Langan corporate health and safety manager as soon as possible following the incident. Accidents will be investigated in-depth to identify all causes and to recommend hazard control measures.

### 18.7.1 Accident and Injury Report Forms

#### *18.7.1.1 Accident/Incident Report*

All injuries, no matter how slight, must be reported to the FTL and the PM immediately. The accident/incident report forms, attached in Attachment C, will be filled out on all accidents by the applicable contractor supervision personnel, the FTL, or the HSO. Copies of all accident/incident reports must be kept on-site and available for review. Project personnel will be instructed on the location of the first aid station, hospital, and doctor and ambulance service near the job. The emergency telephone numbers will be conspicuously posted in site vehicles near the work zone. First aid supplies will be centrally located and conspicuously posted between restricted and nonrestricted areas to be readily accessible to all on the site.

#### *18.7.1.2 First Aid Treatment Record*

The forms will be used for recording all non-lost time injuries treated by the project first-aid attendant, the local physician or hospital will be entered in detail on this record. "Minor" treatment of scratches, cuts, etc. will receive the same recording attention as treatment of more severe injuries.

#### *18.7.1.3 OSHA Form 300*

An OSHA Form 300 will be kept at the Langan Corporate Office in Parsippany, New Jersey. All recordable injuries or illnesses will be recorded on this form. Subcontractor employers must also meet the requirements of maintaining an OSHA 300 form. The Incident Report form used to capture the details of work-related injuries/illnesses meets the requirements of the OSHA Form 301 (supplemental record) and must be maintained with the OSHA Form 300 for all recordable injuries or illnesses. Forms for recording OSHA work-related injuries and illnesses are included in Attachment C.

## 19.0 CONFINED SPACE ENTRY

Confined spaces are not anticipated at the Site during planned construction activities. If confined spaces are identified, the contractor must implement their own confined space program that all

applicable federal, state, and local regulations. Confined spaces **will not** be entered by Langan personnel.

## 20.0 HASP ACKNOWLEDGEMENT FORM

All Langan personnel and contractors will sign this HASP Compliance Agreement indicating that they have become familiar with this HASP and that they understand it and agree to abide by it.

| Printed Name | Signature | Company | Date |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

# TABLES

# TABLE 1
# TASK HAZARD ANALYSES

| Task | Hazard | Description | Control Measures | First Aid |
|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Contaminated Soil or Groundwater-Dermal Contact | Contaminated water spills on skin, splashes in eyes; contact with contaminated soil/fill during construction activities or sampling. | Wear proper PPE; follow safe practices, maintain safe distance from construction activities | See Table 2, seek medical attention as required |
| 1.3.1 – 1.3.34 | Lacerations, abrasions, punctures | Cutting bailer twine, pump tubing, acetate liners, etc. with knife; cuts from sharp site objects or previously cut piles, tanks, etc.; Using tools in tight spaces | Wear proper PPE; follow safe practices | Clean wound, apply pressure and/or bandages; seek medical attention as required. |
| 1.3.1 – 1.3.34 | Contaminated Media Inhalation | Opening drums, tanks, wells; vapors for non-aqueous phase liquids or other contaminated site media; dust inhalation during excavation; vapor accumulation in excavation | Follow air monitoring plan; have quick access to respirator, do not move or open unlabeled drums found at the site, maintain safe distance from construction activities | See Table 2, seek medical attention as required |
| 1.3.1 – 1.3.34 | Lifting | Improper lifting/carrying of equipment and materials causing strains | Follow safe lifting techniques.<br>Langan employees are not to carry contractor equipment or materials | Rest, ice, compression, elevation; seek medical attention as required |
| 1.3.1 – 1.3.34 | Slips, trips, and falls | Slips, trips, and falls due to uneven surfaces, cords, steep slopes, debris, and equipment in work areas | Good housekeeping at site; constant awareness and focus on the task; avoid climbing on stockpiles; maintain safe distance from construction activities and excavations; avoid elevated areas over six feet unless fully accredited in fall protection and wearing an approved fall protection safety apparatus | Rest, ice, compression, elevation; seek medical attention as required |
| 1.3.1 – 1.3.34 | Noise | Excavation equipment, hand tools, drilling equipment. | Wear hearing protection; maintain safe distance from construction activities | Seek medical attention as required |
| 1.3.1 – 1.3.34 | Falling objects | Soil material, tools, etc. dropping from drill rigs, front-end loaders, etc. | Hard hats to be worn at all times while in work zones; maintain safe distance from construction activities and excavations | Seek medical attention as required |
| 1.3.1 – 1.3.34 | Underground/ overhead utilities | Excavation equipment, drill rig auger contacts underground object; boom touches overhead utility | "One Call" before dig; follow safe practices; confirm utility locations with contractor; wear proper PPE; maintain safe distance from construction activities and excavations | Seek medical attention as required |
| 1.3.1 – 1.3.34 | Insects (bees, wasps, hornet, mosquitoes, and spider) | Sings, bites | Insect Repellent; wear proper protective clothing (work boots, socks, and light-colored pants); field personnel who may have insect allergies (e.g., bee sting) should provide this information to the HSO or FSO prior to commencing work and will have allergy medication on site. | Seek medical attention as required |
| 1.3.1 – 1.3.34 | Vehicle traffic / Heavy Equipment Operation | Vehicles unable to see workers on site, operation of heavy equipment in tight spaces, equipment failure, malfunctioning alarms | Wear proper PPE, especially visibility vest; use a buddy system to look for traffic; rope off area of work with cones and caution tape or devices at points of hazard, maintain safe distance from construction activities and equipment | Seek medical attention as required |

# TABLE 2
# CONTAMINANT HAZARDS OF CONCERN

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | 1,4-Dichlorobenzene para-Dichlorobenzene p-Dichlorobenzene 1,4-Dichlorobenzene 1,4-DCB para-Dichlorobenzene p-Dichlorobenzene p-DCB PDB Paramoth Para crystals Paracide Dichlorocide | 106-46-7 | PID | 75 ppm 150 ppm | Groundwater Soil Vapor | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, swelling periorbital (situated around the eye); profuse rhinitis; headache, anorexia, nausea, vomiting; weight loss, jaundice, cirrhosis; in animals: liver, kidney injury; [potential occupational carcinogen] | Eye: Irrigate immediately Skin: Soap wash Breathing: Respiratory support Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | 2-Butanone Ethyl methyl ketone MEK Methyl acetone Methyl ethyl ketone | 78-93-3 | PID | 200 ppm 3000 ppm | Soil Groundwater Vapor | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, nose; headache; dizziness; vomiting; dermatitis | Eye: Irrigate immediately Skin: Water wash immediately Breathing: Fresh air Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Acetone Dimethyl ketone Ketone propane 2-Propanone | 67-64-1 | PID | 1000 ppm 2500 ppm | Groundwater Soil | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, nose, throat; headache, dizziness, central nervous system depression; dermatitis | Eye: Irrigate immediately Skin: Soap wash immediately Breathing: Respiratory support Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Alpha-Chlordane<br>Alpha Chlordane<br>a-Chlordane | 5103-71-9 | None | 0.5 $mg/m^3$<br>100 $mg/m^3$ | Groundwater<br>Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact | Blurred vision; confusion; ataxia, delirium; cough; abdominal pain, nausea, vomiting, diarrhea; irritability, tremor, convulsions; anuria | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Aluminum | 7429-90-5 | None | 0.5 mg/m3<br>50 mg/m3 | Soil | inhalation, skin, and/or eye contact | irritation to the eyes, skin, respiratory system | Eye: Irrigate immediately<br>Breathing: Fresh air |
| 1.3.1 – 1.3.34 | Ammonia<br>Nitrogen, Ammonia | 7664-41-7 | None | 50 ppm<br>300 ppm | Groundwater<br>Soil<br>Vapor | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, skin, nose, respiratory system | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Anthracene | 120-12-7 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Soil | inhalation, skin, or eye contact, ingestion | irritation to the skin, eyes, mucous membranes, and upper respiratory tract, abdominal pain if ingested. | Eye: Irrigate immediately, seek medical attention immediately,<br>Skin: Soap wash immediately,<br>Breathing: Move to fresh air, refer to medical attention.<br>Swallow: refer to medical attention |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Antimony | 7440-36-0 | None | 0.5 $mg/m^3$<br>50 $mg/m^3$ | Groundwater<br>Soil | inhalation, ingestion, skin, and/or eye contact | irritation skin, dermatitis; resp distress; diarrhea; muscle tremor, convulsions; possible gastrointestinal tract | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Arsenic | NA | None | 0.5 $mg/m^3$<br>NA | Groundwater<br>Soil | inhalation, ingestion, skin, and/or eye contact | irritation skin, dermatitis; resp distress; diarrhea; muscle tremor, convulsions; possible gastrointestinal tract | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Barium | 10022-31-8 | None | 0.5 $mg/m^3$<br>50 $mg/m^3$ | Groundwater<br>Soil | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, upper respiratory system; skin, burns; gastroenteritis; muscle spasm; slow pulse | Eye: Irrigate immediately<br>Skin: Water flush immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Benzene<br>Benzol<br>Phenyl hydride<br>Alkyl benzene isomers | 71-43-2 | PID | 3.19 $mg/m^3$<br>1,595 $mg/mg^3$ | Groundwater<br>Soil<br>Vapor | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; lassitude (weakness, exhaustion) [potential occupational carcinogen] | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Benzo(a)anthracene<br>Benzanthracene<br>Benzanthrene<br>1,2-Benzanthracene<br>Benzo[b]phenanthrene<br>Tetraphene | 56-55-3 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Groundwater<br>Soil | inhalation, skin, or eye contact, ingestion | dermatitis, bronchitis, [potential occupational carcinogen] | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Benzo(a)pyrene | 50-32-8 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Soil | inhalation, skin, or eye contact, ingestion | dermatitis, bronchitis, [potential occupational carcinogen] | Eye: Irrigate immediately, seek medical attention<br>Skin: Soap wash immediately.<br>Breathing: move to fresh air.<br>Swallow: Induce vomiting if conscious, seek medical attention immediately |
| 1.3.1 – 1.3.34 | Benzo(b)fluoranthene | 205-99-2 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Soil | inhalation, skin, or eye contact, ingestion | irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache) | Eye: Irrigate immediately, refer to medical attention<br>Skin: Soap wash immediately<br>Breathing: move to fresh air<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Benzo(g,h,i)perylene<br>Benzo(ghi)perylene | 191-24-2 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Soil | inhalation, skin, or eye contact, ingestion | irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache) | Eye: Irrigate immediately, refer to medical attention<br>Skin: Soap wash immediately<br>Breathing: move to fresh air<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Benzo(k)fluoranthene | 207-08-9 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Soil | inhalation, skin, or eye contact, ingestion | irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache) | Eye: Irrigate immediately, refer to medical attention<br>Skin: Soap wash immediately<br>Breathing: move to fresh air<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Beryllium | 7440-41-7 | None | 0.002 $mg/m^3$<br>4 $mg/m^3$ | Soil | inhalation, skin, and/or eye contact | berylliosis (chronic exposure): anorexia, weight loss, lassitude (weakness, exhaustion), chest pain, cough, clubbing of fingers, cyanosis, pulmonary insufficiency; irritation to the eyes; dermatitis; [potential occupational carcinogen] | Eye: Irrigate immediately<br>Breathing: Fresh air |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Bromide | 24959-67-9 | None | 0.1 ppm<br>3 ppm | Groundwater | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, nose, respiratory system | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Cadmium | 7440-43-9 | None | 0.005 $mg/m^3$<br>9 $mg/m^3$ | Soil | inhalation, ingestion | pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen] | Eye: Irrigate immediately<br>Skin: Soap wash<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Calcium | 7440-70-2 | None | NA | Groundwater<br>Soil | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, upper resp tract; ulcer, perforation nasal septum; pneumonitis; dermatitis | Eye: Irrigate immediately<br>Skin: Water flush immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Carbon disulfide | 75-15-0 | PID | 20 ppm<br>500 ppm | Soil<br>Groundwater<br>Vapor | inhalation, skin, or eye contact, ingestion | irritation to the eyes, skin, respiratory system | Eye: Irrigate immediately (liquid)<br>Skin: Water flush immediately (liquid)<br>Breathing: Respiratory support |
| 1.3.1 – 1.3.34 | Chlordane<br>Chlordan<br>Chlordano<br>1,2,4,5,6,7,8,8-Octachloro-3a,4,7,7a-tetrahydro-4,7-methanoindane<br>Total Chlordane | 57-74-9 | None | 0.5 $mg/m^3$<br>100 $mg/m^3$ | Groundwater<br>Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact | Blurred vision; confusion; ataxia, delirium; cough; abdominal pain, nausea, vomiting, diarrhea; irritability, tremor, convulsions; anuria | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Chloride | 16887-00-6 | None | 1 ppm<br>10 ppm | Groundwater<br>Soil | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, nose, respiratory system | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Chlorobenzene<br>benzene chloride<br>monochlorobenzene<br>Phenyl chloride<br>Chlorobenzol<br>MCB | 108-90-7 | PID | 75 ppm<br>1000 ppm | Groundwater<br>Soil<br>Vapor | inhalation, skin, or eye contact, ingestion | irritation to the eyes, skin, nose; drowsiness, incoordination; central nervous system depression; in animals: liver, lung, kidney injury | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Chromium<br>Total Chromium<br>Chromium, Total | 7440-47-3 | None | 1.0 $mg/m^3$<br>250 $mg/m^3$ | Groundwater<br>Soil | inhalation<br>absorption<br>ingestion | irritation to eye, skin, and respiratory | Eye: Irrigate immediately<br>Skin: Soap wash<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Chrysene<br>Benzo[a]phenanthrene<br>1,2-Benzphenanthrene | 218-01-9 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Groundwater<br>Soil | inhalation, absorption, ingestion, consumption | irritation to eye, skin, and respiratory, gastrointestinal irritation nausea, vomit, diarrhea [potential occupational carcinogen] | Eyes: Irrigate immediately<br>Skin: Soap wash promptly.<br>Breath: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | cis-1,2-Dichloroethylene<br>cis-1,2-Dichloroethene | 156-59-2 | NA | NA<br>NA | Groundwater<br>Soil<br>Vapor | inhalation, ingestion, skin, and/or eye contact | Irritant to eyes, skin, mucous membranes, and respiratory system. May be harmful by ingestion, skin absorption and inhalation | Eye: Irrigate immediately<br>Skin: Water flush promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Cobalt | 7440-48-4 | None | 0.1$mg/m^3$<br>20 $mg/m^3$ | Soil | inhalation, ingestion, skin, and/or eye contact | Cough, dyspnea (breathing difficulty), wheezing, decreased pulmonary function; weight loss; dermatitis; diffuse nodular fibrosis; resp hypersensitivity, asthma | Eye: Irrigate immediately<br>Skin: Soap wash<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Copper | 7440-50-8 | None | 1.0 $mg/m^3$ 100 $mg/m^3$ | Groundwater Soil | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, nose, metallic taste; dermatitis; anemia | Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Cyanide | 57-12-5 | None | 5 $mg/m^3$ 25 $mg/m^3$ | Groundwater Soil | inhalation, ingestion, skin, and/or eye contact | Exposure to cyanide can cause weakness, headaches, confusion, dizziness, fatigue, anxiety, sleepiness, nausea and vomiting. Breathing can speed up then become slow and gasping. Coma, and convulsions also occur. If copious amounts of cyanide have been absorbed by the body, the person usually collapses, and death can occur very quickly. Long-term exposure to lower levels of cyanide can cause skin, and nose irritation, itching, rashes and thyroid changes. | Eye: Irrigate immediately Skin: Soap wash Breathing: Respiratory support Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | DDE<br>4,4-DDE<br>4,4′-DDE<br>1,1-bis-(4-chlorophenyl)-2,2-dichloroethene<br>Dichlorodiphenyldichloroethylene<br>p,p'-DDE | 72-55-9 | None | NA<br>NA | Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact | Oral ingestion of food is the primary source of exposure for the general population. Acute and chronic ingestion may cause nausea, vomiting, diarrhea, stomach pain, headache, dizziness, disorientation, tingling, sensation, kidney damage, liver damage, convulsions, coma, and death. 4,4' DDE may cross the placenta and can be excreted in breast milk | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | DDT<br>4,4-DDT<br>4,4′-DDT<br>p,p′-DDT<br>Dichlorodiphenyltrichloroethane<br>1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane | 50-29-3 | None | 1 $mg/m^3$<br>500 $mg/m^3$ | Groundwater<br>Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, skin; paresthesia tongue, lips, face; tremor; anxiety, dizziness, confusion, malaise (vague feeling of discomfort), headache, lassitude (weakness, exhaustion); convulsions; paresis hands; vomiting; [potential occupational carcinogen] | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Dibenz(a,h)anthracene<br>Dibenzo(a,h)anthracene<br>Dibenzo[a,h]anthracene | 53-70-3 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Groundwater<br>Soil | inhalation, absorption, ingestion, consumption | irritation to eyes, skin, respiratory, and digestion [potential occupational carcinogen] | Eyes: Irrigate immediately<br>Skin: Soap wash promptly.<br>Breath: Respiratory support<br>PID Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Diesel<br>Fuel automotive diesel fuel oil No. 2 distillate diesoline diesel oil<br>diesel oil light<br>diesel oil No. 1-D<br>summer diesel | 68334-30-5 | PID | NA<br>NA | Groundwater<br>Soil<br>Vapor | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, nose, throat; burning sensation in chest; headache, nausea, lassitude (weakness, exhaustion), restlessness, incoordination, confusion, drowsiness; vomiting, diarrhea; dermatitis; chemical pneumonitis (aspiration liquid) | Eye: Irrigate immediately<br>Skin: Soap flush immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Fluoranthene<br>Benzo(j,k)fluorene | 206-44-0 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Groundwater<br>Soil | inhalation, skin, or eye contact, ingestion | irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache) | Eye: Irrigate immediately, refer to medical attention<br>Skin: Soap wash immediately<br>Breathing: move to fresh air<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Fuel Oil No. 2 | 68476-30-2 | PID | NA<br>NA | Groundwater<br>Soil<br>Vapor | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, nose, throat; burning sensation in chest; headache, nausea, lassitude (weakness, exhaustion), restlessness, incoordination, confusion, drowsiness; vomiting, diarrhea; dermatitis; chemical pneumonitis (aspiration liquid) | Eye: Irrigate immediately<br>Skin: Soap flush immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | gamma-Chlordane<br>Gamma Chlordane<br>y-Chlordane | 5566-34-7 | None | 0.5 $mg/m^3$<br>100 $mg/m^3$ | Groundwater<br>Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact | Blurred vision; confusion; ataxia, delirium; cough; abdominal pain, nausea, vomiting, diarrhea; irritability, tremor, convulsions; anuria | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Gasoline | 8006-61-9 | PID | NA<br>NA | Groundwater<br>Soil<br>Vapor | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, skin, mucous membrane; dermatitis; headache, lassitude (weakness, exhaustion), blurred vision, dizziness, slurred speech, confusion, convulsions; chemical pneumonitis (aspiration liquid) | Eye: Irrigate immediately<br>Skin: Soap flush immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Helium | 7440-59-7 | Helium Detector | NA<br>NA | NA | inhalation | dizziness, headache, and nausea | Breathing: Respiratory support |
| 1.3.1 – 1.3.34 | Indeno(1,2,3-cd)pyrene<br>Indeno(1,2,3-c,d)Pyrene<br>Indeno[1,2,3-cd]Pyrene | 193-39-5 | None | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Groundwater<br>Soil | inhalation, absorption, ingestion, consumption | irritation to eyes, skin, respiratory, and digestion [potential occupational carcinogen] | Eyes: Irrigate immediately<br>Skin: Soap wash promptly.<br>Breath: Respiratory support<br>Swallow: Medical attention immediately, wash mouth with water |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Iron | 7439-89-6 | None | 10 $mg/m^3$ NA | Groundwater Soil | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, mucous membrane; abdominal pain, diarrhea, vomiting | Eye: Irrigate immediately Skin: Soap wash Breathing: Respiratory support Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Lead | 7439-92-1 | None | 0.050 $mg/m^3$ 100 $mg/m^3$ | Groundwater Soil | inhalation, ingestion, skin, and/or eye contact | lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation to the eyes; hypertension | Eye: Irrigate immediately Skin: Soap flush promptly Breathing: Respiratory support Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Magnesium | 7439-95-4 | None | 15 $mg/m^3$ NA | Soil | inhalation, skin, and/or eye contact | irritation to the eyes, skin, respiratory system; cough | Eye: Irrigate immediately Breathing: Fresh air |
| 1.3.1 – 1.3.34 | Manganese | 7439-96-5 | None | 5 $mg/m^3$ 500 $mg/m^3$ | Groundwater Soil | inhalation, ingestion | aerosol is irritating to the respiratory tract | Eye: Irrigate immediately Skin: Soap flush promptly Breathing: Respiratory support Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Mercury | 7439-97-6 | None | 0.1 $mg/m^3$<br>10 $mg/m^3$ | Groundwater<br>Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Methane<br>Tetrahydridocarbon<br>Carbane<br>Marsh Gas<br>Natural Gas<br>Carbon tetrahydride<br>Hydrogen carbide | 74-82-8 | PID | NA<br>NA | Groundwater<br>Soil<br>Vapor | inhalation, skin, and/or eye contact (liquid) | dizziness, confusion, excitation, asphyxia; liquid: frostbite | Eye: Frostbite<br>Skin: Frostbite<br>Breathing: Respiratory support |
| 1.3.1 – 1.3.34 | Methylene Chloride<br>Dichloromethane<br>Methylene dichloride | 75-09-2 | PID | 25 ppm<br>2300 ppm | Groundwater<br>Soil<br>Vapor | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, skin; lassitude (weakness, exhaustion), drowsiness, dizziness; numb, tingle limbs; nausea; [potential occupational carcinogen] | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Naphthalene<br>Naphthalin<br>Tar camphor<br>White tar | 91-20-3 | PID | 50 $mg/m^3$<br>250 ppm | Groundwater<br>Soil<br>Vapor | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes; headache, confusion, excitement, malaise (vague feeling of discomfort); nausea, vomiting, abdominal pain; irritation bladder; profuse sweating; hematuria (blood in the urine); dermatitis, optical neuritis | Eye: Irrigate immediately<br>Skin: Molten flush immediately/solid-liquid soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Nickel | 7440-02-0 | None | NA<br>10 mg/$m^3$ | Groundwater<br>Soil | ion, ingestion, skin, and/or eye contact | sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen] | Skin: Water flush immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Nitrate | 14797-55-8 | None | NA<br>NA | Groundwater<br>Soil | inhalation, skin, and/or eye contact | irritation to the eyes, skin, mucous membrane | Eye: Irrigate immediately<br>Skin: Soap wash<br>Breathing: Fresh air |
| 1.3.1 – 1.3.34 | Nitrite dioxidonitrate | 14797-65-0 | None | NA<br>NA | Groundwater | NA | NA | NA |
| 1.3.1 – 1.3.34 | Non-Flammable Gas Mixture CALGAS (Equipment Calibration Gas :<br>Oxygen<br>Methane<br>Hydrogen Sulfide<br>Carbon Monoxide<br>Nitrogen | <br>7782-44-7<br>74-82-8<br>7783-08-4<br>830-08-0<br>7727-37-9 | Multi-Gas PID | <br>NA/NA<br>NA/NA<br>10/100 ppm<br>50/1200 ppm<br>NA/NA | NA | inhalation | dizziness, headache, and nausea | Breathing: Respiratory support |
| 1.3.1 – 1.3.34 | Non-Flammable Gas Mixture CALGAS (Equipment Calibration Gas :<br>Oxygen<br>Isobutylene<br>Nitrogen | <br>7782-44-7<br>115-11-7<br>7727-37-9 | PID | <br>NA/NA<br>NA/NA<br>NA/NA | NA | inhalation | dizziness, headache, and nausea | Breathing: Respiratory support |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Phenanthrene | 85-01-8 | PID | 0.2 $mg/m^3$ 80 $mg/m^3$ (Coal Pitch Tar) | Groundwater Soil | inhalation, skin, or eye contact, ingestion | irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache) | Eye: Irrigate immediately, refer to medical attention<br>Skin: Soap wash immediately<br>Breathing: move to fresh air<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Phenol<br>Carbolic acid<br>Hydroxybenzene,<br>Monohydroxybenzene<br>Phenyl alcohol<br>Phenyl hydroxide | 108-95-2 | PID | 5 ppm<br>250 ppm | Groundwater Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, nose, throat; anorexia, weight loss; lassitude (weakness, exhaustion), muscle ache, pain; dark urine, skin, burns; dermatitis; tremor, convulsions, twitching | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Potassium | 7440-09-7 | None | NA<br>NA | Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact inhalation, ingestion, skin, and/or eye contact | eye: Causes eye burns. Skin: Causes skin, burns. Reacts with moisture in the skin, to form potassium hydroxide and hydrogen with heat.<br>ingestion: Causes gastrointestinal tract burns.<br>inhalation: May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Causes chemical burns to the respiratory tract.<br>inhalation may be fatal because of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. | Eyes: Get medical aid immediately<br>Skin: Get medical aid immediately. Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes.<br>Ingestion: If victim is conscious and alert, give 2-4 full cups of milk or water. Get medical aid immediately.<br>inhalation: Get medical aid immediately. |
| 1.3.1 – 1.3.34 | Pyrene<br>benzo[def]phenanthrene | 129-00-0 | PID | 0.2 $mg/m^3$<br>80 $mg/m^3$ (Coal Pitch Tar) | Groundwater<br>Soil | inhalation, skin, or eye contact, ingestion | irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache) | Eye: Irrigate immediately, refer to medical attention<br>Skin: Soap wash immediately<br>Breathing: move to fresh air<br>Swallow: Medical attention immediately |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Selenium | 7782-49-2 | None | 1 $mg/m^3$<br>0.2 $mg/m^3$ | Soil | inhalation, ingestion, skin, and/or eye contact | irritation to the eyes, skin, nose, throat; visual disturbance; headache; chills, fever; dyspnea (breathing difficulty), bronchitis; metallic taste, garlic breath, gastrointestinal disturbance; dermatitis; eye, skin, burns; in animals: anemia; liver necrosis, cirrhosis; kidney, spleen damage | Eye: Irrigate immediately<br>Skin: Soap wash immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Silver | 7440-22-4 | None | 0.01mg/ $m^3$<br>10 $mg/m^3$ | Soil | inhalation, ingestion, skin, and/or eye contact | blue-gray eyes, nasal septum, throat, skin; irritation, ulceration skin; gastrointestinal disturbance | Eye: Irrigate immediately<br>Skin: Water flush<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Sodium | 7440-23-5 | None | NA<br>NA | Groundwater<br>Soil | ion, ingestion, skin, and/or eye contact | sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen] | Skin: Water flush immediately<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Sulfate | 14808-79-8 | None | NA<br>NA | Groundwater<br>Soil | inhalation, skin, and/or eye contact | irritation to the eyes, skin, mucous membrane | Eye: Irrigate immediately<br>Skin: Soap wash<br>Breathing: Fresh air |
| 1.3.1 – 1.3.34 | Total Organic Carbon TOC | 7732-18-5 | NA | NA<br>NA | Groundwater<br>Soil<br>Vapor | NA | NA | NA |

| Task | Contaminant | CAS Number | Monitoring Device | PEL/ IDLH | Source of Concentration on Site | Route of Exposure | Symptoms | First Aid |
|---|---|---|---|---|---|---|---|---|
| 1.3.1 – 1.3.34 | Trichloroethylene<br>Trichloroetheneylenes<br>Ethylene trichloride<br>TCE<br>Trichloroethene<br>Trilene | 79-01-6 | PID | 100 ppm<br>1000 ppm | Groundwater<br>Soil<br>Vapor | inhalation, skin absorption, ingestion, skin, and/or eye contact | irritation to the eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen] | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Vanadium | 7440-62-2 | None | 0.1 mg/m3<br>15 mg/m3 | Groundwater<br>Soil | inhalation, skin absorption, ingestion, skin, and/or eye contact | nausea, diarrhea, abdominal pain, vomiting; ptosis, strabismus; peri neuritis, tremor; retrosternal (occurring behind the sternum) tightness, chest pain, pulmonary edema; convulsions, chorea, psychosis; liver, kidney damage; alopecia; paresthesia legs | Eye: Irrigate immediately<br>Skin: Water flush promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |
| 1.3.1 – 1.3.34 | Zinc | 7440-62-2 | None | 15 $mg/m^3$<br>500 $mg/m^3$ | Groundwater<br>Soil | inhalation | chills, muscle ache, nausea, fever, dry throat, cough; lassitude (weakness, exhaustion); metallic taste; headache; blurred vision; low back pain; vomiting; malaise (vague feeling of discomfort); chest tightness; dyspnea (breathing difficulty), rales, decreased pulmonary function | Eye: Irrigate immediately<br>Skin: Soap wash promptly<br>Breathing: Respiratory support<br>Swallow: Medical attention immediately |

**EXPLANATION OF ABBREVIATIONS**

PID = Photoionization Detector

PEL = Permissible Exposure Limit (8-hour Time Weighted Average)

IDLH = Immediately Dangerous to Life and Health
ppm = part per million
$mg/m^3$ = milligrams per cubic meter
500 $mg/m^3$

# TABLE 3
# SUMMARY OF MONITORING EQUIPMENT

| Instrument | Operation Parameters |
|---|---|
| Photoionization Detector (PID) | **Hazard Monitored:** Many organic and some inorganic gases and vapors.<br>**Application:** Detects total concentration of many organic and some inorganic gases and vapors. Some identification of compounds is possible if more than one probe is measured.<br>**Detection Method:** Ionizes molecules using UV radiation; produces a current that is proportional to the number of ions.<br>**General Care/Maintenance:** Recharge or replace battery. Regularly clean lamp window. Regularly clean and maintain the instrument and accessories.<br>**Typical Operating Time:** 10 hours. 5 hours with strip chart recorder. |
| Oxygen Meter | **Hazard Monitored:** Oxygen ($O_2$).<br>**Application:** Measures the percentage of $O_2$ in the air.<br>**Detection Method:** Uses an electrochemical sensor to measure the partial pressure of $O_2$ in the air and converts the reading to $O_2$ concentration.<br>**General Care/Maintenance:** Replace detector cell according to manufacturer's recommendations. Recharge or replace batteries prior to explanation of the specified interval. If the ambient air is less than 0.5% C $O_2$, replace the detector cell frequently.<br>**Typical Operating Time:** 8 – 12 hours. |
| Additional equipment (if needed, based on site conditions) | |
| Combustible Gas Indicator (CGI) | **Hazard Monitored:** Combustible gases and vapors.<br>**Application:** Measures the concentration of combustible gas or vapor.<br>**Detection Method:** A filament, usually made of platinum, is heated by burning the combustible gas or vapor. The increase in heat is measured. Gases and vapors are ionized in a flame. A current is produced in proportion to the number of carbon atoms present.<br>**General Care/Maintenance:** Recharge or replace battery. Calibrate immediately before use.<br>**Typical Operating Time:** Can be used for as long as the battery lasts, or for the recommended interval between calibrations, whichever is less. |
| Flame Ionization Detector (FID) with Gas Chromatography Option *(i.e., Foxboro Organic Vapor Analyzer (OVA))* | **Hazard Monitored:** Many organic gases and vapors (approved areas only).<br>**Application:** In survey mode, detects the concentration of many organic gases and vapors. In gas chromatography (GC) mode, identifies and measures specific compounds. In survey mode, all the organic compounds are ionized and detected at the same time. In GC mode, volatile species are separated.<br>**General Care/Maintenance:** Recharge or replace battery. Monitor fuel and/or combustion air supply gauges. Perform routine maintenance as described in the manual. Check for leaks.<br>**Typical Operating Time:** 8 hours; 3 hours with strip chart recorder. |
| Potable Infrared (IR) Spectrophotometer | **Hazard Monitored:** Many gases and vapors.<br>**Application:** Measures concentration of many gases and vapors in air. Designed to quantify one or two component mixtures.<br>**Detection Method:** Passes different frequencies of IR through the sample. The frequencies absorbed are specific for each compound.<br>**General Care/Maintenance:** As specified by the manufacturer. |

| Instrument | Operation Parameters |
|---|---|
| Direct Reading Colorimetric Indicator Tube | **Hazard Monitored:** Specific gas and vapors.<br>**Application:** Measures concentration of specific gases and vapors.<br>**Detection Method:** The compound reacts with the indicator chemical in the tube, producing a stain whose length or color change is proportional to the compound's concentration.<br>**General Care/Maintenance:** Do not use a previously opened tube even if the indicator chemical is not stained. Check pump for leaks before and after use. Refrigerate before use to maintain a shelf life of about 2 years. Check expiration dates of tubes. Calibrate pump volume at least quarterly. Avoid rough handling which may cause channeling. |
| Aerosol Monitor | **Hazard Monitored:** Airborne particulate (dust, mist, fume) concentrations.<br>**Application:** Measures total concentration of semi-volatile organic compounds, PCBs, and metals.<br>**Detection Method:** Based on light-scattering properties of particulate matter. Using an internal pump, air sample is drawn into the sensing volume where near infrared light scattering is used to detect particles.<br>**General Care/Maintenance:** As specified by the mfr. Also, the instrument must be calibrated with particulates of a size and refractive index similar to those to be measured in the ambient air. |
| Monitox | **Hazard Monitored:** Gases and vapors.<br>**Application:** Measures specific gases and vapors.<br>**Detection Method:** Electrochemical sensor specific for the chemical species in question.<br>**General Care/Maintenance:** Moisten sponge before use; check the function switch; change the battery when needed. |
| Gamma Radiation Survey Instrument | **Hazard Monitored:** Gamma Radiation.<br>**Application:** Environmental radiation monitor.<br>**Detection Method:** Scintillation detector.<br>**General Care/Maintenance:** Must be calibrated annually at a specialized facility.<br>**Typical Operating Time:** Can be used for as long as the battery lasts, or for the recommended interval between calibrations, whichever is less. |

# TABLE 4
# INSTRUMENTATION ACTION LEVELS

| **Photoionization Detector Action Levels** | **Action Required** |
|---|---|
| Background to 5 parts per million (ppm)[1] | No respirator needed; no further action |
| >5ppm but </= 15 ppm at the perimeter of the work area | • Work temporarily halted and monitoring continues.<br>• If instantaneous readings decrease below 5 ppm above background, work activities will resume with continued monitoring |
| >5ppm but </= 25 ppm at the downwind perimeter of the hot zone | • Work activities will be halted.<br>• Source of vapors identified.<br>• Corrective actions taken to abate emissions.<br>• Continued monitoring.<br>• Workers will don appropriate respirators and work can resume if vapor levels 200 feet downwind or the hot zone or half the distance to the nearest potential receptor or residential or commercial structure, whichever is less – but in no case less than 20 feet – is below 5 ppm above background for the 15-minute average |
| >25ppm at the parameter of the hot zone | Activities will shut down |

| **Particulate Monitoring Action Levels** | **Action Required** |
|---|---|
| Background to 100 micrograms per cubic meter (µg/m³)[2], no dust observed | No further action |
| Background to 100 µg/m³, dust observed leaving the work area | Dust suppression must be employed. |
| 100 to 150 µg/m³ at the downwind parameter of the hot zone | • Work activities will be halted.<br>• Source of dust identified.<br>• Dust suppression activities initiated.<br>• Corrective actions taken to abate emissions.<br>• Continued monitoring.<br>• Workers will don appropriate respirators.<br>• Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM10 concentration to within 150 µg/m³ of the upwind level and in preventing visible dust migration. |
| >150 µg/m³ at the parameter of the hot zone | Activities will shut down |

[1] VOC concentrations are 15-minute averages above site background (upwind parameter)
[2] Particulate concentrations are 15-minute averages above site background (upwind parameter)

## TABLE 5
## EMERGENCY NOTIFICATION LIST

| ORGANIZATION | CONTACT | TELEPHONE |
|---|---|---|
| Local Police Department | | 911 |
| Local Fire Department | | 911 |
| Ambulance/Rescue Squad | | 911 |
| Hospital | Montefiore Jack D. Weller Hospital/Einstein Campus | 911 or 718-904-2800 |
| Langan Incident Hotline | | 800-952-6426 extension 4699 |
| Medical Treatment Hotline | WorkCare™ | 911 or 888-449-7757 |
| Langan Environmental Project Manager | Brian Gonchenaur | 646-247-9121 (cell) |
| Langan Geotechnical Project Manager | Arthur Alzamora | 917-912-4832 (cell) |
| Langan Site Civil Project Manager | Chris Vitolano | 917-882-2017 (cell) |
| Langan Construction Health and Safety Manager (HSM) | Tony Moffa | 215-756-2523 (cell) |
| Langan Health & Safety Officer (HSO) | William Bohrer | 410-984-3068 (cell) |
| Langan Field Team Leader (FTL) | To Be Determined | |
| Client's Representative | Joyen Vakil | 702-499-8587 |
| National Response Center (NRC) | | 800-424-8802 |
| Chemical Transportation Emergency Center (Chemtrec) | | 800-424-9300 |
| Center for Disease Control (CDC) | | 404-639-3534 |
| EPA (RCRA Superfund Hotline) | | 800-424-9346 |
| TSCA Hotline | | 202-554-1404 |
| Poison Control Center | | 800-222-1222 |

***Immediately following an injury, unless immediate emergency medical treatment is required, the injured employee must contact WorkCare - Incident Intervention® at 888-449-7787. For all other incidents or near misses, unless emergency response is required, either the employee or a coworker must contact the Langan Incident Hotline at 973-560-4699.***

# TABLE 6
# SUGGESTED FREQUENCY OF PHYSIOLOGICAL MONITORINGFOR FIT AND ACCLIMATED WORKERS[A]

| Adjusted Temperature[b] | Normal Work Ensemble[c] | Impermeable Ensemble |
|---|---|---|
| 90°F or above (32.2°C) or above | After each 45 min. of work | After each 15 min. of work |
| 87.5°F (30.8°-32.2°C) | After each 60 min. of work | After each 30 min. of work |
| 82.5°-87.5°F (28.1°-30.8°C) | After each 90 min. of work | After each 60 min. of work |
| 77.5°-82.5°F (25.3°-28.1°C) | After each 120 min. of work | After each 90 min. of work |
| 72.5°-77.5°F (22.5°-25.3°C) | After each 150 min. of work | After each 120 min. of work |

a For work levels of 250 kilocalories/hour.

b Calculate the adjusted air temperature (ta adj) by using this equation: ta adj $^{o}$F = ta $^{o}$F + (13 x % sunshine). Measure air temperature (ta) with a standard mercury-in-glass thermometer, with the bulb shielded from radiant heat. Estimate percent sunshine by judging what percent time the sun is not covered by clouds that are thick enough to produce a shadow. (100 percent sunshine = no cloud cover and a sharp, distinct shadow; 0 percent sunshine = no shadows.)

c A normal work ensemble consists of cotton coveralls or other cotton clothing with long sleeves and pants.

# TABLE 7

# HEAT INDEX

**ENVIRONMENTAL TEMPERATURE (Fahrenheit)**

| RELATIVE HUMIDITY | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | APPARENT TEMPERATURE* | | | | | | | | | | |
| **0%** | 64 | 69 | 73 | 78 | 83 | 87 | 91 | 95 | 99 | 103 | 107 |
| **10%** | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 111 | 116 |
| **20%** | 66 | 72 | 77 | 82 | 87 | 93 | 99 | 105 | 112 | 120 | **130** |
| **30%** | 67 | 73 | 78 | 84 | 90 | 96 | 104 | 113 | 123 | **135** | **148** |
| **40%** | 68 | 74 | 79 | 86 | 93 | 101 | 110 | 123 | **137** | **151** | |
| **50%** | 69 | 75 | 81 | 88 | 96 | 107 | 120 | **135** | **150** | | |
| **60%** | 70 | 76 | 82 | 90 | 100 | 114 | **132** | **149** | | | |
| **70%** | 70 | 77 | 85 | 93 | 106 | 124 | **144** | | | | |
| **80%** | 71 | 78 | 86 | 97 | 113 | **136** | | | | | |
| **90%** | 71 | 79 | 88 | 102 | 122 | | | | | | |
| **100%** | 72 | 80 | 91 | 108 | | | | | | | |

*Combined Index of Heat and Humidity...what it "feels like" to the body
Source: National Oceanic and Atmospheric Administration

How to use Heat Index:
1. Across top locate Environmental Temperature
2. Down left side locate Relative Humidity
3. Follow across and down to find Apparent Temperature
4. Determine Heat Stress Risk on chart at right

Note: Exposure to full sunshine can increase Heat Index values by up to 15 degrees F.

| Apparent Temperature | Heat Stress Risk with Physical Activity and/or Prolonged Exposure |
|---|---|
| 90-105 | Heat Cramps or Heat Exhaustion Possible |
| 105-130 | Heat Cramps or Heat Exhaustion Likely, Heat Stroke Possible |
| **>130** | Heatstroke Highly Likely |

# FIGURES

# FIGURE 1
# SITE LOCATION MAP




Notes:
1. Flushing, NY USGS Quadrangle Map
Topographic basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online
Copyright: © 2013 National Geographic Society, i-cubed.
**WARNING:** It is a violation of the NYS Education Law Article 145 for any person, unless he is acting under the direction of a licensed professional engineer, to alter this item in any way.

**LANGAN**
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| Project | Figure Title | Project No. | Figure |
|---|---|---|---|
| PROPOSED BALLY'S CASINO – RING ROAD AT FERRY POINT PARK<br>BRONX NEW YORK | SITE LOCATION MAP | 170773001<br>Date 8/9/2024<br>Scale 1" = 2,000 feet<br>Drawn By MG | 1 |

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Path: \\langan.com\data\NYC\data0\170773001\Project Data\ArcGIS\APRX\170773001\170773001.aprx

# FIGURE 2
# HOSPITAL ROUTE PLAN

**Hospital Location:** **Montefiore Jack D. Weller Hospital/Einstein Campus**
**1825 Eastchester Road**
**Bronx, New York**
**718-904-2800**

***START: 450 Hutchinson Parkway, Bronx, NY***

1. Turn right onto Hutchinson River Pkwy
2. Take the I-678 N/Hutchinson River Pkwy ramp on the left to I-95/I-278
3. Merge onto I-678
4. Take exit 18 for E Tremont Ave toward Westchester Ave
5. Continue onto Ericson Pl
6. Turn left onto E Tremont Ave
7. Turn right onto Blondell Ave
8. Stay on Blondell Ave to turn right onto Eastchester Rd
9. Turn left onto Sackett Ave, destination will be on the right.

***END: Montefiore Jack D. Weller Hospital/Einstein Campus, 1825 Eastchester Road, Bronx, NY***



# ATTACHMENTS

# ATTACHMENT A

# STANDING ORDERS

# STANDING ORDERS

## GENERAL

- No smoking, eating, or drinking in this work zone.
- Upon leaving the work zone, personnel will thoroughly wash their hands and face.
- Minimize contact with contaminated materials through proper planning of work areas and decontamination areas, and by following proper procedures. Do not place equipment on the ground. Do not sit on contaminated materials.
- No open flames in the work zone.
- Only properly trained and equipped personnel are permitted to work in potentially contaminated areas.
- Always use the appropriate level of personal protective equipment (PPE).
- Maintain close contact with your buddy in the work zone.
- Contaminated material will be contained in the Exclusion Zone (EZ).
- Report any unusual conditions.
- Work areas will be kept clear and uncluttered. Debris and other slip, trip, and fall hazards will be removed as frequently as possible.
- The number of personnel and equipment in the work zone will be kept to an essential minimum.
- Be alert to the symptoms of fatigue and heat/cold stress, and their effects on the normal caution and judgment of personnel.
- Conflicting situations which may arise concerning safety requirements and working conditions must be addressed and resolved quickly by the site HSO.

## TOOLS AND HEAVY EQUIPMENT

- Do not, under any circumstances, enter or ride in or on any backhoe bucket, materials hoist, or any other device not specifically designed to carry passengers.
- Loose-fitting clothing or loose long hair is prohibited around moving machinery.
- Ensure that heavy equipment operators and all other personnel in the work zone are using the same hand signals to communicate.
- Drilling/excavating within 10 feet in any direction of overhead power lines is prohibited.
- The locations of all underground utilities must be identified and marked out prior to initiating any subsurface activities.
- Check to ensure that the equipment operator has lowered all blades and buckets to the ground before shutting off the vehicle.
- If the equipment has an emergency stop device, have the operator show all personnel its location and how to activate it.
- Help the operator ensure adequate clearances when the equipment must negotiate in tight quarters; serve as a signal operator to direct backing, as necessary.
- Ensure that all heavy equipment that is used in the Exclusion Zone is kept in that zone until the job is done and that such equipment is completely decontaminated before moving it into the clean area of the work zone.
- Samplers must not reach into or get near rotating equipment such as the drill rig. If personnel must work near any tools that could rotate, the equipment operator must completely shut down the rig prior to initiating such work. It may be necessary to use a remote sampling device.

# ATTACHMENT B

# DECONTAMINATION PROCEDURES

# PERSONNEL DECONTAMINATION

## LEVEL C DECONTAMINATION

| | | |
|---|---|---|
| Station 1: | Equipment Drop | 1. Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross-contamination. During hot weather operations, cool down stations may be set up within this area. |
| Station 2: | Outer Garment, Boots, and Gloves Wash and Rinse | 2. Scrub outer boots, outer gloves, and chemical-resistant splash suit with decon solution or detergent and water. Rinse off using copious amounts of water. |
| Station 3: | Outer Boot and Glove Removal | 3. Remove outer boots and gloves. Deposit in container with plastic liner. |
| Station 4: | Canister or Mask Change | 4. If worker leaves Exclusion Zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers donned, joints taped, and worker returns to duty. |
| Station 5: | Boot, Gloves and Outer Garment Removal | 5. Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic. |
| Station 6: | Face piece Removal | 6. Face piece is removed (avoid touching face with fingers). Face piece deposited on plastic sheets. |
| Station 7: | Field Wash | 7. Hands and face are thoroughly washed. Shower as soon as possible. |

## LEVEL D DECONTAMINATION

| | | |
|---|---|---|
| Station 1: | Equipment Drop | 1. Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, cool down stations may be set up within this area. |
| Station 2: | Outer Garment, Boots, and Gloves Wash and Rinse | 2. Scrub outer boots, outer gloves and chemical-resistant splash suit with decon solution or detergent and water. Rinse off using copious amounts of water. |
| Station 3: | Outer Boot and Glove Removal | 3. Remove outer boots and gloves. Deposit in container with plastic liner. |
| Station 4: | Boot, Gloves and Outer Garment Removal | 4. Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic. |
| Station 5: | Field Wash | 5. Hands and face are thoroughly washed. Shower as soon as possible. |

# EQUIPMENT DECONTAMINATION

## GENERAL:

Equipment to be decontaminated during the project may include tools, monitoring equipment, respirators, sampling containers, laboratory equipment, and drilling equipment.

All decontamination will be done by personnel in protective gear, appropriate for the level of decontamination, as determined by the site HSO. The decontamination work tasks will be split or rotated among support and work crews.

Depending on site conditions, backhoes and pumps may be decontaminated over a portable decontamination pad to contain wash water; or wash water may be allowed to run off into a storm sewer system. Equipment needed may include a steam generator with high-pressure water, empty drums, screens, screen support structures, and shovels. Drums will be used to hold contaminated wash water pumped from the lined pit. These drums will be labeled as such.

Miscellaneous tools and equipment will be dropped into a plastic bucket, tub, or other containers. They will be brushed off and rinsed with a detergent solution, and finally rinsed with clean water.

## MONITORING EQUIPMENT:

Monitoring equipment will be protected as much as possible from contamination by draping, masking, or otherwise covering as many of the instruments as possible with plastic without hindering the operation of the unit. The PID, HNu, or OVA meter, for example, can be placed in a clear plastic bag, which allows reading of the scale and operation of knobs. The probes can be partially wrapped keeping the sensor tip and discharge port clear.

The contaminated equipment will be taken from the drop area and the protective coverings removed and disposed of in the appropriate containers. Any dirt or obvious contamination will be brushed or wiped with a disposable paper wipe.

## RESPIRATORS:

Respirators will be cleaned and disinfected after every use. Taken from the drop area, the masks (with the cartridges removed and disposed of with other used disposable gear) will be immersed in a cleaning solution and scrubbed gently with a soft brush, followed by a rinse in plain warm water, and then allowed to air dry. In the morning, new cartridges will be installed. Personnel will inspect their own masks for serviceability prior to donning them. And, once the mask is on, the wearer will check the respirator for leakage using the negative and positive pressure fit check techniques.

# ATTACHMENT C

# EMPLOYEE EXPOSURE/INJURY INCIDENT REPORT

# EMPLOYEE INCIDENT/INJURY REPORT
# LANGAN ENGINEERING & ENVIRONMENTAL SERVICES

***(Complete and return to Tony Moffa in the Doylestown Office)***

Affected Employee Name: _____ Date: _____

Incident type: ☐ Injury ☐ Report Only/No Injury
☐ Near Miss ☐ Other: _____

---

**EMPLOYEE INFORMATION** (Person completing Form)

Employee Name: _____ Employee No: _____

Title: _____ Office Location: _____

Length of time employed or date of hire: _____

Mailing address: _____

_____

Sex: M ☐ F ☐ Birth date: _____

Business phone & extension: _____ Residence/cell phone: _____

---

**ACCIDENT INFORMATION**

Project: _____ Project #: _____

Date & time of incident: _____ Time work started & ended: _____

Site location: _____

Incident Type: Possible Exposure ☐ Exposure ☐ Physical Injury ☐

Names of person(s) who witnessed the incident:_____

_____

_____

Exact location incident occurred:

_____

_____

Describe work being done:_____

_____

_____

_____

Describe what affected employee was doing prior to the incident occurring:

_____

_____

_____

Describe in detail how the incident occurred:

_____

_____

_____

_____

Nature of the incident (List the parts of the body affected):

_____

_____

_____

_____

Person(s) to whom the incident was reported (Time and Date):

_____

_____

List the names of other persons affected during this incident:

_____

_____

Possible causes of the incident (equipment, unsafe work practices, lack of PPE, etc.):

Weather conditions during incident:

**MEDICAL CARE INFORMATION**

Did affected employee receive medical care? Yes ☐ No ☐

If Yes, when, and where was medical care received:

Provide name of facility (hospital, clinic, etc.):

Length of stay at the facility.

Did the employee miss any work time? Yes ☐ No ☐ Undetermined ☐

Date employee last worked: _____ Date employee returned to work:

Has the employee returned to work? Yes ☐ No ☐

Does the employee have any work limitations or restrictions from the injury? : Yes ☐ No ☐

If Yes, please describe:

Did the exposure/injury result in permanent disability? Yes ☐ No ☐ Unknown ☐

If Yes, please describe:

**HEALTH & SAFETY INFORMATION**

Was the operation being conducted under an established site-specific Health and Safety Plan?
Yes ☐ No ☐ Not Applicable: ☐

Describe protective equipment and clothing used by the employee:

_____

_____

_____

Did any limitations in safety equipment or protective clothing contribute to or affect exposure/injury? If so, explain:

_____

_____

_____

_____

Employee Signature Date

_____

Langan Representative Date

# ATTACHMENT D

# CALIBRATION LOG

**DATE:**_____ **PROJECT:**_____

## CALIBRATION LOG

| Date & Time | Inst Type | Inst # | Media | Initial Reading | Span # | Calibrate Reading | Performed By: |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# ATTACHMENT E

# MATERIAL SAFETY DATA SHEETS
# SAFETY DATA SHEETS

***All Langan Field Personnel Completing This Work Plan Are To Have Real-Time Accessibility To Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDSs) Through Their Smart Phone.***

***The link is http://www.msds.com/***
***The login name is "drapehead"***
***The password is "2angan987"***

***If You Are Unable To Use the Smart Phone App, You Are To Bring Printed Copies of the MSDS/SDSs to the Site***

# ATTACHMENT F

# JOBSITE SAFETY INSPECTION CHECKLIST

# Jobsite Safety Inspection Checklist

**Date:** _____ **Inspected By:** _____

**Location:** _____ **Project #:** _____

Check one of the following: **A:** Acceptable **NA**: Not Applicable **D**: Deficiency

| | A | NA | D | Remark |
|---|---|---|---|---|
| 1. HASP available onsite for inspection? | | | | |
| 2. Health & Safety Compliance agreement (in HASP) appropriately signed by Langan employees and contractors? | | | | |
| 3. Hospital route map with directions posted on site? | | | | |
| 4. Emergency Notification List posted on site? | | | | |
| 5. First Aid kit available and properly stocked? | | | | |
| 6. Personnel trained in CPR/First Aid on site? | | | | |
| 7. MSDSs readily available, and all workers knowledgeable about the specific chemicals and compounds to which they may be exposed? | | | | |
| 8 Appropriate PPE being worn by Langan employees and contractors? | | | | |
| 9. Project site safe practices ("Standing Orders") posted? | | | | |
| 10. Project staff have 40-hr./8-hr./Supervisor HAZWOPER training? | | | | |
| 11. Project staff medically cleared to work in hazardous waste sites and fit-tested to wear respirators, if needed? | | | | |
| 12. Respiratory protection readily available? | | | | |
| 13. Health & Safety Incident Report forms available? | | | | |
| 14. Air monitoring instruments calibrated daily, and results recorded on the Daily Instrument Calibration check sheet? | | | | |
| 15. Air monitoring readings recorded on the air monitoring data sheet/field logbook? | | | | |
| 16. Subcontract workers have received 40-hr./8-hr./Spvsr. HAZWOPER training, as appropriate? | | | | |
| 17. Subcontract workers medically cleared to work on site, and fit-tested for respirator wear? | | | | |
| 18. Subcontract workers have respirators readily available? | | | | |
| 19. Mark outs of underground utilities done prior to initiating any subsurface activities? | | | | |
| 20. Decontamination procedures being followed as outlined in HASP? | | | | |
| 21. Are tools in good condition and properly used? | | | | |
| 22. Drilling performed in areas free from underground objects including utilities? | | | | |

| | | | | |
|---|---|---|---|---|
| 23. Adequate size/type fire extinguisher supplied? | | | | |
| 24. Equipment at least 20 feet from overhead powerlines? | | | | |
| 25. Evidence that drilling operator is responsible for the safety of his rig. | | | | |
| 26. Trench sides shored, layer back, or boxed? | | | | |
| 27. Underground utilities located, and authorities contacted before digging? | | | | |
| 28. Ladders in trench (25-foot spacing)? | | | | |
| 29. Excavated material placed more than 2 feet away from excavation edge? | | | | |
| 30. Public protected from exposure to open excavation? | | | | |
| 31. People entering the excavation regarding it as a permit-required confined space and following appropriate procedures? | | | | |
| 32. Confined space entry permit is completed and posted? | | | | |
| 33. All persons knowledgeable about the conditions and characteristics of the confined space? | | | | |
| 34. All persons engaged in confined space operations have been trained in safe entry and rescue (non-entry)? | | | | |
| 35. Full body harnesses, lifelines, and hoisting apparatus available for rescue needs? | | | | |
| 36. Attendant and/or supervisor certified in basic first aid and CPR? | | | | |
| 37. Confined space atmosphere checked before entry and continuously while the work is going on? | | | | |
| 38. Results of confined space atmosphere testing recorded? | | | | |
| 39. Evidence of coordination with off-site rescue services to perform entry rescue, if needed? | | | | |
| 40. Are extension cords rated for this work being used and are they properly maintained? | | | | |
| 41. Are GFCIs provided and being used? | | | | |

Unsafe Acts: _____

_____

_____

_____

Notes: _____

_____

_____

_____

# ATTACHMENT G

# JOB SAFETY ANALYSIS FORM

| LANGAN | **Job Safety Analysis (JSA)**<br>**Construction Health and Safety** |
|---|---|
| **JSA TITLE:**<br><br>**JSA NUMBER:** | **DATE CREATED:**<br>**CREATED BY**:<br>**REVISION DATE:**<br>**REVISED BY:** |
| **Langan employees must review and revise the Job Safety Analysis (JSA) as needed to address the any site-specific hazards not identified. Employees must provide their signatures on the last page of the JSA indicating they have review the JSA and are aware the potential hazards associated with this work and will follow the provided preventive or corrective measures.** | |

| **PERSONAL PROTECTIVE EQUIPMENT REQUIRED: (PPE):** ■ Required ☒ As Needed | | |
|---|---|---|
| ☐ Steel-toed boots | ☐ Nitrile gloves | ☐ Dermal Protection (Specify) |
| ☐ Long-sleeved shirt | ☐ Leather/ Cut-resistant gloves | ☐ High visibility vest/clothing |
| ☐ Safety glasses | ☐ Face Shield | ☐ Hard hat |
| **ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT NEEDED (Provide specific type(s) or descriptions)** | | |
| ☐ Air Monitoring: | ☐ Respirators: | ☐ Other: |
| ☐ Dermal Protection: | ☐ Cartridges: | ☐ Other: |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE OR CORRECTIVE ACTION |
|---|---|---|
| 1. | 1.<br><br>2. | 1a.<br>1b.<br>2a.<br>2b. |
| 2. | 1. | 1 |
| Additional items identified in the field. | | |
| Additional Items. | | |

**If additional items are identified during daily work activities, please notify all relevant personnel about the change and document on this JSA.**

| LANGAN | Job Safety Analysis (JSA)<br>Construction Health and Safety |
|---|---|
| **JSA Title: COVID-19 Awareness – Site Work**<br>**JSA Number: JSA046-00** |  |
| **A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.** | |

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Boots | ☐ Long Sleeves | ☐ Safety Vest (Class 2) | ☐ Hard Hat | ☐ Hearing Protection |
| ☐ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☐ Nitrile Gloves | ☐ PVC Gloves |
| ☐ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Alcohol-based hand sanitizer, disinfectant wipes/spray | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 1. All Activities | 1. Transmittal/exposure of COVID-19 | 1. Ask yourself and your managers – is this work essential? Can this be done remotely?<br>2. Stay home if sick or showing symptoms of COVID-19 (e.g., fever, cough, etc.).<br>3. Carry nitrile gloves, alcohol-based hand sanitizer, face coverings and disinfectant wipes/spray during field work.<br>4. Check federal, state, and/or local travel restrictions **prior** to travel. Many states, counties, and cities are passing strict "shelter-in-place" or business restrictions in response to COVID-19.<br>5. Immediately notify Beverly Williams or Rory Johnston (Supervisor if employee chooses) if you display symptoms of COVID-19. Symptoms include fever (over 100.4 F), cough, and shortness of breath.<br>6. Notify Beverly Williams or Rory Johnston, Supervisor and Coronavirus Task Force if you had close contact with an individual who tested positive or displayed symptoms of COVID-19.<br>7. Do not touch your face, to the extent possible.<br>8. Wear face coverings when around other worker to minimize spread of COVID-19. (May be required in certain states or locations.) |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 9. Practice social distancing, maintaining at least 6 feet of distance between yourself and others. Avoid gatherings of more than 10 people. Limit, to the extent possible, contact with public items/objects.<br>10. Clean your hands frequently with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, sneezing, or using the rest room.<br>11. If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry.<br>12. Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow.<br>13. Clean and disinfect frequently touched surfaces daily, for example, cell phones, computer equipment, headsets, tables, doorknobs, light switches, countertops, handles, desks, toilets, faucets, and sinks. |
| 2. Travel to Jobsite | 1. Transmittal/exposure of COVID-19 between passengers<br>2. Transmittal/exposure of COVID-19 from previous occupants (rental and fleet vehicles)<br>3. Transmittal/exposure of COVID-19 while refueling | 1. Limit the number of occupants to each vehicle to 2 people. Employees should sit as far away from each other as possible.<br>2. Disinfect high “hand-traffic” areas of the vehicle: Door handles, steering wheel, turn signal and control rods, dashboard controls, seatbelts, armrests, etc. To the extent possible, do not use recycled air for heat/AC and travel with the windows open.<br>3. Use hand sanitizer before and after pumping gas and only return to the inside of the vehicle after refueling is complete.<br>4. Wear nitrile gloves if available or disinfect the keypad, pump handle, and fuel grade button prior to use.<br>5. Recommend face coverings are worn to minimize spread of COVID-19. |
| 3. Conduct Tailgate Safety Meeting & Complete H&S Paperwork | 1. Transmittal/exposure of COVID-19 between meeting participants | 1. Practice social distancing, maintaining at least 6 feet of distance between yourself and others.<br>2. Recommend face coverings are worn when around other workers to minimize spread of COVID-19,<br>3. Hold meetings outside and keep in mind wind direction. To the extent possible, remain crosswind from other people.<br>4. Designate a single person to maintain sign-in sheets/permits throughout the day to limit the passing of pens/clipboards between people.<br>5. Each person should complete their own JSA, even if they are completing similar tasks as others in order to limit the passing of paper/pens/clipboards between people.<br>6. Include COVID-19 topics and prevention measures in safety meetings. |
| 4. Conduct Site Work | 1. Transmittal/exposure of COVID-19 between site workers and public. | 1. Practice social distancing maintaining 6 feet of distance between yourself and others.<br>2. Recommend face coverings are worn when around other workers to minimize spread of COVID-19,<br>3. To the extent possible, do not interact with the public. If it is necessary, politely explain you are practicing social distance and request they stay at least 6 feet away and they do not attempt to pass objects to you.<br>4. Wear nitrile gloves during site work underneath the appropriate gloves for your task. Utilize appropriate decontamination procedures, securely bag all waste (including nitrile gloves) generated during site work and dispose of. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 5. Do not share tools. Each person should be equipped with the tools to complete their task or tasks should be divided to remove the need to share tools. If tools must be shared, surfaces should be disinfected.<br>6. Clean and disinfect surfaces of rental tools and equipment upon receipt. To the extent possible rent equipment from Langan's internal equipment reservation center, where cleaning/disinfecting procedures can be verified. |
| 5. Use of Construction Trailers | 1. Transmittal/exposure of COVID-19 between site workers and others. | 1. Avoid use of shared trailers, if possible. Minimize trailer use to essential personnel.<br>2. Practice social distancing; maintaining 6 feet of distance between yourself and others in trailer.<br>3. Clean and disinfect areas including desks, phones, chairs, and other common areas, before and after use. |
| 6. Purchasing Food from a Restaurant | 1. Transmittal/exposure of COVID-19 from other customers, staff, surfaces. | 1. To the extent possible, bring your own food.<br>2. If you must visit a restaurant, call ahead for take-out or "contactless delivery." Do not dine in. When picking up food, follow guidelines for Job Step #8: Purchasing Supplies at Retail/Shipping Centers.<br>3. Wash hands before and after eating. |
| 7. Smoking Cigarettes | 1. Transmittal/exposure of COVID-19 by touching mouth with hands | 1. Cigarette smokers are at greater risk of complications arising from COVID-19. Nicotine patches/lozenges/gum, smoking cessation programs, and prescription medications may aid in "kicking the habit" if you decide to quit.<br>2. Wash hands thoroughly before and after smoking.<br>3. Discard cigarette butts properly. Do not light cigarettes from others and do not give cigarettes to others. |
| 8. Hotel Stay | 1. Transmittal/exposure of COVID-19 from previous occupants, hotel staff, common areas. | 1. Verify the hotel chain/brand has modified cleaning procedures to reflect risk of COVID-19. Most hotel companies have issued statements on their websites and in email blasts reflecting these new procedures.<br>2. Use the front door, and not peripheral entrances. Front doors of hotels are usually automatic.<br>3. Request ground floor room to avoid elevator use and a room that has not be utilized in 48-72 hours.<br>4. If elevator use is required, do not directly touch elevator buttons with your hands. Do not ride elevators with other people, to the extent possible.<br>5. Bring disinfecting wipes or sanitizing spray. Upon arrival, disinfect high "hand-traffic" areas of the hotel room: Door handles, light switches, shower/sink faucet handles, TV remote, curtain/blind handles. Clean these surfaces daily.<br>6. Place the "Do Not Disturb" Sign on your door to prevent people (housekeeping) from entering your room.<br>7. Avoid common spaces and hotel sponsored events where crowds will be present.<br>8. Confirm hotel cleaning procedures have been modified to address COVID-19. Confirm no COVID-19 cases have occurred in hotel |
| 9. Purchasing Supplies at Retail/Shipping Centers | 1. Transmittal/exposure of COVID-19 from other customers, staff, surfaces. | 1. Plan your travel to limit the need to visit retail/shipping centers.<br>2. Practice social distancing, maintaining at least 6 feet of distance between yourself and others. If the store is too crowded/small, consider visiting another store or returning at a different time.<br>3. Avoid high "hand-traffic" items/areas like door handles (i.e. use your shoulder, hip/butt, or open with a disposable napkin/paper towel), credit cards terminals (i.e. use Apple/Android pay if available), shopping carts/baskets (i.e. bring your own shopping |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | bags), counter tops (i.e. ask clerk if you can hold the items while they are scanned) and bulk/buffet items (i.e. just avoid them).<br>4. Disinfect your hands before and after visiting a retail/shipping center. |

| Print Name | Sign Name | Date |
|---|---|---|
| ***Prepared by:*** | | |
| | | |
| | | |
| | | |
| ***Reviewed by:*** | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

# LANGAN

**Job Safety Analysis (JSA)**
**Construction Health and Safety**

**JSA Title:** **Environmental Sampling**
**JSA Number:** **JSA021-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S – *Stop,* what has changed?**
**T – *Think* about the task**
**E – *Evaluate* potential hazards**
**P – *Plan* safe approach**
**S - *Start* task / *Stop* & regroup**

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☐ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☐ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☒ Fire Resistant Clothing | ☐ Rubber Boots |
| ☒ Insect/Animal Repellent | ☒ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Tyvek Sleeves | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 1. Drive to sample location | 1. Rough/Off Road terrain | 1. Pay attention to road conditions such as road erosion, unprotected embankments, and soft road conditions. |
| 2. Sample Collection (Walking) | 1. Slip/Trips/Falls<br>2. Back strains<br>3. Wildlife (Insects, Stray animals, rodents)<br>4. Poisonous vegetation | 1. Minimize distance to sample area/ Plan route and check surface prior to carrying heavy equipment/ Locate safest access point/ Follow good housekeeping procedures/ Mark significant below grade hazards (holes, trenches) with spray paint or cones/ Wear foot protection with ankle support and gripping soles.<br>2. Use proper lifting techniques/ Use wheeled transport/ Obtain assistance where and when needed/ Consider load weight when evaluating what is safe and unsafe to carry.<br>3. Be aware of surroundings for the presence of wildlife. Do not approach stray animals. Carry and use animal repellant when needed/ Use bug spray when needed.<br>4. Keep skin covered/ Identify and avoid poisonous vegetation/ Clean areas after contact with suspected vegetation. |
| 3. Sample Collection (Water) | 1. Drowning Hazards<br>2. Chemical burns (when adding acid preservative to sample)<br>3. Back Strains<br>4. Ergonomic issues<br>5. Slip/Trips/Falls | 1. Use buddy system/ Wear flotation vest if water is deeper than 2 feet or swift moving/ Select working area with stable footing. Do not attempt to cross or stand in swift moving water.<br>2. Wear proper PPE (Nitrile gloves, Tyvek Sleeves)<br>3. Use proper lifting techniques/ Use wheeled transport/ Obtain assistance where and when needed/ Consider load weight when evaluating what is safe or unsafe to carry.<br>4. When possible, avoid bending over for long periods of time/ Use a small stool for sitting or knee pad for kneeling. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 5. Minimize distance to sample area/ Plan route and check surface prior to carrying heavy equipment/ Locate safest access point/ Follow good housekeeping procedures/ Mark significant below grade hazards (holes, trenches) with spray paint or cones/ Wear foot protection with ankle support and gripping soles/ Avoid standing water or slippery terrain. |
| 4. All activities | 1. Slips/ Trips/ Falls<br>2. Hand injuries, cuts, or lacerations during manual handling of materials<br>3. Foot injuries<br>4. Back injuries<br>5. Traffic<br>6. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>7. High Noise levels<br>8. Overhead hazards<br>9. Heat Stress/ Cold Stress<br>10. Eye Injuries | 1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves<br>3. Wear Langan approved safety shoes<br>4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>5. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>6. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed<br>7. Wear hearing protection<br>8. Wear hard hat / Avoid areas where overhead hazards exist.<br>9. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>10. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

| Print Name | Sign Name | Date |
|---|---|---|
| ***Prepared by:*** | | |
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# LANGAN

**Job Safety Analysis (JSA)**
**Construction Health and Safety**

**JSA Title:** **Subsurface Investigation**
**JSA Number:** **JSA030-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S – *Stop,* what has changed?**
**T – *Think* about the task**
**E – *Evaluate* potential hazards**
**P – *Plan* safe approach**
**S - *Start* task / *Stop* & regroup**

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☒ Safety Goggles | ☐ Face Shield | ☐ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☒ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Dielectric Overshoes, Sun Block | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 5. Transport equipment to work area | 2. Back/strain<br>3. Slip/Trip/Falls<br>4. Traffic<br>5. Cuts/abrasions/contusions from equipment<br>6. Accidents due to vehicle operations | 1. Use proper lifting techniques/Use wheeled transport<br>2. Minimize distance to work area/unobstructed path to work area/follow good housekeeping procedures<br>3. Wear proper PPE (high visibility vest or clothing)<br>4. Wear proper PPE (leather gloves, long sleeves, Langan approved safety shoes)<br>5. Observe posted speed limits/ Wear seat belts at all times |
| 6. Traffic | 1. Hit by moving vehicle | 1. Use traffic cones and signage/ Use High visibility traffic vests and clothing/ Caution tape when working near active roadways. |
| 7. Field Work (drilling, resistivity testing, and inspection) | 1. Biological Hazards: insects, rats, snakes, poisonous plants, and other animals<br>2. Heat stress/injuries<br>3. Cold Stress/injuries<br>4. High Energy Transmission Lines<br>5. Underground Utilities<br>6. Electrical (soil resistivity testing) | 1. Inspect work area to identify biological hazards. Wear light colored long sleeve shirt and long pants/ Use insect repellant as necessary/ Beware of tall grass, bushes, woods, and other areas where ticks may live/ Avoid leaving garbage on site to prevent attracting animals/ Identify and avoid contact with poisonous plants/Beware of rats, snakes, or stray animals.<br>2. Wear proper clothing (light colored)/ drink plenty of water/ take regular breaks/use sun block.<br>3. Wear proper clothing/ dress in layers/ take regular breaks.<br>4. Avoid direct contact with high energy transmission lines/ position equipment at least 15 feet or as required by PSE&G from the transmission lines/ wear proper PPE (dielectric overshoes 15 kV minimum rating). |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 5. Call one-call service before performing intrusive field work/ Review utility mark-outs and available utility drawings (with respect to proposed work locations)/ Follow Underground Utility Guidelines<br>6. See AGI Sting R1 operating manual for specific concerns during operating instrument |
| 8. All activities | 1. Slips/ Trips/ Falls<br>2. Hand injuries, cuts, or lacerations during manual handling of materials<br>3. Foot injuries<br>4. Back injuries<br>5. Traffic<br>6. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>7. High Noise levels<br>8. Overhead hazards<br>9. Heat Stress/ Cold Stress<br>10. Eye Injuries | 7. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>8. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>9. Wear Langan approved safety shoes.<br>10. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>11. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>12. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>13. Wear proper hearing protection.<br>14. Wear hard hat / Avoid areas where overhead hazards exist.<br>15. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>16. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Construction Health and Safety**

**JSA Title:** **Field Sampling**
**JSA Number:** **JSA022-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




S – ***Stop,*** *what has changed?*
T – ***Think*** *about the task*
E – ***Evaluate*** *potential hazards*
P – ***Plan*** *safe approach*
S - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☐ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 9. Unpack/Transport equipment to work area. | 7. Back Strains<br>8. Slip/Trips/Falls<br>9. Cuts/Abrasions from equipment<br>10. Contusions from dropped equipment | 6. Use proper lifting techniques/Use wheeled transport.<br>7. Minimize distance to work area/Unobstructed path to work area/follow good housekeeping procedures. Mark slip/trip/fall hazards with orange safety cones.<br>8. Wear proper PPE (leather gloves, long sleeves).<br>9. Wear proper PPE (Langan approved safety shoes). |
| 10. Initial Site Arrival-Site Assessment | 5. Traffic | 5. Situational awareness (be alert of your surroundings). Secure area from through traffic. |
| 11. Surface Water Sampling | 6. Contaminated media. Skin/eye contact with biological agents and/or chemicals. | 6. Wear appropriate PPE (Safety glasses, appropriate gloves). Review (M)SDS for all chemicals being. |
| 12. Sampling from bridges | 1. Struck by vehicles | 1. Wear appropriate PPE (Safety Vest). Use buddy system and orange safety cones. |
| 13. Icing of Samples/ Transporting coolers/equipment from work area. | 11. Back Strains<br>12. Slips/Trips/Falls<br>13. Cuts/Abrasions from equipment<br>14. Pinch/Crushing Hazards. | 17. Drain coolers of water. Use proper lifting techniques. Use wheeled transport.<br>18. Have unobstructed path from work area. Aware of surroundings.<br>19. Wear proper PPE (Leather gloves, long sleeves)<br>20. Wear proper PPE (Leather gloves, long sleeves) |
| 14. Site Departure | 1. Contaminated PPE/Vehicle | 1. Contaminated PPE should be disposed of on-site. Remove boots and soiled clothing for secure storage in trunk. Wash hands promptly. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 15. All activities | 1. Slips/ Trips/ Falls<br>2. Hand injuries, cuts, or lacerations during manual handling of materials<br>3. Foot injuries<br>4. Back injuries<br>15. Traffic<br>16. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>17. High Noise levels<br>18. Overhead hazards<br>19. Heat Stress/ Cold Stress<br>20. Eye Injuries | 1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves<br>3. Wear Langan approved safety shoes<br>4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>21. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>22. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>23. Wear hearing protection<br>24. Wear hard hat / Avoid areas where overhead hazards exist.<br>25. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>26. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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| LANGAN | Job Safety Analysis (JSA)<br>Construction Health and Safety |
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| **JSA Title:** Equipment Transportation and Set-up<br>**JSA Number:** JSA012-01 |  <br>**S** – ***Stop,*** *what has changed?*<br>**T** – ***Think*** *about the task*<br>**E** – ***Evaluate*** *potential hazards*<br>**P** – ***Plan*** *safe approach*<br>**S** - ***Start*** *task /* ***Stop*** *& regroup* |
| **A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.** | |

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☐ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 16. Transport equipment to work area | 11. Back Strain<br>12. Slips/ Trips/ Falls<br>13. Traffic<br>14. Cuts/abrasions from equipment<br>15. Contusions from dropped equipment | 1. Use proper lifting techniques / Use wheeled transport.<br>2. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures.<br>3. Wear proper PPE (high visibility vest or clothing)<br>4. Wear proper PPE (leather gloves, long sleeves)<br>5. Wear proper PPE (safety shoes) |
| 17. Moving equipment to its planned location | 6. Pinch Hazard<br>7. Slips/ Trips/ Falls | 1. Wear proper PPE (leather gloves)<br>2. Be aware of potential trip hazards / Practice good housekeeping procedures / Mark significant below-grade hazards (i.e., holes, trenches) with safety cones or spray paint |
| 18. Equipment Set-up | 7. Pinch Hazard<br>8. Cuts/abrasions to knuckles/hands.<br>9. Back Strain | 1. Wear proper PPE (leather gloves)<br>2. Wear proper PPE (leather gloves)<br>3. Use proper lifting techniques / Use wheeled transport |
| 19. All activities | 21. Slips/ Trips/ Falls<br>22. Hand injuries, cuts, or lacerations during manual handling of materials<br>23. Foot injuries<br>24. Back injuries<br>25. Traffic<br>26. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) | 27. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>28. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>29. Wear Langan approved safety shoes. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 4. All activities (cont'd) | 27. High Noise levels<br>28. Overhead hazards<br>29. Heat Stress/ Cold Stress<br>30. Eye Injuries | 30. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>31. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>32. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>33. Wear hearing protection<br>34. Wear hard hat / Avoid areas where overhead hazards exist.<br>35. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>36. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Construction Health and Safety**

**JSA Title:** 55-gallon Drum Sampling
**JSA Number:** JSA043-01

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S – *Stop,* what has changed?**
**T – *Think* about the task**
**E – *Evaluate* potential hazards**
**P – *Plan* safe approach**
**S - *Start* task / *Stop* & regroup**

| PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed): | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☐ Hearing Protection |
| ☒ Safety Glasses | ☒ Safety Goggles | ☒ Face Shield | ☒ Nitrile Gloves | ☒ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: All Drums are required to be labeled. Langan employees do not open or move undocumented drums or unlabeled drums without proper project manager authorization. | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 20. Unpack/Transport equipment to work area. | 16. Back Strains<br>17. Slip/Trips/Falls<br>18. Cuts/Abrasions from equipment<br>4. Contusions from dropped equipment | 10. Use proper lifting techniques/Use wheeled transport.<br>11. Minimize distance to work area/Unobstructed path to work area/follow good housekeeping procedures. Mark slip/trip/fall hazards with orange safety cones.<br>12. Wear proper PPE (leather gloves, long sleeves).<br>4. Wear proper PPE (Langan approved safety shoes). |
| 21. Open Drums | 1. Hand Injuries, cuts or lacerations when untightening drum locking bolt, removing drum lid strap, or removing lid.<br>2. Pressure from drums. | 1. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. Use non-metallic mallet and non-sparking tools/wrenches.<br>2. Open drum slowly to relieve pressure. Wear proper PPE: face shield and goggles; correct gloves; and over garments. |
| 22. Collecting Soil/Fluid Sample | 8. Irritation to eye from vapor, soil dust, or splashing.<br>9. Irritation to exposed skin | 6. Wear proper eye protection including safety glasses/ face shield/googles and when necessary, splash guard. If dust or vapor phase is present, wear appropriate safety breathing gear (1/2 mask or full face mask with correct filter)<br>7. Wear proper skin protection including nitrile gloves. |
| 23. Closing Drums | 1. Hand Injuries, cuts or lacerations when untightening drum locking bolt, removing drum lid strap, or removing lid. | 7. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. Use non-metallic mallet and non-sparking tools/wrenches. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 24. Moving Drums | 2. Hand Injuries, cuts or lacerations when untightening drum locking bolt, removing drum lid strap, or removing lid.<br>3. Back Strains | 2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. Use non-metallic mallet and non-sparking tools/wrenches.<br>3. Use proper lifting techniques/Use wheeled transport. |
| 25. All activities | 31. Slips/ Trips/ Falls<br>32. Hand injuries, cuts, or lacerations during manual handling of materials<br>33. Foot injuries<br>34. Back injuries<br>35. Traffic<br>36. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>37. High Noise levels<br>38. Overhead hazards<br>39. Heat Stress/ Cold Stress<br>40. Eye Injuries | 37. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>38. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>39. Wear Langan approved safety shoes.<br>40. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>41. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>42. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>43. Wear hearing protection<br>44. Wear hard hat / Avoid areas where overhead hazards exist.<br>45. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>46. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Construction Health and Safety**

**JSA Title:** Direct-Push Soil Borings
**JSA Number:** JSA004-01

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S – *Stop,* what has changed?**
**T – *Think* about the task**
**E – *Evaluate* potential hazards**
**P – *Plan* safe approach**
**S - *Start* task / *Stop* & regroup**

| PERSONAL PROTECTIVE EQUIPMENT REQUIRED: | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☒ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Half-face respirator, dust cartridges, PID (if applicable) | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 26. Move equipment to work site | 19. Back strain when lifting equipment.<br>20. Slips/ Trips/ Falls while moving equipment.<br>21. Traffic (if applicable)<br>22. Pinched fingers or running over toes during GeoProbe set-up.<br>23. Overturn drilling rig while transporting to loading dock on flat-bed tow truck | 13. Use proper lifting technique (use legs for bending and lifting and not the back)/ Use wheeled transport for heavy equipment / Get assistance when handling loads greater than 50 lbs. / Minimize distance to vehicle<br>14. Use proper lifting technique (use legs for bending and lifting and not the back) / Use wheeled transport for heavy equipment / Get assistance when handling loads greater than 50 lbs. / Minimize distance to vehicle / Have unobstructed path to vehicle or collection point / Do not lift/walk with boxes that are heavy/difficult to lift<br>15. Wear high visibility safety vests or clothing / Exercise caution<br>16. Wear proper PPE (cut-resistant gloves) / Stay alert, be aware of geoprobe rig at all times<br>17. Drill rig should be parked in center of flat-bed tow truck / Emergency brake shall be used at all times during transport on the flat-bed truck/ All unnecessary personnel should stay away from the flat-bed truck during moving activities |
| 27. Calibration of monitoring equipment | 10. Skin or eye contact with calibration chemicals<br>11. Pinch fingers in monitoring equipment | 8. Wear proper PPE (safety glasses/ goggles)<br>9. Wear proper PPE (leather gloves) |
| 28. Set-up GeoProbe rig | 10. Geoprobe rig movement | 8. All field personnel should stay clear of the GeoProbe rig while moving / Use a spotter when backing up the GeoProbe |
| 29. Advance GeoProbe rods below ground surface to desired depth | 4. Underground utilities<br>5. High noise levels | 4. Clean all subsurface soil borings to a minimum of 5 feet below grade.<br>5. Wear proper PPE (hearing protection) |
| 30. Remove and open acetate liner. | 41. Pinched fingers while removing macrocore. | 1. Wear proper PPE (nitrile gloves, cut-resistant or leather gloves<br>2. Wear proper PPE (cut-resistant or leather gloves) |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 5. Remove and open acetate liner (cont'd) | 42. Cuts/lacerations when cutting acetate liner open.<br>43. Exposure to hazardous vapors<br>44. Skin contacts with contaminated soil | 3. Do not place face over acetate liner when opening / Monitor hazardous vapors in air with PID / Upgrade PPE as necessary based on levels contained in the Health and Safety Plan<br>4. Wear proper PPE (nitrile gloves) |
| 31. Sample Collections<br>a) Monitor parameters.<br>b) Prepare sample containers and labels | 1. Contact with potentially contaminated soil.<br>2. Lacerations from broken sample bottles<br>3. Back strain while transporting full coolers.<br>4. Internal exposure to contaminants and metals through inhalation of dust<br>5. Slips/ Trips/ Falls | 1. Use monitoring devices / Wear proper PPE (safety glasses, nitrile gloves)<br>2. Do not over-tighten bottle caps / Handle bottles safely to prevent breakage.<br>6. Use proper lifting techniques / Do not lift heavy loads without assistance.<br>7. Avoid creating dust / If necessary, wear a half mask respirator with applicable dust cartridge / Inspect respirator for damage and cleanliness prior to use / Clean respirator after each use and store in a clean, secure location.<br>8. Be alert / Follow good housekeeping procedures |
| 32. Remove excess soil from acetate liner and place in 55-gallon drum (IF NOT PERFORMED BY LANGAN, REMOVE!) | 1. Cuts/lacerations from acetate liner<br>2. Pinched fingers/hand while opening/closing drum.<br>3. Skin contacts with contaminated soil<br>4. Soil debris in eyes | 1. Wear proper PPE (cut-resistant or leather gloves)<br>2. Wear proper PPE (cut-resistant or leather gloves)<br>3. Wear proper PPE (nitrile gloves)<br>4. Wear proper PPE (safety glasses) |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 8. Transport drums to central staging location (IF NOT PERFORMED BY LANGAN, REMOVE!) | 1. Back, arm or shoulder strain from moving drums.<br>2. Pinch fingers/hand in drum cart when moving drums.<br>3. Pinch fingers/hand when operating lift-gate on vehicle.<br>4. Contact with potentially contaminated groundwater when moving improperly sealed drums.<br>5. Slips when moving drums.<br>6. Drop drum on feet/toes | 47. Use drum cart for moving drums / Use proper lifting techniques / Do not lift heavy loads without assistance.<br>48. Wear proper PPE (cut-resistant or leather gloves)<br>49. Wear proper PPE (cut-resistant or leather gloves)<br>50. Wear proper PPE (nitrile gloves underneath work gloves)<br>51. Follow good housekeeping procedures / Ensure route to move drum and storage space is free from obstructions.<br>52. Wear proper PPE (safety shoes) / Work in a safe manner to prevent dropped drum |
| 9. All activities<br><br>9. All activities (cont'd) | 1. Slips/ Trips/ Falls<br>2. Hand injuries, cuts, or lacerations during manual handling of materials<br>3. Foot injuries<br>4. Back injuries<br>5. Traffic<br>6. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>7. High Noise levels<br>8. Overhead hazards<br>9. Heat Stress/ Cold Stress<br>10. Eye Injuries | 1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>3. Wear Langan approved safety shoes.<br>4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>5. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>6. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>7. Wear hearing protection<br>8. Wear hard hat / Avoid areas where overhead hazards exist.<br>9. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>10. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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| LANGAN | Job Safety Analysis (JSA)<br>Construction Health and Safety |
|---|---|
| **JSA Title:** Geophysical Investigation<br>**JSA Number:** JSA023-01<br>**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.** |  <br>**S** – ***Stop,*** *what has changed?*<br>**T** – ***Think*** *about the task*<br>**E** – ***Evaluate*** *potential hazards*<br>**P** – ***Plan*** *safe approach*<br>**S** - ***Start*** *task /* ***Stop*** *& regroup* |

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☒ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 33. Transport equipment to work area | 24. Back/strain<br>25. Slip/Trip/Falls<br>26. Traffic<br>27. Cuts/abrasions/contusions from equipment | 18. Use proper lifting techniques/Use wheeled transport<br>19. Minimize distance to work area/unobstructed path to work area/follow good housekeeping procedures<br>20. Wear proper PPE (high visibility vest or clothing)<br>21. Wear proper PPE (leather gloves, long sleeves, Langan approved safety shoes) |
| 34. Supervision of subcontractor and all other activities | 12. Slip/Trips/Falls<br>13. Hand injuries<br>14. Foot injuries<br>15. Back injuries/Strains<br>16. Traffic<br>17. Wildlife<br>a. Wildlife<br>b. Mice/rats<br>c. Vectors (i.e., mosquitoes, bees, etc.)<br><br>7. Heat/Cold Stress | 10. Be aware of potential trip hazards/follow good housekeeping procedures/mark significant below-grade hazards (i.e., holes, trenches, wires, ropes) with safety cones or spray paint.<br>11. Wear proper PPE (leather gloves)/watch wear you place your hands/inspect material or equipment for jagged, rough, or slippery surfaces/ watch for pinch points/ wipe off slippery, wet, or dirty items prior to handling.<br>12. Wear proper PPE (Langan approved safety shoes)/ Be aware of uneven terrain)<br>13. Use proper lifting techniques/ Buddy system when lifting/ use wheeled transport.<br>14. Wear proper PPE (high-visibility shirts and vests)/ use cones if appropriate/ notify equipment operators of work area.<br>15. Be aware of surroundings at all times for the presence of wildlife.<br>a. Do not approach stray animals.<br>b. Carry animal repellant/ use if situation arises.<br>c. Use bug spray when needed.<br>7. Wear proper attire for weather conditions (sunscreen, protective clothing in |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | sunlight or layer clothing in cold weather)/ drink plenty of fluids/ take regular breaks. |
| 35. All activities | 45. Slips/ Trips/ Falls<br>46. Hand injuries, cuts, or lacerations during manual handling of materials<br>47. Foot injuries<br>48. Back injuries<br>49. Traffic<br>50. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>51. High Noise levels<br>52. Overhead hazards<br>53. Heat Stress/ Cold Stress<br>54. Eye Injuries | 53. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>54. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>55. Wear Langan approved safety shoes.<br>56. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>57. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>58. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>59. Wear proper hearing protection.<br>60. Wear hard hat / Avoid areas where overhead hazards exist.<br>61. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>62. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Excavation Oversight**
**JSA Number:** **JSA041-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last Minute Risk Assessment.**




**S** – ***Stop,*** *what has changed?*
**T** – ***Think*** *about the task*
**E** – ***Evaluate*** *potential hazards*
**P** – ***Plan*** *safe approach*
**S** - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☒ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 36. Transport equipment to work area | 28. Back Strain<br>29. Slips/Trips/Falls<br>30. Traffic<br>31. Cuts/abrasions/contusions from equipment | 22. Use proper lifting techniques / Use wheeled transport<br>23. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures<br>24. Wear proper PPE (high visibility vest or clothing)<br>25. Wear proper PPE (leather gloves, long sleeves, safety shoes) |
| 37.Earth Moving Equipment | 18. Equipment running over employee<br>19.Swing radius of equipment<br>20.Site constraints<br>21.Line of Fire incidents<br>22.Crushing hazards | 16. Ensure you have direct line of sight with operator of equipment;<br>17. Don't walk behind equipment;<br>18. Maintain a safe distance away from equipment.<br>19. Use spotters to communicate with equipment operator<br>20. Competent person onsite<br>21. Designate/cone-off swing radius of equipment<br>22. Excavator bucket grounded while collecting samples<br>23. Shut-down equipment prior to collecting samples<br>24. Wear proper PPE (high vis vest/clothing) |
| 38.Excavation | 11. Excavation collapse<br>12. Confined space<br>13. Soil | 9. Use proper shoring/benching/sloping techniques; Ladder is properly situated in excavation; no water in excavation; competent person has inspected excavation prior to allow employees to enter.<br>10. Langan employees are not authorized to enter a confined space;<br>11. Soil and equipment is kept atleast 2 feet from edge of excavation |
| 39.Excavated soil | 1. Hazardous substances | 1. Use proper equipment to monitor excavated soil for contaminates; ensure levels do not exceed PEL's for contaminates; Wear proper PPE |
| 40. All activities | 55. Slips/ Trips/ Falls | 63. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | 56. Hand injuries, cuts or lacerations during manual handling of materials<br>57. Foot injuries<br>58. Back injuries<br>59. Traffic<br>60. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.)<br>61. High Noise levels<br>62. Overhead hazards<br>63. Heat Stress/ Cold Stress<br>64. Eye Injuries | 64. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves<br>65. Wear proper PPE (Langan approved safety shoes)<br>66. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>67. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>68. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed<br>69. Wear hearing protection<br>70. Wear hard hat / Avoid areas were overhead hazards exist.<br>71. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>72. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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| LANGAN | Job Safety Analysis (JSA)<br>Health and Safety |
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| **JSA Title:** General Construction Activities<br>**JSA Number:** JSA010-01 |  |
| **A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last Minute Risk Assessment.** | **S** – ***Stop,*** *what has changed?*<br>**T** – ***Think*** *about the task*<br>**E** – ***Evaluate*** *potential hazards*<br>**P** – ***Plan*** *safe approach*<br>**S** - ***Start*** *task /* ***Stop*** *& regroup* |

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☒ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 41. Transport equipment to work area | 32. Back Strain<br>33. Slips/ Trips/ Falls<br>34. Traffic<br>35. Cuts/abrasions from equipment<br>36. Contusions from dropped equipment | 6. Use proper lifting techniques / Use wheeled transport<br>7. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures<br>8. Wear proper PPE (high visibility vest or clothing)<br>9. Wear proper PPE (leather gloves, long sleeves)<br>10. Wear proper PPE (safety shoes) |
| 42. Installation of piping from vapor wells to skid connections and fro mdischarge pipping to effluent stack | 23. Pinch fingers when connecting pipes<br>24. Slips/ Trips/ Falls<br>25. Machinery Hazards | 3. Wear proper PPE (leather gloves)<br>4. Be aware of potential trip hazards / Practice good housekeeping procedures / Mark significant below-grade hazards (i.e. holes, trenches) with safety cones or spray paint<br>5. Wear proper PPE (safety vest) / Maintain safe distance from operating machinery |
| 43. Remediation equipment installation | 14. Back strain when lifting heavy equipment<br>15. Slips/ Trips/ Falls<br>16. Traffic | 5. Use proper lifting techniques / Use wheeled transport / Minimize distance to vehicle<br>6. Be aware of potential trip hazards / Practice good housekeeping procedures / Mark significant below-grade hazards (i.e. holes, trenches) with safety cones or spray pain<br>7. Wear proper PPE (safety vest) |
| 44. All activities | 65. Slips/ Trips/ Falls<br>66. Hand injuries, cuts or lacerations during manual handling of materials<br>67. Foot injuries<br>68. Back injuries | 73. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>74. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 4. All activities (cont'd) | 69. Traffic<br>70. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.)<br>71. High Noise levels<br>72. Overhead hazards<br>73. Heat Stress/ Cold Stress<br>74. Eye Injuries | 75. Wear Langan approved safety shoes<br>76. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>77. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>78. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed<br>79. Wear hearing protection<br>80. Wear hard hat / Avoid areas were overhead hazards exist.<br>81. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>82. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Ladder Use**
**JSA Number:** **JSA056**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last Minute Risk Assessment.**




**S** – ***Stop,*** *what has changed?*

**T** – ***Think*** *about the task*

**E** – ***Evaluate*** *potential hazards*

**P** – ***Plan*** *safe approach*

**S** - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☐ Long Sleeves | ☐ Safety Vest (Class 2) | ☐ Hard Hat | ☐ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☐ Nitrile Gloves | ☐ PVC Gloves |
| ☐ Leather Gloves | ☐ Cut Resist. Gloves | ☒ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 45. Use of Ladders and Inspection of Ladders Before Use | 1. Ladders (portable, fixed)<br>2. Rolling or pinching objects<br>3. Sharp objects | 26. Inspect all ladders for structural defects prior to each use. Decals, weight restrictions, non painted surfaces.<br>27. Use the correct type and size of ladder to safely work.<br>28. . Do not use metal or wooden ladders |
| 46. Use of Ladder(s) | 26. Ladders (portable, fixed)<br>27.Elevated work platform or stairs<br>28.Slippery surfaces (water, ice, snow)<br>29.Rolling or pinching objects<br>30.Sharp objects<br>31.Poor Housekeeping<br>32.Repetitive motion or other ergonomic concerns<br>33.Airborne dust | 25. Maintain three points of contact when ascending and descending ladders.<br>26. Insure area at bottom of ladder is free of obstructions and tripping hazards.<br>27. Never carry tools in your hands while ascending or descending a ladder.<br>28. Utilize rope buckets to pull tools up to you or tool belts. Extension ladders will extend up to 36 inches above the landing that is being accessed and be tied off and secured to prevent them from moving or falling.<br>29. A spotter must hold the ladder if the employee needs to climb the ladder to tie the ladder off. When using an extension ladder, for every 4' of rise, the base must come out 1' (4 to 1 ratio)<br>30. If working from a ladder 6 ft. or higher, fall protection is required. Fall protection is not required for climbing ladders less than 20 ft. in height. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 31. Use the proper ladder for the job at all times.<br><br>32. The belt buckle may never extend past either rail on the side of the ladder.<br><br>33. Do not climb higher than the second tread from the top on a stepladder or the third rung<br><br>34. Before ascending or descending a ladder, wait until other workers have completely cleared the ladder. Do not stand directly below a person who is climbing or descending a ladder to avoid falling objects. |
| 47. All activities | 75. Slips/ Trips/ Falls<br>76. Hand injuries, cuts or lacerations during manual handling of materials<br>77. Foot injuries<br>78. Back injuries<br>79. Eye Injuries | 83. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>84. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves<br>85. Wear proper PPE (Langan approved safety shoes)<br>86. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>87. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>88. Wear hard hat / Avoid areas were overhead hazards exist.<br>89. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>90. Wear safety glasses |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Mechanical Connection Oversight**
**JSA Number:** **JSA027-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last Minute Risk Assessment.**




**S** – ***Stop,*** *what has changed?*

**T** – ***Think*** *about the task*

**E** – ***Evaluate*** *potential hazards*

**P** – ***Plan*** *safe approach*

**S** - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☒ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☒ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 48. Transport equipment to work area | 37. Back Strain<br>38. Slips/ Trips/ Falls<br>39. Traffic<br>40. Cuts/abrasions from equipment<br>41. Contusions from dropped equipment | 11. Use proper lifting techniques / Use wheeled transport<br>12. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures<br>13. Wear proper PPE (high visibility vest or clothing)<br>14. Wear proper PPE (leather gloves, long sleeves)<br>15. Wear proper PPE (Langan approved safety shoes) |
| 49. Piping and connections | 6. Pinch Hazard<br>7. Cuts/abrasions to knuckles/hands<br>8. Back Strain<br>9. High pressure water spray | 1. Wear proper PPE (leather gloves)<br>2. Wear proper PPE (leather gloves or cut resistant gloves)<br>3. Use proper lifting techniques / Use wheeled transport<br>4. Ensure connections are tight and secure/ Wear proper PPE (face shield and safety glasses) |
| 50. All activities | 80. Slips/ Trips/ Falls<br>81. Hand injuries, cuts or lacerations during manual handling of materials<br>82. Foot injuries<br>83. Back injuries<br>84. Traffic<br>85. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.)<br>86. High Noise levels<br>87. Overhead hazards<br>88. Heat Stress/ Cold Stress<br>89. Eye Injuries | 91. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>92. Inspect for jagged/sharp edges, rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather and/or cut-resistant gloves<br>93. Wear Langan approved safety shoes<br>94. Use proper lifting techniques / Consider load location, task repetition, and load weigh / Obtain assistance when possible<br>95. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>96. Be aware of surroundings for presence of wildlife/ Do not approach stray animals / Carry or use animal repellant / Use bug spray when needed |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 97. Wear proper PPE (hearing protection)<br>98. Wear hard hat / Avoid areas were overhead hazards exist.<br>99. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>100. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title: Soil Sampling from Excavator Bucket**
**JSA Number: JSA057**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last Minute Risk Assessment.**




**S – *Stop,* what has changed?**
**T – *Think* about the task**
**E – *Evaluate* potential hazards**
**P – *Plan* safe approach**
**S - *Start* task / *Stop* & regroup**

| PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed): | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☐ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☐ Hearing Protection |
| ☒ Safety Glasses | ☒ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☐ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 51. Drive to site and/or sample location. | 42. Rough/Off-Road terrain;<br>43. Low-light or other hazardous environmental conditions. | 1. Pay attention to road conditions such as road erosion, unprotected embankments, and soft road conditions;<br>2. Ensure vehicle is properly equipped and outfitted for the terrain and all environmental conditions. |
| 52. Initial Site Arrival Site Assessment. | 1. Unsafe driving conditions including personnel walking within driving areas, open excavation or pits, steep slopes etc.;<br>2. Biological hazards (snakes, poison oak, bees). | 1. Maintain situational awareness upon arriving to the work site (be alert of your surroundings). Secure the work area from through traffic. |
| 53. Unpack and transport equipment to work area. | 1. Back Strains;<br>2. Slip/Trips/Falls;<br>3. Cuts/Abrasions from equipment;<br>4. Contusions from dropped equipment. | 1. Use proper lifting techniques and use wheeled transport;<br>2. Minimize distance to work area and create unobstructed path to work area. Follow good housekeeping procedures. Mark slip/trip/fall hazards with orange safety cones and/or caution tape;<br>3. Wear proper PPE (gloves, long sleeves, etc.);<br>4. Wear proper PPE (Langan-approved safety shoes, hardhat, etc.). |
| 54. Earth Moving Equipment. | 1. Equipment striking, crushing, running over employee etc. | 1. Place traffic cones and use caution tape to clearly delineate the excavators front and rear swing radius. Do not enter the excavators or other heavy equipment swing radius/travel paths while in operation;<br>2. Ensure all employees working in the vicinity of the excavator/heavy equipment maintain direct line of sight with the operator at all times; don't walk behind equipment or within the operators blind spots; maintain a safe distance away from the equipment;<br>3. Designate one employee as the "spotter" to communicate with the excavator operator, and establish a shut-down signal that, when |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | sounded, instructs the excavator operator to freeze/stop all movement of the equipment;<br>4. Direct operator to completely power down the excavator before approaching (i.e. breaking the swing radius plane) the excavator bucket to collect a sample;<br>5. Direct the operator keep the equipment completely powered-down until all employees are at a safe distance, and it is safe to continue work. The designated spotter should be the only person directing the operator to power the equipment back on.<br>6. Conduct a planned pause anytime there is a change in procedure or before beginning a new task;<br>7. Wear proper PPE (high vis vest/clothing). |
| 55. Icing of Samples & Transporting coolers/equipment from work area. | 1. Back Strains<br>2. Slips/Trips/Falls<br>3. Cuts/Abrasions from equipment<br>4. Pinch/Crushing Hazards. | 1. Drain coolers of water. Use proper lifting techniques. Use wheeled transport whenever possible;<br>2. Plan for and utilize a safe and unobstructed path of travel to and from work area. Maintain situational awareness when traveling to and from work area;<br>3. Wear proper PPE (Leather gloves, long sleeves);<br>4. Wear proper PPE (Leather gloves, long sleeves, hard hat, Langan approved safety shoes). |
| 56. Excavated soil. | 1. Hazardous substances. | 1. Use proper equipment to monitor excavated soil for contaminates;<br>2. Ensure levels do not exceed PEL's for contaminates;<br>3. Wear proper PPE. |
| 57. Changing site conditions. | 1. Stockpiles and/or excavations/trenches/pits creating unsafe paths of travel.<br>2. Unforeseen conditions | 1. Take time to plan out stockpile, excavation, trench, and/or test pit locations, ensuring that the planned work will not create unsafe conditions or paths of travel once performed;<br>2. Maintain situational awareness throughout the work day (be alert of the evolving site conditions);<br>3. If stockpile, excavation, trench, and/or test pit locations create pinch points, site constraints, or unsafe paths of travel or other unsafe site conditions, stop work immediately and direct the excavator operator to correct the unsafe conditions by moving stockpiles, backfilling excavations, trenches, and/or test pits etc.;<br>4. Use stop work and conduct a planned pause to address changed site conditions. |
| 58. All activities. | 1. Slips/ Trips/ Falls;<br>2. Hand injuries, cuts or lacerations during manual handling of materials;<br>3. Foot injuries;<br>4. Back injuries;<br>5. Traffic;<br>6. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.);<br>7. High Noise levels;<br>8. Overhead hazards;<br>9. Heat Stress/ Cold Stress;<br>10. Eye Injuries. | 1. Be aware of potential trip hazards. Follow good housekeeping procedures. Mark significant hazards;<br>2. Inspect for jagged/sharp edges, and rough or slippery surfaces. Keep fingers away from pinch points. Wipe off greasy, wet, slippery or dirty objects before handling. Wear proper PPE (leather/ cut-resistant gloves);<br>3. Wear proper PPE (Langan approved safety shoes);<br>4. Use proper lifting techniques. Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift. Obtain assistance when possible;<br>5. Wear high visibility clothing & vest / Use cones or signs to designate work area; |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 6. Be aware of surroundings at all times, including the presence of wildlife. Do not approach stray dogs. Carry/use dog/animal repellant. Use bug spray when needed;<br>7. Wear hearing protection;<br>8. Wear hard hat / Avoid areas were overhead hazards exist;<br>9. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather). Drink plenty of fluids to avoid dehydration. Take breaks as necessary to avoid heat/cold stress;<br>10. Wear safety glasses |

| **Print Name** | **Sign Name** | **Date** |
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| ***Reviewed by:*** | | |
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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Site Inspection**
**JSA Number:** **JSA024-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last Minute Risk Assessment.**




**S** – ***Stop,*** *what has changed?*

**T** – ***Think*** *about the task*

**E** – ***Evaluate*** *potential hazards*

**P** – ***Plan*** *safe approach*

**S** - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☒ Rubber Boots |
| ☒ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 59. Jobsite Pre-briefing | 44. None | 29. Review JSA, SOP's, and discuss hazards that may be present and control measures for present hazards while on-site. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 2. Working near railroads | 1. Passing Trains.<br>2. Slip/Trips/Falls. | 1. Wear reflective vest/ Stay away from tracks/ Do not cross tracks within 10 ft. of train car or when there is a train within view/listen for train horn.<br>2. Be aware of tripping hazards/ Follow good housekeeping procedures/ Mark significant hazards with spray paint or cones. |
| 3. Walking around site | 10. Uneven terrain<br>11. Wildlife: Stray animals, mice/rats, vectors (i.e. mosquitoes, bees, etc.)<br>12. Weather: Heat/cold stress<br>13. Slip/Trips/Falls<br>14. Foot injuries<br>15. Eye injuries | 9. Pay attention to surrounding area (puddles, wet, frozen, uneven areas); Mark with cones or spray paint.<br>10. Use bug spray/ Avoid stray animals/Use repellant when needed.<br>11. Dress for the correct weather situation/ Use sunscreen or protective clothing in sunlight, layers in cold weather/ Drink plenty of fluids/ Take breaks when needed.<br>4. Be aware of tripping hazards/ Follow good housekeeping procedures/ Mark significant hazards with spray paint or cones.<br>5. Wear proper PPE (Langan approved safety shoes)/ Change wet socks during cold weather.<br>6. Wear proper PPE (safety glasses/goggles). |
| 4. Working near road | 1. Passing vehicles<br>2. Slip/Trips/Falls | 1. Wear reflective vest/ Stay away from roadway/ Use buddy system/ Place signage or cones when needed.<br>2. Be aware of tripping hazards/ Follow good housekeeping procedures/ Mark significant hazards with spray paint or cones. |
| 5. All activities | 90. Slips/ Trips/ Falls<br>91. Hand injuries, cuts or lacerations during manual handling of materials<br>92. Foot injuries<br>93. Back injuries<br>94. Traffic<br>95. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.)<br>96. High Noise levels<br>97. Overhead hazards<br>98. Heat Stress/ Cold Stress<br>99. Eye Injuries | 101. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>102. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves<br>103. Wear Langan approved safety shoes<br>104. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>105. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>106. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed<br>107. Wear hearing protection<br>108. Wear hard hat / Avoid areas were overhead hazards exist.<br>109. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>110. Wear safety glasses |
| Additional items. | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

| Print Name | Sign Name | Date |
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LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** Groundwater Sampling
**JSA Number:** JSA008-01

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S – *Stop,* what has changed?**
**T – *Think* about the task**
**E – *Evaluate* potential hazards**
**P – *Plan* safe approach**
**S - *Start* task / *Stop* & regroup**

| PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed): | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☒ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Tyvek sleeves, Dermal Protection, PID | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 60. Transport equipment to work area | 1. Back Strain<br>2. Slips/ Trips/ Falls<br>3. Traffic<br>4. Cuts/abrasions from equipment<br>5. Contusions from dropped equipment | 1. Use proper lifting techniques / Use wheeled transport.<br>2. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures.<br>3. Wear proper PPE (high visibility vest or clothing)<br>4. Wear proper PPE (leather gloves, long sleeves)<br>5. Wear proper PPE (safety shoes) |
| 61. Remove well cover | 34. Scrape knuckles/hand<br>35. Strain wrist/bruise palm<br>36. Pinch fingers or hand | 6. Wear proper PPE (leather gloves)<br>7. Using a hammer, tap the end of the wrench to loosen grip of bolts.<br>8. Wear proper PPE (leather gloves) |
| 62. Remove well cap and lock | 17. Well can pops from pressure.<br>18. Exposure to hazardous substances through inhalation or dermal exposure<br>19. Scrape knuckles/hand<br>20. Strain write/bruise palm | 8. Remove cap slowly to relieve pressure / Do not place face over well when opening / Wear proper PPE (safety glasses)<br>9. Use direct air monitoring/reading instrument (i.e., PID) / Be familiar with and follow actions prescribed in the HASP / Wear proper PPE (nitrile gloves)<br>10. Wear proper PPE (leather gloves)<br>11. Using hammer, tap the end of the wrench to loosen grip |
| 63. Measure head-space vapor levels | 1. Exposure to hazardous substances through inhalation | 1. Do not place face over well when collecting measurement |
| 64. Remove dedicated tubing (if necessary) | 1. Exposure to hazardous substances through inhalation or dermal exposure<br>2. Tubing swings around after removal | 1. Wear proper PPE (nitrile gloves, Tyvek sleeves)<br>2. Wear proper PPE (safety glasses) |
| 65. Set-up plastic sheeting for work site around the well | 1. Lacerations when cutting plastic sheeting. | 1. Use scissors to cut plastic sheeting / Cut motions should always be away from body and body parts |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 66. Measure depth to water | 1. Exposure to hazardous substances through inhalation or dermal exposure<br>2. Pinch fingers or hand in water level instrument | 1. Wear proper PPE (nitrile gloves)<br>2. Wear proper PPE (leather gloves) |
| 67. Calibrate monitoring equipment | 1. Skin or eye contact with calibration chemicals<br>2. Pinch fingers or hand in monitoring equipment | 1. Wear proper PPE (safety glasses, nitrile gloves)<br>2. Wear proper PPE (leather gloves) / Avoid pinch points |
| 68. Install sampling pump in well | 1. Hand injuries during installation of pump<br>2. Lacerations when cutting tubing.<br>3. Back strain during installation of pump<br>4. Physical hazards associated with manual lifting of heavy equipment.<br>5. Back strain from starting generator.<br>6. Burns from hot exhaust from generator.<br>7. Electrical shock from improper use of generator and pump<br>8. Contaminated water spray from loose connections | 1. Wear proper PPE (leather gloves, nitrile gloves)<br>2. Use safety tubing cutter.<br>3. Use proper lifting techniques.<br>4. Use proper lifting techniques / Use wheeled transport for heavy equipment.<br>5. Use arm when starting generator / Do not over-strain if generator does not start.<br>6. Do not touch generator near exhaust / Use proper handle to carry / Allow generator to cool down before moving.<br>7. Properly plug in pump to generator / Do not allow the pump or generator to contact water / Check for breaks in the cord.<br>8. Check all tubing connections to ensure they are tight and secure |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 10. Purge water | 1. Contact with potentially contaminated groundwater.<br>2. Back strain from lifting buckets of water<br>3. Tripping potential on sample discharge lines and pump electric lines | 1. Wear proper PPE (safety glasses, nitrile gloves)<br>2. Use proper lifting techniques / Use wheeled transport.<br>3. Organize discharge of electric line to keep out of way as much as possible / Mark potential tripping hazards with caution tape or safety cones |
| 11. Sample water collection | 1. Contact with potentially contaminated groundwater through dermal exposure.<br>2. Contact with and burns from acid used for sample preservation.<br>3. Tripping potential on sample discharge lines and pump electric lines<br>4. Lacerations from broken sample bottles<br>5. Back strain when transporting coolers full of collected samples.<br>6. Slips/ Trips/ Falls | 1. Wear proper PPE (safety glasses, nitrile gloves)<br>2. Wear proper PPE (safety glasses, nitrile gloves) / Ensure sample bottle lids are secure before use and after sample collection.<br>3. Organize line to keep out of the way as much as possible / Mark potential tripping hazards with caution tape or safety cones.<br>4. Do not over-tighten bottle caps / Handle bottles safely to prevent breakage / Wrap glass bottles in bubble wrap, if possible<br>5. Use proper lifting techniques / Use wheeled transport / Seek assistance if coolers weight exceeds 50lbs. / Minimize distance to vehicle.<br>6. Have unobstructed path to vehicle or collection point / Follow good housekeeping procedures / Do not lift/walk with coolers that are too heavy/difficult to lift |
| 12. Remove pump and pack up equipment | 1. Back strain when removing pump or lifting heavy equipment | 1. Use proper lifting technique / Use wheeled transport for heavy equipment |
| 13. Replace well cap and lock | 1. Scrape fingers/hand<br>2. Strain wrist/bruise palm | 1. Wear proper PPE (leather gloves)<br>2. Using hammer, tap the end of the well cap to tighten grip |
| 14. Replace well cover | 1. Scrape knuckles/hand<br>2. Strain write/bruise palm.<br>3. Pinch fingers or hand | 1. Wear proper PPE (leather gloves)<br>2. Using hammer, tap the end of the wrench to tighten the grip of the bolts.<br>3. Wear proper PPE (leather gloves) |
| 15. Transport drums to disposal staging location | 1. Back, arm or shoulder strain from moving drums.<br>2. Pinch hazard<br>3. Contact with potentially contaminated groundwater when moving improperly sealed drums.<br>4. Slips/ Trips/ Falls when moving drum.<br>5. Drop drum on feet/toes | 1. Use drum cart for moving drums / Use proper lifting techniques / Obtain assistance, if needed<br>2. Wear proper PPE (leather gloves)<br>3. Wear proper PPE (nitrile gloves under leather gloves) / Properly seal drum to prevent leak.<br>4. Ensure route to move drum to storage space is dry and free from obstructions.<br>5. Wear proper PPE (safety shoes) |
| 16. Place used PPE in designated disposal drum | 1. Pressure build-up inside drum<br>2. Pinch hazard | 1. Remove cap from bung hole in drum to relieve pressure.<br>2. Wear proper PPE (leather gloves) |
| 17. Decontaminate equipment | 1. Splashing water/soap from decontamination<br>2. Contact with potentially contaminated groundwater through dermal exposure.<br>3. Electrical shock from broken electric cords | 1. Wear proper PPE (safety glasses)<br>2. Wear proper PPE (safety glasses, dermal protection)<br>3. Properly plug in pump to generator / Do not allow the pump or generator to contact water / Check for breaks in the cord |
| 18. All activities | 100. Slips/ Trips/ Falls<br>101. Hand injuries, cuts, or lacerations during manual handling of materials<br>102. Foot injuries<br>103. Back injuries<br>104. Traffic<br>105. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) | 111. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>112. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>113. Wear Langan approved safety shoes. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | 106. High Noise levels<br>107. Overhead hazards<br>108. Heat Stress/ Cold Stress<br>109. Eye Injuries | 114. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>115. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>116. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>117. Wear hearing protection<br>118. Wear hard hat / Avoid areas where overhead hazards exist.<br>119. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>120. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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| LANGAN | Job Safety Analysis (JSA)<br>Health and Safety |
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| **JSA Title: Well Installation**<br>**JSA Number: JSA019-01** |  <br>**S** – ***Stop,*** *what has changed?*<br>**T** – ***Think*** *about the task*<br>**E** – ***Evaluate*** *potential hazards*<br>**P** – ***Plan*** *safe approach*<br>**S** - ***Start*** *task /* ***Stop*** *& regroup* |
| **A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.** | |

| **PERSONAL PROTECTIVE EQUIPMENT REQUIRED:** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: PID, Tyvek sleeves | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 69. Move equipment to work site | 45. Back strain when lifting equipment.<br>46. Slips/ Trips/ Falls while moving equipment.<br>47. Traffic (if applicable)<br>48. Pinched fingers or running over toes during GeoProbe set-up.<br>49. Overturn drilling rig while transporting to loading dock on flat-bed tow truck | 30. Use proper lifting technique (use legs for bending and lifting and not the back)/ Use wheeled transport for heavy equipment / Get assistance when handling loads greater than 50 lbs. / Minimize distance to vehicle<br>31. Use proper lifting technique (use legs for bending and lifting and not the back) / Use wheeled transport for heavy equipment / Get assistance when handling loads greater than 50 lbs. / Minimize distance to vehicle / Have unobstructed path to vehicle or collection point / Do not lift/walk with boxes that are heavy/difficult to lift<br>32. Wear high visibility safety vests or clothing / Exercise caution<br>33. Wear proper PPE (cut-resistant gloves) / Stay alert, be aware of geoprobe rig at all times<br>34. Drill rig should be parked in center of flat-bed tow truck / Emergency brake shall be used at all times during transport on the flat-bed truck/ All unnecessary personnel should stay away from the flat-bed truck during moving activities |
| 70. Calibration of monitoring equipment | 37. Skin or eye contact with calibration chemicals<br>38. Pinch fingers in monitoring equipment | 35. Wear proper PPE (safety glasses/ goggles)<br>36. Wear proper PPE (leather gloves) |
| 37. Set-up GeoProbe rig | 21. Geoprobe rig movement | 12. All field personnel should stay clear of the GeoProbe rig while moving / Use a spotter when backing up the GeoProbe |
| 38. Advance GeoProbe rods below ground surface to desired depth | 16. Underground utilities<br>17. High noise levels | 12. Clean all subsurface soil borings to a minimum of 5 feet below grade.<br>13. Wear proper PPE (hearing protection) |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 39. Remove and open acetate liner.<br><br>5. Remove and open acetate liner (cont'd) | 110. Pinched fingers while removing macrocore.<br>111. Cuts/lacerations when cutting acetate liner open.<br>112. Exposure to hazardous vapors<br>113. Skin contacts with contaminated soil | 5. Wear proper PPE (nitrile gloves, cut-resistant or leather gloves<br>6. Wear proper PPE (cut-resistant or leather gloves)<br>7. Do not place face over acetate liner when opening / Monitor hazardous vapors in air with PID / Upgrade PPE as necessary based on levels contained in the Health and Safety Plan<br>8. Wear proper PPE (nitrile gloves) |
| 6. Remove excess soil from acetate liner and place in 55-gallon drum (IF NOT PERFORMED BY LANGAN, REMOVE!) | 5. Cuts/lacerations from acetate liner<br>6. Pinched fingers/hand while opening/closing drum.<br>7. Skin contacts with contaminated soil<br>8. Soil debris in eyes | 5. Wear proper PPE (cut-resistant or leather gloves)<br>6. Wear proper PPE (cut-resistant or leather gloves)<br>7. Wear proper PPE (nitrile gloves)<br>8. Wear proper PPE (safety glasses) |
| 7. Attach hollow-stem augers to the GeoProbe rig; Advance augers and attach. additional augers until desired depth is reached | 1. Strain wrist/bruise palm<br>2. Pinched fingers<br>3. Back Strain<br>4. Clothing entanglement<br>5. Carbon monoxide poisoning<br>6. Bruise toes/foot<br>7. High noise levels<br>8. Skin contacts with contaminated soil | 1. Wear proper PPE (cut-resistant or leather gloves)<br>2. Wear proper PPE (cut-resistant or leather gloves)<br>3. Use proper lifting techniques.<br>4. Wear proper work attire(no loose clothing/strings)<br>5. Properly ventilate work area<br>6. Wear proper PPE (safety shoes)<br>7. Wear proper PPE (hearing protection)<br>8. Wear proper PPE (Tyvek sleeves, nitrile gloves) |
| 8. Install monitoring well | 1. Pinched fingers<br>2. Lacerations/abrasions<br>3. Back Strain | 1. Wear proper PPE (cut-resistant or leather gloves)<br>2. Wear proper PPE (cut-resistant or leather gloves)<br>3. Use proper lifting techniques |
| 9. Tremie-grout annulus space above bentonite seal | 1. Back strain<br>2. Pinched fingers | 1. Use proper lifting techniques.<br>2. Wear proper PPE (cut-resistant or leather gloves) |
| 10. Install flush-mount monitoring well pad | 1. Splashed concrete.<br>2. Pinched fingers<br>3. Cuts/lacerations | 1. Wear proper PPE (safety glasses)<br>2. Wear proper PPE (cut-resistant or leather gloves)<br>3. Wear proper PPE (cut-resistant or leather gloves) |
| 11. Decontaminate equipment | 1. Splashing water/soap<br>2. Contact with potentially contaminated groundwater/soil through dermal exposure.<br>3. Electrical shock from broken electric cords | 1. Wear proper PPE (safety glasses)<br>2. Wear proper PPE (safety glasses, dermal protection)<br>3. Properly plug in pump to generator / Do not allow the pump or generator to contact water / Check for breaks in the cord |
| 12. Transport drums to central staging location (IF NOT PERFORMED BY LANGAN, REMOVE!) | 7. Back, arm or shoulder strain from moving drums.<br>8. Pinch fingers/hand in drum cart when moving drums.<br>9. Pinch fingers/hand when operating lift-gate on vehicle.<br>10. Contact with potentially contaminated groundwater when moving improperly sealed drums.<br>11. Slips when moving drums.<br>12. Drop drum on feet/toes | 121. Use drum cart for moving drums / Use proper lifting techniques / Do not lift heavy loads without assistance.<br>122. Wear proper PPE (cut-resistant or leather gloves)<br><br>123. Wear proper PPE (cut-resistant or leather gloves)<br><br>124. Wear proper PPE (nitrile gloves underneath work gloves)<br><br>125. Follow good housekeeping procedures / Ensure route to move drum and storage space is free from obstructions.<br>126. Wear proper PPE (safety shoes) / Work in a safe manner to prevent dropped drum |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 13. All activities<br><br>13. All activities (cont'd) | 11. Slips/ Trips/ Falls<br>12. Hand injuries, cuts, or lacerations during manual handling of materials<br>13. Foot injuries<br>14. Back injuries<br>15. Traffic<br>16. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>17. High Noise levels<br>18. Overhead hazards<br>19. Heat Stress/ Cold Stress<br>20. Eye Injuries | 11. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>12. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>13. Wear Langan approved safety shoes.<br>14. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>15. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>16. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>17. Wear hearing protection<br>18. Wear hard hat / Avoid areas where overhead hazards exist.<br>19. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>20. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Monitoring Well Development**
**JSA Number:** **JSA026-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S – *Stop*, what has changed?**
**T – *Think* about the task**
**E – *Evaluate* potential hazards**
**P – *Plan* safe approach**
**S - *Start* task / *Stop* & regroup**

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☐ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☒ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☒ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Tyvek Sleeves | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 71. Transport equipment to work area | 50. Back Strains<br>51. Slips/Trips/Falls<br>52. Traffic<br>53. Cuts/Abrasions/Contusions from equipment | 35. Use proper lifting techniques/ Use wheeled transport/ use buddy system when lifting equipment.<br>36. Minimize distance from work area/ unobstructed path to collection points and vehicle/ Follow good housekeeping procedures.<br>37. Wear high-visibility vest or clothing/Exercise caution/ Use traffic cones or signage if needed.<br>38. Wear proper PPE (leather gloves, long sleeves, Langan approved safety shoes). |
| 72. Measure depth of water | 39. Exposure to hazardous substances<br>40. Pinched fingers | 40. Wear proper PPE (Nitrile gloves, Safety glasses/Face shield).<br>41. Wear proper PPE (cut-resistant gloves). |
| 73. Install Tremie pipe in the monitoring well and connect to water source. | 22. Hand injuries during installation (pinched fingers/hands).<br>23. Back strain from holding Tremie pipe.<br>24. High pressure water spray. | 13. Wear proper PPE (Nitrile gloves/cut-resistant gloves).<br>14. Use proper lifting techniques/ Use two personnel when lowering pump greater than 80 feet.<br>15. Ensure all those connections are tight and secure/ Use proper PPE (face shield and safety glasses). |
| 74. Install pump in to well.<br>a. Connect pump to sample tubing.<br>b. Lower pump to desired depth in well.<br>c. Connect sample tubing to flow cell.<br>d. Connect pump to power source | 18. Hand injuries during pump installation and sample tubing cutting.<br>19. Back strain<br>20. Electric shock<br>21. Exhaust gases from generator<br>22. Burns from hot equipment | 14. Wear proper PPE when installing pump and cutting sample tubing (Nitrile and cut-resistant gloves)/ Use tubing cutter.<br>15. Proper lifting techniques/ Two personnel when installing pump at depths greater than 80 feet/ Use buddy when lifting heavy loads (pump, generator)/Use wheeled transport.<br>16. Ensure equipment is (LO/TO: locked out/tagged out) prior to preforming any electrical connections/ Inspect wires for frays or cuts/Ensure generator is properly grounded prior to starting. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| (generator)<br>e. Turn on power source (generator) | | 17. Position generator so that exhaust is flowing away from work area.<br>18. Do not touch exhaust or any hot part of generator/ Allow equipment time to cool down prior to carrying/ Use proper PPE (long sleeves, leather gloves) |
| 75. Develop monitoring well.<br>a. Jet water into well using Tremie pipe.<br>b. Turn pump on and adjust to desired flow rate.<br>c. Surge pump up and down well to remove sediment from screen.<br>d. Containerize all purge water from well. | 114. Hand injuries<br>115. Face injuries<br>116. Contaminated spray from water | 127. Wear proper PPE (cut-resistant gloves and nitrile gloves).<br>128. Wear proper PPE (face shield and safety glasses)/do not stand over well opening.<br>129. Wear proper PPE (Face shield and safety goggles)/Tyvek over garments/ Ensure all connections are secure and tight/ Tubing outlet is contained in an overflow container. |
| 76. Drum staging area. | 1. Back, Arm, and shoulder strain.<br>2. Pinch points<br>3. Cross contamination<br>4. Slip/Trips/Falls | 1. Use proper lifting techniques/ Use drum carts when moving drums/ use buddy system for moving of drums if needed/Move drums shortest distance needed.<br>2. Keep fingers and feet away from pinch points/ Use proper PPE (cut-resistant gloves, Langan approved safety shoes)<br>3. Use proper PPE (Nitrile gloves, Tyvek sleeves)<br>4. Ensure pathway is clear prior to moving equipment/ Mark all hazards/ Use additional person as a spotter if needed. |
| 77. Equipment pack-up | 1. Back Strains<br>2. Slips/Trips/Falls<br>3. Traffic<br>4. Cuts/Abrasions/Contusions from equipment. | 1. Use proper lifting techniques/ Use wheeled transport/ use buddy system when lifting equipment.<br>2. Minimize distance from work area/ Unobstructed path to collection points and vehicle/ Follow good housekeeping procedures.<br>3. Wear high-visibility vest or clothing/Exercise caution/ Use traffic cones or signage if needed.<br>130. Wear proper PPE (leather gloves, long sleeves, Langan approved safety shoes). |
| 78. All activities | 1. Slips/ Trips/ Falls<br>2. Hand injuries, cuts, or lacerations during manual handling of materials<br>3. Foot injuries<br>117. Back injuries<br>118. Traffic<br>119. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>120. High Noise levels<br>121. Overhead hazards<br>122. Heat Stress/ Cold Stress<br>123. Eye Injuries | 1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves<br>3. Wear Langan approved safety shoes<br>4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>5. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>6. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed<br>7. Wear hearing protection<br>8. Wear hard hat / Avoid areas where overhead hazards exist.<br>9. Wear proper attire for weather conditions (sunscreen or protective clothing |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>10. Wear safety glasses. |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Groundwater/Product Purging/Sampling with Bailer**
**JSA Number:** **JSA053**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




S – ***Stop,*** *what has changed?*
T – ***Think*** *about the task*
E – ***Evaluate*** *potential hazards*
P – ***Plan*** *safe approach*
S - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☒ Safety Goggles | ☒ Face Shield | ☒ Nitrile Gloves | ☒ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☒ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Tyvek sleeves, Dermal Protection, PID, absorbent pads | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 79. Transport equipment to work area | 6. Back Strain<br>7. Slips/ Trips/ Falls<br>8. Traffic<br>9. Cuts/abrasions from equipment<br>10. Contusions from dropped equipment | 6. Use proper lifting techniques / Use wheeled transport.<br>7. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures.<br>8. Wear proper PPE (high visibility vest or clothing)<br>9. Wear proper PPE (leather gloves, long sleeves)<br>10. Wear proper PPE (safety shoes) |
| 80. Remove well cover | 41. Scrape knuckles/hand<br>42. Strain wrist/bruise plan<br>43. Pinch fingers or hand | 9. Wear proper PPE (leather gloves)<br>10. Using a hammer, tap the end of the wrench to loosen grip of bolts.<br>11. Wear proper PPE (leather gloves) |
| 81. Remove well cap and lock | 25. Well can pops from pressure.<br>26. Exposure to hazardous substances through inhalation or dermal exposure<br>27. Scrape knuckles/hand<br>28. Pinch points<br>29. Strain write/bruise palm | 12. Remove cap slowly to relieve pressure / Do not place face over well when opening / Wear proper PPE (safety glasses, face shield, hand protection)<br>13. Use direct air monitoring/reading instrument (i.e., PID) / Be familiar with and follow actions prescribed in the HASP / Wear proper PPE (nitrile gloves)<br>14. Wear proper PPE (leather gloves)<br>15. Using hammer, tap the end of the wrench to loosen grip |
| 82. Measure head-space vapor levels | 2. Exposure to hazardous substances through inhalation | 2. Do not place face over well when collecting measurement |
| 83. Set-up plastic sheeting/absorbent pads | 2. Lacerations when cutting plastic sheeting/absorbent pads. | 2. Use scissors to cut plastic sheeting/absorbent pads / Cut motions should always be away from body and body parts |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| for work site around the well | | |
| 84. Lower Bailer sleeve into well | 7. Repetitive motion injury (pulled arm/back muscles)<br>8. Dehydration | 7. Take breaks while lowering bailer into well/ Use a mechanical device to lower bailer into well/ Rotate employees (take turns conducting the manual labor portion)<br>8. Take breaks and drink water. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 7. Purge/Sample water/product collection | 1. Contact with potentially contaminated groundwater or product through dermal exposure<br>2. Contact with and burns from acid used for sample preservation<br>9. Tripping potential on sampling lanyard<br>10. Lacerations from broken sample bottles<br>11. Back strain when transporting coolers full of collected samples.<br>12. Slips/ Trips/ Falls | 1. Wear proper PPE (safety glasses, nitrile gloves, safety shield, Tyvek)<br>2. Ensure sample bottle lids are secure before use and after sample collection<br>3. Organize lanyard to keep out of the way as much as possible / Mark potential tripping hazards with caution tape or safety cones<br>9. Do not over-tighten bottle caps / Handle bottles safely to prevent breakage / Wrap glass bottles in bubble wrap, if possible<br>10. Use proper lifting techniques / Use wheeled transport / Seek assistance if coolers weight exceeds 50lbs. / Minimize distance to vehicle.<br>11. Have unobstructed path to vehicle or collection point / Follow good housekeeping procedures / Do not lift/walk with coolers that are too heavy/difficult to lift |
| 8. Retrieval of bailer | 9. Repetitive motion injury (pulled arm/back muscles)<br>10. Dehydration | 9. Take breaks while retrieving bailer out of the well/ Use a mechanical device to raise bailer out of well/ Rotate employees (take turns conducting the manual labor portion)<br>10. Take breaks and drink water. |
| 9. Pack-up equipment | 2. Back strain when removing or lifting heavy equipment | 2. Use proper lifting technique / Use wheeled transport for heavy equipment |
| 10. Replace well cap and lock | 3. Scrape fingers/hand<br>4. Strain wrist/bruise palm | 3. Wear proper PPE (leather gloves)<br>4. Using hammer, tap the end of the well cap to tighten grip |
| 11. Replace well cover | 4. Scrape knuckles/hand<br>5. Strain write/bruise palm.<br>6. Pinch fingers or hand | 4. Wear proper PPE (leather gloves)<br>5. Using hammer, tap the end of the wrench to tighten the grip of the bolts.<br>6. Wear proper PPE (leather gloves) |
| 12. Place used PPE in designated disposal drum | 3. Pressure build-up inside drum<br>4. Pinch hazard | 3. Remove cap from bung hole in drum to relieve pressure.<br>4. Wear proper PPE (leather gloves)<br>5. Product drums may require additional spill protection/electrical grounding, check local regulations |
| 13. Decontaminate equipment | 4. Splashing water/soap from decontamination<br>5. Contact with potentially contaminated groundwater through dermal exposure. | 4. Wear proper PPE (safety glasses)<br>5. Wear proper PPE (safety glasses, dermal protection) |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 14. All activities | 124. Slips/ Trips/ Falls<br>125. Hand injuries, cuts, or lacerations during manual handling of materials<br>126. Foot injuries<br>127. Back injuries<br>128. Traffic<br>129. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>130. High Noise levels<br>131. Overhead hazards<br>132. Heat Stress/ Cold Stress<br>133. Eye Injuries | 131. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>132. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>133. Wear Langan approved safety shoes.<br>134. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>135. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>136. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>137. Wear hearing protection<br>138. Wear hard hat / Avoid areas where overhead hazards exist.<br>139. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>140. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Sub-slab soil gas temporary point installation and sampling**
**JSA Number:** **JSA037-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S** – ***Stop,*** *what has changed?*

**T** – ***Think*** *about the task*

**E** – ***Evaluate*** *potential hazards*

**P** – ***Plan*** *safe approach*

**S** - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☐ Hearing Protection |
| ☒ Safety Glasses | ☒ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☒ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Tyvek Sleeves | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 85. Transport equipment to work site | 54. Back injuries<br>55. Slips/Trips/Falls<br>56. Traffic<br>57. Hand injuries | 39. Use proper lifting techniques/ Use wheeled transport/ Get assistance when need with moving equipment/ Minimize distance from vehicle<br>40. Minimize distance from vehicle/ Have unobstructed pathway to vehicle and collection points/ Mark tripping hazards with spray paint, cones, or caution tape/ Observe good housekeeping procedures.<br>41. Wear proper PPE (High Visibility vest and clothing)/ Exercise caution (stay alert-stay alive)<br>42. Wear proper PPE (leather gloves)/ Keep finger and hands clear of pinch points. |
| 86. Mark area for drilling | 44. Slips/Trips/Falls | 42. Minimize distance from vehicle/ Have unobstructed pathway to vehicle and collection points/ Mark tripping hazards with spray paint, cones, or caution tape/ Observe good housekeeping procedures |
| 87. Drill sampling points with hammer drill | 30. Eye injuries<br>31. Dust exposure<br>32. Hand injuries<br>33. Catch items (clothing)<br>34. Electric shock<br>35. Chemical atmosphere hazard (vapor)<br>36. Slips/Trips/Falls | 16. Wear proper PPE (safety glasses)<br>17. Wear proper PPE (dust mask)<br>18. Wear proper PPE (leather gloves)/ Keep hands and fingers out of pinch points/ Avoid drill catching on ground and twisting wrist or hand/ Release drill grip if drill becomes caught/ Ensure drill is unplugged prior to inserting bit.<br>19. Tie up or tuck-in all loose clothing/ Maintain distance from drill.<br>20. Inspect power cable for cuts or nicks before use/ Use GFCI outlet on power cord/ Do not use in wet conditions.<br>21. Monitor air, vapors with Photo-ionization detector (PID) |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 22. Minimize distance from vehicle/ Have unobstructed pathway to vehicle and collection points/ Mark tripping hazards with spray paint, cones, or caution tape/ Observe good housekeeping procedures |
| 88. Measure vapor content and depth to bottom of hole | 1. Chemical atmosphere hazard (vapors) | 1. Monitor air, vapors with Photo-ionization detector (PID)/ Keep face away from opening of hole while collecting measurements |
| 89. Set-up of shroud and sampling canister system | 1. Hand injuries<br>2. Chemical atmosphere hazard (vapors)<br>3. Slips/Trips/Falls | 1. Wear proper PPE (leather gloves, nitrile gloves)/ Keep fingers away from pinch points when installing pump/ Do not use open blades, use tubing cutter<br>2. Monitor air, vapors with Photo-ionization detector (PID)/ Keep face away from opening of hole while collecting measurements<br>3. Minimize distance from vehicle/ Have unobstructed pathway to vehicle and collection points/ Mark tripping hazards with spray paint, cones, or caution tape/ Observe good housekeeping procedures |
| 90. Purge soil gas | 1. Chemical atmosphere hazard (vapors) | 1. Monitor air, vapors with Photo-ionization detector (PID)/ Keep face away from exhaust port of pump |
| 91. Sample collection (opening and closing valves) | 1. Hand injuries | 1. Wear proper PPE (leather gloves)/ Keep fingers away from pinch points |
| 92. Sealing sampling holes | 1. Back injuries<br>2. Concrete dust<br>3. Eye injuries | 1. Use proper lifting techniques for lifting of cement bags<br>2. Wear proper PPE (dust mask)<br>3. Wear proper PPE ( safety glasses) |
| 93. All activities | 134. Slips/ Trips/ Falls<br>135. Hand injuries, cuts, or lacerations during manual handling of materials<br>136. Foot injuries<br>137. Back injuries<br>138. Traffic<br>139. Wildlife: Stray animals, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>140. High Noise levels<br>141. Overhead hazards<br>142. Heat or cold injuries<br>143. Eye Injuries | 141. Be aware of potential trip hazards/ Follow good housekeeping procedures/ Mark significant hazards.<br>142. Inspect for jagged/sharp edges, and rough or slippery surfaces/ Keep fingers away from pinch points/ Wipe off greasy, wet, slippery, or dirty objects before handling/ Wear leather/ cut-resistant gloves. Wear proper PPE (Langan approved safety shoes)<br>143. Use proper lifting techniques/ Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift/ Obtain assistance when possible.<br>144. Wear high visibility clothing & vest/ Use cones or signs to designate work area.<br>145. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray animals/ Carry and use animal repellant when needed/ Use bug spray when needed.<br>146. Wear hearing protection<br>147. Wear hard hat/ Avoid areas where overhead hazards exist.<br>148. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather)/ Drink plenty of fluids to avoid dehydration/ Takes breaks as necessary to avoid heat/cold stress.<br>149. Wear safety glasses |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title: Indoor Air Sampling**
**JSA Number: JSA007-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S** – ***Stop,*** *what has changed?*
**T** – ***Think*** *about the task*
**E** – ***Evaluate*** *potential hazards*
**P** – ***Plan*** *safe approach*
**S** - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: PID, Respiratory Protection (if necessary) | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 94. Building walkthrough and background contaminant removal | 58. Slips / Trips/ Falls<br>59. Exposure to substances/vapors during removal | 16. Be aware of potential trip hazards / Follow good housekeeping procedures / Mark significant below-grade hazards (i.e., holes, trenches) with safety cones or spray paint.<br>17. Monitor indoor air concentrations with a PID / Wear proper PPE (nitrile gloves) / Wear proper respiratory protection if necessary |
| 95. Transport equipment to work area | 11. Back Strain<br>12. Slips/ Trips/ Falls<br>13. Traffic<br>14. Cuts/abrasions from equipment<br>15. Contusions from dropped equipment | 11. Use proper lifting techniques / Use wheeled transport.<br>12. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures.<br>13. Wear proper PPE (high visibility vest or clothing)<br>14. Wear proper PPE (leather gloves, long sleeves)<br>15. Wear proper PPE (safety shoes) |
| 96. Mark out areas for indoor air sampling | 45. Slips/ Trips/ Falls | 12. Be aware of potential trip hazards / Follow good housekeeping procedures / Mark significant below-grade hazards (i.e., holes, trenches) with safety cones or spray paint |
| 97. Set-up canisters and begin indoor air sampling | 37. Dropping crates or canisters<br>38. Pinch hazard | 16. Exercise caution when moving crates and canisters / Use proper housekeeping of materials during sample events / Do not carry too many items at one time / Perform several trips, if necessary<br>17. Wear proper PPE (leather gloves) |
| 98. Sample collection | 3. Dropping crates or canisters<br>4. Pinched fingers from opening valves | 3. Exercise caution when moving crates and canisters / Use proper housekeeping of materials during sample events / Do not carry too many items at one time / Perform several trips, if necessary<br>4. Wear proper PPE (leather gloves) / Keep fingers away from pinch points |
| 99. Pack up equipment | 3. Back strain | 3. Use proper lifting techniques / Use wheeled transport. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | 4. Slips/ Trips/ Falls<br>5. Traffic | 4. Be aware of potential trip hazards / Follow good housekeeping procedures / Minimize distance to vehicle.<br>5. Wear proper PPE (safety vest) |
| 100. All activities | 144. Slips/ Trips/ Falls<br>145. Hand injuries, cuts, or lacerations during manual handling of materials<br>146. Foot injuries<br>147. Back injuries<br>148. Traffic<br>149. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>150. High Noise levels<br>151. Overhead hazards<br>152. Heat Stress/ Cold Stress<br>153. Eye Injuries | 150. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>151. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>152. Wear Langan approved safety shoes.<br>153. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>154. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>155. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>156. Wear hearing protection<br>157. Wear hard hat / Avoid areas where overhead hazards exist.<br>158. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>159. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** Hammer Drill
**JSA Number:** JSA049

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




S – ***Stop,*** *what has changed?*
T – ***Think*** *about the task*
E – ***Evaluate*** *potential hazards*
P – ***Plan*** *safe approach*
S - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☒ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 101. Transport equipment to work area | 60. Back Strain<br>61. Slips/ Trips/ Falls<br>62. Traffic<br>63. Cuts/abrasions from equipment<br>64. Contusions from dropped equipment | 18. Use proper lifting techniques / Use wheeled transport.<br>19. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures.<br>20. Wear proper PPE (high visibility vest or clothing)<br>21. Wear proper PPE (leather gloves, long sleeves)<br>22. Wear proper PPE (safety shoes) |
| 102. Electrical Connection | 46. Inspect electrical cord to drill.<br>47. Inspect hammer drill.<br>48. Inspect extension cord.<br>49. Test GFCI | 13. Check the plug, ensure all connections are in place, check cord for frayed sections. If plug or cord are worn, do not use equipment until repaired.<br>14. Inspect chuck for proper grasping and holding of bit, check that plastic housing is not cracked or missing pieces. Do not use if chuck does not work properly or housing is compromised.<br>15. Inspect extension cord, if worn or stripped pull from service and replace<br>16. Test GFCI, replace if GFCI fails |
| 103. Drill Bit | 1. Inspect drill bit | 1. Replace if worn.<br>2. Wear proper PPE (leather gloves) when installing and removing drill bit.<br>3. Ensure equipment is unplugged from electrical power when removing and installing drill bit. |
| 104. Use of Hammer Drill | 1. Hazards associated with using hammer drill, flying objects, heavy equipment, ground level hazards and dust.<br>2. Slips/ Trips/ Falls<br>3. Hazards associated drilling into concrete slab | 1. Maintain a safe distance from other site operations / Wear proper PPE (hard hat, safety glasses, safety shoes, safety vest, ear protection and leather gloves)<br>2. Be aware of potential trip hazards / Follow good housekeeping procedures / Mark extension cord pathway with safety cones.<br>3. Do not push hammer drill during use. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 105. All activities<br><br>4. All activities (cont'd) | 154. Slips/ Trips/ Falls<br>155. Hand injuries, cuts, or lacerations during manual handling of materials<br>156. Foot injuries<br>157. Back injuries<br>158. Traffic<br>159. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>160. High Noise levels<br>161. Overhead hazards<br>162. Heat Stress/ Cold Stress<br>163. Eye Injuries | 160. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards.<br>161. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves.<br>162. Wear Langan approved safety shoes.<br>163. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible.<br>164. Wear high visibility clothing & vest / Use cones or signs to designate work area.<br>165. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>166. Wear hearing protection<br>167. Wear hard hat / Avoid areas where overhead hazards exist.<br>168. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>169. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Test Pits**
**JSA Number:** **JSA016-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S** – ***Stop,*** *what has changed?*
**T** – ***Think*** *about the task*
**E** – ***Evaluate*** *potential hazards*
**P** – ***Plan*** *safe approach*
**S** - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☐ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☐ Other: | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 106. Transport equipment to work area | 65. Back Strain<br>66. Slips/ Trips/ Falls<br>67. Traffic<br>68. Cuts/abrasions from equipment<br>69. Contusions from dropped equipment | 23. Use proper lifting techniques / Use wheeled transport<br>24. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures<br>25. Wear proper PPE (high visibility vest or clothing)<br>26. Wear proper PPE (leather gloves, long sleeves)<br>27. Wear proper PPE (safety shoes) |
| 107. Digging Test Pit | 50. Back Strain<br>51. Unstable walls of excavation | 17. Observe proper digging technique. Ensure spoil pile and equipment are at least 2 feet from edge of excavation.<br>18. Excavate test pit in a stepped manor. |
| 108. All activities | 164. Slips/ Trips/ Falls<br>165. Hand injuries, cuts, or lacerations during manual handling of materials<br>166. Foot injuries<br>167. Back injuries<br>168. Traffic<br>169. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)<br>170. High Noise levels<br>171. Overhead hazards<br>172. Heat Stress/ Cold Stress<br>173. Eye Injuries | 170. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>171. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves<br>172. Wear Langan approved safety shoes<br>173. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>174. Wear high visibility clothing & vest / Use cones or signs to designate work area |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 3. All activities (cont'd) | | 175. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.<br>176. Wear hearing protection<br>177. Wear hard hat / Avoid areas where overhead hazards exist.<br>178. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress.<br>179. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** Hammer Drill
**JSA Number:** JSA049

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




S – ***Stop,*** *what has changed?*
T – ***Think*** *about the task*
E – ***Evaluate*** *potential hazards*
P – ***Plan*** *safe approach*
S - ***Start*** *task / **Stop** & regroup*

| **PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☒ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Dust mask/respirator | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 109. Transport equipment to work area | 70. Back Strain<br>71. Slips/ Trips/ Falls<br>72. Traffic<br>73. Cuts/abrasions from equipment<br>74. Contusions from dropped equipment | 28. Use proper lifting techniques / Use wheeled transport<br>29. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures<br>30. Wear proper PPE (high visibility vest or clothing)<br>31. Wear proper PPE (leather gloves, long sleeves)<br>32. Wear proper PPE (safety shoes) |
| 110. Electrical Connection | 52. Inpsect electrical cord to drill<br>53. Inspect hammer drill<br>54. Inspect extension cord<br>55. Test GFCI | 19. Check the plug, insure all connections are in place, check cord for frayed sections. If plug or cord are worn, do not use equipment until repaired<br>20. Inspect chuck for proper grasping and holding of bit, check that plastic housing is not cracked or missing pieces. Do not use if chuck doesn't work properly or housing is compromised.<br>21. Inspect extension cord, if worn or stripped pull from service and replace<br>22. Test GFCI, replace if GFCI fails |
| 111. Drill Bit | 2. Inspect drill bit | 4. Replace if worn<br>5. Wear proper PPE (leather gloves) when installing and removing drill bit.<br>6. Ensure equipment is unplugged from electrical power when removing and installing drill bit. |
| 112. Use of Hammer Drill | 4. Hazards associated with using hammer drill, flying objects, heavy equipment, ground level hazards and dust<br>5. Slips/ Trips/ Falls<br>6. Hazards associated drilling into concrete slab | 4. Maintain a safe distance from other site operations / Wear proper PPE (hard hat, safety glasses, safety shoes, safety vest, ear protection, dust mask/respirator, and leather gloves)<br>5. Be aware of potential trip hazards / Follow good housekeeping procedures / Mark extension chord pathway with safety cones<br>6. Do not push hammer drill during use. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 113. All activities<br><br>4. All activities (cont'd) | 174. Slips/ Trips/ Falls<br>175. Hand injuries, cuts or lacerations during manual handling of materials<br>176. Foot injuries<br>177. Back injuries<br>178. Traffic<br>179. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.)<br>180. High Noise levels<br>181. Overhead hazards<br>182. Heat Stress/ Cold Stress<br>183. Eye Injuries | 180. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>181. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves<br>182. Wear Langan approved safety shoes<br>183. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>184. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>185. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed<br>186. Wear hearing protection<br>187. Wear hard hat / Avoid areas were overhead hazards exist.<br>188. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>189. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** **Hand Auger Soil Sampling**
**JSA Number:** **JSA003-01**

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**




**S** – ***Stop,*** *what has changed?*

**T** – ***Think*** *about the task*

**E** – ***Evaluate*** *potential hazards*

**P** – ***Plan*** *safe approach*

**S** - ***Start*** *task /* ***Stop*** *& regroup*

| **PERSONAL PROTECTIVE EQUIPMENT REQUIRED:** | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☐ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☒ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: Half-face respirator, dust cartridges, PID (if applicable) | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 114. Unpack equipment | 75. Slips/ Trips/ Falls<br>76. Physical hazards including strains and hand injury | 1. Be aware of hazards in area/ Place safety cones in areas of potential slips/trips/falls<br>2. Use proper lifting techniques / Do not lift heavy loads without assitance / Avoid putting hands near pinch points / Wear proper PPE (leather gloves) |
| 115. Calibration of monitoring equipment | 56. Skin or eye contact with calibration chemicals<br>57. Pinch fingers in monitoring equipment | 43. Wear proper PPE (safety glasses/ goggles)<br>44. Wear proper PPE (leather gloves) |
| 116. Advancing and removing hand auger | 39. Physical hazards including back strain and hand injury | 23. Twist auger using arms and shoulders/ Do not over exert / Keep back in neutral position, bend at the knees / Request assistance when needed / Remove auger from ground keeping back in neutral position and lift using legs |
| 117. Sample collections<br>a) Monitor parameters<br>b) Prepare sample containers and labels<br>c) Collect soil sample<br>d) Securely cap containers, label and store in sample cooler until shipping<br>e) Deliver cooler to lab or courier to lab | 23. Contact with potentially contaminated soil<br>24. Lacerations from broken sample bottles<br>25. Back strain with transporting coolers<br>26. Internal exposure to contaminants through inhalation of dust<br>27. Slips/ Trips/ Falls | 19. Use monitoring devices / Wear proper PPE (safety glasses, nitrile gloves)<br>20. Do not over-tighten bottles caps / Handle bottles safety to prevent breakage<br>21. Use proper lifting techniques / Do not lift heavy loads without assistance<br>22. Avoid creating dust / If necessary, wear a half-face respirator with applicable dust cartridges / Inspect respirator for damage and cleanliness prior to use / Clean respirator after each use and store in a clean, secure location<br>23. Be alert / Follow good housekeeping procedures |
| 118. Decontamination of equipment | 184. Splashing water/soap from decontamination<br>185. Contact with potentially contaminated soil | 190. Wear proper PPE (safety glasses, gloves)<br>191. Wear proper PPE (safety glasses, gloves) |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 119. All activities<br><br>6. All activities (cont'd) | 1. Slips/ Trips/ Falls<br><br>2. Hand injuries, cuts or lacerations during manual handling of materials<br><br>3. Foot injuries<br>4. Back injuries<br><br>5. Traffic<br><br>6. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.)<br><br>7. High Noise levels<br>8. Overhead hazards<br>9. Heat Stress/ Cold Stress<br><br>10. Eye Injuries | 1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves<br>3. Wear Langan approved safety shoes<br>4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>5. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>6. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed<br>7. Wear hearing protection<br>8. Wear hard hat / Avoid areas were overhead hazards exist.<br>9. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>10. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

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# LANGAN

**Job Safety Analysis (JSA)**
**Health and Safety**

**JSA Title:** Geotechnical Drilling
**JSA Number:** JSA014-01

**A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last Minute Risk Assessment.**




S – ***Stop,*** *what has changed?*
T – ***Think*** *about the task*
E – ***Evaluate*** *potential hazards*
P – ***Plan*** *safe approach*
S - ***Start*** *task / **Stop** & regroup*

| PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed): | | | | |
|---|---|---|---|---|
| ☒ Safety Shoes | ☒ Long Sleeves | ☒ Safety Vest (Class 2) | ☒ Hard Hat | ☒ Hearing Protection |
| ☒ Safety Glasses | ☐ Safety Goggles | ☒ Face Shield | ☒ Nitrile Gloves | ☐ PVC Gloves |
| ☒ Leather Gloves | ☐ Cut Resist. Gloves | ☐ Fall Protection | ☐ Fire Resistant Clothing | ☐ Rubber Boots |
| ☐ Insect/Animal Repellent | ☐ Ivy Blocker/Cleaner | ☐ Traffic Cones/Signs | ☐ Life Vest/Jacket | |
| ☒ Other: NomeX (as needed) | | | | |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 120. Transport equipment to work area | 77. Back Strain<br>78. Slips/ Trips/ Falls<br>79. Traffic<br>80. Cuts/abrasions from equipment<br>81. Contusions from dropped equipment | 33. Use proper lifting techniques / Use wheeled transport<br>34. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures<br>35. Wear proper PPE (high visibility vest or clothing)<br>36. Wear proper PPE (leather gloves, long sleeves)<br>37. Wear proper PPE (safety shoes) |
| 121. Set-up HSA/SPT rig | 58. Slips/ Trips/ Falls<br>59. Pinch Hazards<br>60. High noise levels<br>61. Clothing entanglement<br>62. Electrocution/falling equipment and debris from raising HSA/SPT rig mast<br>63. Carbon monoxide poisoning<br>64. HSA/SPT rig roll-over<br>65. HSA/SPT rig movement | 23. Be aware of potential trip hazards / Follow good housekeeping procedures / Mark significant below-grade hazards (i.e. holes, trenches) with safety cones or spray paint<br>24. Wear proper PPE (leather gloves)<br>25. Wear proper PPE (hearing protection)<br>26. Wear proper attire for HSA/SPT rig (no loose clothing, strings, etc.)<br>27. Wear proper PPE (hard hats) / Be aware of locations at all times / Look up, down and around before raising mast / Check HSA/SPT drill rig mast for loose objects/debris before raising<br>28. Stand upwind of rig engine<br>29. Do not move rig with mast raised / Set stabilizers prior to raising mast / Inspect work area / If area appears unstable, the boring locations should be moved.<br>30. All field personnel should stay clear of rig while moving / Use a spotter when backing up the rig |
| 122. Advance HSA/SPT rods, augers and casing below ground surface | 40. Strain wrist/bruise palm<br>41. Pinched fingers<br>42. Back strain | 18. Wear proper PPE (leather gloves) / Use proper technique for preparing rods / Use second person, if necessary<br>19. Wear proper PPE (leather gloves) |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| 123. Advance HSA/SPT rods, augers and casing below ground surface (cont'd) | 43. Clothing entanglement<br>44. Carbon monoxide poisoning<br>45. Bruised/Broken toes/feet<br>46. High noise levels | 20. Use proper lifting techniques / Obtain assistance if needed<br>21. Wear proper attire for HSA/SPT rig (no loose clothing, strings, etc.)<br>22. Stand upwind of the rig<br>23. Wear proper PPE (safety shoes)<br>24. Wear proper PPE (hearing protection) |
| 124. Remove and open split spoon | 28. Pinched fingers<br>29. Cuts/lacerations<br>30. Skin contact with contaminated soil and groundwater | 1. Wear proper PPE (nitrile and leather gloves)<br>2. Wear proper PPE (leather gloves)<br>3. Wear proper PPE (nitrile gloves, safety glasses) |
| 125. Repeat steps 3 and 4 until desired depth is reached | 5. See steps 3 and 4 | 1. See steps 3 and 4 |
| 126. Remove HSA/SPT rods, augers and casing and place in storage rack | 1. Clothing entanglement<br>2. Back strain<br>3. Pinched fingers<br>4. Carbon monoxide poisoning<br>5. High noise levels | 1. Wear proper attire for HSA/SPT rig (no loose clothing, strings, etc.)<br>2. Use proper lifting techniques / Obtain assistance if needed<br>3. Wear proper PPE (leather gloves)<br>4. Stand upwind of rig engine<br>5. Wear proper PPE (hearing protection) |
| 127. Tremie-grout borehole with a cement-bentonite grout mixture | 1. Splash cement/bentonite grout on face/eyes<br>2. Back strain<br>3. Pinched fingers | 1. Wear proper PPE (safety glasses)<br>2. Use proper lifting techniques / Obtain assistance if needed<br>3. Wear proper PPE (nitrile gloves, leather gloves) |
| 128. Decontaminate equipment | 1. Contact with potentially impacted material<br>2. Contact with sharp pieces of equipment | 1. Wear proper PPE (safety glasses, nitrile gloves)<br>2. Wear proper PPE (leather gloves) |
| 129. Patch soil boring location to return to pre-existing conditions (i.e. concrete, asphalt, grass) | 1. Cuts/lacerations<br>2. Splashed concrete on face/eyes<br>3. Hammer fingers/hands when patching asphalt | 1. Wear proper PPE (leather gloves) / Use scissors for cutting<br>2. Use proper PPE (safety glasses)<br>3. Be aware of hands/fingers during hammering / Wear proper PPE (leather gloves) |
| 130. All activities | 186. Slips/ Trips/ Falls<br>187. Hand injuries, cuts or lacerations during manual handling of materials<br>188. Foot injuries<br>189. Back injuries<br>190. Traffic<br>191. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.)<br>192. High Noise levels<br>193. Overhead hazards<br>194. Heat Stress/ Cold Stress<br>195. Eye Injuries | 192. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards<br>193. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves<br>194. Wear Langan approved safety shoes<br>195. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible<br>196. Wear high visibility clothing & vest / Use cones or signs to designate work area<br>197. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed<br>198. Wear hearing protection<br>199. Wear hard hat / Avoid areas were overhead hazards exist. |

| JOB STEPS | POTENTIAL HAZARDS | PREVENTATIVE / CORRECTIVE ACTION |
|---|---|---|
| | | 200. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress<br>201. Wear safety glasses |
| Additional items. | | |
| Additional Items identified while in the field.<br><br>(Delete row if not needed.) | | |

| Print Name | Sign Name | Date |
|---|---|---|
| ***Prepared by:*** | | |
| | | |
| | | |
| | | |
| ***Reviewed by:*** | | |
| | | |
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| | | |
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| | | |

# ATTACHMENT H

# TAILGATE SAFETY BRIEFING FORM

# LANGAN TAILGATE SAFETY BRIEFING

Date:_____ Time: _____

Leader:_____ Location:_____

Work Task:

_____

_____

**SAFETY TOPICS (*provide some detail of discussion points*)**

Chemical Exposure Hazards and Control:_____

_____

Physical Hazards and Control: _____

Air Monitoring: _____

PPE: _____

_____

Communications:_____

Safe Work Practices: _____

_____

Emergency Response: _____

Hospital/Medical Center Location: _____

Phone Nos.: _____

Other: _____

**FOR FOLLOW-UP** (the issues, responsibilities, due dates, etc.**)**

_____

_____

_____

**ATTENDEES**

| PRINT NAME | COMPANY | SIGNATURE |
|---|---|---|
| | | |
| | | |
| | | |
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| | | |

# E-7

Bally's Bronx
Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, New York
*Prepared by: Ecology and Environmental Engineering, P.C.*

LANGAN

# Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, New York

**May 31, 2012**
**Revised: August 31, 2012**
**October 15, 2013**

**Prepared for:**

**New York City Department of Parks & Recreation**
The Arsenal
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**Prepared by:**

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# List of Abbreviations

| | |
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| AES | American Environmental Solutions, Inc. |
| AGC | Annual Guideline Concentrations |
| AKRF | Allee, King, Rosen & Fleming, Inc. |
| bgs | below ground surface |
| CAA | Clean Air Act |
| C&D | construction and demolition |
| CEQR | City Environmental Quality Review |
| CY | Cubic Yard |
| DPR | (New York City) Department of Parks and Recreation |
| DSNY | New York City Department of Sanitation |
| EEEPC | Ecology and Environment Engineering, P.C. |
| EPA | (United States) Environmental Protection Agency |
| FPPCCCP | Ferry Point (Park East) Post-Construction Custodial Care Plan |
| FPP | Ferry Point Partners, LLC |
| GHG | greenhouse gas |
| HAP | hazardous air pollutant |
| IEM | Independent Environmental Monitor |
| LEL | lower explosive limit |
| LFG | landfill gas |
| LFGMP | Landfill Gas Management Plan |
| $m^3/Mg$ | cubic meters per megagram |
| Mg/yr | megagrams per year |
| M&M | monitoring and maintenance |
| MSW | municipal solid waste |
| NMOC | non-methane organic compound |
| NTU | nephelometric turbidty unit |
| NYCRR | New York Codes, Rules, and Regulations |

## List of Abbreviations and Acronyms (cont.)

| | |
|---|---|
| NYCDEP | New York City Department of Environmental Protection |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| OM&M | operations, maintenance and monitoring |
| PDM | processed dredge material |
| ppm | parts per million |
| psi | pounds per square inch |
| ROI | radius of influence |
| SAPA | State Administrative Procedures Act |
| SEQRA | State Environmental Quality Review Act |
| SF | square foot |
| SGC | short-term guideline concentration |
| SOW | scope of work |
| SSDS | sub-slab depressurization system |
| TAGM | Technical and Administrative Guidance Memorandum |
| TRC | TRC Engineers |
| ULURP | Uniform Land Use Review Procedure |
| VOC | volatile organic compound |
| Walsh | Walsh Environmental Scientists and Engineers, LLC |

# 1 Purpose and Scope

## 1.1 Document Overview

New York City Department of Parks and Recreation (DPR) is submitting this Supplemental Engineering Report ("the Report") in support of its updated application package for the Ferry Point Park East 6NYCRR Part 360 Solid Waste Management Permit ("the 2005 Permit"), No. 2-6006-00014/00013.

This Report presents the studies, modeling, investigations, and design work that were performed to resolve outstanding comments that have been received by DPR since the April 8, 2009, Notice of Incomplete Application and the November 25, 2009, permit application submittal to the New York State Department of Environmental Conservation (NYSDEC).

This Report and the supporting documentation provide sufficient data and analysis to demonstrate how outstanding comments and requests have been addressed and complete the permit application.

## 1.2 Document Organization

This report is organized as follows:

- Section 2 – Presents the history and scope of the project, and past permitting benchmark dates,
- Section 3 – Provides construction status and a permit compliance summary,
- Section 4 – Discusses each previously unresolved NYSDEC issue,
- Appendices – Provide supporting documentation for the additional studies, modeling, and investigations for the Site that were completed at the request of NYSDEC.

# 2 Introduction

## 2.1 Project History

Ferry Point Park East in the Bronx (the "Site") is a former landfill that is bounded by the Bronx-Whitestone Bridge and Hutchinson River Parkway to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue and St. Raymond's Cemetery to the north, and the East River to the south.

In the late 1990s, the New York City Department of Parks & Recreation (DPR) entered into a license agreement with Ferry Point Partners, LLC (FPP) to develop, construct, and operate a new public recreation facility (the "Project") at the Site. The new facility would include a golf course, a Community Park, a waterfront park, and related facilities. At that time all required reviews for the Project were completed under the City Environmental Quality Review (CEQR), State Environmental Quality Review Act (SEQRA), and the City's Uniform Land Use Review Procedure (ULURP).

On July 17, 2000, NYSDEC issued a Part 360 Solid Waste Management Permit (No. 2-6006-00014-000110) (the "2000 Permit") jointly to FPP and DPR (collectively, the "Historic Permittee") for a non-specific "facility" under Part 360-1.9(b) at the Site. The 2000 Permit allowed the Historic Permittee to import and place a total of 1,000,000 cubic yards (CY) of fill necessary to construct the golf course on the Site. In February 2002 and November 2005, the Part 360 Permit was modified to allow additional fill volume and changes in design features. On November 18, 2005, NYSDEC issued the modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013) to place a total of 2,543,729 CY of in-place fill on the Site. This action was followed by a December 27, 2005, revision (No. 2-6006-00014/00013) that amended the total in-place fill volume to 2,370,000 CY (the "2005 Permit").

In 2007, DPR terminated the license agreement with FPP and took over Site development responsibilities, including redevelopment of the Community Park and construction of the waterfront park and golf course portions of the Site.

## 2.2 Project Scope

Consistent with the 2005 Permit, the project scope includes the construction of three major elements (a golf course, Community Park, and waterfront park) over the 222-acre Site (see Figure 2-1) as follows:

- An 18-hole golf course with practice facility, driving range, clubhouse, maintenance facility, irrigation lake, stormwater retention ponds, and a parking lot (192.5 acres);
- A passive recreation waterfront park with walkways and a comfort station (19.5 acres); and
- A Community Park with baseball fields, basketball court, walkways, comfort station, and landscaped stormwater retention area (10 acres).

## 2.3 Permitting Benchmarks

The following bullets chronicle significant permit-related correspondence and actions since the 2005 Permit was issued:

- **July 25, 2008:** A permit renewal application package to the 2005 Permit was submitted by DPR. This submittal requested a modification of the 2005 Permit to allow the use of dredge and processed dredge material (PDM) as fill and the barge delivery of such fill material to the Site.
- **October 24, 2008:** NYSDEC issued a Notice of Incomplete Application and comments to the July 25, 2008 submittal.
- **December 2, 2008:** NYSDEC issued a letter to advise DPR that the 2005 Part 360 Permit (with the corresponding November 30, 2008, expiration date) remains in full force and effect until NYSDEC approves the permit renewal application, as per Section 401(2) of the State Administrative Procedure Act (SAPA). See Appendix A for a copy of the SAPA letter.
- **December 26, 2008:** A response to NYSDEC's comments of October 24, 2008 was submitted by DPR with a supplemental permit application package to the 2005 Permit.
- **April 8, 2009:** NYSDEC issued comments to the December 26, 2008, permit application submittal.
- **April 9, 2009:** DPR withdrew its request for a permit modification to allow the use of PDM as fill.
- **November 25, 2009:** A response to NYSDEC's comments of April 8, 2009, was submitted by DPR with a second supplemental permit application package to the 2005 Permit. This submittal withdrew the request to allow the use of dredge material and PDM as fill and the barge delivery of such fill material

to the Site. This submittal also proposed a design modification for a Site-wide active landfill gas control system. The 2005 Permit included passive venting systems for the Site, with active systems proposed only in enclosed structures.

- **June 25, 2010:** NYSDEC issued a Notice of Incomplete Application and comments on the November 25, 2009, permit application submittal.

- **August 6, 2010:** NYSDEC issued additional comments on the November 25, 2009, permit application submittal.

- **September 29, 2010:** A response to NYSDEC's comments of June 25 and August 6, 2010, was submitted by DPR with a third supplemental permit application package for the 2005 Permit. This submittal withdrew the proposed design modification of a Site-wide active landfill gas control system and proposed a system consistent with the 2005 Permit.

- **October 7, 2010:** A supplemental response to NYSDEC's comments of June 25 and August 6, 2010, was submitted by DPR to accompany the September 29, 2010, permit renewal application submittal.




SOURCE: Ecology and Environment, Inc. 2012

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**Figure 2-1 Ferry Point Park Site Layout**

# 3 Project Status

## 3.1 Construction Status

Construction activities are proceeding with the following scheduled milestones.

### Community Park

- **As of December 31, 2011:** Stormwater retention pond, passive landfill gas (LFG) vents, and recreation facilities were complete.
- **December 31, 2014:** Comfort station completion is anticipated.

### Golf Course

- **As of May 17, 2012:** Construction of the golf course is 73% complete.
- **December 31, 2014:** Golf course completion is anticipated, and opens with a temporary clubhouse.
- **December 31, 2017:** Completion of the permanent clubhouse is anticipated.

### Waterfront Park

- **November 30, 2012:** Final design completion is anticipated.
- **December 31, 2015:** Construction completion is anticipated.

## 3.2 Permit Compliance Monitoring and Reporting since November 18, 2005

In accordance with the 2005 Permit and as required under Special Condition 25, an Independent Environmental Monitor (IEM) has been retained by the Permittee (DPR) to provide environmental oversight of all activities authorized by the permit. The 2005 Permit states that the IEM may be an individual or engineering firm, and must be or provide a New York State-licensed professional engineer. The firm of Woodard & Curran is currently performing the IEM responsibilities for the project.

The IEM monitoring is conducted daily and reported to NYSDEC on a bi-weekly basis. These reports are available at the DPR Bronx Borough Headquarters (Ranaqua) document repository and are part of the public record. The address of the repository is 1 Bronx River Parkway, Bronx, NY 10462; telephone: (718) 430-1800. As these reports continue to be issued, DPR responds to and resolves issues as they develop. An email received from NYSDEC on Thursday, May 24, 2012 (see Appendix B), verified that there is "*no outstanding enforcement action"* for the Site.

# 4 Supplemental Engineering Work

## 4.1 Fill Volumes

DPR is conforming to the fill volume conditions of the 2005 Permit. Under Special Condition No. 9, a total of 2,370,000 CY of in-place fill is allowed to be imported to the Site by truck: 2,120,000 CY of shaping fill material is being imported and placed on-site for the base layer, and approximately, 250,000 CY of cover fill material is being imported to be placed on top of the base layer. The imported fill materials are being used to attain the final design grades and contours of the golf course.

In accordance with Special Condition No. 10 of the 2005 Permit, imported fill brought to the Site is tracked according to "in-truck" volumes and reported by the Site's IEM to NYSDEC. A compaction factor is used to calculate the difference between the volume of in-truck fill and the volume of compacted in-place fill that achieves the design grades and contours of the Site. A compaction factor of 41.7% is being used in the IEM reports to calculate the in-place fill volume.

As of April 20, 2012, the IEM reported that a total of 1,525,436 CY of in-place fill volume has been reported at the Site since October 18, 2002. This volume includes 1,450,858 CY of in-place shaping material and 74,578 CY of in-place cover material.

During 2010, fill material from one particular source was brought on-site and placed in seven different stockpiles. The material was believed to be in conformance with permit conditions. However, it was found that the material did not meet the requirements of 2005 Permit Special Conditions 1, 9, and 16, during NYSDEC and IEM inspections. On January 10, 2011, DPR signed an Administrative Order on Consent (Consent Order), Case No. R2-20100521-172, related to this fill material. In accordance with the Consent Order, NYSDEC and DPR "*agreed … the material specified in this Order as shaping material on this Site, provided that it is covered by asphalt*." The IEM reported that 64,230 CY of in-truck volume was designated as shaping material under this Order. This fill material was covered by asphalt in 2012.

## 4.2 Fill Material Chemical Criteria

In light of evolving soil criteria and standards for public use, NYSDEC has provided comments and other clarifications to DPR with respect to the chemical parameters for each soil layer. DPR has complied with the 2005 Permit require-

ments and the additional clarifications provided by NYSDEC, which has been verified by the IEM.

This section reviews DPR's compliance with the 2005 Permit conditions and NYSDEC clarifications. In addition, it provides responses to NYSDEC comments related to imported fill material.

### 4.2.1 Fill Material Characterization

As required under the 2005 Permit, all fill material imported to the Site is analyzed for the chemical contaminants identified in Special Conditions 15(a) through 15(d). The additional criteria set forth in NYSDEC correspondence since the 2005 Permit, described below must also be met. Only those soils that satisfy the requirements of these criteria are allowed to be used on the Site.

#### 4.2.1.1 Shaping Layer Chemical Criteria

Fill material imported to the Site and used for the shaping layer is analyzed for the following parameters, per Special Condition 15(c) of the 2005 Permit:

*"The shaping layer must meet the following chemical limits:*

*i. Total carcinogenic SVOC levels must be less than 3ppm if any one of the carcinogenic SVOCs exceed Technical and Administrative Guidance Memorandum (TAGM) 4046. The following are the list of carcinogenic SVOCs that are subject to this 3ppm limit: Benzo(a)pyrene, Dibenzo(a,h) anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, and Chrysene.*

*ii. Total SVOCs must be less than 500ppm*

*iii. Metals*

- *Arsenic less than 28ppm;*
- *Barium less than 2,000ppm;*
- *Cadmium less than 20ppm;*
- *Chromium less than 1,000ppm;*
- *Copper less than 1,000ppm;*
- *Lead less than 400ppm;*
- *Mercury less than 0.57ppm;*
- *Selenium less than 11ppm;*
- *Silver less than 100ppm*

*iv. Asbestos for all layers must be 0.5% or less*

*v. Total sulfur for all layers must be 0.5% or less*

*vi. Total PCBs less than 10ppm*

*vii. Total Pesticides less than 10ppm*

*viii. VOCs (all individual analytes less than TAGM 4046)"*

In a letter dated October 25, 2006 (see Appendix C.1), NYSDEC provided a clarification of Special Condition 15(c)(i) adding that a carcinogenic SVOC limit of 10 ppm or lower is allowable from individual fill material sources, provided that a weighted average of equal or less than 3 ppm is achieved by the end of the permit.

A formula for the weighted average was included in the correspondence for use by the IEM.

#### 4.2.1.2 Cover Layer Chemical Criteria

Fill material imported to the Site and used for the cover layer is subject to the following requirements, per Special Condition 15(b) of the 2005 Permit:

*"In order for topsoil material to be used on Site for the cover layer, it must be sampled prior to acceptance and after the importation of each additional 2,000 cubic yards (in truck volumes). Each soil sample is to be analyzed for the entire analyte list in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046, total volatile organic compounds (VOCs), total semi-volatile organic compounds (SVOCs), pesticides and herbicides, polychlorinated biphenyls (PCBs), and metals (including Resource Conservation and Recovery Act (RCRA) metals)."*

As required by the 2005 Permit, the cover layer must meet the following chemical limits:

- TAGM 4046 Table 1 – Volatile Organic Compounds (VOCs)
- TAGM 4046 Table 2 – Semi-Volatile Organic Compounds (SVOCs)
- TAGM 4046 Table 3 – Pesticides/Herbicides and Polychlorinated Biphenyls (PCBs)
- TAGM 4046 Table 4 – Metals
- Total Asbestos 0.5% or less
- Total Sulfur 0.5% or less

The following additional criteria were directed in NYSDEC correspondence since the 2005 Permit. DPR has been following NYSDEC's directives since receipt of each one.

- **April 30, 2009** – Directs DPR not to accept or place on the Site any cover layer materials with arsenic concentrations greater than 16 ppm or lead concentrations greater than 400 ppm.
- **July 28, 2009** – Provides a table to DPR listing modified heavy metal chemical limits for the cover layer at the Site.
- **September 25, 2009** - Revises and clarifies the chromium chemical limits for the cover layer previously presented in the July 28, 2009, letter.

A complete list of the 2005 Permit criteria is provided along with the additional criteria correspondence in Appendix C.2.

#### 4.2.1.3 Demarcation Layer Requirements

Special Condition 15(d) of the 2005 Permit requires the following:

*"The final placement (including top soil), location, thickness, and detailed chemical limits of the final cover layers on the Site, including the community park and waterfront park, are subject to the specifications, directions and requirements determined by the NYS Department of Health (NYSDOH) to be applicable. It is the responsibility of the Permittees to obtain a written determination from NYSDOH. The Permittees must provide the Department with a copy of NYSDOH's determination. No cover layer material may be placed on the Site, until the Department acknowledges receipt of NYSDOH's determination."*

As required by Special Condition 15(d), DPR obtained such written determination from NYSDOH in a letter dated, August 2, 2006 (see Appendix C.3).

In accordance with this communication, two different recreational classifications, active and passive, were proposed by DPR for incorporation into the overall design compliance objectives for the Site. This letter also included that a *"demarcation barrier be used to divide the final cover fill from the existing landfill capping material."* The demarcation barrier (layer) at Ferry Point Park East provides a visual warning that will be easily recognizable during future excavation work beneath the cover layer. (Refer to Section 4.2.1.4 for further discussion of the demarcation layer.)

In a letter dated July 9, 2009 (see Appendix C.3), DPR requested a further review of the heavy metal chemical criteria for the cover layer at Ferry Point Park East. A response received from NYSDEC on July 28, 2009, provided additional clarification regarding what are considered active and passive recreational areas. As per this letter:

Active Recreation – *"…all other areas that are not covered with a building or other impermeable cover system… are deemed active recreational areas."*

In compliance with this active recreational determination, DPR installed 2 feet of cover material and a demarcation layer throughout the Community Park.

Passive Recreation – *"…the golf course is deemed a "passive recreational area" and is required to have a one foot thick cover layer over a demarcation layer."*

Following this directive, DPR requested clarification from NYSDEC regarding the demarcation layer requirement for the extent of the golf course. The request for clarification was based on the need for further specificity regarding the use of a demarcation layer on the golf course.

In response, NYSDEC and NYSDOH reviewed a summary of the analytical data for all the shaping material imported to the Site to date. Upon review of the data set, confirmatory analytical sampling of the in-place shaping material was requested by NYSDEC and NYSDOH. DPR conducted test-pit sampling and analysis under an approved work plan and submitted the data to NYSDEC on February 16, 2011.

In their letter dated March 9, 2011, NYSDEC stated that "*NYSDOH reviewed the shaping layer test pit data and determined that it confirmed existing shaping layer data."* NYSDEC and NYSDOH agreed that a demarcation layer would not be required at areas of the golf course having a fill thickness of 5 or more feet of combined shaping and cover layer materials. Communications related to this determination are provided in Appendix C.3.

#### 4.2.1.4 Demarcation Layer Plan

At the Ferry Point East Site, "demarcation layer" means a brightly colored, permeable plastic material placed beneath the Site's final cover layer that is easily recognizable during an excavation. The request was made for the protection of Site workers during any future excavation work beneath the cover layer.

The demarcation layer plan was based on a comparison of final design grades and the top of waste elevations extrapolated from soil boring data. Appendix C.4 provides the Demarcation Layer Plan for the Site. Field verification that demarcation requirements are being met is performed continuously and routinely reported by the IEM to confirm permit compliance.

### 4.2.2 Dioxin and Furan Analytical Methods

In a letter dated May 26, 2011 (see Appendix C.5), DPR requested confirmation that the use of United States Environmental Protection Agency (EPA) Analytical Method 625/8270 is an acceptable alternative method for the analysis of dioxin and furan constituents. On April 12, 2011, NYSDEC provided verbal confirmation to DPR that this method may be used. Accordingly, EPA Analytical Method 625/8270 is now being used where appropriate for the analysis of dioxin and furan constituents on sources of incoming fill material.

## 4.3 Final Cover Material Physical Characteristics

In accordance with the 2005 Permit, and as written in the June 30, 2005, Engineering Report (TRC 2005), *"The upper portion of the cover layer will consist of topsoil and/or sand capping material in accordance with the Nicklaus Design Technical Specifications (see 2005 Fill Report) to support the growth of the golf course turf and the grassed areas of the adjacent parks*."

Special Condition 16 states that "*the major components (greens, contours, heights, and topsoil) shall meet the Nicklaus Design Technical Specification, as noted in … the 2005 Engineering Report.*

The golf course construction specifications are consistent with these regulatory requirements.

### 4.3.1 Site-wide Water Balance Model

In their August 6, 2010, letter of additional comments to the November 25, 2009, permit application submittal, NYSDEC requested DPR *"demonstrate that the soil to be used at the site as final cover material — not necessarily as the uppermost planting material — will have a sufficiently low coefficient of permeability and percentage of organic material to minimize the infiltration of water into the lower layers of material to the greatest extent practicable."*

In response to this request, DPR performed a site-wide water balance to predict post-construction infiltration rates. The EPA's Hydrologic Evaluation of Landfill Performance (HELP) computer model was used for this purpose.

As requested by NYSDEC, DPR used a modeling scenario that compared a typical one-foot thick soil landfill cover with the proposed Site cover material as designed.

Model results were presented to NYSDEC in a May 13, 2011, Memorandum (see Appendix D.1). The water balance accounted for impermeable areas of the Site, irrigation of the golf course, drainage system stormwater capture, and the lining of on-site ponds (for a specific discussion of Site ponds, see Section 4.3.1.2). Using a cover soil permeability of 14 inches per hour, the model results indicated that post-construction conditions would result in a reduction in the infiltration rate over the entire Site by approximately 9,700 gallons per day. This estimate effectively showed there will be a lower volume of water infiltrating through the surface of the Site following completion of construction.

A subsequent water balance memorandum was submitted by DPR to NYSDEC on August 10, 2011 (see Appendix D.2). These water balance results indicated that a higher cover soil permeability of 30 inches per hour would also result in a lower volume of water infiltrating through the surface of the Site following completion of construction. Prior to approving this subsequent request to use a cover soil permeability of 30 inches per hour, NYSDEC asked that DPR review and verify the adequacy of the Site's drainage capacity. The purpose of this review was to determine whether the Site's drainage system as designed would be adequate if lined ponds and a cover soil permeability of 30 inches per hour were incorporated into the Site design. A description of the pond liners and drainage capacity review are provided in Sections 4.3.1.2 and 4.3.1.3.

Based on the model results and the drainage capacity review discussed in Section 4.3.1.3, NYSDEC approved a maximum permeability of 30 inches per hour for cover material used at the Site. As cover material is imported to the Site, it is sampled and tested to confirm it meets the water balance (permeability) requirements approved by NYSDEC. The results of the permeability testing are provided in bi-weekly IEM reports.

In a letter dated January 26, 2012 (see Appendix D.3), NYSDEC clarified that the average percolation rate from all samples collected within one cover material stockpile can be used as the representative percolation rate of that stockpile. The average percolation rate *"is justified because the loading, unloading, transporting, stockpiling, and spreading of the cover material will provide a homogenous mixture of the sand"* (material) from the stockpile. *"…the sand will be tested every 2,000 CY per the permit requirements moving forward."*

#### 4.3.1.1 Pond Liner Designs

A single irrigation pond has already been constructed at the Site. The purpose of this pond is to collect and store stormwater runoff and reuse it later for irrigation and maintenance of the golf course vegetative cover. This pond is fully lined to maximize the retention of irrigation water. The irrigation pond design documents were included in the November 25, 2009, permit application package.

In addition, there are five smaller water quality ponds designed to provide active stormwater retention and limit the off-site migration of sediment. The geometry and grading (engineering design) of these ponds were also provided in the November 25, 2009, permit application package.

DPR considered various methods to meet NYSDEC's request of August 6, 2010, to minimize the infiltration of water through *"the lower layers of material to the maximum extent possible."* Based on this consideration, DPR is implementing a recommendation contained in the November 16, 2010, memorandum (see Appendix D.1) to line the five on-site water quality ponds to limit water exfiltration.

Supplemental drawings and specifications for the lining of these ponds are provided in Appendix D.4. The pond liner designs are consistent with the previously approved geometry and grading (engineering design) presented in the November 25, 2009, permit application package.

#### 4.3.1.2 Drainage Capacity Review

Following submittal of the Site-wide water balance and the decision to line the water quality ponds, a review of the Site's existing Stormwater Pollution Prevention Plan (SWPPP) (TRC 2009c) was performed by DPR.

NYSDEC requested this review to determine whether additional flow into the Site's drainage system (as a result of lining the water quality ponds and the higher permeability cover soil) would exceed the storm drainage system capacity.

The review indicated that additional flow to the drainage system would not exceed the previously permitted design discharge rates in the SWPPP. The review also concluded that the system's drainage capacity is adequate. The technical memorandum summarizing the drainage review was submitted to NYSDEC on October 18, 2011 (see Appendix D.5). In an October 21, 2011, email response (see Appendix D.5), NYSDEC indicated that they *"…conditionally approve cover*

*material at the FPP [Ferry Point Park] golf course having permeability up to 30 inches per hour."*

The conditional approval was based on a request for DPR to *"submit for approval an amendment to the Stormwater Pollution Prevention Plan (SWPPP) dated November 13, 2009, with plans and computations that reflect the partial lining of the stormwater basins."* DPR provided this in a technical memorandum to NYSDEC dated November 16, 2011 (see Appendix D.6, pond liner design in Appendix D.4). The memorandum presented a formal submittal of the pond liner design to NYSDEC and included excerpts of calculations from the November 13, 2009, SWPPP. This memorandum showed that the original calculations in the 2009 SWPPP remain adequate since they included conditions for lined ponds. An email approval of "*DPR's SWPPP Amendment"* was given by NYSDEC on December 2, 2011 (see Appendix D.6).

## 4.4 Landfill Gas Management

The Site's Landfill Gas (LFG) Management system is designed to prevent harmful effects on workers or recreational users of the Site. Therefore, and as requested by NYSDEC in their August 6, 2010, comments, landfill gas data gathered for the Site in 2009 and 2010 were used to model surface methane emissions, LFG generation rates, and the emissions of hazardous air pollutants (HAPs) across the Site. The data were also used to conduct a health impact analysis for users of the Site. Supporting documents on LFG evaluations and design are included in Appendices E and F of this report.

### 4.4.1 LFG Emission Generation Rates, Hazardous Air Pollutant Concentrations, and Health Impacts Analysis

LFG generation rates for the Site were first estimated in 1999 (AKRF 1999) using the EPA's 1995 "Compilation of Air Pollutant Emission Factors." The generation rates were estimated using a newer mathematical model in 2010, EPA's LandGEM model Version 3.02 (see Appendix E.1). The 2010 LandGEM model results predicted LFG generation rates similar to those of the 1999 modeling. The 1999 and 2010 analyses both indicate that LFG emissions and generation rates are consistent with a municipal solid waste landfill of the age of the Ferry Point Site.

The 2010 analyses also predicted the emissions of HAPs and other air pollutants from the Ferry Point Site. The results predicted that pollutant concentrations in the breathing zones are well below the applicable annual guideline concentrations (AGCs) and short-term guideline concentrations (SGCs). This indicates that there are no expected health impacts on users of the golf course due to these emissions.

The results of these efforts are presented in the Ferry Point Landfill Gas Report (EEEPC 2010, Appendix E.1). A supplemental letter of December 17, 2010, presented in Appendix E.2, provided follow-up responses to NYSDEC comments on the Landfill Gas Report.

In response to an additional comment from NYSDEC received on August 6, 2010, DPR performed emissions monitoring at 12 passive vertical vents installed at Community Park. This monitoring was performed in June 2011.

The monitoring results were used to calculate the emission rates of LFG constituents from the passive vents. Hourly and annual emission rates were predicted. In a July 1, 2011, email, the NYSDEC review of these results concluded that *"there is no ambient air impacts due to the emissions from the twelve vents at the Community Park… which poses no health impact to the public using the park."* Therefore, DPR concludes that no further monitoring is necessary beyond routine maintenance of the 12 passive vents.

Appendix E.3 contains the sampling and analysis report for vent monitoring at Community Park, and the July 1, 2011, email from NYSDEC.

### 4.4.2 LFG Management System

#### 4.4.2.1 Sitewide Passive Venting System

The LFG management system as redesigned for the Site (since the November 25, 2009, permit application submittal) is an update of prior conceptual passive LFG designs and includes a passive system for the venting of LFG in all areas not covered by enclosed facilities. The primary goals for the design of the Site's LFG management system are to provide safe operating conditions and protect human health.

The proposed passive system is consistent with the plans presented in the 1999 EAS (AKRF 1999), the 2002 Technical Environmental Assessment (AKRF 2002), and the 2005 Engineering Reports (TRC 2005a, b) and was approved under the 2005 Part 360 Permit. It deviates from the 2009 permit renewal application prepared by TRC Engineers (TRC), which recommended an active system. An active system uses blowers or fans to extract gas through vents from the landfills subsurface, whereas a passive system uses vents without blowers or fans. Supplemental Site investigations and extraction testing performed by TRC Engineers at the Site in 2009 and 2010 were reviewed by Walsh Environmental Scientists and Engineers, LLC (Walsh) in 2010. Emissions modeling was also performed by EEEPC in 2010, as discussed in Section 4.4.1.

Based on these evaluations and modeling of Site conditions, a Landfill Gas Management Plan (LFGMP) was prepared (see Appendix F.1). The plan concluded that a passive venting system is sufficient to achieve safe operating conditions for users and workers of the golf course and parks. A description and details of the Site's LFG management system are presented in the LFGMP. The LFG management system as currently designed is consistent with the proposed venting system described in the 2005 Permit.

#### 4.4.2.2 LFG Management of Irrigation Lake and Water Quality Ponds

As described in Section 4.3.1.2, the design of the golf course includes one lake to be used for the collection and storage of rain water for irrigation, and five smaller

water quality ponds to provide active stormwater retention and limit the off-site migration of sediment. Design of the irrigation lake and water quality ponds includes the installation of impermeable liners to prevent exfiltration. The liner component impedes surface venting of LFG from the underlying soils.

The lined irrigation lake has been constructed in the northwestern area of the golf course. A gas transmission layer was constructed underneath the liner and is connected to perforated piping around the perimeter of the lake as shown on Contract Drawings H2.1, H2.2, and H2.13, which were submitted with the November 25, 2009, permit application. This perforated pipe will be used for the passive venting of LFG from beneath the liner of the irrigation lake.

Passive venting has been included in the design of all water quality ponds at the Site. Passive venting of the ponds includes a permeable gravel layer and perforated collection piping from areas underneath the ponds and exiting the top of vent stack above the breathing zone. Engineering drawings and technical specifications for the water quality pond liners and passive venting design are provided in Appendix D.5.

#### 4.4.2.3 LFG Management for Enclosed Structures

Due to its potentially explosive nature, LFG shall not be allowed to accumulate within any enclosed structure at the Site. To protect the occupants, an underslab vent system for each enclosed building shall be installed and continuously operated.

The LFGMP (see Appendix F.1) describes the active sub-slab depressurization systems (SSDS) that have been designed for the underslab of each enclosed building at the Site. These systems will have continuous explosive gas monitoring with local and remote alarm capabilities. The SSDS engineering drawings for the golf course facilities (maintenance building and comfort station) are provided in Appendix F.3. The Community Park comfort station design was provided in the November 25, 2009, permit application. The Waterfront Park comfort station has not been designed.

Maintenance of the SSDS and their monitoring equipment will be performed in accordance with the operations, monitoring, and maintenance (OM&M) program for the Site's Landfill Gas management system (see Section 4.4.4).

The design of any additional structures at the Site will be completed in accordance with New York City Department of Buildings requirements. The need for LFG mitigation systems for any future Site structures will be evaluated as part of their design.

#### 4.4.2.4 LFG Venting for Subsurface Utilities

Low-permeability soil/bentonite collars ("soil collars") will be installed for all utility trenches that contain permeable bedding in order to prevent the migration of LFG into enclosed buildings at the Site. The soil collars will be installed

around the water and sewer pipelines, within the trenches at the subsurface location where the pipeline crosses above the building foundation (the building line). Each soil collar will be passively vented as described in the LFGMP (see Appendix F.1) and as shown on the engineering design drawings in Appendix F.2.

Similarly, conduit seals will be used for electrical conduits that are installed in trenches using permeable bedding materials. The conduit seals will be installed at the building lines.

Other utility LFG controls include the underslab passive venting for the aboveground double-check valve (DCV) enclosure. The DCV enclosure is for the potable water supply line as it enters the golf course site. Detailed design drawings for the venting the DCV enclosures are provided in Appendix F.4.

The need for LFG venting for any future Site subsurface vaults will be evaluated as part of their design.

### 4.4.3 Landfill Gas Management Operations, Monitoring & Maintenance Program

The NYCRR Part 360 "Solid Waste Management Facilities" regulations, Section 2.17(f) concerning LFG, were used as guidance in developing the Site's LFG monitoring program. In accordance with this section: (1) the concentration of explosive gases must not exceed 25% of the lower explosive limit (LEL) in on-site and off-site structures; and (2) the concentration of explosive gases must not exceed the LEL at the property boundary.

Because of the planned future uses of the site as a golf course, banquet facility, and public park, the LFG monitoring plan provides a comprehensive program for future monitoring and maintenance at the Site, with specific contingency actions. Continuous LFG monitoring with local and remote alarm capabilities will occur in all enclosed Site buildings for the protection of occupants.

The LFG monitoring and maintenance (M&M) supervisor will be assigned responsibility for overseeing all Site LFG M&M activities, and will serve as the primary point of contact for DPR. The LFG M&M supervisor will be a DPR employee with the responsibility and authority to direct all OM&M work activities and maintain the necessary monitoring personnel for the required M&M activities.

OM&M for the Site's LFG management system will take place on an ongoing, routine schedule, with additional inspections to address maintenance concerns and potential alarm call-outs and to provide contingency monitoring and actions as needed. The OM&M plan for the Site is presented in Section 6 of the LFGMP (see Appendix F.1). This plan has also been incorporated by reference into the Post-Construction Custodial Plan (see Appendix I) for the Site.

## 4.5 Groundwater Characterization

Municipal solid waste (MSW) filling operations ceased at the Site in the 1960s, prior to the implementation of the comprehensive environmental regulations now in place, and a formal groundwater sampling program was not required at that time. Information on groundwater quality at a former landfill site such as Ferry Point Park East can be used to help evaluate existing groundwater conditions.

For the 2005 Permit application, the Site's history was reviewed and a geotechnical investigation was performed to evaluate the potential for adverse impacts on the Site's groundwater due to the placement of fill during construction of the golf course and parks.

A summary provided in the 2005 Engineering Report concluded *"that the placement of fill would not have an adverse impact on pre-development groundwater conditions at the site and that the proposed golf course construction would not result in an increased flow of contamination into the river through groundwater flow."* (TRC 2005a).

In their comments of June 25, 2010, NYSDEC asked DPR whether any new information was available regarding groundwater conditions at the Site, and if any new, relevant information was available, to verify the conclusions of the geotechnical portion of the 2005 Engineering Report (TRC 2005a).

Following several discussions with DPR, and because no prior sampling had been required, NYSDEC requested that DPR undertake a groundwater sampling program and develop a reference point for background water quality conditions at the Site.

To comply with this request, DPR prepared written field procedures for new well installations, well development, and groundwater sampling (see Appendix G.1). The field procedures were submitted to, and approved by, NYSDEC prior to the start of the work effort. Prior to installation, the locations of the monitoring wells were approved by NYSDEC during a meeting held with DPR on September 22, 2011.

In February 2012, eleven new groundwater monitoring wells were installed across the Site to obtain information on current groundwater conditions. Design documents for the groundwater monitoring wells are included in Appendix G.2. An initial sampling event was completed in February 2012 and included the testing activities described below.

- **Groundwater Elevation Measurements:** Water depths were measured at the 11 groundwater monitoring wells. Two measurements were taken from each well within one hour each of high and low tides, starting at the shoreline and moving inland.

- **Elutriate Testing:** One soil core sample per well was collected during well installation in order to perform elutriate analysis. Samples were selected from shaping material zones based on visual observation of the soil cores.

- **Groundwater Testing:** Groundwater samples were collected at each of the 11 wells and shipped for laboratory analysis.

- **Hydraulic Conductivity Testing:** In situ slug testing for hydraulic conductivity was completed at each of the 11 groundwater monitoring wells.

The initial groundwater monitoring data from February 2012 was submitted to NYSEC by email on March 28, 2012. This data is included in the report for the initial groundwater monitoring event (see Appendix G.5). At that time, DPR requested direction from NYSDEC concerning procedures for future sampling events. That is, should future sample collection be modified due to the high turbidity (>1,000 nephelometric turbidity units [NTUs]) observed in the initial samples.

A call was held with NYSDEC on May 8, 2012, to discuss the initial data and provide guidance on future monitoring (see Appendix G.3 for call minutes. Also during this call, NYSDEC directed DPR to perform inorganic analyses on both filtered and unfiltered samples collected during the next sampling event. If the next round of results is found to be in expected ranges, then future sampling events will utilize only filtered samples for inorganic analyses.

NYSDEC provided DPR with requirements for future groundwater monitoring in their FPP Groundwater Characterization/Monitoring Objective, on May 8, 2012 (see Appendix G.4). DPR will implement the groundwater monitoring program in accordance with the schedule and monitoring parameters requested by NYSDEC.

The schedule includes two additional quarterly sampling events, followed by approximately three semi-annual events (through completion of construction) and three post-construction annual sampling events. After the third annual sampling event, DPR may request to reduce the sampling frequency or cease the groundwater sampling program at the Site. Table 4-1 provides a schedule of the monitoring events that will be performed to complete this program and the parameters that will be analyzed for during each event.

Post-construction groundwater monitoring and groundwater monitoring well maintenance requirements are incorporated into the Post-Construction Custodial Care Plan for the Site (see Appendix I).

**Table 4-1 Groundwater Monitoring Program Schedule**

| Sampling Frequency | Approximate Dates of Sampling Events | Parameters |
|---|---|---|
| Quarterly | May 2012 | 6 NYCRR Subpart Part 360-2.11 Baseline Parameters; analysis for inorganic parameters on both filtered and unfiltered samples. |
| Quarterly | August 2012 | 6 NYCRR Subpart Part 360-2.11 Baseline Parameters; analysis for inorganic parameters on filtered samples only. |
| Bi-Annually (2x/year) | March 2013<br>September 2013<br>March 2014 | 6 NYCRR Subpart Part 360-2.11 Baseline Parameters; analysis for inorganic parameters on filtered samples only. |
| Annually | September 2014[1]<br>September 2015<br>September 2016 | 6 NYCRR Subpart Part 360-2.11 Routine Parameters; analysis for inorganic parameters on filtered samples only. |

Notes:
1. It is currently anticipated that golf course operations will begin in the fall of 2014, and that this event will be become the first of the three required annual sampling events.

## 4.6 Settlement Monitoring

### 4.6.1 Impacts on Short- and Long-Term Settlement Monitoring

Special Conditions 7 and 8 of the 2005 Permit set forth settlement monitoring requirements related to the placement of fill material across the Site. Monitoring must also conform to the recommendations provided in the Settlement Evaluation and Long-Term Monitoring Plan prepared by Langan Engineering and Environmental Services, Inc. (Langan 2005).

#### Short-Term Settlement Monitoring

The short-term settlement monitoring program began in December 2002 with the bi-weekly monitoring of seven test fills and six settlement plates located throughout the Site. Test fills consist of an engineered soil fill ranging from 10 to18 feet deep, generally located on-site in areas where significant thicknesses of fill are required. Settlement plates consist of a subsurface plate beneath a casing and a flush-mount monitoring access port, similar to a monitoring well. Settlement plates that are part of the short-term settlement monitoring program were generally located in areas of the site already at or close to final grade.

In their report, Langan recommended the following adjustments be made to the monitoring program during construction:

- Test fills that obstruct construction activities should be replaced with a settlement plate to be monitored near the location of the test fill.
- Settlement plates that need to be moved for construction purposes should be relocated to the same general area and monitored until long-term monitoring points have been installed.

Short-term settlement monitoring continues to be performed bi-weekly at the Site. Monitoring at several points has now been discontinued due to interference with ongoing construction. In an email correspondence dated May 1, 2012 (see Appendix H), NYSDEC informed DPR that these short-term monitoring locations do not need to be replaced as long as construction at the Site progresses.

As construction is concluded in each area of the Site, long-term monitoring plates will be installed as described below.

### Long-Term Settlement Monitoring

The revised Settlement Plate Locations Plan and a sketch that shows the additional monitoring point between golf course holes 6 and 7 (Appendix H) were approved by NYSDEC in an email dated May 1, 2012. The long-term settlement monitoring points will be installed as construction is concluded in each area. Upon installation, the long-term settlement plates will be monitored in accordance with the criteria set forth in Special Condition 8 of the 2005 Permit.

## 4.7 Post-Construction Custodial Care Plan

The Ferry Point Park East Post-Construction Custodial Care Plan (FPCCCP) has been prepared to meet the relevant requirements of NYDEC Part 360 Permit No 2-6006-00014/00013-0 (hereafter referred to as the "Permit") and all other applicable conditions as agreed upon between NYSDEC and DPR. This document provides for the post-construction custodial care requirements as they relate to the systems and components installed as part of Site-wide development specific to Ferry Point Park East. The Post-Construction Custodial Care Plan is provided in Appendix I.

As specified in Special Condition 39 of the 2005 Part 360 Permit, as built drawings and a written post-construction certification report for NYSDEC review and approval and certification by the IEM shall be prepared within 60 days of completion of the filling operation on the Site and construction of the earthwork portion of the Project. Therefore, no as-built drawings or post-construction certification report has been provided in this FPCCCP.

The scope of the FPCCCP is to provide the current monitoring and maintenance plans and descriptions for the components and systems within Ferry Point Park East as they will exist following the conclusion of construction at the Site. For each component or system, a brief overview is included within the scope of this document. In addition, an emergency personnel contact list is provided in the Site's Health and Safety Plan, which is referenced in the Post-Construction Custodial Care Plan.

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Bally's Bronx
Ferry Point Park Landfill Gas Management Plan
*Prepared by: Ecology and Environmental Engineering, P.C.*

LANGAN

# Ferry Point Park East
# Landfill Gas Management Plan

**Originally submitted in October 2011**
**Revised in May 2012**
**Revised on August 31, 2012**
**Revised on October 15, 2013**

**Prepared for:**

**NEW YORK CITY DEPARTMENT OF PARKS & RECREATION**
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# List of Abbreviations and Acronyms

| | |
|---|---|
| AES | American Environmental Solutions, Inc. |
| AGC | Annual Guideline Concentrations |
| AKRF | Allee, King, Rosen & Fleming, Inc. |
| BGS | below ground surface |
| CAA | Clean Air Act |
| CEQR | City Environmental Quality Review |
| cfm | cubic feet per minute |
| $CO_2$ | carbon dioxide |
| cy | cubic yard |
| °F | degrees Fahrenheit |
| DPR | (New York City) Department of Parks and Recreation |
| DSNY | New York City Department of Sanitation |
| EAS | Environmental Assessment Statement |
| EEEPC | Ecology and Environment Engineering, P.C. |
| EPA | (United States) Environmental Protection Agency |
| FPP | Ferry Point Partners, LLC |
| GHG | greenhouse gas |
| HAP | hazardous air pollutant |
| in/sec | inches per second |
| in-wc | inches of water column |
| LDPE | low density polyethylene |
| LEL | lower explosive limit |
| LFG | landfill gas |
| LFGMP | Landfill Gas Management Plan |
| M&M | monitoring and maintenance |
| $m^3/Mg$ | cubic meters per megagram |
| Mg/yr | megagrams per year |

## List of Abbreviations and Acronyms (cont.)

| | |
|---|---|
| MSW | municipal solid waste |
| $N_2$ | nitrogen |
| NMOC | non-methane organic compound |
| NYCCR | New York Codes, Rules, and Regulations |
| NYCDEP | New York City Department of Environmental Protection |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| $O_2$ | oxygen |
| O & M | operation and maintenance |
| OM&M | operations, maintenance and monitoring |
| ppm | parts per million |
| psi | pounds per square inch |
| ROI | radius of influence |
| SEQRA | State Environmental Quality Review Act |
| SF | square foot |
| SGC | short-term guideline concentration |
| SOW | scope of work |
| SSD | sub-slab depressurization |
| TRC | TRC Engineers |
| ULURP | Uniform Land Use Review Procedure |
| VOC | volatile organic compound |
| Walsh | Walsh Environmental Scientists and Engineers, LLC |

# 1 Introduction

Ferry Point Park in the Bronx (the Site) is a former landfill that is bounded by the Bronx Whitestone Bridge and Hutchinson River Parkway to the west, Balcom, Miles, and Emerson avenues to the east, Schley Avenue and St. Raymond's Cemetery to the north, and the East River to the south.

New York City Department of Parks (DPR) has initiated development of a community park, waterfront park, and a golf course on the Site. The boundaries of these portions on the Site are presented in Figure 1-1.

Ecology and Environment Engineering, P.C. (EEEPC) has prepared this Landfill Gas Management Plan (LFGMP) to evaluate landfill gas (LFG) conditions at the Site and to describe the systems proposed for long term LFG control at the Site.

The Ferry Point landfill ceased municipal waste (MSW) landfill operations in the 1960s, and has been closed for approximately 50 years. Over 12 years of LFG monitoring data is available for the Site, dating from 1999. Several field investigations and two gas emissions models have also been completed for the Site. This extensive supply of data forms the basis for the LFG management and monitoring methods proposed in this document.

## 1.1 Purpose and Scope

Environmental compliance for site development is being conducted in accordance with a November 2005 New York State Department of Environmental Conservation (NYSDEC) modified Part 360 Solid Waste Management Permit, for which DPR is the current permit holder.

The proposed LFG management and monitoring approach presented in this document will be incorporated into the Part 360 permit renewal application for the Site. A review of available documentation of previous activities relating to LFG monitoring, investigation, and control at the Site was performed and is presented as a preface to the design component of this plan.

The LFG design presented in this LFGMP supplements prior site conceptual LFG designs and proposes a Site-wide passive system for the venting of LFG in all areas not covered by enclosed facilities. The primary goal for the Site's LFG management has always been to ensure safe conditions and the protection of human health.

The proposed passive system is consistent with the plans presented in the 1999 EAS (AKRF 1999), the 2002 Technical Environmental Assessment (AKRF 2002), and the 2005 Engineering Reports (TRC 2005a, b), and approved under the current Part 360 Permit. It deviates from the 2009 permit renewal application prepared by TRC Engineers (TRC), which recommended an active system. A review of TRC Site investigations and extraction testing by Walsh Environmental Scientists and Engineers, LLC (Walsh) and emissions modeling performed by EEEPC in 2010 was used to conclude that a passive system is sufficient to achieve safe conditions for golf course users or workers.

Existing and proposed LFG control systems are listed in Table 1-1.

**Table 1-1 Existing and Proposed Landfill Gas Control Systems at the Site**

| Control System and Location | Type | Concept Included in 2005 Permit | To be Included in Renewed Permit? |
|---|---|---|---|
| **Golf Course** | | | |
| Irrigation Lake Venting System | Passive[1] | Yes | Yes |
| Water Quality Ponds Venting System | Passive | No | Yes |
| Sub-slab depressurization systems<br>1) One 12,000-square-foot maintenance facility<br>2) One 800-square-foot comfort station on the eastern area of the Site; and<br>3) One approximately 15,000-square-foot combined golf course, clubhouse, and banquet facility (not yet designed (NYD)) | <br>Active<br>Active<br>NYD | <br>Yes<br>Yes<br>Yes | <br>Yes<br>Yes<br>NYD |
| LFG passive venting for subsurface utility lines that enter enclosed facilities or travel offsite | Passive | Yes | Yes |
| Perimeter Vent Trench | Passive | Yes | Yes |
| Individual LFG Vents[2] | Passive | Yes | Yes |
| **Community Park** | | | |
| Perimeter Vent Trench Along Eastern Perimeter – buried trench with individual LFG Vents along its length. | Passive | Yes | Yes |
| 12 Individual LFG Vents | Passive | Yes | Yes |
| Sub-slab depressurization system for one 800-square-foot comfort station | Active | Yes | Yes |
| Water Quality Ponds Venting | Passive | Yes | Yes |
| Individual LFG Vents | Passive | Yes | Yes |

**Table 1-1 Existing and Proposed Landfill Gas Control Systems at the Site**

| | | | |
|---|---|---|---|
| **Waterfront Park** | | | |
| Sub-slab depressurization system for one comfort station (not yet designed) | NYD | Yes | NYD |

Notes:

1. The Irrigation Lake venting system infrastructure allows for the connection of an active blower system as a potential contingency action. Section 6 discusses the conditions under which contingency actions may be taken.
2. See Section 5 for discussion of passive venting design and Appendix A for layout and details of passive gas vents.
3. NYD denotes "Not Yet Designed".

## 1.2 Document Organization

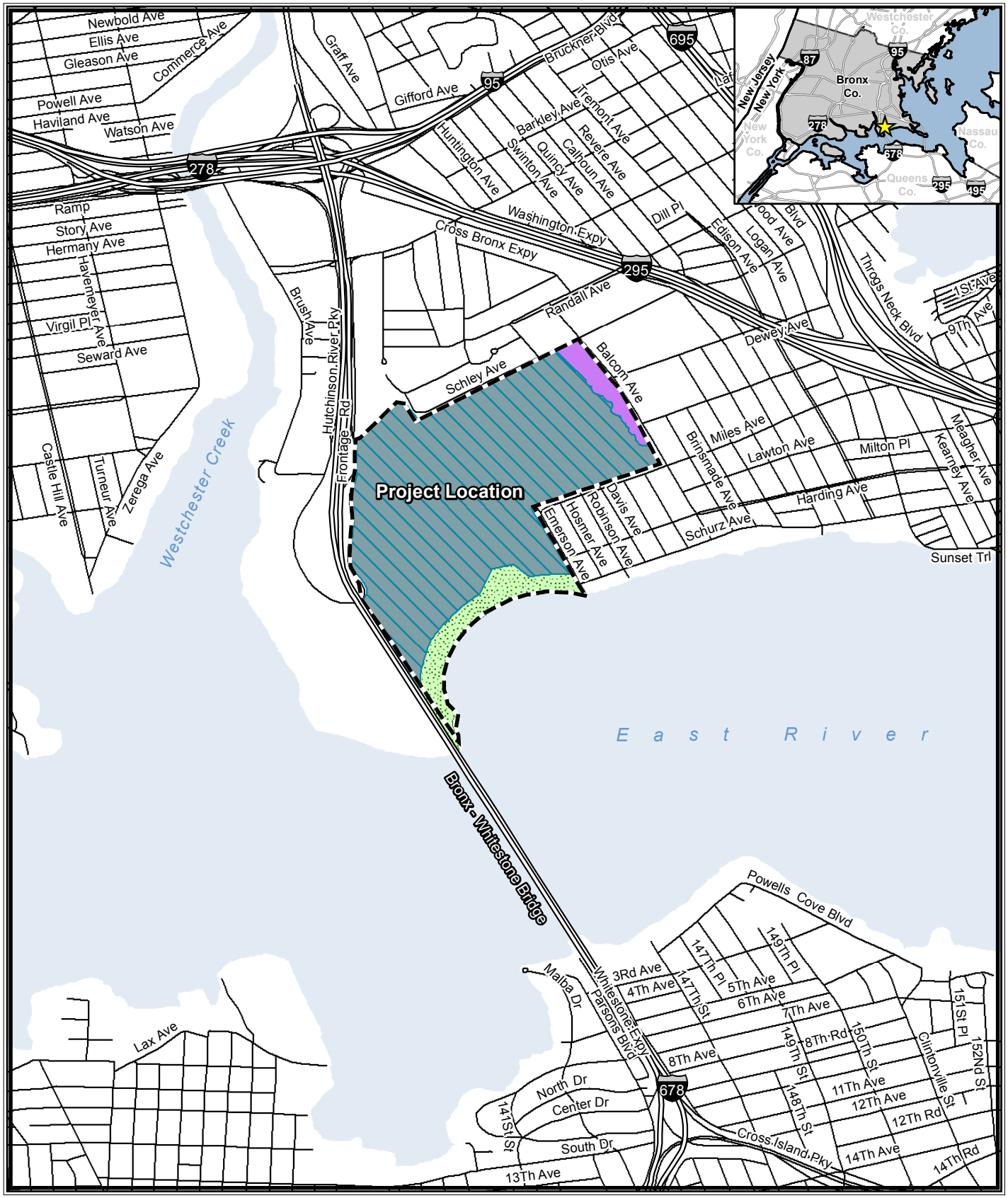
The remainder of this document is divided into four sections. The purpose of each section of this LFGMP is as follows:

- Section 2 - Landfill Gas Generation and Movement: Discusses gas generation rates and primary gas migratory pathways within landfills.

- Section 3 - Background: Discusses Site setting and project history, proposed facilities, sampling and monitoring data, and the evolution of the LFG collection system design.

- Section 4 - Evaluation of Existing Landfill Gas Data and LFG Exposure Assessment: Presents a Site conceptual model that includes an outline of the vertical and lateral extent of the LFG within the interior of the Site and at and along the Site perimeter, and an assessment of the risk from exposure to LFG both on site and at the Site perimeter. Provides a collective review of the data and draws conclusions on current and future site LFG conditions.

- Section 5 - Landfill Gas Management Approach: Discusses the basis for the proposed design. Provides design details of the proposed final LFG collection system.




Project Boundary
Community Park
Golf Course
Waterfront Park

ecology and environment engineering, p.c.
International Specialists in the Environment

0 0.25 0.5 1 Miles

**Figure 1-1 Site Location Map**

# 2 Landfill Gas Generation and Movement

## 2.1 Landfill Gas Generation

LFG is generated in a landfill when bacteria in the landfill waste use anaerobic processes to break down organic material. LFG is composed primarily of methane and carbon dioxide. LFG also contains small amounts of nitrogen, oxygen, water vapor, sulfur, hydrogen, and other non-methane organic compounds (NMOCs). NMOCs comprise less than 1% of LFG and include ethane, propane, butanes, pentanes, and other carbon compounds.

The specific components and quantity of LFG depend on a number of factors, which include but are not limited to the following:

- Waste composition;
- Age of refuse;
- Moisture content; and
- Temperature.

### 2.1.1 Methane Generation

Methane concentrations in landfills can vary according to the season, with low concentrations of methane and high concentrations of carbon dioxide in the summer.

## 2.2 Landfill Gas Migration Pathways

Migration of LFG in the subsurface is influenced by several site-specific factors such as pressure and diffusion gradients, subsurface lithology and soil stratigraphy, and groundwater levels. The factors affecting LFG migration are discussed below.

### 2.2.1 Diffusion

LFG does not build up in a landfill in a uniform manner. As it builds up in the subsurface, it moves from areas of high concentration to areas of lower concentrations. Since gas concentrations are higher within the landfill than outside the landfill, LFG will tend to diffuse, or spread, to surrounding areas.

### 2.2.2 Pressure Gradient

Pressure gradients enable LFG to move both vertically and horizontally within a landfill. This is the primary way LFG moves within the subsurface. As gas continues to be generated, the pressure increases and LFG moves to areas of lower pressure. If there is a confining, or less permeable, layer in place above the MSW layer, LFG will move laterally toward an area of lower pressure.

If no confining layer is present, LFG will migrate vertically to the surface, where it exits the landfill surface into the atmosphere. This occurs when the LFG subsurface pressure is higher than barometric pressure. Diffusion of LFG into the atmosphere results in a rapid reduction to negligible and safe levels once it reaches the landfill surface.

## 2.3 Vertical Landfill Gas Migration

The methane component of LFG is lighter than air. As a result, LFG will travel upward if the permeability of the overlying material is equal or higher than that of the surrounding material

Groundwater level is another factor that influences vertical migration: as the water table rises into an area of the landfill, it forces the LFG upward.

## 2.4 Horizontal Landfill Gas Migration

LFG can migrate horizontally through both natural pathways (fractured rock and porous soil) and man-made pathways (e.g., porous pipe bedding materials, utility pipes and conduits, sand or gravel layers). Layers of low-permeability material that overlie LFG-producing waste material can significantly reduce surface emissions but increase the likelihood for horizontal migration.

# 3 Background

## 3.1 Site Setting and Project History

### 3.1.1 Setting

The Site, a former landfill, is located in the Bronx next to the Whitestone Bridge and is bounded by the Hutchinson River Parkway to the west; Balcom, Miles, and Emerson Avenues to the east; Schley Avenue and Saint Raymond's Cemetery to the north; and the East River to the south (see Figure 3-1). The original parcel of 171 acres was first acquired by New York City in 1937, and two additional parcels totaling 243 acres were acquired by the City in 1948. From 1951 into the 1960s, the New York City Department of Sanitation (DSNY) used the Ferry Point property as a municipal waste importation site (DPR 2007). Figure 3-1 shows the approximate fill progression at the Site. Landfill operations ceased in the 1960s. Upon closing, the landfill was capped with a soil cover of varying thickness across the site.

A summary of the results from previous investigations is presented in the 2005 Engineering Report (TRC 2005a, b). A bibliography of documents reviewed is provided in Section 6 of this LFGMP.

### 3.1.2 Project History

In the late 1990s, the DPR entered into an agreement with Ferry Point Partners, LLC (FPP) to develop, construct, and operate a new public recreation facility, including a golf course, community park, waterfront park, and related facilities that would encompass 222 acres of the Site. At that time, all required reviews for the Project were completed under the City Environmental Quality Review (CEQR), the State Environmental Quality Review Act (SEQRA), and the City's Uniform Land Use Review Procedure (ULURP).

In July 2000, NYSDEC issued a Part 360 Solid Waste Management Permit (NYSDEC No. 2-6006-00014-000110; Part 360 Permit) jointly to the FPP and the DPR (collectively, the "Historic Permittee") for a non-specific "facility" under Part 360-1.9(b) at the Site. This permit allowed the import and placement of a total of 1,000,000 cubic yards (cy) of fill necessary to construct the golf course. In February 2002 and November 2005, the Part 360 Permit was modified to accommodate additional golf course design features and changes in the design approach. In November 2005, NYSDEC issued a modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013) to place a total of 2,370,000 cy of in-place fill on the Site (NYSDEC 2005).

In 2007, the DPR terminated its license agreement with the FPP. Since that time, the DPR has taken over the site development responsibilities and has initiated re-development of the community park, waterfront park, and golf course portions of the Site.

## 3.2 Current Project Plans

### 3.2.1 Overview

The project includes the development of public recreational facilities (waterfront and community parks) on 29.5 acres, a comprehensive golf facility on 192.5 acres, and a fine-dining/banquet facility incorporated into the golf course club-house facilities.

### 3.2.2 Cover Soil

As per the 2005 Part 360 Permit, 423,729 cy of uncontaminated soil were approved for use in the cover layer. The final cover/topsoil layer will consist of uncontaminated soil materials, which meet background levels approved by NYSDEC and will be imported from non-industrial sites. (For cover layer fill specifications see Section 2.1.2 of the 2005 Fill Report Volume 2, Exhibit C [TRC 2005b]).

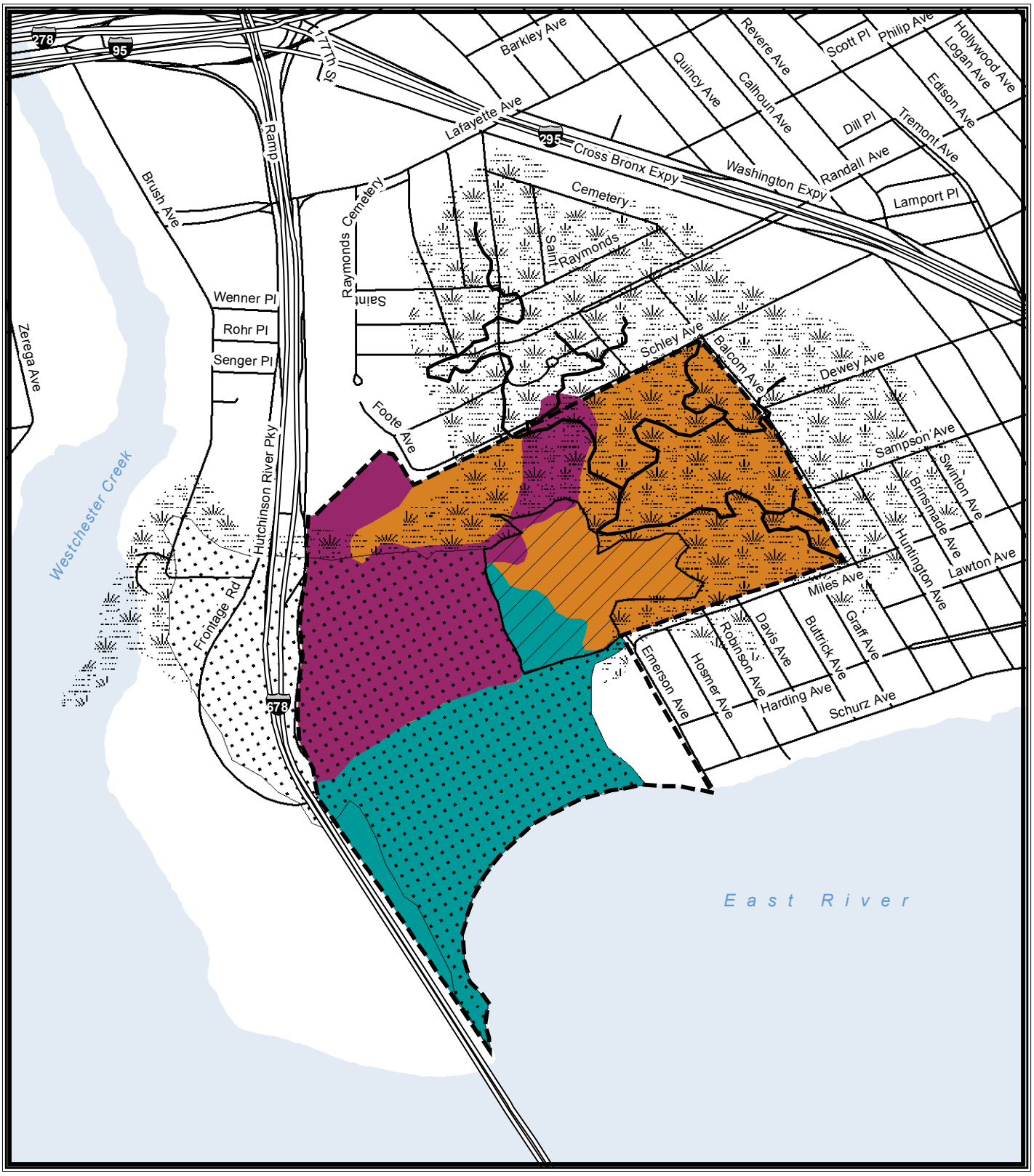
Major components of the cover layer will be constructed to meet the Nicklaus Design Technical Specification as noted in Exhibit C of the June 30, 2005, Engineering Report (TRC 2005a), and summarized here as follows:

- Greens mix imported to the site shall be tested per the specified material testing requirements. Fertilizer and soil amendments may be applied on the greens mix after spreading and grassed; and

- Topsoil imported shall be free of rock and debris greater than three-quarters of an inch. Soil amendments, fertilizer applications, and seed may be applied to tee, fairway, and rough areas.

A NYSDEC letter from July 28, 2009 (NYSDEC 2009) notes that a minimum thickness of 2 feet of cover layer material is required for all active recreation areas that are not covered with a building or other acceptable impermeable cover and at least 1 foot of cover layer material is required for passive recreation areas.

The 2005 permit requires that "the major components (greens, contours, heights and topsoil) of the cover layer shall meet the Nicklaus Design Technical Specification, as noted in Exhibit C of the June 30, 2005 Engineering Report." In accordance with the Nicklaus Technical Design Specifications, the Permit allows amendments to the topsoil and/or sand capping. Because imported material may not be readily available, sand capping may be used as an alternative to topsoil on portions of the course.




## Figure 3-1 MSW Fill Progression Map

N

Project Boundary

Area Filled 1951

Area Filled 1954

Area Filled 1959

Historic Baxter Creek

Historic Marshlands

Historic Baxter Creek Inlet

Historic East River

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0 0.125 0.25 0.5 Miles

Source Data: Historic Wetland Maps:
Friends of Ferry Point Park http://www.ferrypointpark.org/

### 3.2.3 Buildings

The following buildings are proposed for the golf course portion of the Site:

- Two 220-square-foot, open-air rain shelters located on the western and northern portions of the site
- One 12,000-square-foot maintenance facility on the western portion of the site
- One 800-square-foot comfort station on the eastern area of the site
- One approximately 15,000-square-foot combined clubhouse and banquet facility on the southwest portion of the site.

The following is proposed for the community park:

- One 800-square-foot comfort station near the center of the park.

The following is proposed for the waterfront park:

- One comfort station on the western area of the park.

### 3.2.4 Utilities

An extensive storm sewer system will be installed throughout the golf course. Storm water will be drained from the golf course and directed to on-site water quality ponds located within the golf course or to New York City Department of Environmental Protection (NYCDEP) combined sewer systems. Excess water beyond the storage capacity of the ponds will also be directed from the water quality ponds to the NYCDEP sewer system.

The main drainage line for the golf course surface catchment system will be set at a depth of approximately 3 to 4 feet below ground surface (BGS). Lateral branches to the fairways will intersect the main line at this elevation and will be graded to the fairways with a final depth of 1.5 to 2 feet. A fairway "herring-bone"-shaped surface drainage system will tie into these lateral branches and into the main site storm drainage line.

The drainage master plan is presented in the NYCDEP Master Plan (Drawing X.126-808M of the Golf Course Contract Drawings).

A sanitary sewer is to be installed along the south, west, and north perimeter of the golf course and cross into the golf course at hole 18 and to the comfort station on the eastern area of the site. Other on-site subsurface utilities include water main, electric, telephone, and gas. These utilities will service buildings and run along the western and northern perimeter of the Site as well as to the comfort station on the eastern area of the Site. Subsurface electric utilities are also to be installed throughout the practice area. Irrigation lines will be installed throughout the golf course fairways, greens, and tees.

Existing utilities at the Site include the Emerson Avenue Box Culvert and an abandoned passive methane-venting system. The box culvert runs along the Emerson Avenue alignment through the middle of the golf course. The methane-venting system was installed at the northeast portion of the site, east of the Emerson Avenue Box Culvert, in 1986. The system contained a series of collection lines that allowed LFG to travel through one main vent. Attempts to locate this system were unsuccessful, and the system's structural integrity or viability cannot be ascertained. Therefore, the existing system will not be incorporated into the currently proposed LFG venting system (see Section 3.3.2).

## 3.3 History and Evolution of the System

EEEPC reviewed site documents and reports generated since 1999 to develop an understanding of previous monitoring and control of LFG at the Site. A list of the documents reviewed for this LFGMP is presented in Section 6.

### 3.3.1 1999 Activities and Landfill Gas Control Systems

As described in the Hazardous Materials section of the 1999 Environmental Assessment Statement (EAS), Allee, King, Rosen, & Fleming, Inc. (AKRF) evaluated LFG at the Site (AKRF 1999). Both ambient air and subsurface borings were monitored. This investigation and recommended control systems are discussed below.

Although AKRF produced the 1999 EAS report and performed several gas monitoring studies for the project, TRC wrote the Hazardous Materials section of the report and incorporated AKRF investigations into their text. TRC analyzed methane emissions rate as part of this work.

#### Landfill Gas Monitoring

AKRF surveyed for soil gas in April 1999 to characterize LFG occurrence and assess the potential for adverse effects of methane gas on the golf course facilities. Thirty-one borings were measured for percentages of methane, carbon dioxide, and oxygen at depths of 2 to 3 feet below the landfill surface. Ambient air was monitored in the immediate vicinity of the survey points. Methane was not detected in the ambient air, even when measurements were taken at the surface immediately adjacent to the soil gas survey points. Readings below the landfill surface ranged from non-detect to 76% methane by volume and were described as being "not atypical of a landfill this size and age."

#### Landfill Gas Emission Rates

The 1999 EAS describes TRC's analysis of methane generation, which was used to determine sub-slab venting requirements under on-site buildings. Using the United States Environmental Protection Agency's (EPA's) "Compilation of Air Pollutant Emission Factors" (EPA 1995), TRC calculated a methane gas generation rate that considered the age of the waste, the rate and amount at which waste had been accepted over the lifetime of the landfill, and several constant factors for methane generation potential and rate constant based on Site conditions.

The calculations yielded a Site methane gas generation rate of 0.00004 cubic feet per minute (cfm) of methane per square foot, or about 2 cfm per acre of surface area. TRC determined that the maximum allowable gas concentration in the air beneath a structure was 1% or less of methane in air (less than 20% lower explosive level [LEL]).

Using the above generation rate and a safety factor of 2, a minimum venting rate of 0.008 cfm of air per square foot of sub-slab was determined (0.00004 cfm methane generation rate/ [1% allowable concentration/2])(see Section 4.1.6 for a comparison of this estimate with the LandGEM modeling results.

Based on the estimated methane emission rate and venting calculation, TRC recommended installing active venting systems beneath the planned Site structures. The 1999 report did not recommend LFG venting systems in open space areas, except for specific turf grass areas.

The movement of methane through turf grass and the vegetative soil layer was anticipated by TRC to have limited and isolated impacts. If needed, based on future evaluations, TRC suggested that an impermeable barrier with a permeable gas-venting layer could be constructed below selected areas of the course ensure turf health. This was to be determined on a hole-by-hole basis during the final project design phase.

#### 1999 Conceptual Proposal for LFG Control Systems

The 1999 EAS recommended the following features for the LFG control system:

- LFG interception and venting systems would be below buildings and, in the area of built structures, direct LFG away from buildings to designated release points. Several venting systems were considered for further evaluation, including passive vents, continuous mechanical venting, or intermittent mechanical venting controlled by a methane monitor.

- Ponds to collect and store water on-site were to be constructed with impermeable membrane liner systems to prevent water leaks and a gas-venting layer for passive gas collection and venting.

- Soil plugs and conduit seals for underground utilities and drainage features would be constructed.

### 3.3.2 2001 through 2004 Activities at and around the Perimeter Vent Trench

#### Landfill Gas Control Systems

The LFG perimeter vent trench was the primary gas-management structure proposed and constructed in 2001. No additional changes were proposed to the 1999 conceptual LFG control systems (described above in Section 3.3.1) during this

time. The LFG perimeter vent trench was installed in order to prevent the migration of LFG off-site. TRC designed and oversaw the installation of the trench and provided certified drawings to NYSDEC for each stage for approval (AKRF 2002).

The LFG vent trench was constructed along the eastern and part of the northern Site perimeter from May 2001 to December 2001 (see Figure 3-2). The purpose of the trench was to allow passive gas venting and provide a physical gas barrier between the Site and adjacent residential neighborhoods. The passive vent trench extends from the water's edge near the foot of Emerson Avenue, along the length of the Balcolm Avenue Site boundary and continues approximately 1,050 feet west past the intersection of Schley and Buttrick avenues.

## Landfill Gas Monitoring

**Off-site Monitoring Study.** Starting in March 2001, AKRF sampled off-site soils to evaluate off-site LFG migration. The results were reported in the February 2002 AKRF Methane Monitoring Study (Attachment A of the 2002 Technical EAS [AKRF 2002]), and included the following findings:

- Perimeter monitoring performed by Emteque Corporation indicated that methane outside the vent trench was below the LEL since November 2001. However, MW-0, located at the corner of Schley and Buttrick avenues in the former Baxter Creek, showed no change after the vent trench was installed and ranged from 10% to 20% methane by volume. AKRF concluded that the source of methane in this area was off-site.

- Elevated levels were noted on Buttrick Avenue between Randall and Schley Avenues. Specifically, three monitoring points along Buttrick Avenue (300 to 400 feet north of the Site) had elevated levels of methane in the soil ranging from 10% to 50% methane by volume. AKRF also reported that installation of the LFG vent trench had not impacted these readings and presented two explanations:

  1. Elevated methane levels were located over former Baxter Creek, a marshy area filled in before 1954. The plants and organic sediments could have produced methane when covered with fill and subsequent laboratory test results indicated that soils were rich in organic material.

  2. Garbage was found in two test pits along Buttrick Avenue and outside of the Site.

  Considering these factors and the fact that no methane was detected in the ambient air above the trench, AKRF concluded that methane detected on Buttrick Avenue was due to an off-site source.




SOURCE: Ecology and Environment Engineering, P.C. 2011

**Figure 3-2 Monitoring Locations**

TRC reported results for biweekly monitoring of methane in perimeter wells and off-site, semi-permanent monitoring points and measuring depth to groundwater in the piezometer network starting in February 2002 (TRC 2002). Locations of sampling points included in the monitoring program are shown in Figure 3-2. A discussion of the results of the off-site monitoring is presented in Section 4 of this LFGMP.

**Perimeter Monitoring Wells.** At NYSDEC's direction, FPP installed perimeter LFG monitoring wells MW-0 through MW-18 (not including MW-13) at approximately 250-foot intervals along the eastern border of the Site, adjacent to a residential neighborhood (AKRF 2002). In accordance with the Part 360 Permit, these wells were monitored biweekly and continue to be included in the LFG monitoring program.

## Part 360 Permit Modification Application

In February 2002, TRC submitted a permit modification application to supplement the April 2000 Engineering Report prepared for the original Part 360 Permit application. TRC indicated in this document that the LFG control systems presented in the 2000 Engineering Report would be implemented. The following items were discussed.

**Piezometer Installation and Monitoring.** Details regarding installation and monitoring of piezometers were presented in this report. Twenty-five piezometers (PZ-01 through PZ-25) were installed at approximate 300-foot intervals along the trench, adjacent to Miles Avenue. The piezometers were installed to monitor groundwater elevations relative to the vent trench depth.

Monitoring was proposed to begin one week after the piezometers were installed and every month thereafter until six months after all fill had been placed on the Site. The piezometers were to be inspected every month.

**LFG Perimeter Vent Trench.** The vent trench was reported to be operating and forming a physical barrier to prevent methane from migrating off-site. The Permit application indicated that the trench was designed to operate passively. The trench was on a biweekly inspection schedule.

**1986 Passive Ventilation System.** In a response to NYSDEC comments on the February 2002 permit modification application, dated July 2, 2002, TRC indicated that FPP planned a visual and test pit program to evaluate the systems around the 1986 passive-venting system outflow vent location. If the outflow vent could be located and nearby piping from the collection wells to the outflow vent were found to be functioning (i.e., conveying methane), the passive venting system would remain in place and FPP would construct and maintain a new outflow vent "at a nearby location removed from the primary golf course features." It is also stated in this response that MW-19 was installed separately by FPP and is not the outlet vent of the 1986 system. In follow-up correspondence with NYSDEC, dated February 10, 2003, TRC discussed their field investigations to locate the his-

toric venting system (TRC 2003a). Test pits and visual investigations were unsuccessful in locating the historic venting system. TRC recommended that if this system were uncovered during the upcoming construction activities, it should be preserved. (To date, the historic venting system has not been uncovered and, therefore, will not be included in the proposed LFG venting design).

### 3.3.3 2005 Activities and Landfill Gas Control Systems

Consistent with information presented in the 1999 EAS, the 2005 Engineering Report indicated that because of the age of the waste materials at the Site, which was approaching 40 to 50 years, the LFG generation rate is declining (TRC 2005a,b). Conceptual design of the LFG control system was also to remain similar to that proposed in 1999, noting that building slab areas would contain active venting systems, and the golf course and utilities would contain passive systems where necessary.

A number of monitoring activities were included in this report, along with a revised description of the LFG control system.

#### Landfill Gas Monitoring

**Monitoring Wells.** The 2005 Engineering Report (TRC 2005 a) provided the following information on monitoring wells:

- TRC continued to monitor all perimeter gas monitoring wells and off-site gas monitoring points biweekly for methane and oxygen per the 2002 Permit. Monitoring points were repaired and maintained as needed

- Elevated levels continued to be found in three monitoring points on Buttrick Avenue between Randall and Schley Avenues after construction of the vent trench, thus suggesting the presence of an off-site methane source.

- From October 2002 to February 2005, two off-site semi-permanent monitoring points (9 and 10) along Buttrick Avenue exceeded 25% of the LEL. Additionally, MW-0, located near the trench and within the Ferry Point Park property, routinely showed elevated levels.

#### Piezometers and Piezometer Monitoring

Groundwater was monitored every month at the piezometers as per the 2002 Permit requirements. TRC generated a construction-phase Response Action Plan to define response to conditions where groundwater in one or more groundwater level-monitoring piezometer was beneath the base of the trench elevation.

#### Landfill Gas Control Systems

The 2005 Engineering Report proposed the following components of the LFG control system, which were consistent with, but more detailed than those described in the 1999 EAS.

- Sub-slab venting components were primarily described as active systems beneath buildings and on-site structures. Several venting systems were recommended for further evaluation and the design was to be finalized based on building structure and location.

- The irrigation lake and ponds were proposed to have impermeable membrane liner systems with a gas-venting layer for passive gas collection and venting.

- Underground site utilities were proposed to have soil plugs and conduit seals for piping and conduits.

- The movement of methane through turf grass and the vegetative soil layer was anticipated to have limited and isolated impacts. If specific greens required venting for the maintenance of turf health, an impermeable barrier with a permeable gas venting layer was recommended beneath the vegetative soil.

- The 2005 Engineering Report did not propose LFG venting systems in open space areas, except for specific turf grass areas as described above.

### 3.3.4 Post-2005 Monitoring at and around the Perimeter Vent Trench

#### Landfill Gas Monitoring

**Methane Monitoring.** Permanent monitoring wells and semi-permanent points have been monitored biweekly in accordance with the 2005 Permit. Since issuance of the 2005 Permit, several exceedences have occurred at MW-0, with sporadic exceedences at MW-14 and E3R.

#### Piezometers and Piezometer Monitoring

Monthly monitoring of groundwater depth was completed in each piezometer in accordance with Special Condition 30 of the 2005 Permit. Sustained, low groundwater levels have not been observed since 2005.

#### Vent Trench

Routine inspections and maintenance ensured continued vent trench functionality. A review of historic vent trench data by TRC (TRC 2009a) concluded that the LFG vent trench was providing an effective perimeter control based on the following:

- In the year following installation of the vent trench, methane levels near the trench decreased significantly in most monitoring wells.

- Methane levels generally increased in 2005, likely due to installation of new monitoring points and repaired wells.

### 3.3.5 2007 through 2009 Activities

#### Methane Monitoring Reports (2007 through 2009)

Monthly methane monitoring reports were prepared by TRC from 2007 through September 2009. The monitoring routine included noting weather conditions; measuring methane and oxygen levels from both on-site methane monitoring wells and off-site semi-permanent methane monitoring points; and measuring groundwater levels in piezometers adjacent to the vent trench.

#### Pre-Extraction Pilot Test Subsurface Investigation (2008/2009)

In 2008 and 2009, TRC performed a subsurface investigation through the installation of borings and LFG probes and tested for soil gas with slam bars (sampling rods with slotted points) in order to supplement existing site data and assess the current nature and extent of LFG at the Ferry Point site (TRC 2009c).

Data obtained from TRC's investigation include:

- MSW thickness ranged from 4 to 47 feet. Saturated MSW thickness ranged from 0 to 24 feet.

- Methane gas concentrations observed in 16 of the western perimeter slam bar monitoring locations were less than the 25% LEL regulatory level for landfill gas control in on- and off-site structures, and less than the 100% LEL regulatory level at or beyond the property boundary (New York Code of Rules and Regulations [NYCRR]360-2.15(e) and.360-2.15(k)(4)).

- Combustible gas concentrations observed in the shallow slam bar monitoring locations were lower than those present in the deeper soil borings. Only one slam bar monitoring point exceeded 0.5% methane by volume.

- In 39 of 54 borings within the golf course interior, combustible gas was measured at 25% LEL or higher.

- Permeability field testing revealed that the average permeability of the existing shaping layer material was on the order of $10^{-5}$ inches per second (in/sec). Non-domestic MSW (typically soil with some construction and demolition debris) and domestic MSW had average permeabilities of $10^{-2}$ in/sec and $10^{-3}$ in/sec, respectively.

#### Extraction Pilot Test

TRC performed an extraction pilot test in 2009 with the intention of gaining a better understanding of on-site gas generation. NYSDEC's Air Guide 1 air toxics assessment procedure was used as the testing protocol and a comparison of emissions from the test to short-term guideline concentrations (SGCs) was made to confirm that SGCs were not exceeded. Details of the pilot extraction test are included in the Pre-Design Landfill Gas Investigation Scope of Work (SOW) and

the Amendment to Volume No. 1 of the Permit application dated November 25, 2009 (TRC 2009a).

Data from the test reported by TRC include the following:

- During static conditions, pressures measured in the LFG were less than 0.02 to 0.08 inches of water column (in-wc) gauge.
- During passive venting of the extraction well, monitoring probes showed positive pressure readings from 0.04 to 0.30 in-wc gauge.
- LFG samples collected from the extraction well produced methane concentrations of approximately 61% by volume. Methane concentrations measured with pressure probes exceeded LELs at several locations.
- Data from the active blower test were as follows:
  - An 85 standard cubic feet per minute flow rate was shown capable of evacuating pore volume and creating negative pressure over a 150 foot test radius.
  - Atmospheric infiltration was noted in several probes when the induced pressure vacuum was increased to 14 to 16 in-wc.

Shortcomings of the pilot test performed by TRC have been evaluated by EEEPC and are discussed in Section 4.2.1.1.

### Landfill Gas Control Systems

Based on TRC's interpretation of the 2009 subsurface investigation and extraction pilot tests, they proposed a low-flow active LFG control system for "the golf course area of the site". The rationale for this design was that passive venting was not expected to achieve safe levels of methane in the subsurface in time for the anticipated opening of the golf course. The proposal for active systems for subslab venting was similar to those previously proposed by TRC in the 2005 Engineering Report (2005a). The irrigation pond venting system was proposed for incorporation into the active system.

However, the TRC report did state that operating an active LFG extraction at high flow rates could cause dangerous atmospheric infiltration, pulling air underground from the surface and potentially causing underground fires or explosions.

In this report, TRC proposed the following system components:

- Vertical LFG collection wells, screened in the MSW layer, would consist of horizontal collection systems, including perforated collection pipes placed underneath an impermeable liner below the green and tee areas and the clubhouse parking lot asphalt; horizontal collection pits/pipes under the comfort station and maintenance facility; and gas venting geocomposite and perforated collection pipe system associated with the lined irrigation pond.

- Forty control zones of extraction wells and green and tee horizontal collection piping would be established, divided to accommodate Site conditions (topography and "other features such as the box culvert") and to allow "flexible operations." Wells and piping in each zone would be connected through a network of header pipes to a vent flare with an in-line fan. Flexible operation would be enabled by a blanked flange in each vent point. Subsurface collection piping network would be incorporated into the irrigation pond and parking lot with piping connected to a central discharge location. Sub-slab active depressurization systems would be installed for the comfort station and maintenance facility and would include automated methane monitoring and alarm systems.

- A probe network for monitoring LFG control system performance and LFG across the Site and along the boundary would be installed.

# 4 Evaluation of Existing LFG Data and LFG Exposure Assessment

Based on the 2008/2009 TRC investigations and proposal for a Site-wide active LFG extraction systems for all open space areas of the site, it was decided that a re-evaluation of LFG data be performed to ensure the appropriate mitigation systems were selected. An exposure assessment and additional emissions modeling effort was also undertaken to provide additional Site data.

## 4.1 Additional Data Collection

The following data was gathered through monitoring, investigations, and computer modeling to provide additional information regarding LFG conditions at the Site.

### 4.1.1 Methane Monitoring Reports (2009 through present)

Monthly methane monitoring reports are prepared by American Environmental Services, Inc. (AES). From October 2009 to May 17 2012, AES monitored:

- Ambient weather conditions
- Methane, oxygen, hydrogen sulfide, and carbon monoxide levels in on-site methane monitoring wells, perimeter methane monitoring wells, and off-site semi-permanent methane monitoring points
- Groundwater levels in piezometers adjacent to the vent trench

As of May 23, 2012, AES began monitoring the expanded parameters requested by NYSDEC in their January 3, 2011 letter. The following parameters are now being monitoring in addition to those above:

- Well pressure
- Well temperature
- Ambient relative humidity

### 4.1.2 Walsh Review of Site Investigations (2010)

Walsh reviewed TRC's subsurface investigation and extraction test in May and August of 2010 (Walsh 2010a, b). The review reported that the results of the TRC testing were consistent and expected based on the age and character of the landfill. Due to low pressure readings throughout the Site and methane levels below the LEL in most shallow monitoring points, Walsh concluded that a site-wide

active venting system would not be necessary to achieve safe conditions for golf course users or workers.

Based on the Walsh reviews and as requested by NYSDEC (NYSDEC 2010), TRC completed a flux box sampling in October 2010 in order to more accurately determine surface methane emission rates at the Site. The results of the flux box sampling were reported by TRC as an insert to the Supplement to the 2009 Engineering Report.

### 4.1.3 TRC Flux Box Testing (2010)

The TRC flux box and ambient air sampling event in October 2010, in accordance with the sampling plan submitted to NYSDEC, is included as Appendix B of EEEPC's November 2010 Landfill Gas Report. A flux box is a container of known volume which is used at the surface of the landfill for the measurement of LFG emissions and concentrations. A total of 30 test locations were sampled: 19 in the area of the golf course and associated facilities, three each in the waterfront and community parks, and five at the LFG vent trench. Results of this sampling were as follows:

- Methane was not detected in any of the flux box samples.
- No sulfur compounds were detected above the detection limit in any flux box or ambient air sample.
- Five compounds were found at concentrations higher than the NYSDEC Annual Guideline Concentrations (AGCs): benzene, carbon tetrachloride, methylene chloride, tetrachloroethylene, and trichloroethylene. Due to the concentrations found in the ambient air samples, it was concluded that these compounds were likely from off-site urban environment sources. Three of the five compounds warranted further evaluation using the NYSDEC Area Source Method. The results indicated on-site annual impacts would be less than 1.5% of the AGC, and off-site impacts less than 0.25% of the AGC for tetrachloroethylene, trichloroethylene, and methylene chloride.

### 4.1.4 Community Park Vent Monitoring (2011)

In June 2011, EEEPC conducted a monitoring event of the twelve (12) passive LFG vents previously installed at Community Park (EEEPC 2011b). Vent testing was used to identify and quantify the emission rates of LFG constituents from the vents. Air samples were collected from each vent and analyzed to determine the concentration of methane, carbon dioxide ($CO_2$), oxygen ($O_2$), nitrogen ($N_2$), volatile organic compounds (VOCs), and sulfur compounds. The LFG flow rate for each vent pipe was also measured.

The field data and analytical results were used to estimate hourly and annual emission rates of chemical constituents from the LFG vents. Modeled ambient air concentrations resulting from the estimated emission rates were found to be below NYSDEC short-term and annual guideline concentrations (SGCs/AGCs).

### 4.1.5 LFG Fingerprinting Investigation (2011)

In an effort to supplement existing data regarding the source of offsite methane detections in the vicinity of Buttrick/Schley avenues, EEEPC conducted an investigation in June 2011, in accordance with a May 2011 Fingerprinting Protocol (EEEPC 2011b).

The following wells/probes were included in the investigation:

- Offsite monitoring points 9 and 10, located on Buttrick Avenue between Randall and Schley avenues;
- Perimeter monitoring well, MW-0, located in the vicinity of Buttrick Avenue; and
- Onsite monitoring wells MW-13 and MW-19.

The fingerprinting protocol recommended that methane measurement be conducted in interior monitoring well MW-4R. However, this well was previously decommissioned and as a result, measurement was conducted in well, MW-13, which is also an onsite monitoring well.

Each location was purged according to procedures outlined in the protocol and then monitored for methane concentration. None of the locations yielded methane concentrations sufficient for isotopic gas analysis, a minimum of 1% methane by volume. As a result, LFG samples could not be collected for isotopic fingerprinting analyses.

### 4.1.6 Landfill Gas Generation Modeling

Using LandGEM Model Version 3.02, EEEPC (2010) modeled emission rates for the Site in order to compare to the flux box sampling and previous emission rates estimated by TRC in 1999.

The LandGEM model generates emission estimates during landfill operation and for the years following closure. For use in the model, the waste acceptance rate at the site and the years of waste acceptance were based on site characteristics and historical data. Conservative Clean Air Act (CAA) municipal solid waste landfill defaults were used for the remaining input parameters.

- Years of waste acceptance: 1940 to 1959
- Annual waste acceptance rate: 319,566 megagrams per year (Mg/yr) assumed to be equal from 1940 to 1959
- Methane generation rate: 0.05 $yr^{-1}$

- Potential methane generation capacity: 170 cubic meters per megagram ($m^3$/Mg)

- Methane content: 50% by volume.

LandGEM generated the following results, predicting methane emissions from the start of waste acceptance in 1940 through the year 2040:

- The 1999 model year emissions rate was calculated to be 3,268 Mg/yr, equivalent to 0.00003 cfm per square foot (SF) a rate similar to the 1999 TRC estimate of 0.00004 cfm/SF calculated using EPA Method AP-42.

- For the model year 2010, the results yielded a methane emission rate of 1,885 Mg/yr, or 2,078 tons per year (tons/yr) in 2010. This is equivalent to an emission rate of 0.00002 cfm/SF or slightly less than 1 cfm/acre.

- LandGEM also projected methane generation calculations up to 30 years into the future, projecting that by 2040 emissions would be reduced to 25% of current day emissions (420 Mg/yr, approximately 0.000005 cfm/SF). Overall, methane generation shows a consistent decrease over time.

- The emission rate projected by LandGEM in 2010 is just a fraction of the peak estimated emission rate of 22,970 Mg/yr (0.00023 cfm/SF), predicted for the year 1960.

Like other landfill sites, the rate of LFG production at the Site is affected by waste composition, waste volume, moisture content, age, and landfill geometry. Field measurements have shown that the LFG produced at the Site predominantly contains methane and carbon dioxide, with small amounts of nitrogen, oxygen, water vapor, sulfur, and other contaminants. Some NMOCs, which can also be classified as hazardous air pollutants (HAPs) were reported at much lower quantities.

Section 4.2 presents an assessment of the lateral and vertical extents of LFG within the MSW and the current shaping layers, both in the interior and at and around the perimeter of the Site. Figures 4-1 and 4-2 are conceptual cross sections illustrating the lateral and vertical extents of methane at the Site. Figure 4-3 shows methane concentrations in samples collected within the Site interior, along the Site perimeter, and at off-site locations.

Also included is an assessment of the risk of exposure to LFG both on and at the perimeter of the Site. The exposure assessment includes a comparison of LFG concentrations to applicable New York Codes, Rules, and Regulations (NYCRR) Part 360 standards.

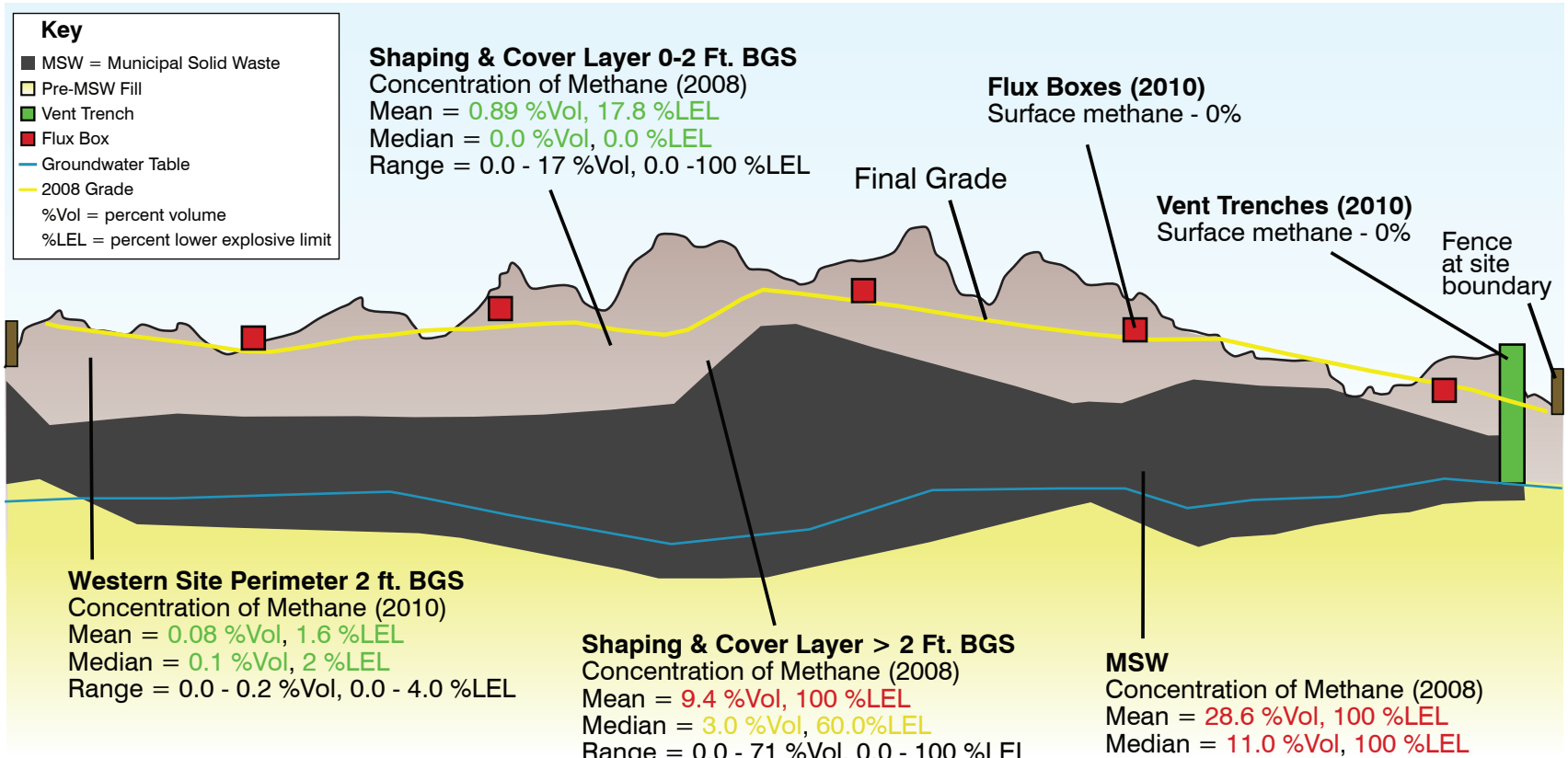


**Figure 4-1 Conceptual Site Cross-Section & Methane Concentrations**

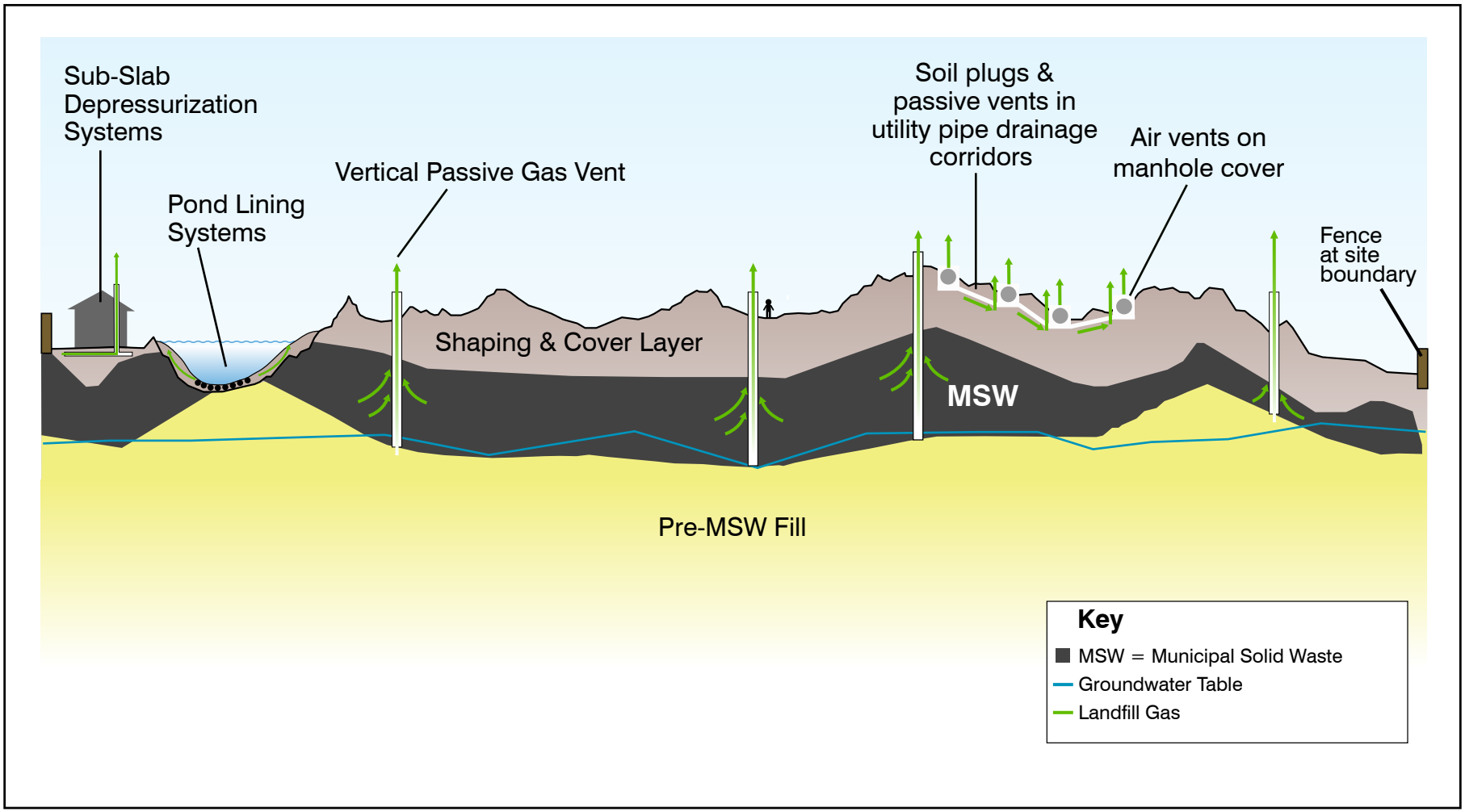


**Figure 4-2 Conceptual Site Cross-Section & Landfill Gas Control Systems**

Ecology and Environment GIS Department: \\prtbhp1\gis\NYC\FerryPointPark\MAPS\MXDs\ProjectArea_Boring_Concentrations_11x17_2012May16.mxd 5/16/2012

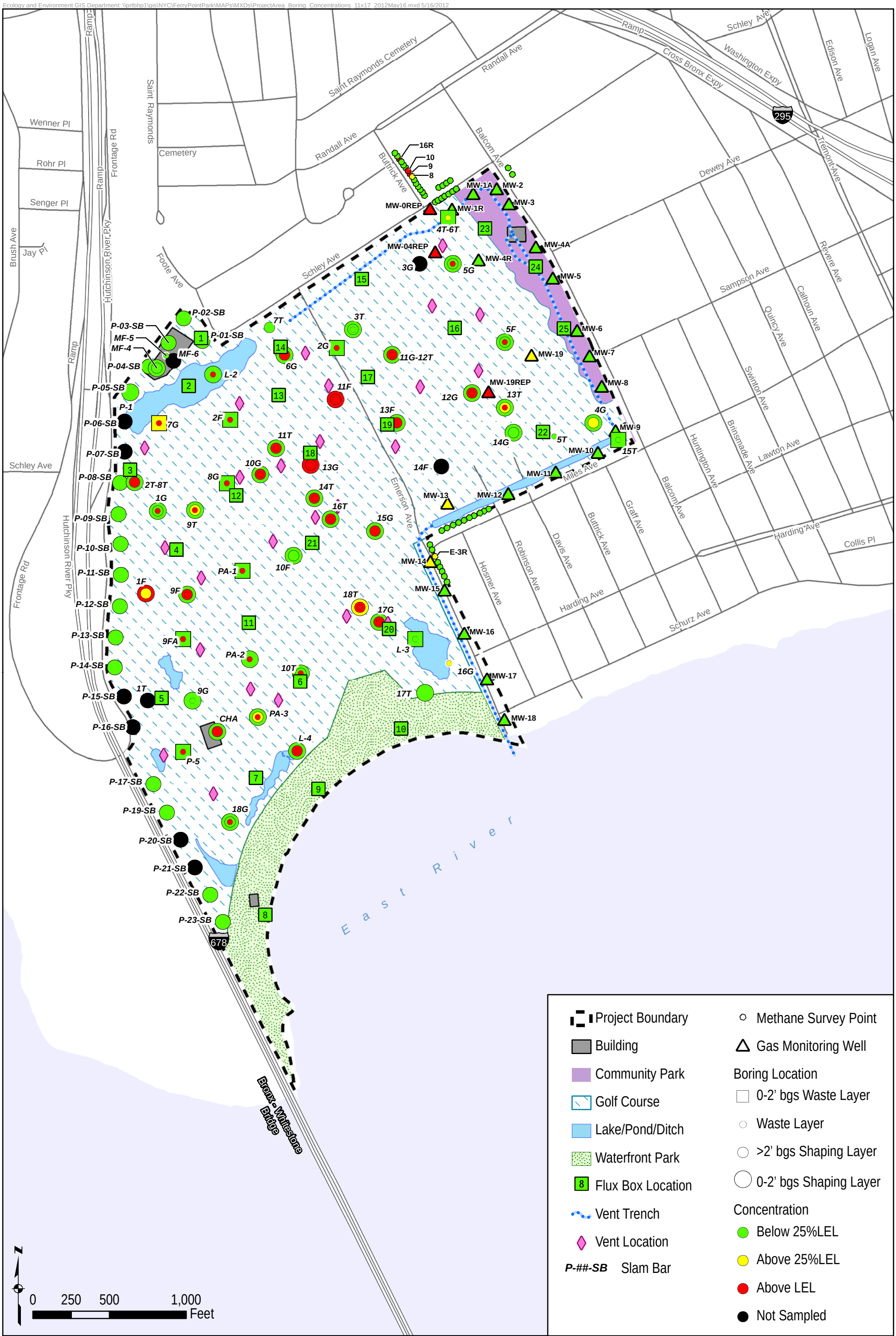


**Figure 4-3:**
**Methane Concentrations in Landfill Gas in Site Interior, Along Site Perimeter, and at Offsite Locations**

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Notes: 1. Data are from the TRC 2009 Supplemental Landfill Gas Investigation, the TRC 2009 Pre-Extraction Pilot Test Subsurface Investigation, and the TRC 2010 Emissions and Air Quality Testing.
2. Color coding for monitoring wells and methane survey points based on data from a 2 year period between January 2009 and January 2011. Color coded as yellow if 2 or more meausurements equal or exceed 25% LEL and as red if 2 or more measurements equal or exceed LEL.

## 4.2 Evaluation of LFG Data

### 4.2.1 Occurrence of LFG in the MSW Layer

#### 4.2.1.1 Site Interior

**Historical LFG Operations Monitoring Data**

Since 2000, field methane measurements have been collected from two interior gas wells; MW-4/4R and MW-19 (see Figure 4-4, which shows temporal trends for these monitoring points from 2000 to 2011). Between 2008 and 2010 these measured concentrations had declined from 100% of LEL to non-detect levels.

Due to concerns raised by NYSDEC regarding the condition of the wells, DPR submitted a plan to abandon the existing onsite gas wells and install two replacement gas wells within the Site's interior. Concurrently, DPR requested that gas well MW-0 be abandoned and a replacement gas well installed within the Site's interior. This request was made due to a suspected off-site source(s) of methane in the vicinity of this location (AKRF 2002; TRC 2005a, 2009a). Monitoring at the approved replacement locations began in February 2012. Measured methane concentrations in the three interior replacement gas wells (see Appendix C), is consistent with LFG data from samples collected within the MSW layer at the Site between 2008 and 2009, which indicated methane concentrations above the LEL.

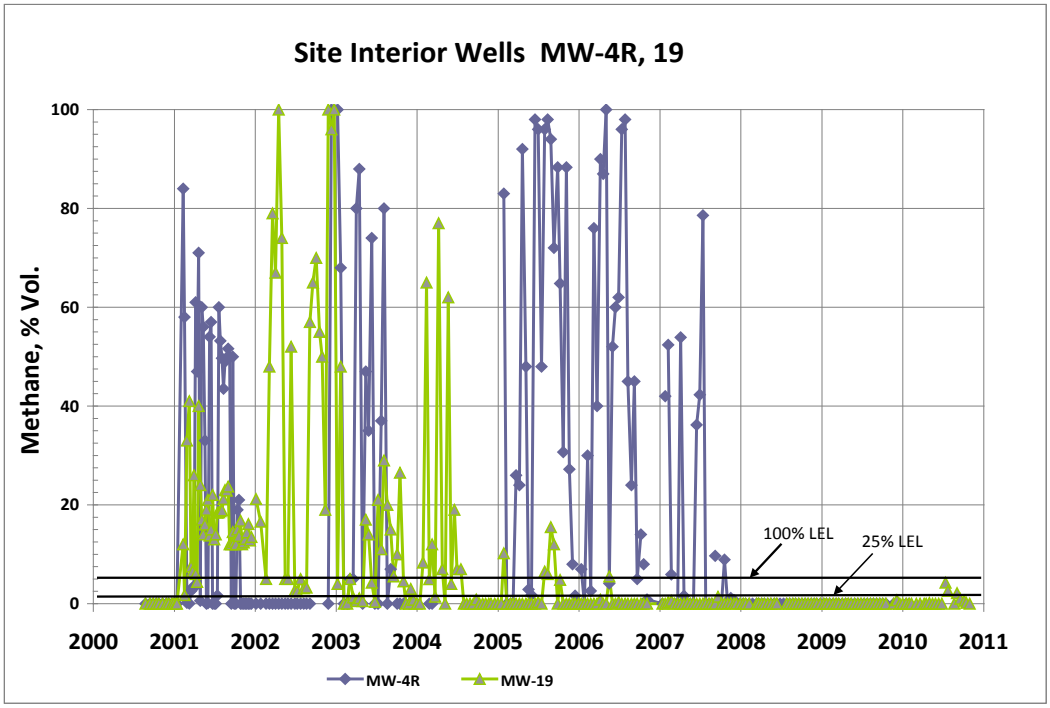



**Figure 4-4 Temporal Trends in Methane Concentrations at Site Interior Wells, 2000 to 2011**

### Recent LFG Investigation Data

**Pre-Extraction Subsurface Investigation.** Methane concentrations were measured by TRC at on-site borings in 2008 and 2009 (see Figure 3-2 for boring locations).

Methane was measured at concentrations exceeding 25% LEL in 82 of 135 samples and exceeding the LEL in 73 of 135 samples within the MSW layer. Mean and median of the measured methane concentrations were both greater than the LEL. Methane concentrations exceeding 25% LEL were measured in approximately two-thirds of the samples collected from the MSW layer, which supports the premise that methane is not present in specific areas but appears to exist in the MSW layer throughout the interior of the Site. However, measured data in the shaping layer, overlying the MSW layer, and at the surface indicates that concentrations decline rapidly as gas migrates upward toward the surface (see Sections 4.2.2 and 4.2.3).

**LFG Extraction Test.** TRC utilized EPA Method 2E in their 2009 extraction testing. EPA Method 2E was historically used to determine LFG flow (EPA 2000). This method states that the purpose of short-term testing is to determine the "maximum vacuum that can be applied to wells without infiltration of ambient air into the landfill." In 2003, an article in the *Journal of Air & Waste Management* (Walter 2003) discussed fatal flaws that existed with this method for measuring landfill gas generation rates. In addition, TRC's extraction pilot test diverged from the recommended EPA method, which identifies ambient air intrusion by percent volume of nitrogen. TRC identified ambient air intrusion by percent volume of oxygen. TRC determined the radius of influence based on differential pressures at the surrounding test wells, yet EPA Method 2E specifies determining the radius of influence based on absolute pressures under static and active extraction conditions.

More importantly, because of the atmospheric intrusion noted during the extraction test, the LFG extraction rate used by TRC during the pilot testing would be significantly higher than the actual LFG generation rates within the area of the pilot test. If LFG generation rates for the entire Site are based on the pilot test results, the resulting estimate would grossly over-estimate actual LFG generation.

#### 4.2.1.2 Site Perimeter

### Historical LFG Operations Monitoring Data

Since 2000, biweekly field methane measurements have been collected from wells located next to the passive vent trench along the perimeter of the Site (see Figure 3-2). Measured methane concentrations have declined from more than 100% of LEL to non-detect levels with a few exceptions (see Figure 4-5 for temporal trends in selected perimeter wells from 2000 to 2011). This significant decline in methane concentrations in perimeter wells demonstrates the effectiveness of the perimeter trench in venting LFG, along with an overall decline in LFG gen-

eration. However, a number of monitoring locations were missing valves during this time, which may have impacted the data collected.

A suspected offsite source of methane in the vicinity of MW-0 located close to the intersection of Buttrick and Schley Avenues, outside the northeastern corner of the Site) was attributed to elevated methane readings at this location (see Section 4.2.1.3 for further discussion). MW-0 has now been abandoned and relocated within the Site's interior as discussed in Section 4.2.1.1 above.

### Gas Monitoring Well Repairs

During their routine inspections of the Site, the IEM noted out that many of the perimeter monitoring wells were missing valves and caps, or otherwise needed repair. DPR performed an inspection of all perimeter wells, and performed the necessary repairs, or installed replacement wells as necessary to bring them into compliance with the current Part 360 Permit.

Monitoring following the repairs began in February 2012 (see Figure 4-6 for temporal trends in selected perimeter wells. The new bi-weekly data from the site perimeter wells shows that methane concentrations remained consistent with concentrations measured at these wells between 2008 and 2011 (see Appendix C for methane monitoring data).

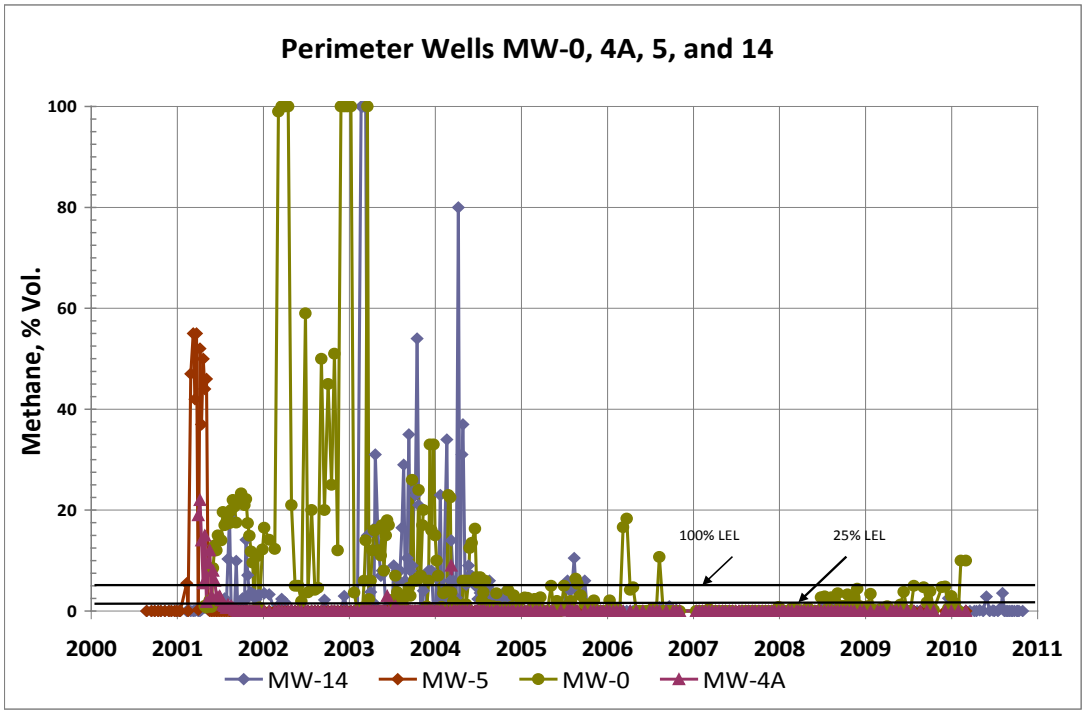



**Figure 4-5 Temporal Trends in Methane Concentrations in Site Perimeter Wells, 2000 to 2011**

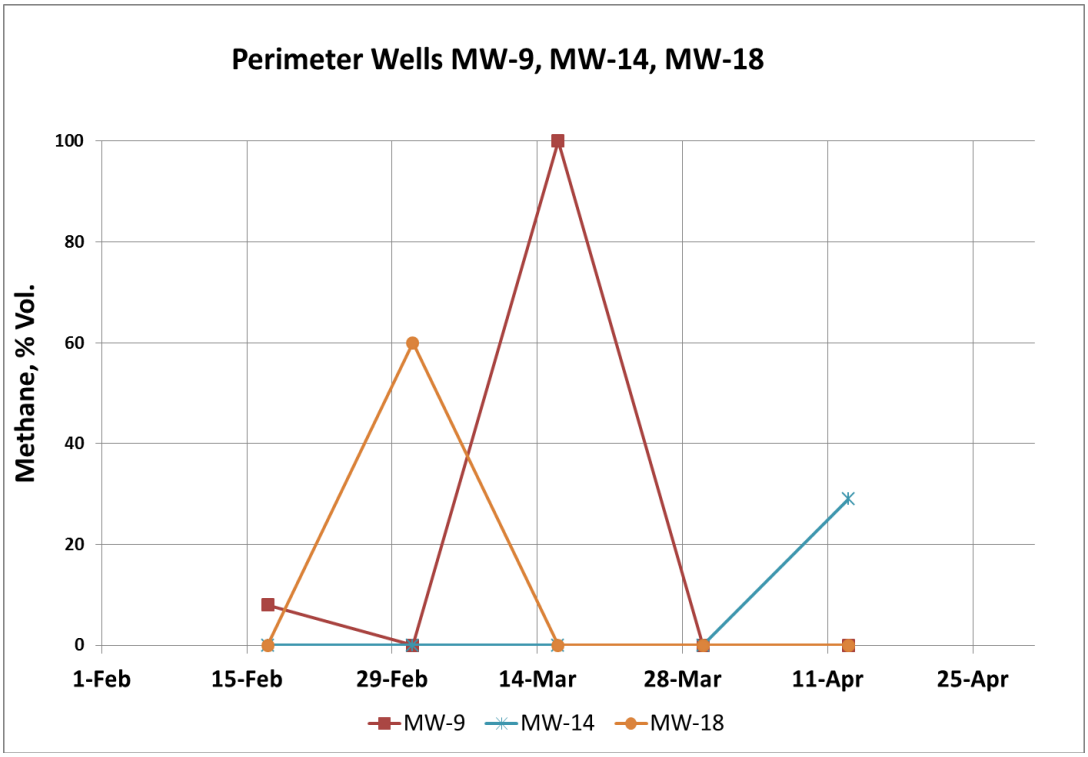



**Figure 4-6 Temporal Trends in Methane Concentrations in Site Perimeter Wells, Biweekly Sampling Events 2012**

The TRC 2008 and 2009 investigations (TRC 2009c) did not measure methane in the MSW along the site perimeter.

### Recent Community Park Vent Data

Sampling was performed at 12 vents within Community Park in June 2011, using the procedures established in the *Landfill Gas Vents Sampling and Analysis Protocol*,(EEEPC 2011c). The protocol summarized the procedures used to identify and estimate the emission rates of air pollutants as well as procedures to conduct an air quality model analysis to identify and compare potential impacts associated with these emissions. The protocol was approved as noted by NYSDEC on March 30, 2011. The June 2011 data reported no measurable gas flow in the Community Park vents. The presence of methane was detected in only 3 of the 12 vents sampled, with detections in the three vents ranging from 1.5 to 7.3% by volume (7.5% LEL to >100%LEL). In the 9 remaining vents, concentrations were below laboratory reporting limits (EEEPC 2011b).

#### 4.2.1.3 Off-site Areas on Schley, Buttrick, Balcom, and Emerson Avenues

### Historical LFG Operations Monitoring Data

Since the early 2000s, field methane measurements have been collected from probes, located on Schley, Buttrick, Balcom, Miles, and Emerson avenues (see Figure 3-2). Measured methane concentrations have been lower than the LEL in

the Schley, Balcom, Miles, and Emerson Avenue probes since 2002, indicating absence of significant methane at these off-site locations.

Methane concentrations in the probes on Buttrick Avenue, however, have been higher than the LEL in several probes (see Figures 4-7 and 4-8). The presence of elevated methane levels in these probes indicates an off-site source of methane, separate from landfill activities at the Site. This is further discussed below under the heading "Gas Monitoring Well Repairs."

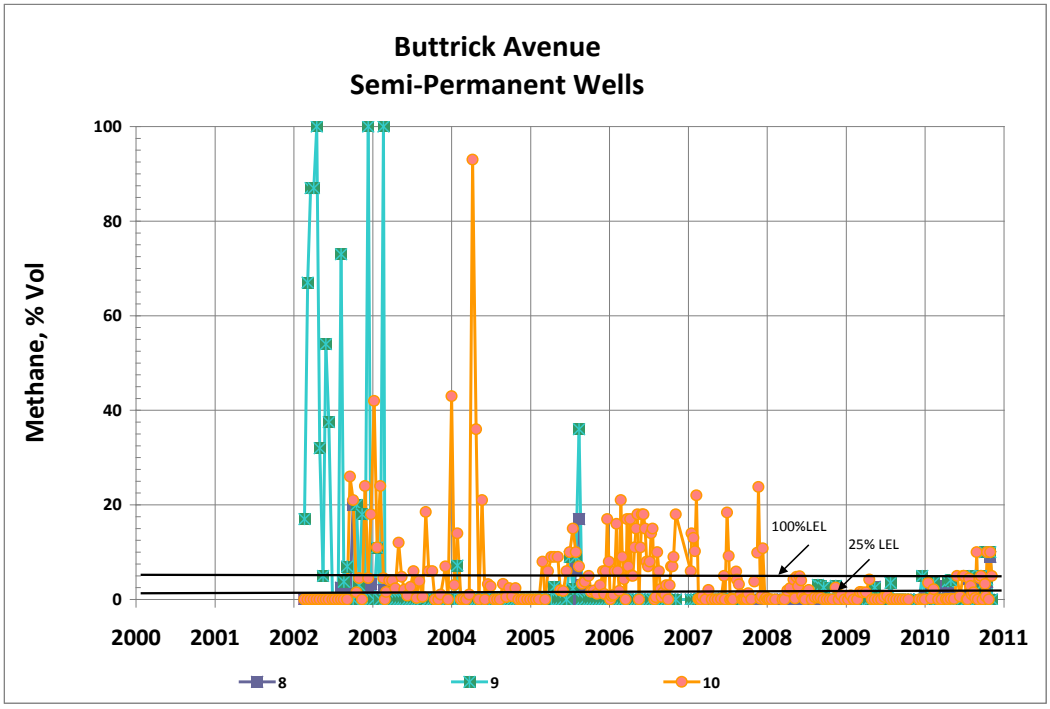



**Figure 4-7 Temporal Trends in Methane Concentrations in Off-site Probes on Buttrick Avenue, 2000 to 2011**

## Gas Monitoring Well Repairs

As discussed in Section 4.2.1.2, off-site monitoring locations were also subject to repairs based on the IEM's routine inspections. DPR has performed the necessary repairs, or installed replacement wells as appropriate for the majority of monitoring locations.

Monitoring following these repairs began in February 2012 (see Figure 4-8). The new bi-weekly data showed that methane concentrations remained consistent with concentrations measured at these wells between 2008 and 2011.

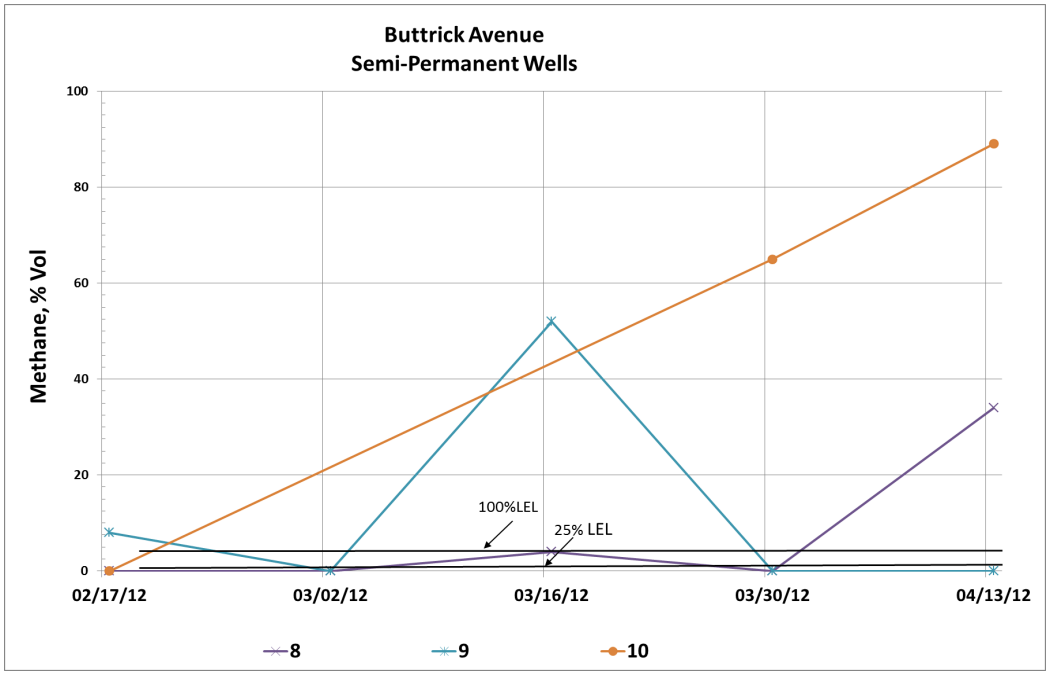



**Figure 4-8 Temporal Trends in Methane Concentrations in Off-site Probes on Buttrick Avenue, Biweekly Sampling Events 2012**

The following findings from previous investigations/LFG monitoring provide evidence for the presence of an offsite source of methane in the Buttrick Avenue area:

1. The February 2002 AKRF Methane Monitoring Study in which two test pits were excavated in areas of elevated methane detections along Buttrick Avenue in September 2001 identified presence of garbage at this location.
   a. According to the report: "*Garbage was identified in the material excavated and included wood, paper, cloth, metal cans, plastic bottles, glass, ceramic, asphalt, foam, and shoe soles*".

2. The 2002 AKRF study also confirmed the presence of soils rich in organic material, consistent with the reported presence of historic marshlands in this area.
   a. To confirm the presence of historic marshlands, soil samples from the excavations from the test pits in this area were sent for laboratory analysis and AKRF reported that "the laboratory results indicate the soils are rich in organic material". These results support the presence of a former marsh, which was likely to contain organic-rich sediments.

3. During the sampling conducted following the installation of the perimeter vent trench, AKRF concluded the following in their 2002 study:
   a. *"because there has been little change in the elevated methane levels on Buttrick Avenue since the installation of the landfill gas venting trench, garbage and organic rich materials were found in the test pits excavated*

*in this area, and the area is located over a filled marshy area, the source of methane on Buttrick Avenue is offsite".*

4. Further, as discussed in the TRC 2005 and 2009 engineering reports (TRC 2005a, 2009a), this area was a former tidal marsh subject to potential filling with MSW prior to 1945. According to TRC, organic-rich marsh deposits and fill possibly containing MSW are the likely sources of methane in this area. (Figure 3-1 shows the approximate MSW fill progression at the Site and surrounding historic waterbodies and marshlands.)

In the TRC 2008 and 2009 investigations (TRC 2009c), samples for methane measurement were not collected at off-site locations.

### 4.2.2 Occurrence of LFG in the Shaping Layer

#### 4.2.2.1 Site Interior

Methane concentrations were measured by TRC in the shaping layer at on-site borings drilled in 2008 and 2009 (see Figure 3-2). Samples were collected from within the top 2 feet of the shaping layer and from 2 to 6 feet BGS, also within the shaping layer (TRC 2009c).

Methane concentrations observed in the shaping layer were lower than those in the underlying MSW layer (see Figure 4-3). More importantly, methane concentrations attenuated from the bottom to the top of the shaping layer; concentrations in the top 2 feet are significantly lower than those measured from 2 to 6 feet BGS.

The mean and median values for samples within the top 2 feet of shaping layer were 17.84% LEL and 0.0% LEL, respectively. Samples collected between 2 and 6 feet BGS resulted in a mean and median of 100% LEL and 60% LEL, respectively.

#### 4.2.2.2 Site Perimeter

During the 2008 and 2009 investigation, TRC measured methane concentrations in the shaping layer in shallow, temporary monitoring points installed along the western perimeter of the Site (see Figure 3-2). Samples were collected from within the top 2 feet of shaping material (TRC 2009c).

The mean and median values of methane concentrations in these samples were 1.6% LEL and 2% LEL, respectively. The absence of methane concentrations above the LEL in these perimeter monitoring points demonstrates the rapid attenuation that occurs in the westward direction. These findings indicate that mitigation measures are not deemed necessary along the western perimeter of the Site.

### 4.2.3 Occurrence of LFG at the Surface

At 30 locations, flux box and ambient air testing was conducted by TRC in 2010, for field measurements of methane and laboratory analysis of VOCs (see Figure 3-2). Monitoring and analysis was performed using the procedures established in the "Flux Chamber Testing Program Work Plan", included as Appendix B to the

Ferry Point Landfill Gas Report (EEEPC 2010). The work plan summarized the flux chamber sampling and analysis techniques that would be used to determine surface emission rates from the landfill. The results of the analysis were used to develop total hourly and annual emission rates. These rates were used for the analysis of potential impacts to on site and off site receptors for methane and hazardous air pollutants (HAPs).

Methane was not detected in field measurements in any of the sampling locations (EEEPC 2010). The absence of methane in the flux box samples demonstrates a rapid attenuation of methane occurring in the upward direction from the MSW layer through the shaping layer and to the surface. It provides further evidence that methane is not present at measurable rates at the surface of the Site.

Low levels of select VOCs were reported in some flux box samples. However, the concentrations were either below NYSDEC acceptable standards or similar to background concentrations reported in ambient air samples (EEEPC 2010).

## 4.3 LFG Emission Rates

### 4.3.1 Methane Emission Rates

The surface emission rate of methane at the Site was estimated using LandGEM Version 3.02 (EEEPC 2010 [see Appendix B]). Because the LandGEM model is intended to be used to design gas collection systems, it typically overpredicts LFG generation. CAA defaults were used in the model, which also yields conservative emission estimates.

As discussed in Section 4.1.6 the LandGEM model estimated a 2010 methane emission rate of 1,885 Mg/yr (or 2,078 tons/yr). This corresponds to an average hourly emission rate of 0.237 tons/hr (based on 24 hours/day and 365 days/year). The model predicts substantial reductions in each subsequent year, ranging from a predicted rate of 2,078 tons/yr in 2010 to a rate of 463 tons/yr in 2040. This represents an approximate 75% decrease in methane production over time.

For comparison, in 1999, TRC estimated a methane emission rate of 0.00004 cfm/SF, calculated using the EPA Method AP-42. The LandGEM modeling performed in 2010 calculated 1999 model year emissions rate equivalent to 0.00003 cfm/SF, which is nearly the same value as the TRC AP-42 estimate.

### 4.3.2 HAP and Other VOC Emission Rates

#### Flux Box Measurements

The emission rates of HAPs and other reported VOCs in the LFG from the Site were estimated using the average concentration of each compound in the flux box samples. The average concentration was calculated only from samples with compound concentrations over the detection limit. This methodology produces a very conservative (i.e., biased high) emission rate as it ignores samples with results below detection limits. The assumptions and the approach used to model the

emission rate are presented in EEEPC's Landfill Gas Report, Ferry Point (November 2010).

NYSDEC's guidelines for estimating annual impacts, when applied to the calculated emission rates, resulted in ambient air concentrations below NYSDEC's acceptable thresholds (EEEPC 2010).

#### Community Park Vent Measurements

The emission rates of VOCs and sulfur compounds in the community park vents were estimated by multiplying an assumed vent flow rate (1 $cm^3$/sec was used because no measurable flow was observed) and reported concentration of each constituent. Emission rates were below levels that would result in an adverse impact to public receptors in the vicinity of the vents (EEEPC 2011b).

## 4.4 Exposure Assessment

### 4.4.1 Criteria

#### Methane

NYCRR Part 360 criteria, which requires that combustible gas concentrations not exceed 25% of the LEL in structures on-site and off-site and not exceed the LEL at or beyond the Site boundary, were used for comparison with methane concentrations measured within and along the perimeter of the Site.

#### HAPs and Other VOCs

NYSDEC SGCs and AGCs are screening-level values used to determine the appropriate environmental rating of air pollutant emissions. SGCs are chosen to protect the general population from adverse acute one-hour exposures; AGCs are chosen to protect against adverse chronic exposure and are based upon the most conservative carcinogenic or non-carcinogenic annual exposure limit. SGCs and AGCs are used to assess impacts on ambient air caused by an emission source.

### 4.4.2 Comparison of Flux Box & Community Park Testing Results with Exposure Criteria

#### Methane

Methane was not detected in the flux box samples collected within the interior of the Site, indicating that methane is not emitted at the ground surface at measurable rates. Absence of methane at the surface indicates that NYCRR Part 360 criteria are met.

Also both mean and median concentrations of methane in the top 2 feet of the shaping layer within the interior of the Site did not exceed 25% LEL, as would be required by NYCRR Part 360 for on and off-site structures.

Methane concentrations in the perimeter wells, except in MW-0, located along the existing vent trench, abutting Emerson, Miles, Balcom, and Schley avenues were below the LEL, as required by NYCRR Part 360. Methane concentrations were

also below the NYCRR Part 360 criteria for samples collected along the western perimeter.

Methane concentrations in the probes on Buttrick Avenue, located close to MW-0, have been higher than 100% LEL. As discussed in Section 4.2.1.3, the presence of elevated methane levels in these probes along with the nearby organic-rich marshland and pre-1945 use of the area for MSW fill indicates an off-site source of methane that likely contributes to elevated levels at MW-0.

### VOCs

**Flux Box Measurements.** Of the four VOCs detected in flux box samples in the 2009 TRC investigation, benzene was reported below the concentrations found in the ambient samples, which are representative of background concentrations. Three other VOCs— methylene chloride, trichloroethylene, and tetrachloroethylene—concentrations in flux box samples were roughly equivalent to and/or slightly greater than those in the ambient samples (EEEPC 2010). Potential impacts on ambient air as a result of emission of these VOCs at the Site were assessed by EEEPC, and the results indicated no exceedences of NYSDEC standards (EEEPC 2010).

Carbon tetrachloride was detected in an ambient sample but not in the flux box sample. Because of its reported widespread use in operations within urban areas and its absence in Site flux box samples, the Site is not considered to be a source of carbon tetrachloride in ambient air.

**Community Park Vent Measurements.** Recent testing indicates that the VOC emissions from the 12 community park vents would result in ambient air concentrations that are well below NYSDEC standards, indicating an absence of impacts above public exposure thresholds in the vicinity of the vents (EEEPC 2011b).

In an email dated July 1, 2011, NYSDEC confirmed their acceptance of these tests and indicated that emissions from the vents pose no health impact to the public using the park.

## 4.5 Conclusions

The following conclusions were drawn from the evaluation of the LFG data collected and modeling conducted to date at the Site:

- The reported data indicates the presence of methane within the MSW, as expected from a landfill of its age. Methane levels at the surface were below regulatory limits for structures within the interior of the Site (below 25% LEL). Methane levels in the subsurface were below regulatory limits at the perimeter of the Site (below LEL).

- At the current landfill surface, concentrations of other LFG compounds, primarily VOCs, were either below their acceptable thresholds or similar to background levels measured in ambient air samples.

- Modeled ambient air concentrations using VOC concentrations reported in the flux box samples demonstrated no reportable impact of VOCs on ambient air at the Site.

- The LandGEM model, which predicts a conservative estimate of LFG generation rates, shows that methane emissions from Ferry Point do not contribute significantly to greenhouse gas (GHG) emissions. The estimated 2010 annual methane emissions from Ferry Point are approximately 0.048 million tons of $CO_2$-equivalent emissions.

- No measurable LFG flow was measured in recently tested Community Park Vents.

- Recent testing of the vents at the Community Park indicate that emissions for VOCs and sulfur compounds from the LFG vents that would cause short-term and annual impacts that are well below the SGCs and AGCs. The impacts are several orders of magnitude less than these guideline concentrations, which is indicative of the limited emissions from the LFG that is present in the subsurface.

- Subsurface MSW and historic marshlands in the Buttrick Avenue area have been identified as the likely offsite source(s) of elevated methane measurements in LFG probes in this area.

LFG does not exceed regulatory and health-based thresholds at the surface, which indicates that LFG generation within the waste occurs at low levels, consistent with the age of the landfill. Therefore, active LFG extraction systems at the Site are not warranted.

However, methane concentrations exceeded the LEL in 73 out of 135 samples collected within the subsurface MSW layer during the 2008/2009 TRC subsurface investigation. Therefore, passive venting systems are proposed for the open areas of the Site. Active depressurization systems are recommended to be placed under building footprints to minimize the potential for LFG to collect underneath structures.

# 5 Landfill Gas Management Approach

## 5.1 Summary of LFG Data and Planned LFG Control Measures

### 5.1.1 Summary of Data

#### Site Interior

The MSW layer in the interior of the golf course and community park portions of the Site ranges from 4 feet thick to 47 feet. Concentrations of methane, the primary component of LFG, are elevated in the MSW layer, with both mean and median concentrations above the LEL. However, as the LFG migrates upward toward the ground surface through the shaping layer, methane concentrations decline rapidly. Concentrations in samples collected at the surface in flux boxes were below the instrument's detection.

#### Site Perimeter

Along the northern and eastern perimeters of the Site, where the perimeter vent trench is located, methane concentrations have declined significantly. As described in Section 3.3.4, groundwater levels measured during biweekly piezometer monitoring events have been observed to be above the vent trench bottom depth since 2005. This demonstrates the effectiveness of the vent trench in controlling the migration of LFG in this area. Along the western perimeter of the Site, methane concentrations in the upper section of the shaping layer are below the LEL, thus precluding the need for placing LFG control measures in this area.

### 5.1.2 Planned LFG Control Measures

A description of the planned LFG control measures is included below and the type of LFG control measures to be installed for each Site feature is presented in Table 1-1 (see Figure 5-1 for a conceptual layout of the LFG control measures).

#### Site Interior

Methane generation, as shown in the 2010 LandGEM modeling, is currently estimated at approximately 1 cfm/acre or less, a very low rate that correlates well with the 1999 TRC AP-42 modeling. Elevated levels of subsurface methane are expected to decrease over time and, as described in Section 2, methane that exits the landfill via the permeable soil cover into the open atmosphere will quickly diffuse to negligible levels. Moreover, elevated subsurface levels do not result in

unsafe levels at the landfill's surface, as demonstrated by the lack of methane detection in the flux box measurements taken by TRC in October 2010.

In order to provide adequate ventilation to enclosed structures at the site, the migration of LFG into occupied structures or structures where there is an ignition source (such as electrical connections) needs to be prevented or minimized (to at or below the regulatory-prescribed levels). Thus, all on-site buildings will have an active sub-slab depressurization (SSD) system (see Section 5.3).

Although the data do not indicate the need for LFG control within the site interior (other than within enclosed structures), methane concentrations exceeded the LEL in 73 out of 135 samples within the MSW layer during the 2008/2009 TRC subsurface investigation. Hence, a passive venting system consisting of venting wells screened across the MSW layer will be installed as a precautionary measure (see Figure 5-1 and Appendix A for a layout of the venting system, and Section 5.2 for a design description). Figure 5-1 currently shows the location of passive vent wells within the golf course portion of the Site.

Also, methane was not present in the upper section of the shaping layer above the NYCRR Part 360 limit (25% LEL) for on-site structures. During the recent 2008/2009 TRC investigations, less than 10% of samples collected in the upper 2 feet of the Site subsurface were reported to have concentrations exceeding this limit. None of these sample locations, where methane was reported above the 25% LEL, were below the planned footprint of proposed onsite structures. Conservatively, an SSD system is proposed for installation underneath the footprints of the structures as a precautionary measure to allow the LFG to be directed to and vented at the rooftops. This design will mitigate the threat of exposure to building occupants and preclude explosive conditions. Refer to Figure 5-1 for locations of the planned buildings where a SSD system is planned and Section 5.3 for a design description.

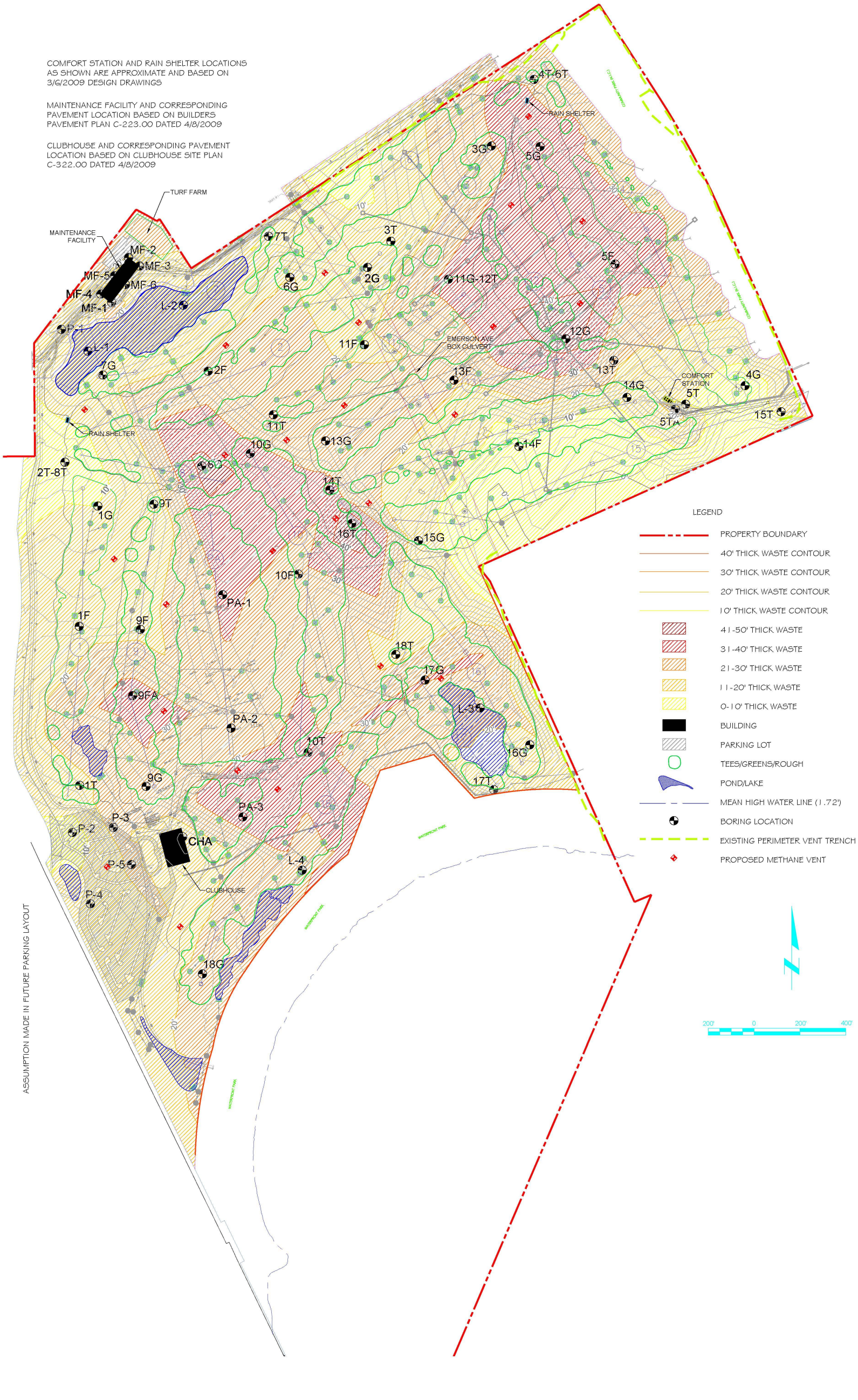
Risk management measures to control LFG under subsurface features, including utility corridors, ponds, and lakes in the interior of the Site are described in Section 5.4.

### Site Perimeter

Because passive venting has been effective in reducing methane concentrations along the eastern and northern perimeters of the Site, the existing vent trench will continue to operate in accordance with the existing program requirements outlined in the Part 360 permit (see Figure 5-1).

LFG control along the western perimeter of the Site, where methane concentrations are below the LEL is not planned The East River will provide an effective block to off-site migration of LFG on the south side of the Site.

02:003096.SG12.03\Graphics\Figure 5-1_LFG Control Measures.cdr




SOURCE: Ecology and Environment Engineering, P.C. 2011

**Figure 5-1 Layout of LFG Control Measures**

## 5.2 Passive Vent Well System Design

### 5.2.1 System Description

EEEPC has prepared a layout of the vertical passive gas vent wells for the golf course (see Figure 5-1 and Appendix A). The number of vent wells and their locations were selected to maximize the LFG removal efficiency while avoiding the golf course playing area using the following criteria, in order of priority:

- Vent wells were first located in areas exhibiting high historical subsurface and shaping layer LFG concentrations (see Figure 4-3).
- The locations were further biased toward areas exhibiting larger waste thicknesses because these areas could generate more LFG.
- The locations were then biased toward areas of higher shaping layer thickness and higher top of MSW elevations because these areas will influence LFG pressure build-up and/or lateral migration of LFG.
- The locations were selected to avoid subsurface utilities and playing areas of the golf course.
- The Site includes a network of vertical vent trenches along the northern and eastern boundaries that capture and release any LFG that laterally migrates towards these Site boundaries.
- The Site design includes a porous sand layer that will diffuse any LFG releasing from any preferential pathway in the shaping layer.
- Subsurface utilities that travel off-site or into/out of occupied structures will have soil/bentonite collars and additional passive vents installed (see Section 5.4).
- Water quality ponds will be lined up to their permanent pool elevations with a low permeability low density polyethylene (LDPE) liner and include passive vent systems. Ponds to be lined and passively vented include: K, L, M, P1, P2, and the irrigation lake. Pond P2 will be lined for its entire volume due to the presence of MSW encountered during excavation.
- The three enclosed buildings (maintenance facility, comfort station, and clubhouse/banquet facility) on the golf course will have active SSD systems with additional venting installed. The maintenance facility and comfort station are shown on the engineering drawings S-202.00, C-221.00/C-222.00, and C-321.00/C-322.00, respectively prepared for the DPR under Contract X.126-209M (TRC 2009b). Community and waterfront parks will have one comfort station each which will also be designed with active SSD systems. The community park is shown on the engineering drawings prepared for the DPR under Contract X.126-208M (TRC 2008), which were also included in the November 2009 Permit Application (TRC 2009a).

Twenty-five stand-alone vertical passive vents and 12 passive vents installed into utility pipe bedding material are planned for the site. There are approximately 190 acres not covered by ponds or buildings, which are vented separately. This equates to a frequency of one vent per 5 acres. It is anticipated that this same venting frequency will be applied to the waterfront park. The community park already has 12 passive vent wells installed, which is a greater frequency than one vent per 5 acres. The community park passive vent design is shown on Drawings H-1.1 through H-1.7 (submitted under separate cover). These drawings show that the stand-alone vertical vents facilitate venting through the aspirometric cowl. The drawings also show a sample port on the side of each vent stack that will facilitate the monitoring of the vented gases.

Passive venting, combined with an LFG generation rate that is more than 50 years past its maximum, the vertical vent trenches and those vents incorporated into utilities, SSD systems, and the pond liner systems will more than adequately vent the LFG such that all emissions and health and safety requirements are met.

These vents will work predominantly via a pressure gradient. The vertical vents will be screened for the entire thickness of the MSW layer and extend to below the lowest known water table. When the LFG pressure in the subsurface is higher than the atmospheric pressure, LFG will be conveyed towards the vent and released through the top of the vent. During periods of equal subsurface and vent pipe pressure, a smaller amount of LFG will be released via diffusion as the subsurface gas concentrations in or near the vent pipe seek to equalize with the atmospheric concentrations. Radii of Influence (ROIs) are calculated for active venting systems and do not apply to the performance of passive venting systems. Therefore, no ROI calculations can be made for the passive vents as the pressure gradient in the subsurface will convey LFG to the passive vents.

## 5.3 Sub-Slab Depressurization Systems for Building Structures

SSD systems will be installed for all enclosed buildings at the site. This includes the maintenance building, clubhouse/banquet facility, and comfort station at the golf course; and one comfort station each at community and waterfront parks.

The SSD systems will be designed to capture and actively vent LFG from beneath each building foundation. Vent piping will be installed to penetrate the foundation slabs at each building, and travel up through the roof via a suction fan to discharge accumulated LFG to the atmosphere.

At each building, an impermeable geotextile liner will be placed directly on top of a 12-inch thick gas permeable aggregate sub-base layer, beneath the entire building's floor slab. Sub-slab depressurization pit(s) will be installed in the aggregate layer. A six-inch diameter vertical riser pipe will extend from the SSD pit(s) through the building to the roof, where a suction fan shall be installed to actively vent LFG.

Sub-slab LFG concentrations will be monitored through monitoring points installed through the floor slabs of each building. Indoor air combustible gas levels will be monitored via combustible gas indicators installed throughout the buildings.

## 5.4 LFG Control in Subsurface Features

### LFG Control in Utility Corridors

All site utilities will be installed within the subsurface. Low-permeability soil/bentonite collars will be installed in utility corridors containing permeable pipe bedding materials at the building line into structures and where the utilities travel off-site. This will be done to prevent LFG from migrating laterally within pipe bedding and into buildings or off-site. These utilities are predominantly water and sanitary sewer lines but will include other utilities if they were installed with permeable pipe bedding material and they either enter a building or extend off-site.

Where such utilities are routed off-site through a perimeter vent trench, the soil collar will be installed immediately adjacent to the off-site side of the vent trench, thus allowing any gas traveling through the pipe bedding to be vented to the atmosphere through the vent trench. In locations where these utilities are not routed through a vent trench, a vertical passive vent will be installed immediately on the landfill side of the soil collar. In locations where these utilities travel into a building, the soil collar will be at the building line and a passive vent will be installed to vent the pipe bedding to the roof of the building.

Other utility LFG controls include air vents on vault and manhole covers and conduit seals and electrical connection.

Locations and details of the soil/bentonite collars and vent locations are shown on the Design Drawings prepared for the DPR under Contract X.126-208M (EEEPC 2012). The Design Drawings also include a detail of the conduit seals.

### LFG Control Underneath Ponds/Lakes

An irrigation lake with a geomembrane liner has been constructed in the northwestern area of the golf course. The liner is an impediment to the surface venting of LFG. A gas transmission layer has been installed underneath the geomembrane liner and is connected to perforated piping around the perimeter of the lake as shown on TRC's Contract Drawings H2.1, H2.2, and H2.13 of Contract X.126-109M (TRC 2009c). This perforated pipe enables the passive venting of LFG from beneath the liner. This venting system could be activated should contingency actions be needed as described below.

Should perimeter LFG monitoring data indicate the off-site migration of methane, this venting system allows for the contingency connection of an active blower. Section 6.3.4.1 discusses the conditions for this potential contingency action.

Water quality ponds will be lined with a low permeability liner up to their permanent pool elevation. The low permeability LDPE liner will include passive venting. Ponds to be lined and passively vented include: K, L, M, P1, P2, and the irrigation lake. Pond P2 will be lined for its entire volume due to the presence of MSW encountered during excavation. The water quality ponds are shown on TRC's Contract Drawings C3.4 through C3.9 of Contract X.126-109M (TRC 2009c) and C-351.00 of Contract X.126-209M (TRC 2009b). The water quality pond liner designs are shown in EEEPC's Supplemental Drawings of Contract X.126-109M (EEEPC 2011a). A geocomposite layer will transfer, via a pressure gradient, any LFG building up pressure beneath the liner to the perimeter trench perforated pipe, where it will be passively vented to the atmosphere. Once the gas reaches the atmosphere, it will diffuse quickly to negligible levels, as described in Section 2.

## Additional Risk Management Measures

The venting of enclosed but rarely occupied spaces, such as manholes, will be conducted by following confined space entry protocols, including active ventilation just prior to and during entry. A health and safety plan that addresses confined space ventilation, required air monitoring, and required personal protective equipment will be prepared and provided to NYSDEC.

# 6 Landfill Gas Maintenance and Monitoring Requirements

## 6.1 Introduction

Since 2000, DPR has performed bi-weekly LFG monitoring at on-site, perimeter, and off-site monitoring locations in accordance with the Site's 2005 Part 360 Permit (Permit No. 2-6006-00014/00013). Compliance with Part 360-2.17(f) requires methane concentrations at the site boundary to be less than the LEL. However, the 2005 Permit required the Ferry Point site to comply to a more restrictive criteria of 25% LEL as the action level for which additional sampling and reporting was required. The Part 360 renewal application for the site will comply with the regulatory guidance of NYCRR Part 360-2.17(f) for LFG monitoring and reporting, as described below in Section 6.1.1.

The required operations, maintenance, and monitoring (OM&M) actions presented in this document will be incorporated into the Part 360 permit renewal application for the Site.

LFG monitoring is planned using existing LFG probes, and will be conducted in accordance with this Plan. Figure 3-2 shows the location of LFG monitoring probes and piezometers.

### 6.1.1 Regulatory Guidance

The NYCRR Part 360 "Solid Waste Management Facilities" regulations concerning LFG were used as guidance in developing the OM&M program. The following criteria will be used for the Site:

Part 360-2.17(f):

- Concentration of explosive gases must not exceed 25% LEL in on-site and off-site structures; and
- Concentration of explosive gases must not exceed LEL at the property boundary.

Because of the planned future uses of the site as a golf course, banquet facility, and public park, the LFG monitoring plan provides a comprehensive program for future monitoring and maintenance, with specific contingency actions as needed.

Continuous monitoring for methane will occur in all enclosed buildings at the Site for the protection of occupants.

## 6.2 Monitoring Activities through Completion of Golf Course Construction

LFG monitoring activities through the completion of construction will continue to comply with the existing 2005 Part 360 permit special conditions, as summarized below. OM&M personnel for the site will remain as-is (AES or other DPR authorized gas monitoring subcontractor) through turnover of the project to post-construction operations.

- Special condition 26: Monthly inspections shall be performed of the gas venting trench to verify the integrity of the trench and mulch cover. The gas venting trench shall be maintained at all times and soil washouts promptly repaired. Mulch cover shall be replaced at a minimum every spring to maintain the effectiveness of the trench.

- Special condition 30: Monthly groundwater elevation gauging shall be performed to measure the depth to groundwater in each piezometer installed at the gas venting trench until completion of construction. If groundwater elevation in an individual piezometer is measured below the base of the vent trench during a single event, DPR will implement a response plan in accordance with special condition 31 of the 2005 permit. This response plan supersedes the requirements outlined in Exhibit I of Volume II of TRC's 2005 Engineering Report.

- Special condition 31: In the event groundwater level in an individual piezometer is measured below the base of the perimeter vent trench, the following actions will be taken:

    1. NYSDEC will be notified within 24 hours of an individual detection of groundwater elevation below the base of the trench.

    2. Frequency of piezometer monitoring will be switched to bi-weekly if two consecutive exceedences of LEL occur at nearby gas probes; or two consecutive groundwater elevation measurements in the piezometer are reported below the trench elevation.

    3. Monitoring will return to its routine frequency when groundwater elevation in the piezometer is reported above the base of the trench for three consecutive bi-weekly measurements; or methane measurements in nearby probes drop below the LEL for three consecutive measurements.

- Special conditions 32 and 34: Bi-weekly monitoring shall be performed for perimeter gas monitoring wells (0, 1A, 1 to 3, 5 to 12, and 14 to 18) and on-site monitoring wells (13 and 19).

If any individual monitoring point has a reading equal to or greater than 100% LEL or three consecutive bi-weekly readings greater than 25% LEL, monitoring will be performed weekly for the individual points with the elevated readings. An individual monitoring point will return to the regular bi-weekly monitoring schedule when three consecutive weekly readings are measured below the 25% LEL.

- Special conditions 36 and 37: Bi-weekly monitoring shall be performed for the off-site gas monitoring network.

  If any individual monitoring point has a reading that equals or greater than 100% LEL, or three consecutive bi-weekly readings greater than 25% LEL, monitoring will be performed weekly for the individual points with elevated readings. An individual monitoring point will return to the regular bi-weekly monitoring schedule when three consecutive weekly readings are measured below 25% LEL.

- As per NYSDEC's January 3, 2011, letter, additional LFG monitoring parameters will be added to the gas probe monitoring program for the remainder of Site construction. These parameters will continue to be monitored post-construction. These parameters include hydrogen sulfides, VOCs, and carbon monoxide, reported in parts per million (ppm); and well temperature and pressure.

## 6.3 Post-construction Monitoring and Maintenance

The information presented in the post-construction monitoring and maintenance plan is organized as follows:

- Description of OM&M personnel and responsibilities;
- Description of site gas monitoring and maintenance infrastructure, and the activities that will occur for each monitoring and/or maintenance event;
- Schedule of proposed maintenance and monitoring frequency;
- Performance criteria for:
  - Contingency actions,
  - Reduction in maintenance/monitoring,
  - Abandonment of gas venting and monitoring infrastructure; and
- Record keeping and reporting requirements.

Monitoring locations and frequencies are summarized in Table 6-1. O&M forms are included in Appendix D.

### 6.3.1 OM&M Personnel

#### New York City Departments of Parks and Recreation

The DPR is responsible for maintaining this OM&M Plan and ensuring that the LFG control systems are operated and maintained.

#### LFG Monitoring and Maintenance Supervisor

The LFG monitoring and maintenance (LFG M&M) supervisor will be an employee of DPR, oversee all Site LFG monitoring and maintenance activities, and serve as the primary point of contact for DPR for OM&M activities for the Site's LFG control systems. This individual shall be required to have a minimum of 5 years experience with the monitoring and reporting of LFG. The individual will be proficient in operating and maintaining gas monitoring equipment. They will have completed the initial 29 CFR 1910.120 (OSHA 40-hour HAZWOPER) training, and maintain the annual 8-hour refresher training. The LFG M&M supervisor has responsibility and authority to direct all OM&M work activities. The LFG M&M supervisor will maintain the necessary monitoring personnel for the required maintenance and monitoring activities.

#### LFG O&M Personnel

Each inspection/monitoring event will be performed by up to two personnel, who shall have prior experience with LFG monitoring, and who will be assigned by the LFG M&M supervisor. O&M personnel will be trained in the operation and maintenance of gas monitoring equipment and have completed the initial 29 CFR 1910.120 (OSHA 40-hour HAZWOPER) training, and maintain the annual 8-hour refresher training.

The duties of the LFG operation and maintenance (O&M) personnel include:

- Routine monitoring, maintenance, and inspections as detailed in Section 6.3.2;
- Performing contingency activities as detailed in Section 6.3.4.1; and
- Providing completed LFG O&M forms to the LFG M&M supervisor.

#### New York State Department of Environmental Conservation

NYSDEC is the regulatory agency under whose oversight maintenance and operation of LFG control systems will be conducted.

### 6.3.2 LFG Monitoring and Maintenance Infrastructure

#### 6.3.2.1 Perimeter LFG Probes

Perimeter probes are located at approximately 250-foot intervals along the north, east, and southern site boundaries (refer to Figure 6-1 for probe locations and Exhibit H of Volume II of the TRC 2005 Engineering Report for probe completion details).

**Routine Monitoring and Maintenance**
During each event, OM&M personnel will:

1. Record the following field measurements at each location:
   a. Methane (% by volume and % LEL), $O_2$ (% by volume), hydrogen sulfides (ppm), VOCs (ppm), and carbon monoxide (CO) (ppm).
   b. Well temperature degrees Fahrenheit (°F) and well pressure pounds per square inch (psi).

2. Observe the probes and surrounding ground surface for damage and settlement, and make repairs as necessary (inspect inner and outer casings, check sample tube for holes or cuts, and make sure it is not kinked, make sure valve is operable, replace bolts, well lid, and check well locks as necessary). A summary of necessary repairs will be included in the Annual Report.

3. Complete a monitoring report following each event.

### 6.3.2.2 Off-site LFG Monitoring Network

Off-site probes are located along Buttrick, Balcom, Schley, Miles, and Emerson, avenues (see Figure 3-1 for probe locations and AKRF [2002] for probe construction details).

**Routine Monitoring and Maintenance**
During each event, OM&M personnel will:

1. Record the following field measurements at each location:
   a. Methane (% by volume and % LEL), $O_2$ (% by volume), hydrogen sulfides (ppm), VOCs (ppm), and CO (ppm).
   b. Well temperature (°F) and well pressure (psi).

2. Observe the probes and surrounding ground surface for damage and settlement and make repairs as necessary (inspect inner and outer casings, replace bolts, well lid, and check well locks). A summary of necessary repairs will be included in the Annual Report.

3. Complete a monitoring report following each event.

### 6.3.2.3 Piezometers

In 2002, 25 piezometers were installed to evaluate the groundwater elevation relative to the bottom of the passive-vent trench (see Figure 6-1 for piezometer locations and Exhibit I of Volume II of TRC's 2005 Engineering Report for piezometer details).

**Routine Monitoring and Maintenance**
During each event, OM&M personnel will:

1. Record the following field measurements at each location:

a. Depth to groundwater in the piezometer.

2. Observe the piezometers and surrounding ground surface for damage and settlement and make repairs as necessary (e.g., inspect inner and outer casings, replace bolts, well lid). A summary of necessary repairs will be included in the Annual Report.

3. Complete a monitoring report following each event.

#### 6.3.2.4 Passive Vent Trench

The passive-vent trench is installed along the eastern perimeter of the Site and along a portion of the northern Site perimeter. The passive vent trench will be inspected annually, and maintained by DPR to verify the trench is operating as designed. During each event, OM&M personnel will:

1. Observe the vent trench for soil washouts of the mulch cover or other visible signs of damage.

2. Replace mulch cover for areas noted to have washouts.

3. Remove any woody vegetation that has accumulated in the trench.

4. Restore to grade any areas observed to have settled or eroded.

5. Complete a maintenance report, noting the schedule for any maintenance unable to be completed during the original event.

#### 6.3.2.5 LFG Passive Vents

The passive venting system consists of:

- 25 individual vents within the golf course interior (See Appendix A – Passive Vent Layout and Details – Sheet S-H11.01 and SH11.02 for locations of these vents.)

- 12 passive vents inserted into utility pipe bedding material within golf course interior

- 12 passive vents within the community park.

- Additional passive vents as-needed for site features such as water quality pond liners.

Passive vents are intended to relieve LFG pressure buildup within in the buried waste and prevent offsite gas migration. Data trends observed in onsite probes MW-4R and MW-19 (Appendix C – LFG Monitoring Data - Sheets S-H6.01 and S-H6.02 –Existing Gas Monitoring and Venting Plan) illustrate the behavior of LFG that is anticipated at passive vent locations that are drilled into areas where

LFG is present. Elevated methane levels might be observed for up to several years following installation when decreased methane levels are expected.

The 25 stand-alone passive vents will be monitored for stack height reduction eligibility and decommissioning purposes, as described in Section 6.3.4.3 – Decommissioning of LFG Management Infrastructure. Passive vents will have an access port to facilitate monitoring. Passive vent monitoring will occur during routine vent inspection.

Routine monitoring of perimeter probes is based on the regulatory requirements outlined in Section 6.1, and will continue to detect the potential of off-site gas migration and be used for the recommendation of contingency actions for the Site.

Elevated levels of methane in a vent do not indicate an unsafe surrounding, since the vents are designed to transport LFG from within the landfill to the atmosphere for dispersal. Contingency actions for the stand-alone passive vents are given in Section 6.3.4.

### Routine Maintenance and Inspection

During each event, OM&M personnel will:

1. Observe the ground surface around the vents and confirm that the vents are firmly anchored in their original intended position.

2. Observe the vent riser and confirm absence of damage to vent piping.

3. Provide general upkeep, including:
   a. Removing excessive vegetation at and around the vent area,
   b. Repairing any erosion or settlement around the vent riser, and
   c. Repairing any damage to vent risers, as necessary.

4. Monitoring of the 25 stand-alone passive vents within the golf course will be performed to evaluate stack height reduction eligibility. These measurements will be recorded and reported in the maintenance or inspection report.

   Perimeter probe monitoring will be used to determine if methane may be migrating off site. Contingency actions are discussed in Section 6.3.4.1.

   The following parameters will be measured and recorded:

   a. Methane (% by volume and % LEL), $O_2$ (% by volume), hydrogen sulfides (ppm), VOCs (ppm), and CO (ppm)
   b. Vent temperature (°F).

5. Complete a maintenance report, noting the schedule for any repairs/maintenance unable to be completed during the original event.

#### 6.3.2.6 Sub-Slab Depressurization Systems

SSD systems are proposed for enclosed buildings at the Site. Monitoring requirements for SSD systems are presented in this section. The locations of the enclosed buildings where the SSD systems are to be installed are presented in Figure 3-2, Monitoring Locations. The proposed SSD systems must be approved by both NYSDEC and the New York State Department of Health (NYSDOH) prior to installation. Upon completion of the detailed design of these systems, DPR will provide NYSDEC with the manufacturer's specification sheets for the vapor barrier materials; manufacturers' operation and maintenance manuals for all vapor monitoring and control systems; and sizing calculations for vent fans. Installation and proper functioning of the SSDS shall be certified by a Professional Engineer registered in New York State.

The following buildings will have SSDSs:

- Golf Course Comfort station, as shown on drawings X-002.00 through X-005.00 (TRC 2009b);
- Golf Course Maintenance Facility, as shown on drawings X-001.00 and X-003.00 through X-005.00 (TRC 2009b);
- Community Park Comfort Station, as shown on drawing EV-1 (Whitestone Associates 2009);
- Golf Course Clubhouse (not yet designed); and
- Waterfront Park Comfort Station (not yet designed).

Any new structures at the Site will be designed in accordance with New York City Department of Buildings permitting procedures. The need and extent of LFG mitigation systems for future site structures will be evaluated on a case by case basis.

#### Routine Maintenance and Inspections

System inspections will be performed on a routine basis for the site's SSD systems. During each event, OM&M personnel will:

1. Perform routine maintenance on the SSD equipment based on manufacturer's manuals, including calibration of the methane gas monitors using standard gasses.

2. Download continuous SSD monitoring data retained by the system controller at each building.

3. Complete maintenance activities indicated by equipment manufacturers of the respective systems.

4. Complete an inspection report, with the following readings:
   a. Sub-slab vacuum readings at the sub-slab monitoring points located within each building,
   b. Vacuum gauge readings located on the suction fan inlet, and

c. Note the schedule for any maintenance unable to be completed during the original event.

### Real-Time Monitoring and Contingency Actions for Occupied Structures

Each enclosed facility will have at least one continuous combustible-gas monitor that will transmit real-time methane readings to a system controller. The installed system will be capable of retaining the readings and generating reports that include date, time, and methane concentration.

One air-flow switch will be installed for each suction fan. The switch will detect and transmit low-flow conditions to a system autodialer.

An autodialer system will enable the DPR to be notified remotely based on "early warning" indicators. Early warning levels will be set to allow time for corrective action to be taken before methane levels reach 25% LEL in the enclosed space.

Early warning indicators will identify the following conditions:

- Reduction of system flow rate below what is required for effective operation.
- Detection of methane levels at a sentinel concentration of 10% LEL.

Visible and audible alarms will occur at levels of 25% LEL and above to signal the need for building evacuation. Upon notification of elevated methane levels, the building will be evacuated and ventilated. Building occupants will be allowed to re-enter the enclosed facility only after continuously monitored LEL levels drop below 25% LEL.

If methane readings exceed 25% LEL in an enclosed space, NYSDEC will be notified within 24 hours of the event.

### 6.3.2.7 Irrigation Lake Venting System

An irrigation lake with a geomembrane liner has been constructed in the northwestern area of the golf course. The liner is an impediment to the surface venting of LFG. A gas transmission layer has been installed underneath the geomembrane liner and is connected to perforated piping around the perimeter of the lake as shown on TRC's Contract Drawings H2.1, H2.2, and H2.13 of Contract X.126-109M. This perforated pipe enables the passive venting of LFG from beneath the liner. This venting system could be activated should contingency actions be needed as described below.

Should perimeter LFG monitoring data indicate the off-site migration of methane, this venting system allows for the contingency connection of an active blower. Section 6.3.4.1 discusses the conditions for this potential contingency action.

### 6.3.3 LFG Monitoring Schedule

Implementation of the post-construction monitoring plan will collect data necessary to meet the regulatory guidance and to confirm the effectiveness of the installed LFG control measures. The monitoring program will be used to confirm that future LFG conditions are consistent with noted historical trends and LandGEM model projections.

#### Basis for Proposed Monitoring Schedule

A review of Site data from 2000 to April, 2012 was performed to create the basis for the recommended method of post-construction gas monitoring. The data review included five bi-weekly monitoring events that occurred after the well repairs (including retrofits) were made. LFG design criteria and LandGEM modeling data were also reviewed.

Methane emissions modeling performed by both TRC in 1999 (AKRF 1999) and EEEPC in 2010 projected estimates that were approximately 10% of the peak generation rate, and were higher in concentration than actual field measured emissions obtained through the 2010 flux box sampling event (see Figure 6-1). The flux box sampling event found no reportable surface methane concentrations at any of the 30 on-site test locations.

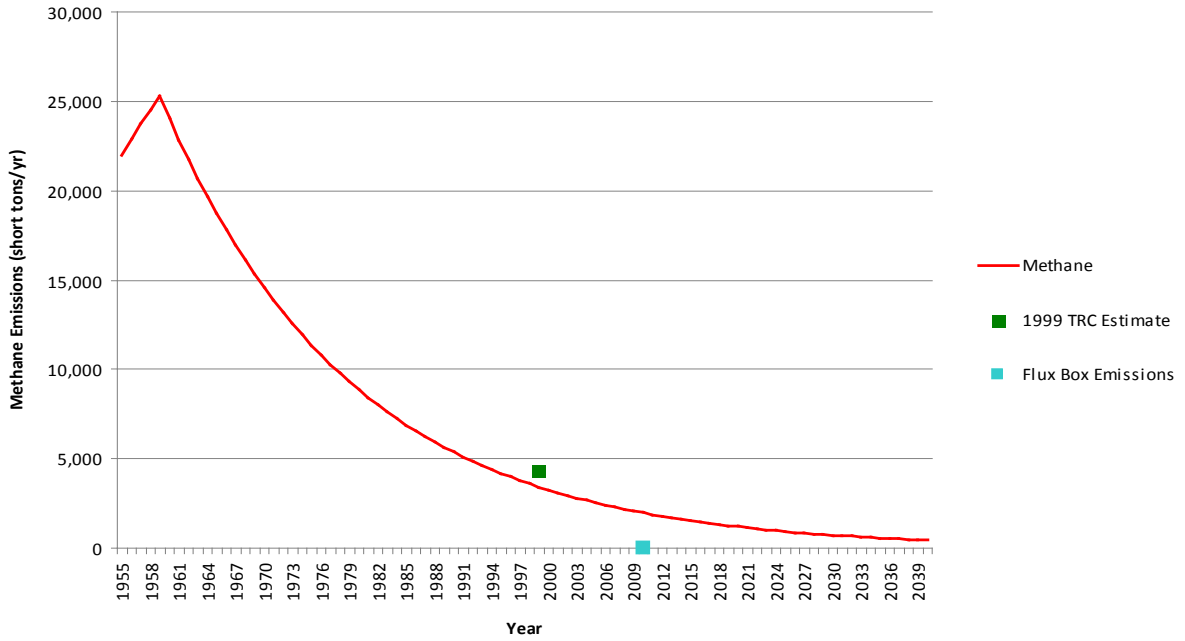



**Figure 6-1 LandGEM Emissions Model Results**

#### Piezometer Measurements

In compliance with the current permit and consistent with Part 360-2.15(f) performance objectives, the DPR has taken groundwater elevation measurements bi-weekly at piezometer locations. The data collected from 2007 through 2010 demonstrates that groundwater elevations in the piezometers have been above the base of the vent trench during the entire period.

#### 6.3.3.1 Proposed Monitoring Frequencies

The monitoring schedule below is proposed as the initial post-construction monitoring plan. Adjustments to monitoring frequencies will be requested of NYSDEC upon meeting the performance criteria thresholds identified in this document. DPR will submit a request with supporting documentation to NYSDEC 30 days prior to the desired date of the proposed change in monitoring. DPR will not change monitoring frequencies until the request has been approved.

All wells that have not been approved for abandonment by NYSDEC, have undergone the repairs necessary to bring them into compliance with the current Part 360 Permit. Data collected from the repaired well locations has been used, with the historic data to recommend the initial monitoring frequencies shown in Table 6-1.

- Perimeter and off-site gas probes that reported detections of methane above 25% LEL in the last five years of monitoring (since 2006) will be monitored quarterly. Inspections and maintenance at these locations will be performed during monitoring events.

- Perimeter and off-site gas probes that reported no detections of methane above 25% LEL in the last five years of monitoring (since 2006) will be monitored annually. Inspections and maintenance at these locations will be performed during monitoring events.

- On-site LFG monitoring probes will not be included in the post-construction monitoring program. Inspections and maintenance at these locations will be performed annually.

- Piezometers locations will be monitored and inspected monthly.

- The 25 stand-alone passive vents within the golf course boundary will be inspected approximately one month after completion of installation of all vents. Inspections will occur quarterly for the first year following installation, and continue annually thereafter. NYSDEC reserves the right to require an inspection frequency other than annual after the first year. Inspections of passive vents include LFG monitoring as described in Section 6.3.2.5.

- The remaining passive venting infrastructure, including the passive vent trench, and vents for Community Park, water quality ponds, and utility soil collar vents will be inspected annually.

- Monitoring in enclosed structures will be conducted using combustible gas monitors that will record real-time methane concentrations. System alarms will be monitored and maintained inside these structures. Inspections and maintenance of sub-slab depressurization systems at enclosed structures will be performed quarterly.

Monitoring will continue at the frequency outlined in this Plan until: 1) the DPR provides NYSDEC a formal request to change the monitoring frequencies along with supporting documentation and 2) the request is approved by NYSDEC. Additional inspections of passive venting infrastructure may occur upon the implementation of contingency activities, as discussed in Section 6.3.4.1.

**Table 6-1 Post Construction Landfill Gas Initial Monitoring Frequency**

| Location | Number of Methane Detections Above 25% LEL | | | Proposed Monitoring Frequency[1,2] |
|---|---|---|---|---|
| | August 2000 – January 2010 | January 2006 – January 2010 | Post-Retrofit 2/21/12 – 4/16/12 | |
| **Perimeter LFG Monitoring Probes** | | | | |
| **MW-0** | **176** | **61** | NA | None – Abandoned. Replaced with onsite MW-0REP |
| MW-1 | **41** | 0 | NA | None (Previously Decommissioned) |
| MW-1A | **3** | 0 | 0 | Annually |
| MW-1R | **1** | 0 | 0 | Annually |
| MW-2 | **4** | 0 | **1** | Quarterly |
| MW-3 | **1** | 0 | 0 | Annually |
| MW-4A | **17** | 0 | 0 | Annually |
| MW-5 | **11** | 0 | 0 | Annually |
| MW-6 | **12** | 0 | 0 | Annually |
| MW-7 | **16** | 0 | 0 | Annually |
| MW-8 | **2** | 0 | 0 | Annually |
| MW-9 | 0 | 0 | 1 | Quarterly |
| MW-10 | **1** | 0 | 0 | Annually |
| MW-11 | 0 | 0 | 0 | Annually |
| MW-12 | **1** | 0 | 0 | Annually |
| **MW-14** | **105** | **4** | **1** | Quarterly |
| MW-15 | 0 | 0 | 0 | Annually |
| MW-16 | **2** | 0 | 0 | Annually |
| MW-17 | 0 | 0 | 0 | Annually |
| MW-18 | 0 | 0 | **1** | Quarterly |
| **Onsite LFG Monitoring Probes[3]** | | | | |
| MW-0REP | NA | NA | **4** | Quarterly |
| MW-4R | **90** | **30** | NA | None – Abandoned. Replaced with MW-4REP |
| MW-4REP | NA | NA | **10** | Quarterly |
| MW-13 | **17** | **4** | 0 | Quarterly |
| MW-19 | **108** | **5** | NA | None – Abandoned. Replaced with MW-19REP |
| MW-19REP | NA | NA | **10** | Quarterly |
| **Off-Site Monitoring Probes[4]** | | | | |
| **Buttrick** | | | | |
| 1R | 0 | 0 | 0 | Annually |
| 2R | 0 | 0 | 0 | Annually |
| 3R | 0 | 0 | 0 | Annually |
| **4R** | **2** | **1** | **0** | Quarterly |

**Table 6-1 Post Construction Landfill Gas Initial Monitoring Frequency**

| Location | Number of Methane Detections Above 25% LEL August 2000 – January 2010 | January 2006 – January 2010 | Post-Retrofit 2/21/12 – 4/16/12 | Proposed Monitoring Frequency[1,2] |
|---|---|---|---|---|
| 5 | 0 | 0 | 0 | None (Previously Decommissioned) |
| 6 | 2 | 2 | 1 | None (Proposed for Abandonment due to proximity to other monitoring points)) |
| **8** | **35** | **23** | **1** | Quarterly |
| **9** | **54** | **30** | **1** | Quarterly |
| **10** | **166** | **108** | **NA** | None – Abandoned. Replaced with MW-10REP |
| **10REP** | **NA** | **NA** | **2** | Quarterly |
| **12R** | **50** | **35** | **4** | Quarterly |
| **13R** | **13** | **6** | **2** | Quarterly |
| **14R** | **14** | **6** | **3** | Quarterly |
| **16R** | **84** | **70** | **3** | Quarterly |
| **17R** | **8** | **5** | **0** | Quarterly |
| 18 | 0 | 0 | 0 | Annually |
| **Schley South** | | | | |
| 3R | **2** | 0 | 0 | Annually |
| **5** | **4** | **4** | **0** | Quarterly |
| **6** | **22** | **22** | **1** | Quarterly |
| 7 | 2 | 2 | 0 | None (Proposed for Abandonment due to proximity to other monitoring points)) |
| **8** | **2** | **2** | **1** | Quarterly |
| **9** | **3** | **3** | **0** | Quarterly |
| 10 | 0 | 0 | 0 | Annually |
| **Schley North** | | | | |
| 4A | 0 | 0 | 0 | Annually |
| 5 | 0 | 0 | 0 | Annually |
| 7R | 0 | 0 | 0 | Annually |
| 7A | **1** | 0 | 0 | None (Proposed for Abandonment due to proximity to other monitoring points) |
| **Emerson** | | | | |
| E1R | 0 | 0 | 0 | Annually |
| E2RR | 0 | 0 | 0 | Annually |
| **E3R** | **5** | **5** | **2** | Quarterly |
| E4R | 0 | 0 | 0 | Annually |
| E5R | 2 | 0 | 0 | Annually |
| E6R | 0 | 0 | 0 | Annually |

**Table 6-1 Post Construction Landfill Gas Initial Monitoring Frequency**

| Location | Number of Methane Detections Above 25% LEL | | | Proposed Monitoring Frequency[1,2] |
|---|---|---|---|---|
| | August 2000 – January 2010 | January 2006 – January 2010 | Post-Retrofit 2/21/12 – 4/16/12 | |
| E7R | 0 | 0 | 0 | Annually |
| E8R | 0 | 0 | 0 | Annually |
| **Miles** | | | | |
| M1R | **1** | 0 | 0 | Annually |
| M2R | **2** | 0 | 0 | Annually |
| M3R | **1** | 0 | 0 | Annually |
| M4R | **1** | 0 | 1 | Quarterly |
| M5R | 0 | 0 | 0 | Annually |
| M6R | 0 | 0 | 0 | Annually |
| M7R | 0 | 0 | 0 | Annually |
| M8R | 0 | 0 | 0 | Annually |
| M9R | **1** | 0 | 0 | Annually |
| M10R | 5 | 0 | 0 | Annually |
| **Balcom** | | | | |
| 2 | **6** | 0 | 0 | Annually |
| 4 | 0 | 0 | 0 | Annually |

Notes:
1. Locations selected for annual monitoring - No detections of methane above 25% LEL since January 2006.
2. Locations selected for quarterly monitoring - At least one detection of methane above 25% LEL since January 2006.
3. On-site wells will not be included in post-construction monitoring.
4. Off-site probe locations selected for abandonment based on proximity to other monitoring points.

### 6.3.4 Gas Monitoring Performance Criteria

#### 6.3.4.1 Contingency Actions for LFG Monitoring Wells and Gas Management Infrastructure

The following contingency actions are recommended for post-construction site operations for LFG monitoring wells and gas management infrastructure:

- NYCDPR will provide verbal and electronic notification within 24 hours of an individual LFG measurement exceeding the criteria established in the Part 360 Permit to FDNY, NYCHA, NYSDEC, and NYCDOHMH, according to the following guidelines:
  - NYSDEC & FDNY – Will be notified for all post-construction monitoring events and contingency action events where an exceedance is observed.
  - NYCHA & NYCDOHMH – Will be notified for post-construction monitoring and contingency action events where an exceedance is observed within an enclosed building, or at a perimeter or offsite monitoring location. Enclosed buildings are defined as those buildings within the site that have sub-slab depressurization systems: golf course maintenance building, clubhouse, comfort station/snack bar and community park comfort station.
  - All monitoring, maintenance, and contingency actions will be documented and kept at the NYCDPR Bronx Borough Office (Ranaqua), Bronx Park, Bronx, New York.

- If two consecutive measurements above 100% LEL occur at any perimeter gas monitoring probe, or at an offsite gas monitoring probe located on Emerson, Miles, or Balcolm avenues, a monitoring and maintenance event will be performed within seven days following the second consecutive measurement and consist of the following:
  1. Inspection and maintenance of the perimeter vent trench within 100 feet on either side of the individual probe location.
  2. Water level gauging at the two nearest piezometers to the individual probe location.
  3. Inspection of any additional passive venting infrastructure located within a 100-foot radius of the individual probe location for damage and overgrowth.
  4. Follow up monitoring for all parameters at the individual probe location two weeks after completion of the items above.

  If contingency maintenance reveals a potential cause for the elevated methane measurements (e.g., vent trench clogged and water levels below trench), this will be reported to NYSDEC and routine monitoring frequency will resume once maintenance is complete, and follow-up monitoring indicates levels have dropped.

  If monitoring following contingency maintenance indicates that methane levels remain above 100% LEL, the following actions will be completed and reported to NYSDEC within 45 days of completion of initial contingency maintenance:
  1. Review of recent elevated detections at nearby monitoring locations.
  2. Evaluation of methane levels at the property boundary and off-site, if necessary.
  3. Evaluation of potential outside causes of elevated methane (i.e., mulching/composting activities nearby).
  4. Evaluation of potential Site disturbances (i.e., excavation or construction) that may have resulted in the movement of subsurface methane.
  5. A proposed plan for the mitigation of elevated methane, which includes:
     a. Mitigation of outside causes of elevated methane, if identified.
     b. LFG monitoring in the vicinity of site work to determine impacts resulting from site activities.
     c. Inspection and maintenance of passive vent trench.
     d. Follow-up monitoring to confirm methane levels following completion of contingency actions.
  6. Evaluation for the potential installation of additional venting infrastructure may be considered if the contingency actions above are shown to be ineffective. These include:
     a. Installation of additional individual passive vents, and
     b. Installation of active blower system for the irrigation lake;

- Off-site probes on Buttrick and Schley avenues are believed to be located near an off-site source of methane. In addition, perimeter gas probes exist on

Schley Avenue which will indicate the presence of methane at the Site boundary. Therefore, elevated methane measurements at off-site probes located on Buttrick and Schley avenues will not require contingency actions.

- For the twenty-five stand-alone passive vents at the golf course:

If the routine vent inspections indicate that any stand-alone passive vent is not functioning as designed, DPR will:

1. Perform a 25-foot radius scan using the LFG monitoring instrument around that vent to confirm safe conditions in the breathing zone.

2. Prepare a specific work plan to evaluate conditions at that vent and recommend contingency actions.

#### 6.3.4.2 Performance Criteria for Reduction of LFG Monitoring

The following performance thresholds will be used as guidance reductions in monitoring frequency. When the data thresholds assigned show that site conditions are acceptable for such reductions, DPR will provide NYSDEC with the supporting documentation and a request to change the monitoring frequency, for NYSDEC review and approval.. These thresholds apply to the post-construction period only.

For perimeter, on-site and off-site probes initially subject to quarterly monitoring:

- Following three consecutive years of quarterly methane measurements below 25% LEL at an individual location, DPR will request that monitoring at that location will be reduced to annually.

- Following two additional consecutive years of annual methane measurements below 25% LEL at an individual location, DPR will request that monitoring at that location will be discontinued and decommissioned. Discontinued gas monitoring locations may be selected for decommissioning upon approval by NYDEC.

For perimeter, on-site and off-site probes initially subject to annual monitoring:

- Following five consecutive years of annual methane measurements below 25% LEL at an individual location, DPR will request that monitoring at that location will be discontinued. Discontinued gas monitoring locations may be selected for decommissioning upon approval by NYSDEC.

For piezometers (all subject to annual monitoring):

- Following five years of annual groundwater measurements above the base elevation of the perimeter vent trench at an individual location, DPR will request that monitoring at that location will be discontinued. Discontinued pie-

zometer locations may be selected for decommissioning upon approval by NYSDEC.

#### 6.3.4.3 Decommissioning of LFG Management Infrastructure

LFG monitoring and mitigation systems will be evaluated for phase-out and decommissioning as described in the sections below. DPR will submit a request with supporting documentation to NYSDEC 30 days prior to the desired date of decommissioning of any LFG mitigation infrastructure. Decommissioning of LFG management infrastructure will not occur until after the request has been approved by NYSDEC.

**Perimeter, On-Site and Off-site Monitoring Probes**

Decommissioning of perimeter, on-site and off-site gas probes will be requested when an individual location has met the criteria for removal from the monitoring program.

**Off-site Probes in Buttrick/Schley Avenue (North and South) Areas:**

Persistent methane detections in probes, located on Buttrick/Schley Avenue areas are attributed to a source separate from a landfill. The DPR has performed desktop and field evaluations to determine the source of the methane measurements.

1. Historic mapping shows the previous presence of marshlands, which are a likely contributor to elevated subsurface methane.

2. Following installation of the landfill gas perimeter vent trench, no significant changes in the elevated methane levels on Buttrick Avenue were observed.

3. LFG fingerprint testing for selected wells on Buttrick Avenue was attempted in June 2011. Monitoring following well purging observed methane levels too low on this occasion to obtain sufficient samples for laboratory analysis.

Due to these considerations, decommissioning of these probes may be requested of NYSDEC prior to meeting the criteria established in this document.

**Piezometers**

Monitoring of perimeter piezometer locations within the LFG vent trench will continue while LFG monitoring continues at perimeter gas monitoring locations. Once data shows that all perimeter gas monitoring locations have met the criteria for removal from the monitoring program, monitoring of the piezometers will also be discontinued, and piezometer locations will be abandoned in place, pending approval by NYSDEC.

**Passive Vent Trench**

Maintenance of the passive vent trench will continue while LFG monitoring continues at perimeter gas monitoring locations. Once data shows that all perimeter gas monitoring locations have met the criteria for removal from the monitoring

program, inspections of the vent trench and its use as a passive gas mitigation method will be discontinued, pending approval by NYSDEC.

### Passive Venting Systems

The 12 community park vents will remain in place after LFG monitoring and mitigation activities cease, due to their incorporation into park facilities. Once it is determined that on-site and perimeter monitoring can be discontinued, inspections of these vents and their use as a passive gas mitigation method will be discontinued, pending approval by NYSDEC.

Passive vents associated with utilities, structures, and ponds may be selected for decommissioning on site, pending approval by NYSDEC.

The 25 stand-alone passive vents within the golf course boundary will be monitored for stack height reduction eligibility only during annual inspection events. The stand-alone passive vents are designed with a sampling port to facilitate monitoring. Vents will be eligible for a stack height reduction according to the following:

- Following five years of methane detections reported below the LEL at an individual vent location, vent height will be reduced to 6 inches above ground surface. Reduced height vents will continue to remain in service and be fitted with an appropriate cover to allow venting and protect from damage or foreign objects.

The 25 stand-alone passive vents within the golf course boundary may be selected for decommissioning, pending approval by NYSDEC. Once on site and perimeter monitoring locations have shown compliance with the criteria for removal from the monitoring program, inspections of the vents and their use as a passive gas mitigation method will be discontinued.

DPR will submit a request with supporting documentation to NYSDEC 30 days prior to the planned date to decommission of any passive venting locations. DPR will not take action until the request has been approved by NYSDEC.

### SSD Systems

Once it is determined that all of the 25 stand-alone onsite passive vents have been decommissioned based on the decommissioning guidelines provided in this document and upon approval by NYSDEC, SSD systems will be phased out of active operations. At this time the SSD systems will be retrofitted to enable passive venting. Continuous methane monitors and alarms will remain in place inside each building, and be maintained until approval to discontinue continuous monitoring is granted by NYSDEC.

## 6.4 Record-Keeping and Reporting

### 6.4.1 Record-Keeping

All project documents, maintenance, and monitoring records will be held at the NYCDPR Bronx Borough Office (Ranaqua), Bronx Park, Bronx, New York. An additional copy of the LFG OM&M plan will be maintained at the Site's Maintenance Facility office. Project documents held by the DPR will include:

- Construction Specifications;
- Record Drawings;
- Ferry Point Landfill Gas Management Plan;
- Ferry Point Landfill Gas Operations, Maintenance, and Monitoring Plan; and
- Equipment Manufacturers Operations and Maintenance Documents and Specifications.

Monitoring personnel will be required to fill out the forms enclosed in Appendix D upon completion of the respective Site activity. Completed forms will be kept on-site for a minimum of one year and retained by the DPR thereafter. These documents will be provided to NYSDEC as part of the Annual Report.

### 6.4.2 Contingency Reporting

#### LFG Monitoring Locations

- NYSDEC will be notified within 24 hours if methane is detected above the LEL during monitoring activities.
- NYSDEC will be notified within 24 hours when methane detections indicate contingency actions are necessary.
- NYSDEC will be notified within seven days following completion of contingency actions.
- The DPR will prepare and submit a follow-up report to NYSDEC upon completion of contingency actions.

#### Piezometer Monitoring Locations

- NYSDEC will be notified within 24 hours if groundwater elevation is detected below the base of the passive-vent trench during monitoring activities.

### Sub-slab Depressurization Systems

- NYSDEC will be notified within 24 hours if methane levels are reported above 25% LEL.

### 6.4.3 Annual Reporting

The DPR will prepare and submit an Annual Report to NYSDEC describing monitoring activities each year. Observation, repair, and monitoring reports will be included as appendices to the annual report. Annual reports will be submitted until the phase-out and decommissioning of all LFG-control systems and monitoring locations has occurred. The annual report will be submitted to NYSDEC by March 31 of the year following the monitoring period.

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# A Passive Vent Layout

# B LandGEM Model Results

# C LFG Monitoring Data

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-0 | MW-1 | MW-1A | MW-1R | MW-2 | MW-3 | MW-4R | MW-4A | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/23/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.S. |
| 9/12/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.S. |
| 9/26/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.S. |
| 10/11/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/22/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/8/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/25/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/6/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/20/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/29/2000 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/8/2001 | | 0.00 | | --- | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/12/2001 | | N.S. | | --- | N.S. | N.S. | N.S. | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/9/2001 | | 2.60 | | --- | 0.20 | 0.00 | 84.00 | | 5.50 | 6.50 | 12.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.00 |
| 2/15/2001 | | 0.00 | | --- | 0.25 | 0.00 | 58.00 | | 0.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.75 |
| 2/26/2001 | | 0.20 | | --- | 0.00 | 0.00 | 0.20 | | 47.00 | 45.00 | 12.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 33.00 |
| 3/9/2001 | | 2.65 | | --- | 0.70 | 0.00 | 0.05 | | 55.00 | 53.00 | 35.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 41.00 |
| 3/16/2001 | | 2.15 | | --- | 0.25 | 0.05 | 2.60 | | 42.00 | 49.00 | 4.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.50 |
| 3/23/2001 | | 2.35 | | --- | 0.60 | 0.05 | 3.30 | | 55.00 | 56.00 | 46.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.50 |
| 3/30/2001 | | 4.40 | | --- | 0.40 | 0.00 | 3.25 | 19.00 | 0.25 | 55.00 | 43.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 26.00 |
| 4/6/2001 | | 4.40 | | --- | 1.55 | 0.00 | 61.00 | 22.00 | 52.00 | 55.00 | 39.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.00 |
| 4/13/2001 | | 2.25 | | --- | 0.25 | 0.00 | 47.00 | 14.00 | 37.00 | 48.00 | 25.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.40 |
| 4/20/2001 | | 2.85 | | --- | 0.95 | 0.00 | 71.00 | 5.50 | 50.00 | 57.00 | 37.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 40.00 |
| 4/27/2001 | 1.00 | 4.25 | 0.00 | --- | 1.60 | 0.00 | 0.60 | 15.00 | 44.00 | 48.00 | 40.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 24.00 |
| 5/4/2001 | 0.70 | 1.40 | 0.00 | --- | 1.00 | 0.00 | 60.00 | 1.80 | 46.00 | 51.00 | 38.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.00 |
| 5/11/2001 | 0.95 | 2.85 | 0.00 | --- | 0.30 | 0.00 | 56.00 | 9.50 | 0.85 | 0.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.00 |
| 5/18/2001 | 2.10 | 2.40 | 0.00 | --- | 0.45 | 0.00 | 33.00 | 12.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 16.00 |
| 5/25/2001 | 0.80 | 0.00 | 0.00 | --- | 0.50 | 0.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 19.00 |
| 6/1/2001 | 8.50 | 1.80 | 0.00 | --- | 0.15 | 0.00 | 0.10 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 21.00 |
| 6/8/2001 | 13.00 | 6.50 | 1.30 | --- | 1.00 | 0.00 | 54.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.80 |
| 6/15/2001 | 12.00 | 3.20 | 0.00 | --- | 0.50 | 0.00 | 57.00 | 2.80 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| 6/22/2001 | 15.00 | 3.35 | 0.35 | --- | 0.80 | 0.00 | 0.00 | 2.80 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 22.00 |
| 6/29/2001 | 14.00 | 3.00 | 0.35 | --- | 0.60 | 0.00 | 0.00 | 2.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.00 |
| 7/6/2001 | 14.00 | 0.65 | 0.10 | --- | 0.50 | 0.00 | 0.00 | 2.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.00 |
| 7/13/2001 | 19.60 | 4.15 | 0.00 | --- | 0.30 | 0.00 | 1.65 | 1.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.40 |
| 7/20/2001 | 17.00 | 0.00 | 0.00 | --- | 0.25 | 0.00 | 60.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.50 |
| 7/27/2001 | 17.50 | 0.00 | 0.00 | --- | 0.00 | 0.00 | 53.20 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.70 |
| 8/3/2001 | 19.20 | 11.20 | 0.00 | --- | 0.90 | 0.00 | 49.70 | 1.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.90 |
| 8/10/2001 | 17.40 | 7.30 | 0.00 | --- | 0.57 | 0.00 | 43.50 | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 21.20 |
| 8/17/2001 | 20.00 | 16.00 | 0.80 | --- | 5.40 | 0.00 | 49.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 23.00 |
| 8/24/2001 | 22.00 | 6.90 | 0.70 | --- | 1.00 | 0.00 | 49.80 | 0.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 22.90 |
| 8/31/2001 | 20.70 | 14.50 | 1.20 | --- | 6.30 | 0.00 | 51.60 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 23.70 |
| 9/7/2001 | 17.50 | 3.30 | 0.00 | --- | | | 50.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.00 |
| 9/14/2001 | | 7.50 | NS | --- | 0.00 | 0.00 | NS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.00 |
| 9/21/2001 | 21.70 | 1.20 | 0.00 | --- | 0.00 | 0.00 | 50.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.50 |
| 9/28/2001 | 23.30 | 3.60 | 0.00 | --- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.50 |
| 10/4/2001 | 22.00 | 3.00 | 0.00 | --- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.00 |
| 10/12/2001 | 21.00 | 6.40 | 0.00 | --- | 0.00 | 0.00 | 19.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| 10/19/2001 | 22.20 | 1.95 | 0.00 | --- | 0.00 | 0.00 | 21.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.70 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-0 | MW-1 | MW-1A | MW-1R | MW-2 | MW-3 | MW-4R | MW-4A | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/26/2001 | 17.40 | 5.50 | 0.00 | --- | 0.00 | 0.00 | NS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.80 |
| 11/2/2001 | 14.90 | 3.30 | 0.00 | --- | 0.00 | 0.00 | NS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.00 |
| 11/9/2001 | 11.80 | 2.90 | 0.00 | --- | 0.00 | 0.00 | NS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.40 |
| 11/16/2001 | 9.60 | 1.70 | 0.00 | --- | 0.00 | 0.40 | NS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.10 |
| 11/23/2001 | 0.00 | 0.60 | 0.00 | --- | 0.00 | 0.00 | NS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.40 |
| 11/30/2001 | 11.10 | 0.80 | 0.00 | --- | 0.00 | 0.00 | NS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.10 |
| 12/7/2001 | 10.90 | 1.00 | 0.00 | --- | 0.00 | 0.00 | NS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.80 |
| 12/14/2001 | 0.70 | 1.10 | 0.00 | --- | 0.00 | 0.00 | NS | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.50 |
| 12/28/2001 | 12.20 | 1.80 |  | --- |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1/4/2002 | 16.50 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 21.20 |
| 1/25/2002 | 14.10 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.60 |
| 2/18/2002 | 12.30 | 0.00 | N.M. | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| 3/5/2002 | 99.00 | 100.00 | 0.10 | --- | 0.05 | 0.05 | N.O. | 0.20 | 0.10 | 0.05 | 0.10 | 0.05 | 0.00 | 0.00 | 0.00 | 0.05 | 48.00 |
| 3/19/2002 | 100.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 79.00 |
| 4/2/2002 | 100.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 67.00 |
| 4/16/2002 | 100.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| 4/30/2002 | 21.00 | 2.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 74.00 |
| 5/15/2002 | 5.00 | 0.25 | 0.05 | --- | 0.05 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| 5/28/2002 | 5.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| 6/11/2002 | 1.92 | 0.15 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 52.00 |
| 6/28/2002 | 59.00 | 1.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.70 |
| 7/9/2002 | 3.70 | 0.05 | 0.00 | --- | N.O. | N.O. | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.50 |
| 7/24/2002 | 20.00 | N.O | 0.00 | --- | N.O. | N.O. | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| 8/7/2002 | 4.20 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.10 |
| 8/20/2002 | 4.60 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.25 |
| 9/4/2002 | 50.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | N.M. | N.M. | N.M. | N.M. | 0.00 | 0.00 | 0.00 | 57.00 |
| 9/17/2002 | 20.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 65.00 |
| 10/2/2002 | 45.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 70.00 |
| 10/17/2002 | 25.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 55.00 |
| 10/29/2002 | 51.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 50.00 |
| 11/12/2002 | 12.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 19.00 |
| 11/26/2002 | 100.00 | 97.00 | 0.00 | --- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| 12/10/2002 | 100.00 | 5.00 | 0.00 | --- | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.00 | 96.00 |
| 12/23/2002 | 100.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| 1/7/2003 | 100.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 |
| 1/21/2003 | 3.65 | 6.00 | 0.00 | --- | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 48.00 |
| 2/4/2003 | 0.00 | 0.00 | 0.00 | --- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/19/2003 | 0.00 | NO | NO | --- | NO | NO | NO | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NO |
| 3/4/2003 | 0.70 | 0.00 |  | --- | 0.00 |  | 5.00 | 0.05 | 0.05 | 0.15 | 0.15 | 0.15 | 0.00 | 0.05 | 0.00 | 0.00 | 5.00 |
| 3/18/2003 | 6.00 | 6.00 | 0.00 | --- | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.25 |
| 4/1/2003 | 14.00 | 0.00 | 0.10 | --- | 0.05 | 0.00 | 80.00 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 |
| 4/15/2003 | 100.00 | 0.05 | 0.00 | 0.10 | 0.00 | 0.00 | 88.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.10 |
| 4/30/2003 | 2.35 | 0.00 | 0.10 | 0.10 | 0.00 | 0.00 | 0.00 | 0.05 | 0.05 | 0.10 | 0.10 | 0.05 | 0.00 | 0.00 | 0.05 | 0.00 | 0.50 |
| 5/14/2003 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 47.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.00 |
| 5/27/2003 | 12.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.00 |
| 6/10/2003 | 16.00 | 0.20 | 0.18 | 0.00 | 0.25 | 0.00 | 74.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.24 |
| 6/24/2003 | 16.00 | 0.20 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 |
| 7/8/2003 | 12.00 | 0.00 | 0.00 | 1.52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 21.00 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-0 | MW-1 | MW-1A | MW-1R | MW-2 | MW-3 | MW-4R | MW-4A | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/23/2003 | 12.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 37.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 11.00 |
| 8/4/2003 | 11.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 80.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 29.00 |
| 8/19/2003 | 17.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.00 |
| 9/3/2003 | 8.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 15.00 |
| 9/17/2003 | 15.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.50 |
| 10/3/2003 | 18.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| 10/15/2003 | 17.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 26.50 |
| 10/31/2003 | | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.50 |
| 11/11/2003 | 2.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/26/2003 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/3/2003 | 7.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | | 1.00 | 2.00 | 0.00 | 2.00 | 2.00 | 1.00 | 7.00 | 1.00 | 2.00 | 3.00 |
| 12/15/2003 | 3.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.78 |
| 12/31/2003 | 2.32 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/13/2004 | 2.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/27/2004 | 2.16 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.30 |
| 2/12/2004 | 2.52 | 0.00 | | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 65.00 |
| 2/25/2004 | 0.40 | 0.00 | 0.00 | 0.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.94 |
| 3/8/2004 | 3.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.00 |
| 3/22/2004 | 4.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.05 | 0.10 | 0.10 | 0.10 | 0.05 | 0.05 | 0.00 | 0.00 | 0.00 | 1.40 |
| 4/7/2004 | 3.00 | 1.00 | 2.00 | 1.00 | 1.00 | 0.00 | | 0.00 | 0.00 | 2.00 | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 77.00 |
| 4/23/2004 | 26.00 | 2.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.00 |
| 5/6/2004 | 6.00 | 0.00 | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/20/2004 | 6.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 62.00 |
| 6/3/2004 | 6.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 4.00 |
| 6/17/2004 | 24.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 19.00 |
| 6/29/2004 | 7.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.00 |
| 7/16/2004 | 17.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.00 |
| 7/30/2004 | 20.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 1.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/11/2004 | | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/26/2004 | 0.90 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 1.15 | 0.00 | | 0.00 | 0.00 | | 0.00 |
| 9/10/2004 | 6.00 | | | 0.00 | 0.00 | | | 0.10 | 0.00 | 0.00 | 0.10 | 0.05 | | 0.00 | 0.00 | | 0.00 |
| 9/24/2004 | 33.00 | | | 0.00 | | | | 0.05 | 0.05 | 0.05 | 1.45 | 0.00 | | 0.00 | 0.00 | | 0.85 |
| 10/8/2004 | 16.00 | | | 0.00 | | | | 0.10 | 0.00 | 0.00 | 0.10 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/22/2004 | 33.00 | | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/5/2004 | 15.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/19/2004 | 10.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/29/2004 | 7.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/16/2004 | 0.50 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/30/2004 | 0.83 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/14/2005 | 3.50 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/26/2005 | 3.86 | | | 0.00 | 0.00 | 0.00 | 83.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.20 |
| 2/8/2005 | 23.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/25/2005 | 22.50 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 | 0.00 |
| 3/9/2005 | 3.68 | | | 0.00 | 0.00 | 0.00 | 0.00 | 9.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/22/2005 | 1.90 | | | 0.00 | 0.00 | 0.00 | 26.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/6/2005 | 1.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 24.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/20/2005 | 1.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 92.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/6/2005 | 1.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 48.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-0 | MW-1 | MW-1A | MW-1R | MW-2 | MW-3 | MW-4R | MW-4A | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/17/2005 | 0.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/31/2005 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/16/2005 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 98.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/30/2005 | 6.00 | | 0.00 | | 0.00 | 0.00 | 96.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.33 |
| 7/15/2005 | 1.30 | | 0.00 | 0.00 | 0.00 | 0.00 | 48.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | cnl |
| 7/29/2005 | 6.00 | | 0.00 | | 0.00 | 0.00 | 96.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.50 |
| 8/12/2005 | 12.50 | | 0.00 | 0.00 | 0.00 | 0.00 | 98.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.00 |
| 8/26/2005 | 13.50 | | 0.00 | 0.00 | 0.00 | 0.00 | 94.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.50 |
| 9/9/2005 | 16.32 | | 0.00 | | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.00 |
| 9/26/2005 | 6.70 | | 0.00 | 0.00 | 0.00 | 0.00 | 88.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/7/2005 | 5.60 | | 0.00 | 0.00 | 0.00 | 0.00 | 64.80 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.80 |
| 10/21/2005 | 6.70 | | 0.00 | 0.00 | 0.00 | 0.00 | 30.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/4/2005 | 2.13 | | 0.00 | 0.00 | 0.00 | 0.00 | 88.32 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/18/2005 | 3.70 | | 0.00 | 0.00 | 0.00 | 0.00 | 27.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/2/2005 | 6.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/7/2005 | 0.54 | | | | | | | | | | | | | | | | |
| 12/14/2005 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/21/2005 | 0.72 | | | | | | | | | | | | | | | | |
| 12/29/2005 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/4/2006 | 0.95 | | | | | | | | | | | | | | | | |
| 1/10/2006 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/25/2006 | 3.50 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/8/2006 | 0.85 | | 0.00 | 0.00 | 0.00 | 0.00 | 30.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/22/2006 | 0.53 | | 0.00 | 0.00 | 0.00 | 0.00 | 2.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/8/2006 | 0.70 | | 0.00 | 0.00 | 0.00 | 0.00 | 76.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/23/2006 | 4.12 | | 0.00 | 0.00 | 0.00 | 0.00 | 40.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/7/2006 | 0.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 90.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.80 |
| 4/19/2006 | 3.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 87.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/3/2006 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/17/2006 | 2.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.50 |
| 5/31/2006 | 2.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/14/2006 | 2.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/28/2006 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 |
| 7/12/2006 | 2.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 96.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7/27/2006 | 1.74 | 0.00 | | 0.00 | 0.00 | 0.00 | 98.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/9/2006 | 2.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 45.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/25/2006 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 24.00 | 0.00 | 0.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 9/7/2006 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 45.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9/20/2006 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | | | | | 0.10 | 0.00 | 0.00 | 0.00 |
| 10/6/2006 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/13/2006 | 2.00 | | | | | | | | | | | | | | | | |
| 10/19/2006 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 8.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/24/2006 | 5.00 | | | | | | | | | | | | | | | | |
| 11/3/2006 | 1.10 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.85 | 0.15 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/12/2007 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/15/2007 | 2.00 | | | | | | | | | | | | | | | | |
| 1/24/2007 | 0.10 | 0.00 | | 0.00 | 0.00 | 0.00 | 42.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/31/2007 | 0.20 | | | | | | | | | | | | | | | | |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-0 | MW-1 | MW-1A | MW-1R | MW-2 | MW-3 | MW-4R | MW-4A | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/7/2007 | 6.40 | 0.00 | | 0.00 | 0.10 | 0.15 | 52.40 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 |
| 2/21/2007 | 5.40 | 0.00 | | 0.00 | 0.10 | 0.15 | 5.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 |
| 2/28/2007 | 3.10 | | | | | | | | | | | | | | | | |
| 3/7/2007 | 1.40 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/16/2007 | 0.80 | | | | | | | | | | | | | | | | |
| 3/21/2007 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/4/2007 | 2.10 | | | 0.00 | 0.00 | 0.00 | 53.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/19/2007 | 0.10 | | | 0.00 | 0.00 | 0.00 | 1.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/4/2007 | 0.00 | | | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 |
| 5/17/2007 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/1/2007 | 0.10 | | | 0.05 | 0.00 | 0.00 | 0.00 | 0.10 | | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 |
| 6/15/2007 | 2.10 | | | 0.20 | 0.00 | 0.20 | 36.20 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/29/2007 | 0.00 | | | 0.00 | 0.00 | 0.00 | 42.30 | 0.00 | | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 7/13/2007 | 0.50 | | | 0.00 | 0.00 | 0.00 | 78.60 | 0.00 | | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 7/26/2007 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/10/2007 | 16.60 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/13/2007 | 18.30 | | | | | | | | | | | | | | | | |
| 8/23/2007 | 4.20 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/31/2007 | 4.70 | | | | | | | | | | | | | | | | |
| 9/7/2007 | 0.00 | | | 0.00 | 0.00 | 0.00 | 9.70 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 9/14/2007 | 0.00 | | | | | | | | | | | | | | | | |
| 9/19/2007 | 0.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 1.40 |
| 9/28/2007 | 0.00 | | | | | | | | | | | | | | | | |
| 10/5/2007 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/19/2007 | 0.55 | | | 0.00 | 0.00 | 0.00 | 8.90 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/2/2007 | 0.05 | | | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.05 |
| 11/16/2007 | 10.70 | | | 0.00 | 0.00 | 0.05 | 1.15 | 0.00 | | | | | 0.05 | 0.00 | 0.05 | 0.00 | 0.10 |
| 11/21/2007 | 0.05 | | | | | | | | | | | | | | | | |
| 11/30/2007 | 0.00 | | | 0.05 | 0.00 | 0.00 | 0.75 | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 |
| 12/6/2007 | 0.00 | | | | | | | | | | | | | | | | |
| 12/11/2007 | 0.05 | | | 0.00 | 0.05 | 0.00 | 0.05 | 0.00 | 0.05 | 0.05 | 0.10 | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 | 0.05 |
| 12/28/2007 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/11/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/22/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/7/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/22/2008 | 0.00 | | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3/12/2008 | 0.02 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/21/2008 | 0.35 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/3/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/16/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/1/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/15/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/30/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 6/11/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 6/25/2008 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | |
| 7/11/2008 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | |
| 7/25/2008 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 8/8/2008 | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-0 | MW-1 | MW-1A | MW-1R | MW-2 | MW-3 | MW-4R | MW-4A | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/22/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9/4/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9/18/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/2/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/16/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/30/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/13/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/26/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/8/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/24/2008 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/9/2009 | 0.80 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/21/2009 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/4/2009 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/20/2009 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/5/2009 | 0.50 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/17/2009 | 0.50 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/2/2009 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/17/2009 | 0.10 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/29/2009 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/12/2009 | 0.60 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/28/2009 | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/11/2009 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/26/2009 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7/10/2009 | 2.70 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7/24/2009 | 2.90 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/7/2009 | 0.50 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8/21/2009 | 2.70 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9/4/2009 | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9/18/2009 | 3.50 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/2/2009 | 1.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/16/2009 | 1.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/20/2009 | 3.30 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 12/4/2009 | 1.30 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.70 |
| 12/18/2009 | 2.80 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/23/2009 | 4.40 | | | | | | | | | | | | | | | | |
| 12/30/2009 | 0.95 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/15/2010 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1/29/2010 | 0.95 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2/9/2010 | 3.40 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/2/2010 | 0.25 | | 0.00 | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/19/2010 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/7/2010 | 0.40 | | | 0.15 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/16/2010 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/30/2010 | 0.95 | | 0.15 | | 0.20 | | | | 0.15 | | | 0.20 | 0.15 | 0.15 | 0.10 | 0.15 | 0.15 |
| 5/14/2010 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.10 | 0.00 |
| 5/28/2010 | 0.00 | | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/11/2010 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6/25/2010 | 1.25 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.05 | 0.05 | 0.00 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-0 | MW-1 | MW-1A | MW-1R | MW-2 | MW-3 | MW-4R | MW-4A | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/1/2010 | 3.80 | | | | | | | | | | | | | | | | |
| 7/12/2010 | 0.00 | | | 0.00 | 0.10 | 0.10 | | 0.10 | 0.10 | 0.15 | 0.10 | 0.10 | 0.15 | 0.00 | 0.00 | 0.00 | 4.25 |
| 7/16/2010 | 0.00 | | | | | | | | | | | | | | | | |
| 7/23/2010 | 5.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.60 |
| 7/30/2010 | | | | | | | | | | | | | | 0.00 | 0.00 | 0.00 | |
| 8/5/2010 | | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8/13/2010 | 4.70 | | | | | | | | | | | | | | | | |
| 8/20/2010 | 1.70 | | | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 |
| 8/27/2010 | 3.90 | | | | | | | | | | | | | | | | |
| 9/2/2010 | 0.20 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | 2.15 |
| 9/10/2010 | 4.75 | | | | | | | | | | | | | | | | |
| 9/16/2010 | 4.85 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| 9/24/2010 | 0.55 | | | | | | | | | | | | | | | | |
| 10/5/2010 | 2.95 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 |
| 10/8/2010 | 1.60 | | | | | | | | | | | | | | | | |
| 10/14/2010 | 0.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| 10/22/2010 | 10.00 | | | | | | | | | | | | | | | | |
| 10/29/2010 | 10.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/5/2010 | 5.00 | | | | | | | | | | | | | | | | |
| 11/12/2010 | 10.00 | | | 0.00 | 0.00 | 0.00 | | 0.05 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/19/2010 | 10.00 | | | | | | | | | | | | | | | | |
| 11/24/2010 | 10.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/3/2010 | 0.45 | | | | | | | | | | | | | | | | |
| 12/10/2010 | 10.00 | | | 0.00 | 0.00 | 0.00 | | 0.05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 |
| 12/17/2010 | 1.25 | | | | | | | | | | | | | | | | |
| 12/30/2010 | 10.00 | | | 0.00 | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1/7/2010 | 10.00 | | | | | | | | | | | | | | | | |
| 01/14/11 | 6.00 | | | 0.00 | - | - | | 0.00 | - | - | - | - | 0.05 | 0.00 | 0.00 | 0.00 | - |

POST RETROFIT MONITORING DATA

| Well | MW-0 REP | MW-1 | MW-1A | MW-1R | MW-2 | MW-3 | MW-4 REP | MW-4A | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-19 REP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/17/2012 | 100.00 | NM | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.00 | NM | NM | NM | 100.00 |
| 2/23/2012 | 0.00 | NM | NM | NM | NM | NM | 100.00 | NM | NM | NM | NM | NM | NM | NM | NM | NM | 100.00 |
| 3/2/2012 | 34.00 | NM | NM | 0.00 | 0.00 | 0.00 | 87.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NM | NM | NM | 100.00 |
| 3/8/2012 | 59.00 | NM | NM | NM | NM | NM | 100.00 | NM | NM | NM | NM | NM | NM | NM | NM | NM | 100.00 |
| 3/16/2012 | 0.00 | NM | 0.00 | NM | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | NM | NM | NM | 100.00 |
| 3/21/2012 | 0.00 | NM | NM | NM | NM | NM | 95.00 | 36.00 | NM | NM | NM | NM | 0.00 | NM | NM | NM | 100.00 |
| 3/30/2012 | 16.00 | NM | 0.00 | NM | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NM | NM | NM | 100.00 |
| 4/6/2012 | NM | NM | NM | NM | NM | NM | 52.00 | 10.00 | NM | NM | NM | NM | 0.00 | NM | NM | NM | 100.00 |
| 4/13/2012 | 26.00 | NM | 0.00 | NM | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NM | NM | NM | 100.00 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 | E1R | E2RR | E3R | E4R | E5R | E6R | E7R | E8R | M1R | M2R | M3R | M4R | M5R | M6R | M7R | M8R | M9R | M10R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/23/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/12/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/26/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/11/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/22/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/08/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/25/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/06/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/20/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/29/00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01/08/01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01/12/01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/09/01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/15/01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/26/01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/09/01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/16/01 | 0.00 | 0.05 | 0.00 | 0.05 | 0.00 | 0.05 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/23/01 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.04 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/30/01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/06/01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/13/01 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/20/01 | 0.00 | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/27/01 | 0.00 | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/04/01 | 0.00 | 1.50 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/11/01 | 0.00 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/18/01 | 0.00 | 1.75 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/25/01 | 0.00 | 0.55 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/01/01 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/08/01 | 0.00 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/15/01 | 0.00 | 1.05 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/22/01 | 0.00 | 0.90 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/29/01 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/06/01 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/13/01 | 0.00 | 1.25 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/20/01 | 0.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/27/01 | 0.00 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/03/01 | 0.00 | 10.30 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/10/01 | 0.00 | 18.60 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/17/01 | 0.00 | 0.00 | 0.00 | 0.30 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/24/01 | 1.25 | NS | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/31/01 | 3.50 | NS | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/07/01 | 1.00 | 9.90 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/14/01 | NS | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/21/01 | NS | 0.00 | NS | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/28/01 | 0.00 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/04/01 | 0.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/12/01 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/19/01 | 5.30 | 14.10 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/26/01 | 3.30 | 7.10 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/02/01 | 0.00 | 3.10 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/09/01 | 2.00 | 3.70 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/16/01 | 0.00 | 3.20 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/23/01 | 1.10 | 3.30 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/30/01 | 1.60 | 2.30 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/07/01 | 1.30 | 3.10 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/14/01 | 1.10 | 3.20 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/28/01 | | | | | | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01/04/02 | 2.20 | 3.50 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01/25/02 | 2.00 | 3.30 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/18/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/05/02 | 0.75 | 1.10 | 0.05 | 0.05 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/19/02 | 1.40 | 2.40 | 0.00 | 0.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/02/02 | 1.10 | 1.75 | 0.00 | 0.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/16/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/30/02 | 0.15 | N.O. | 0.00 | 3.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/15/02 | 0.05 | N.O. | 0.10 | 0.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/28/02 | 0.00 | 0.05 | 0.00 | 1.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/11/02 | 0.00 | N.O. | 0.05 | 0.50 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/28/02 | 0.00 | 0.00 | 0.00 | N.M. | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/09/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/24/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/07/02 | N.M | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/20/02 | N.M | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 | E1R | E2RR | E3R | E4R | E5R | E6R | E7R | E8R | M1R | M2R | M3R | M4R | M5R | M6R | M7R | M8R | M9R | M10R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/04/02 | N.M. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/17/02 | 0.00 | 2.20 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/02/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/17/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/29/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/12/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/26/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/10/02 | 0.00 | 2.95 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/23/02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01/07/03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01/21/03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/04/03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/19/03 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/26/03 | 0.00 | 100.00 |  | 0.00 |  |  | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/04/03 | 0.15 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/11/03 | 0.00 | 100.00 | 0.00 |  |  |  | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/18/03 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/25/03 | 0.00 | 1.75 | 0.00 | 0.00 |  |  | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/01/03 | 0.00 | 3.75 | 0.00 | 0.00 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/08/03 | 0.00 | 1.25 | 0.00 | 0.00 |  |  | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/15/03 | 0.00 | 1.55 | 0.00 | 0.35 | 0.00 | 0.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/21/03 | 0.00 | 31.00 | 0.00 | 0.00 |  |  | 0.00 | 0.80 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 |
| 04/30/03 | 0.45 | 17.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/07/03 | 0.50 | 11.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.20 |
| 05/14/03 | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/20/03 | 0.00 | 8.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/27/03 | 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/04/03 |  | 0.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.67 |
| 06/10/03 | 0.00 | 0.80 | 0.00 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/17/03 | 0.00 | 0.40 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/24/03 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/02/03 | 0.00 | 0.93 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/08/03 | 0.00 | 9.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.10 |
| 07/15/03 | 0.00 | 1.68 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | 0.00 | 0.00 | 0.00 | 0.70 |
| 07/23/03 | 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.98 |
| 07/29/03 | 0.00 | 6.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| 08/04/03 |  | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.20 |
| 08/12/03 |  | 16.50 | 0.00 | 0.00 |  |  |  |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/19/03 |  | 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/26/03 | 0.00 | 6.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.50 |
| 09/03/03 | CNA | 10.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | CNA | CNA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/10/03 | 0.00 | 35.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/17/03 | 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/24/03 | 0.00 | 9.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/03/03 | 0.00 | 24.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/08/03 | 0.00 | 23.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/15/03 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/22/03 | 0.00 | 21.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/31/03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/07/03 | 0.00 | 0.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/11/03 | 0.00 | 4.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/19/03 | 0.00 | 7.00 | 0.00 | 0.00 |  |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/26/03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/03/03 | 2.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/09/03 | 0.00 | 6.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/15/03 | 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/24/03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/31/03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/06/04 | 0.00 | 6.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/13/04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/22/04 | 0.00 | 23.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/27/04 | 0.00 | 2.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/04/04 | 0.00 | 1.52 | NA | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/18/04 | 0.00 | 34.00 | NA | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/25/04 | 0.00 | 2.40 | NA | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/04/04 | 0.00 | 6.00 | 0.00 | 0.00 |  |  | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/08/04 | 0.00 | 14.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/17/04 | 0.00 | 6.00 | NA | 0.00 |  |  | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/22/04 | 1.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/29/04 | 0.00 | 2.65 | 0.00 | 0.00 |  |  | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/07/04 | 10.00 | 80.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |
| 04/14/04 | 0.00 | 0.00 | 0.00 | 1.00 |  |  | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/23/04 | 0.00 | 31.00 |  | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 | E1R | E2RR | E3R | E4R | E5R | E6R | E7R | E8R | M1R | M2R | M3R | M4R | M5R | M6R | M7R | M8R | M9R | M10R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/27/04 | 9.00 | 37.00 | 0.00 | 13.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 36.00 | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/06/04 | 0.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/11/04 | 0.00 | 5.20 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/20/04 | 0.00 | 9.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/25/04 | 0.00 | 7.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/03/04 | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/17/04 | 0.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/23/04 | 0.00 | 4.82 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/29/04 | 0.00 | 2.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/09/04 | 0.00 | 3.60 | 0.00 | 0.00 | | | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/16/04 | 0.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/23/04 | 0.00 | 6.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/30/04 | 0.00 | 0.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/06/04 | 0.00 | 2.72 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/11/04 | 0.00 | 4.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/17/04 | 1.30 | 6.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/26/04 | 0.15 | 1.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/03/04 | | 1.25 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/10/04 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | | 0.00 | 0.00 | | 0.00 |
| 09/16/04 | | 0.85 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/24/04 | 0.75 | 2.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/08/04 | 0.00 | 2.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/22/04 | 0.00 | 3.88 | 0.00 | 0.00 | 0.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/05/04 | 0.00 | 2.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/19/04 | 0.00 | 2.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/29/04 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | | 0.00 | 0.00 | | 0.00 |
| 12/16/04 | 0.00 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/30/04 | 0.75 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/14/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/26/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/08/05 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/25/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/09/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/22/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/06/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/20/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/06/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/17/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/31/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/16/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/30/05 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/15/05 | 0.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/26/05 | 0.00 | 4.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/29/05 | 0.00 | 4.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/05/05 | 0.00 | 6.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 4.00 |
| 08/12/05 | 0.00 | 10.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/19/05 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/26/05 | 0.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/09/05 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/26/05 | 0.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/07/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/21/05 | 0.00 | 1.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/04/05 | 0.00 | 0.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/18/05 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/02/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/14/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/29/05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/10/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/25/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/08/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/22/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/08/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/23/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/07/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/19/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/03/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/17/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/31/06 | 0.00 | 0.00 | 0.00 | 0.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/14/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/28/06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/12/06 | 0.00 | 0.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/27/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/09/06 | | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 | E1R | E2RR | E3R | E4R | E5R | E6R | E7R | E8R | M1R | M2R | M3R | M4R | M5R | M6R | M7R | M8R | M9R | M10R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/25/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/07/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/20/06 | | 0.95 | 0.00 | | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/06/06 | | 0.15 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/19/06 | | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/03/06 | | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/12/07 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/24/07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/07/07 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/21/07 | 0.80 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/07/07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/21/07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/04/07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/19/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/04/07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/17/07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/01/07 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/15/07 | 0.20 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.80 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.10 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/29/07 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/13/07 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 1.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/26/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/10/07 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/23/07 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.05 | | | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/07/07 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 09/19/07 | | | | 0.00 | 0.00 | 0.00 | | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 10/05/07 | | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/19/07 | | | 0.10 | 0.00 | 0.00 | 0.00 | | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 11/02/07 | | | 0.00 | 0.05 | 0.00 | 0.00 | | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 11/16/07 | | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.05 |
| 11/30/07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/11/07 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | | | 0.00 | | 0.00 | 0.05 | 0.05 | 0.05 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.05 | 0.00 | 0.05 |
| 12/28/07 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/11/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/22/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/07/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/22/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/12/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/21/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/03/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/16/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/01/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/15/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/30/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/11/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 |
| 06/25/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/11/08 | 0.00 | 1.80 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 07/25/08 | 0.00 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/08/08 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/22/08 | | 0.00 | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/04/08 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/18/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/02/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/16/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/30/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/13/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/26/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/08/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/24/08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/09/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/21/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/04/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/20/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/05/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/17/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/02/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/17/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/29/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/12/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 05/28/09 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/11/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 06/26/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/10/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/24/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged

| Well | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 | E1R | E2RR | E3R | E4R | E5R | E6R | E7R | E8R | M1R | M2R | M3R | M4R | M5R | M6R | M7R | M8R | M9R | M10R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/07/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/21/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/04/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/18/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/02/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/16/09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/20/09 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.20 | 0.15 | 0.10 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 12/04/09 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 12/18/09 | | 2.55 | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| 12/30/09 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/15/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/29/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/09/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/02/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/19/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/07/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/16/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/30/10 | 0.30 | 0.15 | 0.15 | 0.15 | 0.15 | 0.00 | 0.15 | 0.00 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.15 | 0.10 | 0.00 | 0.00 | 0.00 |
| 05/14/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.10 | 0.10 | 0.00 | 0.00 | 0.05 | 0.10 | 0.05 | 0.05 | 0.05 |
| 05/28/10 | 0.00 | 2.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 |
| 06/11/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 |
| 06/25/10 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.05 | 0.00 | 0.10 | 0.05 | 0.05 | 0.00 | 0.00 | 0.00 |
| 07/01/10 | | 0.00 | | | | | | | | | | | | | | | | | | | | | | |
| 07/12/10 | | | 0.00 | 0.00 | 0.00 | 0.10 | 0.15 | 0.20 | 0.15 | 0.15 | 0.30 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/16/10 | | 0.00 | | | | | | | | | | | | | | | | | | | | | | |
| 07/23/10 | 0.00 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 07/30/10 | | 0.60 | | | | | | | | | | | | | | | | | | | | | | |
| 08/05/10 | 0.00 | 3.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/13/10 | | 0.00 | | | | | | | | | | | | | | | | | | | | | | |
| 08/20/10 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/27/10 | | 0.00 | | | | | | | | | | | | | | | | | | | | | | |
| 09/02/10 | 0.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/10/10 | | 0.00 | | | | | | | | | | | | | | | | | | | | | | |
| 09/16/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/24/10 | | 0.00 | | | | | | | | | | | | | | | | | | | | | | |
| 10/05/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/08/10 | | 0.00 | | | | | | | | | | | | | | | | | | | | | | |
| 10/14/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/22/10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10/29/10 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/05/10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/12/10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/19/10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/24/10 | 1.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/03/10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/10/10 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12/17/10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/30/10 | 2.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 01/14/11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

**POST RETROFT MONITORING DATA**

| Well | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 | E1R | E2RR | E3R | E4R | E5R | E6R | E7R | E8R | M1R | M2R | M3R | M4R | M5R | M6R | M7R | M8R | M9R | M10R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/17/12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 81.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/23/12 | NM | NM | NM | NM | NM | NM | NM | NM | 100.00 | NM | NM | NM | NM | NM | NM | NM | NM | 92.00 | NM | NM | NM | NM | NM | NM |
| 03/02/12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.00 | 12.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/08/12 | NM | NM | NM | NM | NM | NM | NM | NM | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM | 0.00 | NM | NM | NM | NM | NM | NM |
| 03/16/12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.00 | 11.00 | NM | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/21/12 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 03/30/12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/06/12 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 04/13/12 | 0.00 | 29.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Inaccessible
Destroyed
Clogged
Damaged

| Samp. Pt. | Schley South | 3B | 5 | 6 | 7 | 8 | 9 | 10 | Schley North | 4A | 5 | 7R | 7A | Buttrick | 1 | 2R | 3R | 4R | 5 | 6 | 8 | 9 | 10 | 12R | 13R | 14R | 16R | 17R | 18 | Balcom | Balcom-2 | Balcom-4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/18/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | N.M. | | | | 0.00 | 0.00 | 0.00 | 17.00 | 0.00 | 0.00 | | 0.00 | | | | | | |
| 03/05/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.10 | 0.05 | | 0.00 | 0.00 | 0.10 | 0.05 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 03/19/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 87.00 | N.O. | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 04/02/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 87.00 | N.O. | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 04/16/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 100.00 | N.O. | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 04/30/02 | | 0.05 | 0.00 | 0.05 | 0.05 | 0.15 | 0.00 | 0.05 | | 0.00 | 0.00 | 0.10 | 0.10 | | 0.00 | | | | 0.00 | N.O. | 0.00 | 32.00 | N.O. | 0.00 | | N.F. | 0.00 | | | | 0.00 | 0.00 |
| 05/15/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | | 0.05 | 0.05 | 0.05 | 0.05 | | 0.00 | | | | 0.00 | N.O. | 0.00 | 5.00 | N.O. | 0.00 | | N.F. | 0.00 | | | | 0.00 | 0.00 |
| 05/28/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | N.O. | 0.00 | 54.00 | N.O. | N.O. | | N.F. | 0.00 | | | | 0.00 | 0.00 |
| 06/11/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | N.O. | N.O. | 0.00 | 37.50 | N.O. | N.O. | | N.F. | N.O. | | | | N.O. | 0.00 |
| 06/28/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | N.O. | 0.00 | | 0.00 | | | | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | | N.O. | N.O. | | | | N.O. | 0.00 |
| 07/09/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | N.O. | 0.00 | | 0.00 | | | | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | | N.O. | N.O. | | | | N.O. | 0.00 |
| 07/24/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | N.O. | 0.00 | | 0.00 | | | | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | | N.O. | N.O. | | | | N.O. | 0.00 |
| 08/07/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 2.50 | 73.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 08/20/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 2.60 | 3.75 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 09/04/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 1.25 | 7.00 | 0.00 | 0.20 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 09/17/02 | | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 26.00 | 0.00 | | 2.50 | 0.00 | | | | 0.00 | 0.00 |
| 10/02/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 20.00 | 0.00 | 21.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 10/17/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 20.00 | 1.50 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 10/29/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 3.00 | 4.50 | 0.00 | | 0.58 | 0.00 | | | | 0.00 | 0.00 |
| 11/12/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 18.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 11/26/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 24.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 12/10/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 2.00 | 100.00 | 4.50 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 12/23/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 3.20 | 0.00 | 18.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 01/07/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | N.O. | | | | 0.00 | 0.58 | 0.00 | 0.00 | 42.00 | 0.00 | | 0.00 | N.O. | | | | 1.45 | 0.00 |
| 01/21/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.55 | 11.00 | 11.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 02/04/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 24.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 02/19/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 2.00 | 100.00 | 4.50 | 0.20 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 02/26/03 | | | | | | | | | | | | | | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | | |
| 03/04/03 | | 0.00 | 0.00 | | 0.00 | | | | | | | 0.05 | | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 1.60 | 0.00 | | 1.20 | 0.00 | | | | 4.00 | 0.00 |
| 03/11/03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 03/18/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 | | 2.50 | 0.00 | | | | 3.25 | 0.00 |
| 03/25/03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 04/01/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 | | 2.50 | 0.00 | | | | 3.25 | 0.00 |
| 04/08/03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 04/15/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 2.35 | 0.00 | | 0.80 | 0.00 | | | | 0.00 | 0.00 |
| 04/30/03 | | 0.00 | 0.00 | 0.00 | 0.00 | CNL | CNL | CNL | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 12.00 | 0.05 | | 0.30 | 0.00 | | | | 0.00 | 0.00 |
| 05/14/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 4.80 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 05/27/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 2.08 | 0.00 | | 1.10 | 0.00 | | | | 0.00 | 0.00 |
| 06/10/03 | | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.15 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.80 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.20 |
| 06/24/03 | | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.15 | | | | | 0.00 | 0.00 | 0.00 | 2.68 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 07/08/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 6.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 07/23/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.20 | 0.15 | | 0.00 | | 0.00 | | | | | 0.00 | 0.46 | 0.00 | 0.30 | 0.00 | | 0.15 | 0.00 | | | | 0.00 | 0.15 |
| 08/04/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 3.90 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 08/19/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.56 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 09/03/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.40 | 18.50 | 4.00 | | 0.00 | 11.00 | | | | 8.00 | 0.00 |
| 09/17/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 6.00 | 7.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 10/03/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 6.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 10/15/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 30.00 | | | | 0.00 | 0.00 |
| 10/31/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | 8.00 | 0.00 |
| 11/11/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 1.06 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | 0.00 |
| 12/03/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 7.00 | 0.00 | | 1.00 | 0.00 | | | 0.00 | 0.00 | 0.00 |
| 12/15/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | | | 0.00 | 0.00 |
| 12/31/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 43.00 | 0.00 | | | 0.00 | | | | 0.00 | 0.00 |
| 01/13/04 | | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 3.06 | 0.00 | | | 0.00 | | | | 0.00 | 0.00 |
| 01/27/04 | | 1.56 | 0.00 | 0.00 | NA | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 7.20 | 14.00 | 0.00 | | | 0.00 | | | | NA | 0.00 |
| 02/12/04 | | 0.00 | NA | NA | NA | NA | NA | 0.00 | | 0.00 | 0.00 | | NA | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | | | 0.00 | 0.00 |
| 02/25/04 | | 0.00 | 0.00 | NA | NA | NA | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | | | 0.00 | | | | 0.00 | 0.00 |
| 03/08/04 | | 0.00 | 0.00 | NA | NA | NA | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 1.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | | | 0.00 | 0.00 |
| 03/22/04 | | 0.00 | 0.00 | NA | NA | NA | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 1.05 | 0.00 | | | | | | | 0.00 | 0.00 |
| 04/07/04 | | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 2.00 | | 1.00 | | | | | 0.00 | 0.00 | 0.00 | 93.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 04/23/04 | | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 1.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 36.00 | 0.00 | | | | | | | | 0.00 |
| 05/06/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 1.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | 0.00 |
| 05/20/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 21.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 06/03/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 06/17/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 3.24 | 0.00 | | | | | | | 0.00 | 0.00 |
| 06/29/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 2.80 | 0.00 | | | | | | | 0.00 | 0.00 |
| 07/16/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 07/30/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 08/11/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 08/26/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | | 0.00 | 0.00 | 3.30 | 0.05 | | | | | | | 0.00 | 0.00 |
| 09/10/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | | 0.00 | 0.00 | 1.35 | 0.50 | | | | | | | 0.00 | 0.00 |
| 09/24/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | | 0.00 | 0.00 | 2.40 | 0.10 | | | | | | | 0.00 | 0.00 |
| 10/08/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | 0.68 | 0.00 | | | | | | 0.00 | 0.00 |
| 10/22/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 2.40 | 0.10 | | | | | | | 0.00 | 0.00 |
| 11/05/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 11/19/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 11/29/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 12/16/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 12/30/04 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | 0.00 | 0.00 |
| 01/14/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 |
| 01/26/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | CNM | 0.00 | | CNM | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 |
| 02/08/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 |
| 02/25/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 5.20 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 03/09/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 03/22/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 6.00 | 5.50 | 0.00 | 7.00 | 20.40 | 0.00 | | | | | 0.00 | 0.00 |
| 04/06/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 9.00 | 1.70 | 0.45 | 0.00 | 9.00 | 0.35 | 0.00 | | 0.00 | 0.00 |
| 04/20/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 2.68 | 9.00 | 2.72 | 1.16 | 7.00 | 6.00 | 0.00 | 0.00 | | 0.00 | |
| 05/06/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 9.00 | 7.00 | | CNL | 8.00 | 1.50 | 0.00 | | 0.00 | 0.00 |
| 05/17/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 1.94 | 7.00 | | 0.15 | 0.00 | 0.00 | 0.00 | | 0.00 | |
| 05/31/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 1.78 | 2.52 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/16/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 6.00 | 16.00 | 7.00 | 22.00 | 16.50 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/30/05 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.33 | 9.00 | 10.00 | 0.00 | 0.00 | 2.46 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/15/05 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 2.28 | 15.00 | | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/29/05 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 6.50 | 9.00 | 10.00 | | 0.00 | 2.46 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/12/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.00 | 36.00 | 7.00 | 6.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/26/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | 3.34 | 5.80 | 18.30 | 0.00 | 2.20 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/09/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.34 | 0.00 | 3.74 | 2.62 | 1.66 | 0.00 | 8.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/26/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.80 | 0.00 | 5.00 | 1.30 | 10.50 | 0.00 | 8.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/07/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 4.80 | | 0.00 | 0.00 | 0.00 | 1.62 | 1.13 | 3.68 | 0.00 | 1.80 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/21/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 1.30 | 0.00 | 1.90 | | 0.00 | 0.25 | 0.60 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 11/04/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 1.20 | 0.00 | 0.00 | 0.00 | 1.20 | 0.00 | | | 0.00 | 0.00 |
| 11/18/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 12/02/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.38 | 0.00 | 6.00 | 0.00 | 0.86 | 0.00 | 6.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 12/07/05 | | | | | | | | | | | | | | | | | | | | | | | 1.15 | | | | 0.00 | | | | | |
| 12/14/05 | | | 0.00 | CNL | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.00 | 1.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 12/21/05 | | | | | | | | | | | | | | | | | | | | | | | 17.00 | | | | 0.00 | | | | | |
| 12/29/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.00 | 23.00 | 0.00 | 0.00 | 1.60 | 7.00 | 0.00 | | 0.00 | 0.00 |
| 01/04/06 | | | | | | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | | | | 0.00 | | | | |
| 01/10/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 01/18/06 | | | | | | | | | | | | | | | | | | | | | | | 0.97 | 27.00 | | | | 0.70 | | | | |
| 01/25/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.00 | 0.23 |

Inaccessible
Destroyed
Clogged
Damaged

| Samp. Pt. | Schley South | 3R | 5 | 6 | 7 | 8 | 9 | 10 | Schley North | 4A | 5 | 7R | 7A | Buttrick | 1 | 2R | 3R | 4R | 5 | 6 | 8 | 9 | 10 | 12R | 13R | 14R | 16R | 17R | 18 | Balcom | Balcom-2 | Balcom-4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/31/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 18.00 | 12.00 | 0.00 | 0.00 | 5.25 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/07/06 | | | | | | | | | | | | | | | | | | | | | | | 18.00 | 19.00 | | | 10.00 | | | | | |
| 06/14/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.53 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/21/06 | | | | | | | | | | | | | | | | | | | | | | | 8.00 | 1.92 | | | 0.50 | | | | | |
| 06/28/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 1.74 | | 0.00 | 0.00 | 0.00 | 7.00 | 8.00 | 0.35 | 0.00 | 8.00 | 7.00 | 0.00 | | 0.00 | 0.00 |
| 07/06/06 | | | | | | | | | | | | | | | | | | 0.00 | | | | | 8.00 | 3.78 | | | 17.00 | 0.00 | | | | |
| 07/12/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 14.00 | 7.00 | 2.34 | 1.32 | 16.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/19/06 | | | | | | | | | | | | | | | | | | 0.00 | | | | | 15.00 | 5.15 | 3.50 | 4.50 | 8.00 | 3.00 | | | | |
| 07/27/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 3.64 | 1.30 | 0.00 | 21.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/03/06 | | | | | | | | | | | | | | | | | | | | | | | 0.45 | 0.25 | | | 14.00 | 0.00 | | | | |
| 08/09/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 10.00 | 6.00 | 0.80 | 0.25 | 2.40 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/17/06 | | | | | | | | | | | | | | | | | | | | | | | 6.00 | 4.56 | | | 0.15 | 0.00 | | | | |
| 08/25/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 3.30 | 0.00 | 0.00 | 2.20 | 6.00 | 2.60 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/30/06 | | | | | | | | | | | | | | | | | | | | | | | 0.55 | 7.00 | | | 10.00 | | | | | |
| 09/07/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 1.52 | 6.00 | 0.00 | 0.75 | 5.25 | 0.35 | 0.00 | | 0.00 | 0.00 |
| 09/15/06 | | | | | | | | | | | | | | | | | | | | | | | 1.05 | 0.25 | | | 0.25 | | | | | |
| 09/20/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 3.00 | 10.00 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | | 0.00 | 0.00 |
| 09/29/06 | | | | | | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | | | 2.00 | | | | | |
| 10/06/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 4.00 | 0.00 | 0.00 | 3.00 | 6.00 | 0.00 | 0.15 | 0.55 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/13/06 | | | | | | | | | | | | | | | | | | | | 0.00 | | | 7.00 | 0.15 | | | 2.00 | | | | | |
| 10/19/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 7.00 | 6.00 | 0.00 | 1.50 | 13.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/24/06 | | | | | | | | | | | | | | | | | | | | 0.10 | | | 9.00 | 0.00 | | | 10.00 | | | | | |
| 11/03/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.05 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.15 | 0.00 | | 0.00 | 0.00 | 0.00 | 18.00 | 0.75 | 0.05 | 0.00 | 0.70 | 0.25 | 0.15 | | 0.00 | 0.00 |
| 01/12/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 6.00 | 0.00 | 0.00 | 0.00 | 3.00 | 2.00 | 0.00 | | 0.00 | 0.00 |
| 01/15/07 | | | | | | | | | | | | | | | | | | | | | | | 14.00 | 18.00 | | | 4.00 | | | | | |
| 01/24/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 13.00 | 0.70 | 0.00 | 0.00 | 3.80 | 0.70 | 0.00 | | 0.00 | 0.00 |
| 01/31/07 | | | | | | | | | | | | | | | | | | | | | | | 10.20 | 0.00 | | | 0.50 | | | | | |
| 02/07/07 | | 0.00 | 0.10 | 0.10 | 0.00 | 0.00 | 0.10 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 22.00 | 0.00 | | 1.00 | 2.30 | 0.00 | 0.00 | | 0.00 | 0.20 |
| 02/16/07 | | | | | | | | | | | | | | | | | | | | | | | 0.10 | 0.00 | | | 0.10 | | | | | |
| 02/21/07 | | 0.00 | 0.00 | | 0.00 | | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.20 | 0.00 | 2.30 | 0.00 | 0.30 | | 0.00 | 0.00 | | 0.00 | |
| 02/28/07 | | | | | | | | | | | | | | | | | | | | | | | 0.00 | | | | 6.50 | | | | | |
| 03/07/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 03/16/07 | | | | | | | | | | | | | | | | | | | | | | | | | | | 3.30 | | | | | |
| 03/21/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 03/28/07 | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.10 | | | | | |
| 04/04/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.10 | | 0.20 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.10 | 0.00 | 0.10 | | 0.00 | 0.00 | 0.00 | 2.00 | 14.80 | 0.00 | 0.00 | 0.40 | 0.80 | 0.00 | | 0.00 | 0.00 |
| 04/13/07 | | | | | | | | | | | | | | | | | | | | | | | | 0.00 | | | | | | | | |
| 04/19/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 04/26/07 | | | | | | | | | | | | | | | | | | | | | | | | 0.00 | | | | | | | | |
| 05/04/07 | | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.10 | | 0.10 | 0.00 | 0.10 | 0.00 | | 0.10 | 0.00 | 0.10 | 0.10 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.30 | 0.10 | 0.00 | | 0.00 | 0.00 |
| 05/17/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.10 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/01/07 | | 0.10 | 0.00 | 0.05 | 0.00 | 0.05 | 0.00 | 0.05 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.05 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.05 | 0.05 | | 0.00 | 0.00 |
| 06/15/07 | | 0.00 | 0.10 | 0.00 | 0.20 | 0.00 | 0.00 | 0.20 | | 0.15 | 0.00 | 0.00 | 0.00 | | 0.25 | 0.10 | 0.05 | 0.00 | | 0.00 | 0.20 | 0.10 | 5.00 | 0.25 | 0.30 | 0.35 | 0.90 | 0.20 | 0.00 | | 0.15 | 0.05 |
| 06/19/07 | | | | | | | | | | | | | | | | | | | | | | | 0.00 | | | | | | | | | |
| 06/29/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 18.40 | 1.40 | 5.30 | 0.00 | 0.90 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/06/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 9.20 | 0.00 | 1.20 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/13/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 | 7.80 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/20/07 | | | | | | | | | | | | | | | | | | | | | | | 0.20 | | 0.00 | | 21.50 | | | | | |
| 07/26/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/03/07 | | | | | | | | | | | | | | | | | | | | | | | | | | | 8.80 | | | | | |
| 08/10/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 5.90 | 0.00 | 0.00 | 0.00 | 3.80 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/13/07 | | | | | | | | | | | | | | | | | | | | | | | 4.20 | | | | 0.30 | | | | | |
| 08/23/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 3.20 | 0.00 | 0.00 | 0.00 | 1.30 | 6.20 | 0.00 | | 0.00 | 0.00 |
| 08/31/07 | | | | | | | | | | | | | | | | | | | | | | | 1.10 | | | | 6.50 | 1.10 | | | | |
| 09/07/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/14/07 | | | | | | | | | | | | | | | | | | | | | | | 0.05 | | | | 1.20 | 0.00 | | | | |
| 09/19/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.25 | | 0.00 | 0.00 | 0.00 | 0.00 | 11.00 | 0.00 | 0.00 | | | 0.00 |
| 09/28/07 | | | | | | | | | | | | | | | | | | | | | | | 0.04 | | | | 9.00 | 0.00 | | | | |
| 10/05/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 1.30 | 4.20 | 0.20 | 0.00 | 1.80 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/12/07 | | | | | | | | | | | | | | | | | | | | | | | | | | | 16.10 | | | | | |
| 10/19/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.05 | 11.60 | 1.60 | 0.00 | 16.40 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/25/07 | | | | | | | | | | | | | | | | | | | | | | | | 1.60 | | | 2.50 | | | | | |
| 11/02/07 | | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.10 | 0.00 | | 3.80 | 0.35 | 0.15 | 0.10 | 2.00 | 0.00 | 0.05 | | 0.00 | 0.00 |
| 11/05/07 | | | | | | | | | | | | | | | | | | | | | | | | 0.70 | | | 13.10 | | | | | |
| 11/16/07 | | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.05 | | 0.10 | 0.05 | 0.00 | 0.00 | | 0.15 | 0.00 | 0.00 | 0.00 | | 0.10 | | | 9.90 | 0.05 | 0.05 | 0.05 | 19.70 | 0.00 | 0.10 | | 0.00 | 0.00 |
| 11/21/07 | | | | | | | | | | | | | | | | | | | | | | | 23.80 | | | | 11.40 | | | | | |
| 11/30/07 | | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.10 | 0.00 | | 0.15 | 0.00 | 0.00 | 0.20 | 1.20 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 12/06/07 | | | | | | | | | | | | | | | | | | | | | | | 0.68 | | | | 0.22 | | | | | |
| 12/11/07 | | 0.05 | 0.00 | 0.05 | 0.00 | 0.00 | 0.05 | 0.05 | | 0.10 | | 0.05 | 0.05 | | 0.00 | 0.05 | 0.00 | 0.00 | | 0.00 | 0.10 | | 10.80 | 0.00 | 0.05 | 0.00 | 5.40 | 0.00 | 0.00 | | | |
| 12/21/07 | | | | | | | | | | | | | | | | | | | | | | | 0.00 | | | | 0.00 | | | | | |
| 12/28/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 01/04/08 | | | | | | | | | | | | | | | | | | | | | | | 0.00 | | | | 0.00 | | | | | |
| 01/11/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.14 | | 0.00 | 0.00 |
| 01/22/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 02/07/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.11 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 02/22/08 | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.00 | | | | | |
| 03/12/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 03/21/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 04/03/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 1.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 | 0.00 | | 0.00 | 0.00 |
| 04/16/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 2.40 | 0.00 | 0.00 | 0.00 | 1.60 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 05/01/08 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 4.20 | 0.00 | 0.00 | 0.00 | 2.70 | 0.00 | 0.00 | | | 0.00 |
| 05/08/08 | | | | | | | | | | | | | | | | | | | | | | | 0.25 | | | | | | | | | |
| 05/15/08 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 4.80 | 0.00 | 0.00 | 0.00 | 0.70 | 0.45 | 0.00 | | | 0.00 |
| 05/23/08 | | | | | | | | | | | | | | | | | | | | | | | 2.80 | | | | | | | | | |
| 05/30/08 | | 0.00 | 0.00 | | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 4.90 | 0.00 | 0.00 | 0.00 | 1.80 | 0.00 | 0.00 | | | 0.00 |
| 06/06/08 | | | | | | | | | | | | | | | | | | | | | | | 4.00 | | | | | | | | | |
| 06/11/08 | | 0.00 | 0.00 | | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.80 | 0.00 | 0.00 | 0.00 | 2.20 | 0.45 | 0.00 | | | 0.00 |
| 06/19/08 | | | | | | | | | | | | | | | | | | | | | | | 0.20 | | | | | | | | | |
| 06/25/08 | | 0.00 | 0.00 | | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.45 | 0.00 | 0.00 | | | |
| 07/11/08 | | 0.00 | 0.00 | | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 2.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.00 | | | 0.00 |
| 07/25/08 | | 0.00 | 0.00 | | 0.00 | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.40 | 0.00 | 0.00 | | | 0.00 |
| 08/08/08 | | 0.00 | | 1.30 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 1.20 | 0.45 | 0.00 | 0.00 | 0.00 | 0.85 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/22/08 | | 0.00 | | 1.80 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 3.10 | 0.40 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/04/08 | | 0.00 | | 0.75 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 2.80 | 0.40 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/18/08 | | 0.00 | | 0.00 | 0.00 | 0.00 | 2.50 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/02/08 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/16/08 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/30/08 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.20 | 0.00 | | 0.00 | 0.00 |
| 11/13/08 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 2.90 | 2.50 | 0.00 | 0.00 | 0.00 | 0.95 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 11/26/08 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 12/08/08 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.10 | 0.90 | 0.00 | 0.00 | 0.00 | 0.95 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 12/24/08 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | 0.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 01/09/09 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 01/21/09 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | | 0.00 | | | | | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.85 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 02/04/09 | | 0.00 | | | | | | | | | | | | | | | | | | 0.00 | | | 0.00 | | | | | | | | | |
| 02/20/09 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.60 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.50 | 0.00 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | | 0.00 | 0.00 |
| 03/05/09 | | 0.00 | | | | | | | | 0.00 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | | | | 0.00 | 1.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 03/17/09 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 1.50 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | | 0.00 | 0.00 |
| 04/02/09 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.50 | 1.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | | 0.00 | 0.00 |
| 04/17/09 | | 0.00 | | 2.10 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | 4.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | | 0.00 | 0.00 |
| 04/29/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 05/12/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 2.70 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | | 0.00 | 0.00 |
| 05/28/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/11/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/26/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/10/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | | 0.00 | 0.00 |
| 07/24/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 3.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/07/09 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/21/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/04/09 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/18/09 | |

Inaccessible
Destroyed
Clogged
Damaged

| Samp. Pt. | Schley South | 3R | 5 | 6 | 7 | 8 | 9 | 10 | Schley North | 4A | 5 | 7R | 7A | Buttrick | 1 | 2R | 3R | 4R | 5 | 6 | 8 | 9 | 10 | 12R | 13R | 14R | 16R | 17R | 18 | Balcom | Balcom-2 | Balcom-4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/29/10 | | 0.20 | 0.00 | 3.45 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.30 | 0.50 | 0.25 | 0.00 | | 0.30 | 0.00 | 0.25 | 0.00 | | 0.00 | 1.40 | 0.80 | 0.20 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.35 | 0.00 |
| 02/09/10 | | 0.00 | 0.00 | 4.50 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.35 | 3.50 | 2.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 03/02/10 | | 0.00 | 0.25 | 4.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 2.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.35 | 0.00 |
| 03/19/10 | | 0.00 | 0.00 | 4.90 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 04/07/10 | | 0.10 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.10 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 04/16/10 | | 0.00 | 3.35 | 3.50 | 0.00 | 2.05 | 0.30 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 2.00 | 3.83 | 0.00 | 0.00 | 0.30 | 0.00 | 0.95 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 04/30/10 | | 0.10 | 0.20 | 0.20 | 0.15 | 0.20 | 0.10 | 0.10 | | 0.20 | 0.20 | 0.15 | 0.10 | | 0.15 | 0.10 | 0.15 | 0.15 | | 0.15 | 0.25 | 4.10 | 0.15 | 0.15 | 0.15 | 0.15 | 0.25 | 0.00 | 0.30 | | 0.20 | 0.10 |
| 05/14/10 | | 0.05 | 0.00 | 0.05 | 0.10 | 0.05 | 0.00 | 0.10 | | 0.10 | 0.05 | 0.05 | 0.10 | | 0.05 | 0.05 | 0.05 | 0.00 | | 0.10 | | 0.05 | 0.10 | 0.05 | 0.05 | 0.10 | 0.10 | 0.05 | 0.10 | | 0.00 | 0.00 |
| 05/28/10 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 2.30 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/11/10 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.05 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 06/25/10 | | 0.40 | 0.00 | 0.40 | 0.05 | 0.00 | 0.00 | 0.05 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.05 | 0.05 | | 0.05 | 0.70 | 0.20 | 5.00 | 0.05 | 0.10 | 0.05 | 0.10 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/01/10 | | | | 0.00 | | | | | | | | | | | | | | | | | | | 5.00 | | | | 0.00 | | | | | |
| 07/12/10 | | 0.00 | 0.00 | 0.95 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/16/10 | | | | 0.00 | | | | | | | | | | | | | | | | | | | 0.00 | | | | 5.00 | | | | | |
| 07/23/10 | | 0.00 | 0.05 | 3.35 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.05 | 0.05 | 0.05 | 0.00 | | 0.05 | 0.05 | 0.05 | 0.00 | | 0.00 | 4.40 | 5.00 | 4.45 | 0.15 | 0.45 | 0.00 | 4.95 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 07/30/10 | | | | 1.40 | | | | | | | | | | | | | | | | | | | 2.85 | | | | 2.50 | | | | | |
| 08/05/10 | | 0.00 | 0.35 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.05 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.05 | 0.00 | 0.10 | | 0.15 | 4.50 | 0.00 | 1.05 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/13/10 | | | | 2.45 | | | | | | | | | | | | | | | | | | | 1.50 | | | | 0.00 | | | | | |
| 08/20/10 | | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.05 | | 0.00 | 0.00 | 0.00 | 0.05 | | 0.00 | 3.55 | 1.75 | 0.30 | 0.00 | 0.25 | 0.10 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 08/27/10 | | | | 0.00 | | | | | | | | | | | | | | | | | | | 10.00 | | | | 0.00 | | | | | |
| 09/02/10 | | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/10/10 | | | | 0.00 | | | | | | | | | | | | | | | | | | | 4.50 | | | | 0.00 | | | | | |
| 09/16/10 | | 0.00 | 4.50 | 0.00 | 1.30 | 0.20 | 1.30 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.05 | | 0.00 | 3.60 | 5.00 | 5.00 | 0.00 | 0.85 | 0.00 | 4.25 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 09/24/10 | | | | 0.00 | | | | | | | | | | | | | | | | | | | 0.00 | | | | 0.00 | | | | | |
| 10/05/10 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.05 | | 0.00 | 3.40 | 10.00 | 3.30 | 0.00 | 0.00 | 1.65 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/08/10 | | | | | | | | | | | | | | | | | | | | | | | 0.65 | | | | 0.00 | | | | | |
| 10/14/10 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.05 | | 0.00 | 3.70 | 4.20 | 10.00 | 0.00 | 0.00 | 0.00 | 1.65 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 10/22/10 | | | | | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | | | | 0.00 | | | | | |
| 10/29/10 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 9.00 | 10.00 | 10.00 | 0.00 | 0.00 | 0.00 | 2.45 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 11/05/10 | | | | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 5.00 | | | | 0.00 | | | | | |
| 11/12/10 | | 0.00 | 0.00 | 2.15 | 0.00 | 0.20 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 2.50 | 10.00 | 10.00 | 0.50 | 0.00 | 0.50 | 3.05 | 0.05 | 0.00 | | 0.00 | 0.00 |
| 11/19/10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/24/10 | | 0.00 | 0.00 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/03/10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/10/10 | | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/17/10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/30/10 | | 0.00 | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 1.10 | 0.00 | 0.00 | 0.00 | 0.35 | 0.60 | 0.00 | | | |
| 01/07/10 | | | | | | | | | | | | | | | | | | | | | | 2.90 | 5.00 | | | | 0.00 | | | | | |
| 01/14/11 | | 0.00 | - | - | - | 0.00 | - | - | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.05 | 0.00 | 1.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | - | - |

POST RETROFIT MONITORING DATA

| Samp. Pt. | Schley South | 3R | 5 | 6 | 7 | 8 | 9 | 10 | Schley North | 4A | 5 | 7R | 7A | Buttrick | 1 | 2R | 3R | 4R | 5 | 6 | 8 | 9 | 10 | 12R | 13R | 14R | 16R | 17R | 18 | Balcom | Balcom-2 | Balcom-4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/17/12 | | 0.00 | 0.00 | 100.00 | 0.00 | 100.00 | 0.00 | 5.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | NM | 0.00 | 0.00 | NM | 0.00 | 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 28.00 | 33.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 02/23/12 | | NM | NM | 0.00 | NM | 0.00 | NM | NM | | NM | NM | NM | NM | | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | 0.00 | NM | | NM | NM |
| 03/02/12 | | 0.00 | 0.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | NM | 0.00 | 0.00 | NM | 0.00 | 0.00 | 0.00 | NM | 0.00 | 0.00 | 36.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 03/08/12 | | NM | NM | NM | NM | NM | NM | NM | | NM | NM | NM | NM | | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | | NM | NM |
| 03/16/12 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | NM | | 0.00 | NM | 0.00 | 0.00 | NM | 0.00 | 4.00 | 0.00 | NM | 100.00 | 0.00 | 27.00 | 10.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 03/21/12 | | NM | NM | NM | NM | NM | NM | NM | | NM | NM | NM | NM | | NM | NM | NM | NM | NM | NM | NM | NM | NM | 0.00 | NM | 0.00 | NM | NM | NM | | NM | NM |
| 03/30/12 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | NM | 0.00 | 0.00 | NM | 75.00 | 0.00 | 0.00 | 65.00 | 77.00 | 25.00 | 4.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 |
| 04/06/12 | | NM | NM | NM | NM | NM | NM | NM | | NM | NM | NM | NM | | NM | NM | NM | NM | NM | NM | NM | NM | NM | 23.00 | NM | 0.00 | NM | NM | NM | | NM | NM |
| 04/13/12 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | NM | 0.00 | 0.00 | NM | 0.00 | 34.00 | 0.00 | 89.00 | 100.00 | 100.00 | 0.00 | 100.00 | 0.00 | 0.00 | | 0.00 | 0.00 |

Ferry Point Park
Methane Monitoring

Inaccessible
Destroyed
Clogged
Damaged

| Samp. Pt. | Miles | 1M | 2M | 3M | 4M | 5M | 6M | 7M | 8M | 9M | 10M | 11M | 12M | 13M | 14M | 17M | 19M | 20M | 21M | Emerson | 1E | 2E | 3E | 4E | 5E | 6E | 7E | 8E | 9E | 10E | 11E | 12E | 13E | 14E | 15E | 16E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/18/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 03/05/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | 0.00 | N.M. | 0.00 | 0.00 | N.M. | 0.00 | 0.00 | 0.00 | | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | N.M. | N.M. | N.M. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 |
| 03/19/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | N.M. | N.M. | 0.00 | 0.00 | N.M. | 0.00 | N.M. | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | N.M. | N.M. | N.M. | N.M. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/02/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | N.M. | 0.00 | N.M. | N.M. | 0.00 | 0.00 | 0.00 | N.M. | 0.00 |
| 04/16/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 04/30/02 | | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | N.M. | N.M. | N.M. | N.M. | 0.05 | 0.05 | N.O. | 0.00 | N.M. | N.M. | | 0.05 | N.O. | N.M. | 0.05 | N.M. | 0.05 | N.M. | 0.05 | N.M. | N.M. | N.M. | 0.05 | N.M. | 0.00 | N.O. | N.M. |
| 05/15/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.M. | N.M. | N.M. | N.M. | 0.10 | N.O. | N.O. | 0.00 | N.M. | N.M. | | 5.00 | N.O. | 0.00 | 0.00 | N.M. | 0.00 | N.M. | 0.00 | N.M. | N.M. | N.M. | N.M. | N.M. | N.M. | N.M. | 0.00 |
| 05/28/02 | | 0.00 | 0.00 | 0.00 | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.M. | N.O. | N.O. | 0.00 | 0.00 | 0.00 | | 0.75 | N.O. | 0.00 | 0.00 | N.M. | N.M. | N.M. | N.M. | N.M. | N.M. | N.M. | 0.00 | N.O. | N.O. | N.O. | N.O. |
| 06/11/02 | | 0.00 | 0.00 | 0.00 | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | 0.00 | N.O. | N.O. | N.O. | 0.00 | 0.00 | | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.M. | 0.00 | N.O. | N.O. | N.O. | N.O. |
| 06/28/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.O. | 0.00 | N.O. | N.O. | N.O. | N.O. | 0.00 | N.O. | 0.00 | N.O. | 0.00 | 0.00 | | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.M. | 0.00 | N.O. | N.O. | N.O. | N.O. |
| 07/09/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.O. | 0.00 | N.O. | N.O. | N.O. | N.O. | 0.00 | N.O. | N.O. | 0.00 | 0.00 | 0.00 | | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | 0.00 | N.O. | 0.00 | N.O. | N.O. |
| 07/24/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | 0.00 | N.O. | N.O. | 0.00 | 0.00 | N.O. | | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | 0.00 | N.O. | 0.00 | N.O. | N.O. |
| 08/07/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 08/20/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/04/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | N.O. | 0.00 | N.O. | 0.00 | 0.00 | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | 0.00 | 0.00 | 0.00 | 0.00 |
| 09/17/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | N.O. | 0.00 | N.O. | 0.00 | 1.00 | N.O. | N.O. | N.O. | N.O. | N.O. | N.O. | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/02/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | N.O. | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/17/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | N.O. | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10/29/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/12/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N. O. | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | N.O. | N.O. | 0.00 | 0.00 | 0.00 | N.O. | 0.00 |
| 11/26/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | N.O. | N.O. | 0.00 | 0.00 | 0.00 | N.O. | 0.00 |
| 12/10/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | N.O. | N.O. | N.O. | 0.00 | 0.00 | 0.00 | N.O. | 0.00 |
| 12/23/02 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | N.O. | N.O. | 0.00 | 0.00 | 0.00 | N.O. | 0.00 |
| 01/07/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | N.O. | N.O. | N.O. | 0.00 | N.O. | 0.00 | N.O. | N.O. | N.O. | 0.00 | 0.00 | 0.00 | N.O. | 0.00 |
| 01/21/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.15 | 0.00 | N.O. | N.O. | N.O. | 0.00 | 4.90 | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | N.O. | 0.00 |
| 02/04/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | N.O. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02/19/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | N.O. | 0.00 | N.O. | N.O. | 0.00 | 0.00 | N.O. | N.O. | N.O. | 0.00 | 0.00 | 0.00 | N.O. | 0.00 |
| 03/04/03 | | | | 0.00 | | | | 0.00 | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | | | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 |
| 03/18/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 |
| 03/25/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | | 0.05 | | 0.00 | 0.00 | | | | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 |
| 04/01/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 |
| 04/08/03 | | | | | | | | | | 0.00 | | | | | | | | | | | 0.00 | 0.00 | | | | | | | | | | | | | | 0.00 |
| 04/15/03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | | | | 0.00 | | 0.00 | 0.00 | | | 0.00 | 0.00 | 0.00 | | 0.00 |
| 04/30/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/14/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/27/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/10/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/24/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/08/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/23/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/04/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/19/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/03/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 09/17/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/03/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/15/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/31/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/11/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/03/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/15/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/31/03 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01/13/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01/27/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/12/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 02/25/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/08/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/22/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/07/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 04/21/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/06/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 05/20/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/03/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/17/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 06/29/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/16/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/30/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 08/11/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/08/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/22/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/05/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11/19/04 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 07/15/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 07/29/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 08/12/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 08/26/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 09/09/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 09/26/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 10/07/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 10/21/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 11/04/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 11/18/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 12/02/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 12/14/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 12/29/05 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 01/10/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 01/25/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 02/08/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 02/22/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 03/08/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 03/23/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 04/07/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 04/19/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 05/03/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 05/17/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 05/31/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 06/14/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 06/28/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 07/12/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 07/27/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 08/09/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 08/25/06 | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 09/07/06 | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | | | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 09/20/06 | | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 10/06/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | | | | | | | | |
| 10/19/06 | | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | | | | | | | | |
| 11/03/06 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | | | | | | | | |
| 01/12/07 | | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| 01/24/07 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0

**POST RETROFIT MONITORING DATA**

| Samp. Pt. | Miles | 1M | 2M | 3M | 4M | 5M | 6M | 7M | 8M | 9M | 10M | 11M | 12M | 13M | 14M | 17M | 19M | 20M | 21M | Emerson | 1E | 2E | 3E | 4E | 5E | 6E | 7E | 8E | 9E | 10E | 11E | 12E | 13E | 14E | 15E | 16E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/17/12 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | 02/17/12 | 0.00 | 0.00 | 81.00 | 0.00 | NM | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM |
| 02/23/12 | | NM | NM | NM | 92.00 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | 02/23/12 | NM | NM | 100.00 | NM | NM | NM | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM |
| 03/02/12 | | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | 03/02/12 | 0.00 | 0.00 | 17.00 | 12.00 | NM | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 03/08/12 | | NM | NM | NM | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | 03/08/12 | NM | NM | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 03/16/12 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | 03/16/12 | 0.00 | 0.00 | 13.00 | 11.00 | NM | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM |
| 03/21/12 | | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | 03/21/12 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 03/30/12 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | 03/30/12 | 0.00 | 0.00 | 14.00 | 0.00 | NM | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM |
| 04/06/12 | | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | 04/06/12 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 04/13/12 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | 04/13/12 | 0.00 | 0.00 | 0.00 | 0.00 | NM | 0.00 | 0.00 | 0.00 | NM | NM | NM | NM | NM | NM | NM | NM |
| 04/18/12 | | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | 04/18/12 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |

# D LFG O & M Forms




**City of New York Department of Parks and Recreation**

# Ferry Point Park Golf Course & Community Park
# Bronx, New York

**Final Construction Certification Report**
**NYSDEC Permit #2-6006-00014 / 00013 (SW)**
**October 19, 2015**

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# 1 Introduction

## 1.1 Purpose

This Final Construction Certification Report for the Ferry Point Park Golf Course is submitted to the New York State Department of Environmental Conservation upon completion of the construction of Ferry Point Park East, a solid waste management facility, which includes the resultant information prepared in accordance with 6NYCRR Part 360 of the New York State Solid Waste Management Program.

This report is to certify that the construction of Ferry Point Park East has been completed in accordance with the 6NYCRR Part 360 and the Ferry Point Park Part 360 permits. Therefore, this report will present in great detail each specific approved component of the project – what was approved, what was actually constructed initially (with pictures), the changes that were made, and the final status and design as of the date of this report (with pictures).

## 1.2 Report Organization

This report has been generated to provide a written post-construction certification report to comply with the requirements of the Project's Part 360 Permits. The narrative and supporting information provided in this report have been organized such that any individual, especially those not familiar with the project, can gain a concise understanding of the history of improvements at the Site. As such, the report has been organized into the following sections:

- This report begins with this introductory chapter (Section 1) which briefly describes the purpose and scope of the project, provides details pertaining to the Site background including a Site description, key agencies involved, and Project and permitting history.

- Section 2 describes the Part 360 Permits and modifications, Permit reference documents, non-conformance issues, operational upsets, emergencies, and unusual circumstances, and reporting completed associated with the Project.

- Section 3 details the fill importation QA/QC program, specifically source site reviews for shaping layer and cover layer material, on-site fill importation inspection, trucking manifests, rejected trucks and materials, fill tracking, and total carcinogenic semi-volatile organic compound tracking.

- Section 4 provides details related to construction activities on-site including construction of the Community Park and the Golf Course, status of the Waterfront Park, environmental controls such as landfill gas wells, groundwater wells, liners, gas venting systems, vent trench, landfill cap, municipal solid waste handling, earthwork and fill placement, demarcation layer, miscellaneous golf course materials such as greens and tees mix, construction progress meetings, and deviations from the approved design plans and/or Permit requirements with as-built surveys.

- Section 5 details the environmental monitoring completed during the Project including Stormwater Pollution Prevention Plan (SWPPP), landfill gas, piezometer, settlement plate, and groundwater monitoring as well as information related to the deed restriction and post construction monitoring requirements at the Site.

- Section 6 provides a summary of the report.

- Report certification is provided in Section 7.

## 1.3 Background Information

### 1.3.1 Project Scope

Ferry Point Park in the Bronx (the "Site") is a former landfill covering 222 acres that is bounded by the Bronx-Whitestone Bridge and Hutchinson River Parkway to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue and St. Raymond's Cemetery to the north, and the East River to the south (See Figure 1-1 Ferry Point Park Project Area Map). The project was originally managed under Ferry Point Partners, LLC and was taken over solely by the City of New York Department of Parks and Recreation in October 2007.

The original project scope (the "Project") included the construction of three main elements including a golf course, a community park, and a waterfront park over the 222-acre Site (see Figure 2-1 Ferry Point Park Site Layout) as follows:

1. An 18-hole golf course with practice facility, driving range, clubhouse, maintenance facility, irrigation lake, stormwater retention ponds, and a parking lot (192.5 acres);
2. A passive recreation waterfront park with walkways and a comfort station (19.5 acres); and
3. A community park with baseball fields, basketball court, walkways, comfort station, and landscaped stormwater retention area (10 acres).

### 1.3.2 Project Site

The origins of the site for purposes of presenting a description of the site and surrounding area for this report extend back to the early 1900's. At that time an available 1900 map of the Bronx (Figure 2-2) showed the western edge of the site which now contains the expressway and Whitestone Bridge was a long narrow peninsula extending out to the same area that the northern landing of the Whitestone Bridge now extends to. Immediately east of this peninsula was a large open bay which is the area that the Ferry Point Golf Course is located within. Further to the northeast of this bay and well inland and beyond the current golf course was the Baxter Creek that drained into the bay. The eastern landfall of this embayment area is a larger peninsula that contains roadways and what appears to be residential development. The road patterns do not resemble the roadways that currently exist in that area and appear to have been changed.

A 1938 aerial photo (Figure 2-3) showing the construction of the Whitestone Bridge shows the Bay, mooring, residential area and land to the west to be virtually the same as shown in the 1900 map (Fig. 2-2). The significant change is in the widening of the western peninsula where the expressway was being constructed leading to the bridge ramps. The widening was not significant at this time but a rectangular area in the extreme northwest corner of what is now the site does appear to be filled and graded possible for bridge and expressway construction staging or support. Areas of filling can be readily identified by the contrasting lighter color typically indicative of sandy dredge sand placement. Other areas along the shoreline can be seen as containing a lighter colored band of fill material and this includes much of the new Ferry Point Park located west of the Whitestone Bridge. Much of the park area was filled, graded and completed by 1938. Bulkheads were constructed with linear components to present a smooth shoreline but one that does not appear to contain a beach where water diminishes in depth to 0. Photos of the eastern area of the bay where mooring and docks can be seen showing large vessels moored against the shore. This would indicate the water has significant depth all of the way to the center of the bay.

Aerial photographs from the 1950's (Figure 2-4) show a drastic change in the area currently referred to as the site. Large expansion of the filling that was evident in 1938-39 up in the northeast corner can be clearly seen. The filling extends well into the bay and it appears that a connective bridge was constructed from the eastern shore to the fill area. It is difficult to discern if this is a usable structure for crossing or if it had some other purpose. The filling operation appears from the photo to consist of the same light colored material that was placed in the Ferry point Park and from photos showing a large number of barges in the water filled with material of the same light color. There is no specific logs and documentation that presents the specific origin and consistency of the material but from the prior aerials showing filling and this large expansion, it appears to be of a similar origin which would be dredge sand. In the 1951 aerial, no specific municipal solid waste dumping and disposal can be seen but the records indicate the landfill operated from this approximate time period. So it can be assumed that municipal solid waste was dumped within the site area very soon after that. The filling shown in the aerial may very well have been the initial construction of the upper portion of the landfill with the tidal gate or bridge closing in the upper bay area. Additional aerials of the landfilling were not identified and more recent aerials document the completion of filling as well as the more recent golf course construction.
What can be discerned from this compilation of photos is that the landfill was located on area that may have been completely filled open water as well as some area that was previously reclaimed land with dredge material.

The Site operated as a landfill from before 1951 to the 1960's. The landfill reportedly accepted municipal solid waste during its operating period and was closed and covered in the mid-1960's, with additional closure operations conducted more recently in the 1980's. Prior Site use was determined from historic aerial photographs from 1951 thru 1991. The aerial photographs span practically the entire operational period of the prior landfill, from its initial operations to the present, and provides substantial information about the Site's development.

### 1.3.3 Key Agencies

The following were the key agencies associated with the project providing oversight, administration, design, construction, and monitoring services. The following is not intended to be an exhaustive list of involved entities related to the Project. A more extensive list of project participants is included in Appendix 18.

Primary Regulatory Agency:
New York State Department of Environmental Conservation Region 2 ("NYSDEC")

Project Permittee (Prior to October 2007):
Ferry Point Partners, LLC ("FPP")
City of New York Department of Parks and Recreation ("NYCDPR")

Project Permittee (Post October 2007):
City of New York Department of Parks and Recreation ("NYCDPR")

Primary Design, Engineering, Construction, and Monitoring Consultants:
Sanford Golf Design ("Sanford")
Nicklaus Design ("Nicklaus")
TRC Companies, Inc. ("TRC")
Langan Engineering & Environmental Services, Inc. ("Langan")
Ecology and Environment, Inc. ("E&E")
KS Engineers PC ("KSE")
Wesler Cohen Associates ("WCA")
The Pignato Group ("TPG")
Thomas Balsley Associates ("TBA")
Green Bases, Inc. ("GBI")

Independent Environmental Monitor ("IEM"):
ARCADIS/Geraghty & Miller (July 2000 – December 2000)
Gannett Fleming (December 2000 – October 24, 2010)
Woodard & Curran ("WC") (October 25, 2010 – Project Completion)

General Contractor:
Golf Course and Community Park: LAWS Construction Corp. ("LAWS")
Community Park Comfort Station: TJM Construction Corp. / Long Island Concrete, Inc.
Golf Course Maintenance Building, Rain Shelter, Comfort Station: Triton Structural Concrete, Inc.
Golf Course Cover Layer Material Importation: MFM Contracting Corp.

Golf Course Concessionaire/Operator:
The Trump Organization ("Trump")

### 1.3.4 Independent Environmental Monitor

The requirement for an Independent Environmental Monitor ("IEM") on this project was associated with an increased level of monitoring exceeding normal review and oversight practices of the NYSDEC in order to protect public health and the environment. The increased level of review and oversight for this Project was mainly associated with the extensive effort required for evaluation of fill material sources, source site testing and inspection, importation of the fill material, extensive earthwork, and environmental monitoring required at the 222-acre Site.

In accordance with Special Condition 24 of the 2014 Permit, NYCDPR was responsible to retain an IEM, accountable to the NYSDEC, to provide environmental oversight of all activities authorized under the Permit including but not limited to the quantification, importation and placement of fill, and the monitoring of the Site. Particular activities performed by the IEM for this Project included the following:

- Report deviations from or non-compliance with permitted activities to the NYSDEC;
- Evaluate and inspect fill sources;
- Witness source site investigation, sampling, and compare lab test results to Permit requirements;
- Visual and Photo-Ionization Detector (PID) inspection of imported fill materials to the Site;
- Monitor offloading of all trucks and reject unacceptable materials from being dumped on the Site and used for construction;
- Monitor environmental sampling on the Site (i.e. landfill gas, piezometer, groundwater, settlement, etc.);
- Monitor all aspects of fill operations on the Site, particularly the installation of minimum thickness of shaping layer and cover layer materials as well as demarcation layer installation; and
- Complete and submit to the NYSDEC Daily Observation Reports, bi-weekly Fill Management Reports, and Quarterly Reports related to Project activities.

The selection, continued retention, discharge, or replacement of the IEM was subject to the approval of the NYSDEC, at its sole discretion.

### 1.3.5 Project and Part 360 Permitting History

The following represents an overview of project and permitting history outlining key events associated with the Project. For more detailed and additional supporting information, reference the updated Permit Modification application package titled "Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East", dated May 31, 2012 and subsequently revised on August 31, 2012, June 20, 2013, and October 15, 2013 ("2013 Engineering Report") included in Appendix 20.

In May 1997, a Request for Proposals was released for the development of the Site. In May of 1998 Ferry Point Partners, LLC ("FPP") was selected as the developer and in the late May 2000, the City of New York Department of Parks and Recreation ("NYCDPR") initially entered into a license agreement with FPP to develop, construct, and operate the new recreation facility. The facility included a Jack Nicklaus signature golf course, a community park, a waterfront park, and related facilities (the "Project"). At that time, all required reviews for the Project were completed under the City Environmental Quality Review (CEQR),

State Environmental Quality Review Act (SEQRA), and New York City's Uniform Land Use Review Procedure (ULURP).

On July 17, 2000, the NYSDEC issued a Part 360 Solid Waste Management Permit (DEC No. 2-6006-00014-00011) (the "2000 Permit") jointly to NYCDPR and FPP (the "Permittee"), for a non-specific "facility" under Part 360-1.9(b) at the Site (see Appendix 1 for a copy of the permit). This permit allowed the Permittee to import and place fill necessary to construct the Project. This permit allowed for 1,000,000 cubic yards of fill material (in-place volume) to be imported and placed on the Site. The Permittee prepared an Engineering Report, dated April 11, 2000 and a Report on Fill Management Operations & Maintenance, dated May 16, 2000 as part of the permit application.

After the receipt of the original Part 360 Permit in July 2000, FPP entered into a contract with LAWS Construction Company, Inc. (the "Contractor") to construct the golf course, parks and other features of the Project, and to identify, secure and import the off-site fill material to be used to meet the design elevations of the grading plans referenced in the 2000 Permit.

Initially ARCADIS/Geraghty & Miller, Inc. was retained as the IEM. ARCADIS/Geraghty & Miller, Inc. was retained as the IEM for a period from July 2000 to December 2000 and was replaced as the IEM by Gannett Fleming Engineers and Architects, P.C. in December 2000.

FPP began importing fill to the Site in August 2000 and continued, with some interruptions, until January 2002 when fill deliveries were halted pending the modification of the 2000 Permit.

On January 10, 2001, the NYSDEC issued a letter addressing quality control protocol for potential sources of material from sites that previously experienced backfilling with soil, but not with waste materials, for the use in the shaping layer.

On May 21, 2001, the NYSDEC issued a Fill Procurement Protocol letter addressing acceptance of uncontaminated, unprocessed construction and demolition debris ("C&D") from registered C&D processing facilities.

On May 24, 2001, the NYSDEC issued a Fill Procurement Protocol letter addressing paragraph b in the May 21, 2001 letter and clarifying the definition of processed material.

From May to December 2001, based on the results of the Site perimeter methane gas monitoring, the NYSDEC required the construction of a landfill gas passive vent trench along most stretches of the Site perimeter from the water's edge near the foot of Emerson Avenue, along the entire length of the Site boundary with Balcom Avenue, and along Schley Avenue and continuing approximately 1,050 feet to the west past the intersection of Schley Avenue and Buttrick Avenue. In total, approximately 5,350 feet of passive vent trench was constructed (see Section B.3.a of Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx,

NY, Engineering Report, dated June 30, 2005 (revised) for additional information). Additional discussion related to the vent trench construction is included in Sections 4.2.4 and 4.6 of this report.

In February 2002, the Permittee requested a modification to the 2000 Permit to increase the volume of in-place fill to approximately 1,550,000 cubic yards and changes in design features. The Permittee prepared a Supplement to the Engineering Report, dated February 11, 2002 and a Response to Request for the Additional Information, dated July 2, 2002 as part of the permit modification.

On October 18, 2002, the NYSDEC issued a Part 360 Solid Waste Management Permit (DEC No. 2-6006-0014-00013) (the "2002 Permit") to allow the Permittee to place 1,522,300 cubic yards of in-place fill on the Site (see Appendix 1 for a copy of the permit modification). Prior to October 18, 2002, 446,500 cubic yards of shaping material had been imported to the Site.

After the NYSDEC issued the 2002 Permit in October 2002, FPP resumed importing fill to the Site. The importation of fill to the Site was performed in accordance with the 2000 Permit, the 2002 Permit, the 2000 Fill Report and the Fill Procurement Protocol per the NYSDEC letters dated January 10, 2002, May 21, 2001 and May 24, 2001.

On December 10, 2002, NYCDPR submitted the Response Action Plan ("RAP") as required by Special Condition 31 of the 2002 Permit. A copy of the RAP is included in Appendix 19.

On March 10, 2003, NYCDPR submitted a proposal to the NYSDEC to repair and replace methane monitoring system components. A copy of the proposal is included in Appendix 19.

In response to NYCDPR's March 10, 2003 request to repair and replace methane monitoring system components, the NYSDEC approved replacement of 34, 25-foot spaced, semi-permanent monitoring wells with eighteen, 50-foot spaced, monitoring wells along Miles and Emerson Avenues, in accordance with Special Condition #37 of the 2002 Permit, on March 17, 2003. Installation of the replacement monitoring wells was completed in May 2003.

On November 18, 2003, the NYSDEC approved the Work Plan for the Final Consent Order, Case No. R2-20030724-187, dated November 18, 2003. This provided for the placement on Site of the solid waste material excavated during the construction of the gas venting trench, the size reduction of concrete on Site, and the processing and composting of existing wood on Site. The solid waste material was moved and placed in January 2004 and the processing and composting of the wood was completed in the spring of 2004. A copy of the approval is included in Appendix 19.

On January 12, 2004, the NYSDEC transmitted a copy of the executed Order on Consent No. R2-20030724-187 to NYCDPR. A copy of the fully executed consent order is included in Appendix 19.

On November 1, 2004, the NYSDEC approved the revised truck compaction factor of 42.4% based on the October 10, 2003 30% aerial topographic survey as was required per the 2002 Permit.

On December 7, 2004, the NYSDEC approved the revised truck compaction factor of 41% based on the July 17, 2004 60% aerial topographic survey as was required per the 2002 Permit.

In May 2005, the Permittee requested a modification to the permit to increase the volume of in-place fill to approximately 2,370,000 cubic yards among other items in order to reshape the Golf Course related to a revised design by the golf course architect. The Permittee prepared Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associated dated June 30, 2005 (revised) and Volume #2, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associated dated June 30, 2005 (collectively known as the "2005 Engineering Report"). A copy of the 2005 Engineering Report is included in Appendix 20.

On August 2, 2005, NYCDPR responded to NYSDEC comments on the previously submitted June 30, 2005 Permit Modification and Engineering Report. A copy of the comment response is included in Appendix 19.

On November 18, 2005, the NYSDEC issued the modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013) to place a total of 2,543,729 cubic yards of in-place fill on the Site (see Appendix 1 for a copy of the permit modification). This action was followed by a December 27, 2005, revision (No. 2-6006-00014/00013) that amended the total in-place fill volume to 2,370,000 cubic yards (the "2005 Permit").

On April 4, 2006, NYCDPR submitted a request for a determination related to cover layer material chemical criteria to the NYSDOH. On August 2, 2006, the NYSDOH provided written determination related to fill material chemical criteria required under Permit Special Condition 15(d) of the 2005 Permit. The submission and response are included in Appendix 19.

On October 25, 2006, the NYSDEC authorized the importation of shaping layer material from otherwise allowable sites with a total carcinogenic SVOC level in exceedance of the site limit, but 10 ppm or lower provided that a weighted average equal to or less than 3 ppm would be achieved by the end of each quarter of each year. A copy of the correspondence is included in Appendix C.1 of the 2013 Engineering Report (Appendix 20).

On October 26, 2007, the NYCDPR terminated the license agreement with Ferry Point Partners, LLC and took over site development activities. Ferry Point Partners, LLC was no longer involved with the Project or a Permittee.

On February 29, 2008, FPP submitted an application to the NYSDEC to transfer the Part 360 Permit solely to NYCDPR.

On July 25, 2008, a permit renewal application package to the 2005 Permit was submitted by NYCDPR. This submittal requested a modification of the 2005 Permit to allow the use of dredge and processed dredge material (PDM) as fill and the barge delivery of such fill material to the Site.

On August 12, 2008, the NYSDEC notified NYCDPR and FPP that the Part 360 Permit had been transferred to NYCDPR.

On October 24, 2008, the NYSDEC issued a Notice of Incomplete Application and comments to the July 25, 2008 submittal.

On December 2, 2008, the NYSDEC issued a letter to advise NYCDPR that the 2005 Part 360 Permit (with the corresponding November 30, 2008, expiration date) remained in full force and effect until NYSDEC approved the permit renewal application, as per Section 401(2) of the State Administrative Procedure Act (SAPA). See Appendix A of the 2013 Engineering Report (Appendix 20) for a copy of the SAPA letter.

On December 26, 2008, a response to NYSDEC's comments of October 24, 2008 was submitted by NYCDPR with a supplemental permit application package to the 2005 Permit.

On April 8, 2009, the NYSDEC issued comments to the December 26, 2008, permit application submittal. A copy of the comment letter is included in Appendix 19.

On April 9, 2009, the NYCDPR withdrew its request for a permit modification to allow the use of Processed Dredged Material ("PDM") as fill.

On April 30, 2009, the NYSDEC directed NYCDPR to not accept or place on the Site any cover layer materials with arsenic concentrations greater than 16 ppm or lead concentrations greater than 400 ppm. A copy of the correspondence is included in Appendix C.2 of the 2013 Engineering Report (Appendix 20).

On July 9, 2009, NYCDPR submitted proposed cover layer material chemical criteria to NYSDEC for review and approval. A copy of the correspondence is included in Appendix C.3 of the 2013 Engineering Report (Appendix 20).

On July 28, 2009, the NYSDEC notified NYCDPR that cover material is divided between two classifications: Active (suitable for use in Active or Passive Recreation areas), and Passive (suitable for use in Passive Recreation areas only). NYSDEC provided a table to NYCDPR listing modified heavy metal chemical limits for the cover layer at the Site. A copy of the correspondence is included in Appendix C.2 of the 2013 Engineering Report (Appendix 20).

On September 18, 2009, NYCDPR submitted rationale for a revised shaping layer correction factor based on the latest survey and fill imports volumes at that time. A December 11, 2012 letter evaluating the September 18, 2009 submittal was also submitted to the NYSDEC. The submissions are included in Appendix 19.

On September 25, 2009, the NYSDEC revised and clarified the chromium chemical limits for the cover layer previously presented in the July 28, 2009 correspondence. A copy of the correspondence is included in Appendix C.2 of the 2013 Engineering Report (Appendix 20).

On November 25, 2009, a response to NYSDEC's comments of April 8, 2009, was submitted by NYCDPR with a second supplemental permit application package to the 2005 Permit. This submittal withdrew the request to allow the use of dredge material and PDM as fill and the barge delivery of such fill material to the Site. This submittal also proposed a design modification for a Site-wide active landfill gas control system. The 2005 Permit included passive venting systems for the Site, with active systems proposed only in enclosed structures. The November 25, 2009 permit renewal application is included in Appendix 20.

On June 25, 2010, the NYSDEC issued a Notice of Incomplete Application and comments on the November 25, 2009, permit application submittal. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On August 6, 2010, the NYSDEC issued additional comments on the November 25, 2009, permit application submittal. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On September 29, 2010, a response to NYSDEC's comments of June 25 and August 6, 2010, was submitted by NYCDPR with a third supplemental permit application package for the 2005 Permit. This submittal withdrew the proposed design modification of a Site-wide active landfill gas control system and proposed a system consistent with the 2005 Permit. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On October 7, 2010, a supplemental response to NYSDEC's comments of June 25 and August 6, 2010, was submitted by NYCDPR to accompany the September 29, 2010, permit renewal application submittal. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On October 25, 2010, Woodard & Curran replaced Gannett Fleming, assuming the duties of the IEM for the Project.

On December 17, 2010, NYCDPR submitted supplemental information to the NYSDEC related to the Landfill Gas Report originally submitted to the NYSDEC on November 16, 2010 to address requests from the NYSDEC from a December 2, 2010 meeting. The November 2010 Landfill Gas Report and the December 17, 2010 supplemental information are included in Appendix E of the 2013 Engineering Report (Appendix 20).

On January 3, 2011, the NYSDEC issued a letter directing NYCDPR to collect and provide additional landfill gas data to better elucidate the subsurface conditions at a frequency described in the 2005 Permit. The letter requested that NYCDPR expand the landfill gas monitoring to include concentrations of hydrogen

sulfide, volatile organic compounds, and carbon monoxide, well temperature, and well pressure. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On January 10, 2011, NYCDPR signed an Administrative Order on Consent (Consent Order), Case No. R2-20100521-172, related to fill material imported to the Site that violated the Permit. During 2010, fill material was brought on-site and placed in seven different stockpiles. The material was believed to be in conformance with Permit conditions. However, the material was found to be in violation of 2005 Permit Special Conditions 1, 9, and 16, during NYSDEC and IEM inspections. Under the terms of the consent order, the material was allowed to remain on-site under controlled conditions. The material was used to construct the base of the clubhouse and maintenance facility parking lots. Additional details are included in the Order on Consent, which is included in as Appendix I of the 2013 Engineering Report (Appendix 20).

On January 12, 2011, NYSDEC issued a response to NYCDPR's Request for Explanation of NYSDEC Request for Expansion of Ferry Point Park Landfill Gas Monitoring Parameters. Additional parameters included collecting data for hydrogen sulfide, volatile organic compounds and carbon monoxide, well temperature and well pressure. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On February 16, 2011, NYCDPR submitted test pit analytical data to NYSDEC for review related to demarcation layer installation requirements. A copy of the correspondence is included in Appendix C.3 of the 2013 Engineering Report (Appendix 20).

On March 9, 2011, the NYSDEC issued a response to NYCDPR's February 16, 2011 correspondence requiring demarcation layer to be installed on the Site only in areas where there was less than five feet of shaping and cover layer materials. A copy of the correspondence is included in Appendix C.3 of the 2013 Engineering Report (Appendix 20).

On May 13, 2011, NYCDPR issued a memorandum to the NYSDEC presenting the results of a site-wide water balance based on a cover layer material permeability of 14 inches per hour, which indicated that there would be a reduction in the infiltration rate over the entire Site. A copy of the correspondence, which includes additional details on the topic, is included in Appendix D.1 of the 2013 Engineering Report (Appendix 20).

On May 26, 2011, NYCDPR requested confirmation from the NYSDEC that the use of USEPA Analytical Method 625/8270 was an acceptable alternative method for the analysis of dioxin and furan constituents. The NYSDEC provided verbal confirmation that this was an acceptable method to be used. A copy of the correspondence is included in Appendix C.5 of the 2013 Engineering Report (Appendix 20).

NYCDPR issued a June 2011 report to the NYSDEC regarding sampling and analysis of landfill gas vents at the Community Park. A copy of the report, which includes further details of this sampling and analysis, is included in Appendix E.3 of the 2013 Engineering Report (Appendix 20). On July 1, 2011, the NYSDEC concluded that there were no ambient air impacts due to the landfill gas emissions from the twelve vents

located in the Community Park and that no further monitoring was necessary beyond routine maintenance.

On August 10, 2011, NYCDPR issued a subsequent water balance memorandum indicating that a higher cover layer material permeability of 30 inches per hour would also result in a lower volume of water infiltrating through the surface of the Site after completion of construction. Section 4.2.1 includes the description relating to the site permeability modifications. Additional details related to the water balance are included in Appendix D.2 of the 2013 Engineering Report (Appendix 20).

On September 19, 2011, NYCDPR prepared technical memorandum Field Sampling Procedures for Ferry Point Site related to groundwater characterization. The memorandum is included in Appendix G of the 2013 Engineering Report (Appendix 20).

On October 18, 2011, NYCDPR submitted a technical drainage review memorandum to the NYSDEC for review regarding the final cover material and site wide water balance. A copy of the correspondence is included in Appendix D.5 of the 2013 Engineering Report (Appendix 20).

On October 21, 2011, the NYSDEC provided a response to NYCDPR's October 18, 2001 technical drainage review memorandum including a conditional approval allowing cover layer material to have a percolation rate of up to 30 inches per hour. The condition was that NYCDPR was required to submit for approval an amendment to the Stormwater Pollution Prevention Plan (SWPPP) including plans and computations that reflect the partial lining of stormwater basins. A copy of the correspondence is included in Appendix D.5 of the 2013 Engineering Report (Appendix 20).

On November 16, 2011, NYCDPR provided NYSDEC with a technical memorandum addressing the conditions included in the October 21, 2011 conditional approval for the cover layer material percolation rate. A copy of the correspondence is included in Appendix D.6 of the 2013 Engineering Report (Appendix 20).

On December 2, 2011, the NYSDEC provided an approval for NYCDPR's SWPPP amendment via email. A copy of the correspondence is included in Appendix D.6 of the 2013 Engineering Report (Appendix 20).

On January 26, 2012, the NYSDEC clarified that the average percolation rate from all samples collected within one cover layer material stockpile could be used as the representative percolation rate of that stockpile due to the mixing that occurred during loading, unloading, transport, stockpiling, and spreading of the material. A copy of the correspondence is included in Appendix 19.

On March 28, 2012, NYCDPR submitted to the NYSDEC initial groundwater monitoring data from the installation of 11 new monitoring wells installed and sampled in February 2012. NYCDPR requested additional direction from the NYSDEC concerning procedures for future sampling events.

On May 1, 2012, the NYSDEC acknowledged that settlement plate monitoring at several points has been discontinued due to interference with ongoing construction, and informed NYCDPR that the short-term monitoring locations did not need to be replaced as long as construction at the Site progressed and the long-term plates were installed as construction was completed. A copy of the correspondence is included in Appendix H of the 2013 Engineering Report (Appendix 20).

On May 8, 2012, a conference call was held between NYCDPR and the NYSDEC to discuss the initial groundwater monitoring data submitted on March 28, 2012 and to discuss guidance for future groundwater monitoring. The NYSDEC provided NYCDPR with requirements for future groundwater monitoring in their May 8, 2012 Ferry Point Park Groundwater Characterization/Monitoring Objective. Meeting minutes are included in Appendix G of the 2013 Engineering Report (Appendix 20).

On May 24, 2012, the NYSDEC verified via email that there were no outstanding enforcement actions for the Site. A copy of the correspondence is included in Appendix B of the 2013 Engineering Report (Appendix 20).

In May 2012, the Permittee requested a modification to the Permit presenting studies, modeling, investigations, and design work that were performed to resolve outstanding comments that were received by the Permittee after the April 8, 2009 Notice of Incomplete Application and the November 25, 2009 permit application to the NYSDEC. NYCDPR submitted the initial version of the Supplemental Engineering Report dated May 31, 2012.

On June 8, 2012, the NYSDEC confirmed that the sand material used for the tees, greens, and sand traps (bunkers) should not be counted towards the Permit stated allowable cover soil maximum of 250,000 cubic yards. Based on information provided to the IEM by NYCDPR, NYCDPR's consultants have estimated the required sand material volumes as follows: Tees and Greens (24,705 cubic yards), Driving Range Tee (3,025 cubic yards), and bunkers (6,076 cubic yards). Since these values were estimated and calculated by NYCDPR's consultants, it shall be noted that actual installed volumes may fluctuate from the volumes identified above. Information is from an email from Joe Voss to Faisal Choudhury on June 13, 2012. A copy of the correspondence is included in Appendix 19.

On January 23, 2013, NYCDPR submitted the rationale for increasing the amount of cover layer material that could be imported to the Site under the Permit. A copy of the correspondence is included in Appendix 19.

On February 1, 2013, The NYSDEC issued an amendment to the 2005 Permit (last modified October 17, 2012) authorizing the Permittee to import a total of 2,514,000 cubic yards of in-place fill totaling approximately 2,120,000 cubic yards of shaping layer material and approximately 394,000 cubic yards of cover layer material. A copy of the amendment is included in Appendix 1.

On April 26, 2013, the NYSDEC notified NYCDPR that the compaction factor for cover layer material was revised to 18%, approving NYCDPR's revised April 8, 2013 submittal. A copy of the approval letter and submittal are included in Appendix 19.

On October 15, 2013, NYCDPR submitted the final version of the "2013 Engineering Report", entitled Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, NY dated May 31, 2012 (Revised August 31, 2012, October 15, 2013) to address concerns raised by the NYSDEC since the Notice of Incomplete Application of November 25, 2009 to modify the 2005 Permit. The 2013 Engineering Report is attached in Appendix 20.

On April, 17, 2014, the NYSDEC confirmed via email that a minor exceedance of the cover layer in-place volume as included in the Permit is acceptable considering no additional shaping material will need to be imported and that the exceedance could be addressed via as-built drawings and in the final construction certification report. A copy of the email is included in Appendix 19.

On May 21, 2014, the NYSDEC issued the modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013 (SW)) and Tidal Wetlands Permit (No. 2-6006-00014/00016 (TW)) (the "2014 Permit"). See Appendix 1 for a copy of the permit.

On October 29, 2014, the NYSDEC issued an amendment to Special Condition 24 of the 2014 Permit stating that during fill delivery and earthwork, NYCDPR should submit quarterly reports to the NYSDEC summarizing all Site activities set forth in the Permit. Each report should provide details of all rejected fill material, quantify the amount of material imported to the Site using truck volumes, and the results of all on-site monitoring for that period. All fill tracking, earthwork activities, landfill gas monitoring, and associated reporting requirements typically contained within each Fill Management Report would be addressed by Quarterly Reports moving forward and Fill Management Reports would no longer be issued. FMRs were no longer being issued due to a significant reduction in fill importation and earthwork activities at the Site. A copy of the letter is included in Appendix 1.

For a detailed history of site operations and activities prior to June 30, 2005, see Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associated dated June 30, 2005 (revised) which is attached in Appendix 20.

### 1.3.6 Construction Drawings

The project included a substantial number of different construction drawings associated with the Project. Construction drawings are included in Appendix 4.

# 2 Part 360 Permit

## 2.1 Part 360 Permits and Modifications

The following is a list of the permits and modifications issued for this Project:

On July 17, 2000, the NYSDEC issued a Part 360 Solid Waste Management Permit (DEC No. 2-6006-00014-00011) (the "2000 Permit").

On October 18, 2002, the NYSDEC issued a Part 360 Solid Waste Management Permit (DEC No. 2-6006-0014-00013) (the "2002 Permit").

On November 18, 2005, the NYSDEC issued a modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013), followed by a December 27, 2005 revision (the "2005 Permit").

On May 21, 2014, the NYSDEC issued a modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013 (SW)) and a Tidal Wetlands Permit (No. 2-6006-00014/00016 (TW)) (the "2014 Permit").

Note that a separate SPDES General Permit for Stormwater Discharges from Construction Activity (GP-08-001) was obtained for the Project and the Acknowledgement of Notice of Intent is dated May 12, 2009 (Permit Identification No. NYR10R112).

Copies of the aforementioned permits and modifications are included in Appendix 1.

## 2.2 Reference Documents

Refer to Appendix 2 for a list of Permit reference documents. These documents support the original Permit and/or provide basis for subsequent permits renewals and modifications.

## 2.3 Non-Conformance Issues

In accordance with Special Condition 24, the IEM reported on Permit related non-conformance issues during the duration of construction at the Site. A complete list of all non-conformance issues observed and corrective actions taken during the Project is included in Appendix 3.

## 2.4 Operational Upsets, Emergencies, and Unusual Circumstances

### 2.4.1 Security breaches, Unauthorized Entries, Injuries, Fires, Theft, Vandalism, etc.

The following information was gathered from TRC, NYCDPR's design and construction consultant:

In July/August of 2013, a CBS film crew received authorization from the Agency to scout and film areas within the Ferry Point Golf Course proper. There were no known issues with those activities.

TRC did not have specific detailed reports for thefts or vandalism that occurred on the Site. To the best of their knowledge, there were two incidents of vandalism to contractor equipment (broken glass

windows and spray painted vehicles), and a few incidents when the perimeter fence was damaged (bent/scratched vertical bars). Landfill gas vent caps were damaged, but there was no evidence of vandalism; the vent caps may have been damaged by lawn mowers or other equipment running over them.

There were no known major fires or injuries during the construction time period.

The only unusual event was the discovery of the body of a construction worker who had fallen from the Throggs Neck Bridge and washed up at the Waterfront Park. For several days there was police presence and other related activity. However, that event was not related to the work at the golf course nor did it delay or adversely affect the progress of the project.

As reported by the IEM:

On the evening of August 18, 2011, the Site was broken into by unknown persons. LAWS equipment storage containers were forced open and various tools and copper piping was stolen. The trespassers appeared to have entered the Site at the back entrance to the golf course along Balcom Avenue. The fence was observed cut open in that area.

Upon arrival at the Site on August 26, 2011, IEM staff observed that the IEM trailer had been broken into by unidentified persons. On-site security and LAWS representatives were notified as well as the local police (by LAWS). Two digital cameras were stolen from the IEM trailer.

On June 25, 2012, the IEM witnessed a trailer of imported fill material slide off its frame during dumping activities. No injuries were reported.

On October 31 and November 1, 2012, IEM staff performed on-site inspections to assess damage caused by Hurricane Sandy. IEM staff observed many areas around the Site where restoration work needs to be performed on the vent trench, silt fence repair, site security fence repair, and garbage/debris removal. The southern site boundary was observed to have significant damage and washout. The entire south end of the Site was open without protection and it was filled with debris from the storm.

On October 25, 2012, the IEM witnessed both a truck and a trailer roll over onto their side during dumping activities. No injuries were reported.

Various Permit non-conformance issues were observed related to unsatisfactory security at the Site beginning with non-conformance issue 12 on October 1, 2003 where security fence and other controls were not properly maintained on-site allowing for unauthorized entry to the Site. Site security, control, and unauthorized access were the subject of non-conformance issues 15, 72, 90, 93, 97, 98, 122, and 127. Ultimately, all of these non-conformance issues were resolved and closed out during construction on an ongoing/as-needed basis.

There was a presence of coyotes at the Site as tracked and studied as part of the Gotham Coyote Project. The work was conducted under NYCDPR permits and information was released to NYCDPR for informational purposes. Coyotes were initially monitored by game camera in Ferry Point Park beginning in January 2012 through 2013. Coyote monitoring did not occur at the Site in 2014.

## 2.5 Reporting

The IEM was responsible for reporting to the NYSDEC related to Permit activities and compliance for the Project in accordance with Special Condition 24 of the 2014 Permit. The IEM prepared and submitted to the NYSDEC Daily Observation Reports ("DOR"), bi-weekly Fill Management Reports ("FMR"), and Quarterly Reports ("QR"). These reports are attached as appendices to this report and available at the NYCDPR Bronx Borough Headquarters (Ranaqua) document repository and are part of the public record. The address of the repository is 1 Bronx River Parkway, Bronx, NY 10462, telephone: (718) 430-1800.

### 2.5.1 Daily Observation Reports (DOR)

The IEM reported to the NYSDEC on a daily basis on the following information: weather conditions, municipal solid waste material removal from the site, fill materials imported to the site, detailed notes of construction activities, and non-conformance issues related to the Permit conditions.

DORs are attached in Appendix 5 beginning on October 25, 2010. Daily site activity observations for the time period prior to October 25, 2010 are summarized in the IEM's Fill Management Reports.

### 2.5.2 Fill Management Reports (FMR)

The IEM prepared Fill Management Reports (FMRs) that were submitted to the NYSDEC on a bi-weekly basis. Generally, the FMRs contained the following information and data: a project summary including an overview of site activities, Permit non-conformance issues, fill source site review activities and associated data, site testing activities, filling and shaping activities, and environmental monitoring. FMRs contained figures identifying imported material dump locations and any active filling, grading, and shaping areas associated with the landfill cap.

FMRs were discontinued on October 31, 2014 with FMR 346. FMRs were discontinued because the importation of shaping layer and cover layer materials and earthwork activities were significantly reduced in scope and scale on the Site. In a Permit amendment issued to NYCDPR on October 29, 2014, the NYSDEC stated that all fill tracking, earthwork activities, landfill gas monitoring, and associated reporting requirements would be addressed by Quarterly Reports thereafter.

FMRs 1 through 346 are attached in Appendix 6.

### 2.5.3 Quarterly Reports

The IEM prepared Quarterly Reports (QRs) that were submitted to the NYSDEC on a quarterly basis. Generally, the QRs contained summarized and aggregated information included in FMRs over each quarterly reporting period.

QRs beginning with the 4th Quarter of 2002 through the 1st Quarter of 2015 (with the exception of the 1st Quarter of 2011) are attached in Appendix 7. Observations for site activities for the 1st Quarter of 2011 are included in FMRs 247 through 253.

## 2.6 Authorized Fill Volumes

On July 17, 2000, the NYSDEC issued 2000 Permit jointly to NYCDPR and FPP to allow for a total of 1,000,000 cubic yards of fill to be imported and placed on the Site including approximately 750,000 cubic yards of in-place shaping layer material and 250,000 cubic yards of in-place cover layer material.

On October 18, 2002, the NYSDEC issued the 2002 Permit to allow a total of 1,522,300 cubic yards of fill (in-place) to be imported and placed on the Site. The fill material was to consist of approximately 1,272,300 cubic yards of select exempt construction and demolition debris for the shaping layer, and approximately 250,000 cubic yards of uncontaminated soil for the cover layer. The 2002 Permit also stated that, "approximately 415,000 cubic yards of fill was deposited on the Site prior to the effective date of the Permit and the projection for in-place fill material to complete the project was 1,107,300 cubic yards, consisting of approximately 857,300 cubic yards (in-place volume) of select exempt construction debris for the shaping layer and approximately 250,000 cubic yards (in-place volume) of uncontaminated soil for the cover layer.

In 2003, the golf course architect determined that the tournament quality and signature status of the course could be significantly improved by making the facility a "links" style golf course. The changes to the Project as compared to the work authorized under the 2002 Permit included:

- Increasing the support mounding between golf holes and grading the course in a links style.
- Re-routing of holes 11, 12 and 13 to reverse their direction in order to improve player circulation and playing time.
- Moving Hole 9 to the west of the golf driving range in order to improve the safety zone of the driving range and remove the need for high netting.
- Realigning the centerlines of holes: 10, 16, 17, and 18 to improve the strategic layout and visual experience of the golf course.
- Lowering the elevations of tees 4 and 6. This eliminated the retaining wall proposed at the northeast corner of the Site.
- Adding a golf training area at the north end of the driving range. This required shifting the centerline of Hole 8 slightly north and increasing the support mounding around this area to buffer the adjacent holes.
- Increasing the mounding adjacent to the TBTA toll plaza in order to block noise and adjacent traffic from view.
- Shifting the Site roadway along the east side of the bridge to accommodate a TBTA easement that extends 25 feet east of the bridge. This required changes to the parking lot at the clubhouse and the location of detention/water quality basin and Waterfront Park.
- Eliminating the Boathouse Grill restaurant in the Waterfront Park. A restaurant would be located within the banquet facility. Parking spaces for the banquet facility were increased to

accommodate the restaurant. A restaurant may be constructed within the Waterfront Park in a future phase, based on economic demands.

- Modifying the parking lot for the Waterfront Park. The 120 parking spaces for the Waterfront Park will be located near the Whitestone Bridge approach structure.

These proposed changes to the Project increased the total needed in-place fill volume for the project to 2,370,000 cubic yards to shape the golf course in a links style.

The quantification of the imported fill material was continuously tracked by both truck volume and periodic topographic surveys of in-place volumes. Initially it was assumed that truck volume would be reduced by 25% when compacted into place, but a new correction factor was to be calculated. On November 1, 2004, the NYSDEC approved a revised truck correction factor of 42.4%, which was based upon an October 10, 2003 30% aerial topographic survey, and on December 7, 2004, the NYSDEC approved a revised truck correction factor of 41%, which was based upon a July 17, 2004 60% aerial topographic survey. These recalculations were performed by dividing the actual in-place volume by the total cubic yards of truck volume delivered to the Site as of the date of the survey, as required by the 2002 Permit.

TRC prepared the 2005 Engineering Report, which comprised of Volume #1, Volume #2, and a 26 sheet drawing set entitled, "Ferry Point Park Public Recreational Facility Bulk Earthwork, Bronx, New York, Supplement No. 2". The 2005 Engineering Report is included in Appendix 20 and represented the following scope of work:

- An 18 hole golf course with practice area;
- Maintenance Area in the northwest corner of the Site;
- Clubhouse parking lot in the southwest portion of the Site;
- Banquet Facility in the southwest portion of the Site (along Emerson Avenue);
- Community Park;
- Waterfront Park with parking lot; and
- Drawing G-3 and G-4 of "Ferry Point Park Public Recreational Facility Bulk Earthwork, Bronx, New York, Supplement No. 2", showed the deviations in grading between the plans approved on October 18, 2002 with the proposed plan.

On November 18, 2005, the NYSDEC issued the 2005 Permit authorizing the importation of a total of 2,370,000 cubic yards of in-place fill material to the Site. The fill material was to consist of approximately 2,120,000 cubic yards of select exempt construction and demolition debris for the shaping layer, and approximately 250,000 cubic yards of uncontaminated soil for the cover layer. The correction factor was 41% at that time and could be further modified.

On January 22, 2009, in accordance with Special Condition 10 of the 2005 Permit, TRC submitted a revised truck reduction factor of 40.3%. On September 18, 2009 TRC submitted a truck reduction factor of 43.3% based on a May 10 2009 aerial topographic survey. On February 11, 2010, the NYSDEC approved a truck reduction factor of 41.7% as submitted by the IEM on December 11, 2009 (included in Appendix 19).

The Golf Course layout that NYCDPR moved forward with was modified from what was shown in the 2005 Engineering Report as revised by the 2013 Engineering Report. One major change was the complete removal of the Banquet Facility in the southeast part of the Site. There were also changes in the placement, alignment, and grading of some holes on the Golf Course.

On February 1, 2013, the NYSDEC granted a permit modification to increase the limit of cover material from 250,000 to 394,000 cubic yards with the stipulation that NYCDPR revisit the correction factor for cover layer material. It was determined that the correction factor for the granular cover material (sand) was 18%. This revised the truck volume to 480,488 cubic yards. The correction factor for cover layer material was approved per an April 26, 2013 letter from NYSDEC to NYCDPR as included in Appendix 19.

On May 21, 2014, the NYSDEC issued the 2014 Permit to NYCDPR to allow the import of a total of 2,514,000 cubic yards of in-place fill material including 2,120,000 cubic yards of in-place shaping layer material and 394,000 cubic yards of in-place cover layer material.

# 3 Fill Importation QA/QC Program

Fill material importation commenced on August 2, 2000 and the last day for fill import was May 5, 2015. The fill importation QA/QC program implemented for the Project based on the Permit and associated reference documents was adhered to. The fill importation consisted of two main components including source site reviews and on-site inspections. A source site review was conducted by the IEM prior to any fill material being imported to the Site and additional visual and photo-ionization detector (PID) inspections were completed by the IEM upon the material entering the Site at the IEM inspection platform and again once the material was dumped at the work or stockpile location on the Site.

## 3.1 Source Site Reviews

Prior to any shaping layer or cover layer material being imported to the Site, each potential source was thoroughly evaluated by the IEM. An environmental review was performed for all proposed source sites in accordance with Special Condition 24 of the 2014 Permit. The source site review process criteria was specified in the Report on Fill Management, Operations and Maintenance, prepared by TRC on May 16, 2000, and revised June 30, 2005 (Volume #2 of the 2005 Engineering Report). The source site review process was modified over time as compared to the original process outlined in the various engineering reports and permit modification requests. The process generally consisted of the following main components:

1. NYCDPR would notify the IEM of a new potential source site. NYCDPR would provide the IEM with the site name and location as well as any available historical site information and soil environmental analytical results that existed for the potential source site.

2. Once NYCDPR confirmed that they wanted to move forward with pursuing the potential source site, NYCDPR authorized the IEM to retrieve any available site information from Environmental Data Resources, Inc. (EDR) which included environmental and historical land use records for the source site property under evaluation including Sanborn maps, city directories, topographic maps, and aerial photographs. NYCDPR then completed an initial review of the existing site information,

generated a sampling plan, and provided the results of the initial review and sampling plan to the IEM. NYCDPR then authorized the IEM to conduct a desktop review of the existing site information (i.e. EDR), any available soil environmental analytical results, and NYCDPR's sampling plan. The IEM provided NYCDPR with comments related to their review and their sampling plan in consultation with the NYSDEC. Once a final sampling plan was agreed upon, the source site investigation was initiated and executed per the NYCDPR sampling plan with IEM oversight. For source sites with in situ material, test pits were typically completed with additional soil samples inspected, collected, and analyzed in accordance with the Permit requirements. Once all the sampling was completed, the IEM reviewed sample results and the IEM generated a memorandum summarizing the review process and provided recommendations and requirements necessary for NYCDPR to address in order to continue pursuing the potential source site. The recommendations typically included conditions associated with overseeing the excavation, loading, and import of the source site material to the Site in accordance with the Permit. The IEM submitted the memo of recommendations to the NYSDEC for review and comment prior to issuing the final memorandum to NYCDPR. The NYSDEC would provide final comments and approval of the source site with any additional required conditions.

3. If NYCDPR determined that the potential source site was worth pursuing considering site-specific conditions, schedules, etc., they coordinated with the source site operator and IEM on importation schedule and requirements. The IEM provided oversight to confirm that the loading, hauling, and overall import of the approved material was completed in accordance with the memorandum of recommendations, NYSDEC conditions, and the Permit.

4. The IEM provided oversight during export from the approved source sites on an as needed basis and provided oversight at each source site during additional sampling activities if the source site was exporting more than the minimum sampling frequency outlined in the Permit (i.e. 10,000 cubic yards for shaping layer material and 2,000 cubic yards for cover layer material).

If at any time during the review process there were reasons for concern identified by the IEM resulting in the potential source site being classified as a "complex" source site, the NYSDEC became the primary reviewer and made final recommendations related to additional site investigation requirements or approval/rejection of the potential source site with support from the IEM. A complex source site was defined by the presence of an abundance of or particular Recognized Environmental Concerns ("RECs") and the NYSDEC made any decisions related to approval and/or associated conditions for further evaluation or import of the fill material.

A flow chart detailing the source site review process is included as Appendix 21.

Details of source site review and site testing activities are included in the report text and tables of each bi-weekly Fill Management Report issued by the IEM. Source site review supporting information and testing data is included in Appendix 8.

The following is a listing of source site reviews completed by the IEM since October 25, 2010. Since October 25, 2010, Woodard & Curran's first day as the IEM, 42 potential source sites were formally identified as potential fill source options by NYCDPR. Of the 42 potential source sites identified since October 25, 2010, 39 were advanced to at least a preliminary review stage. Potential source sites did not advance to a full source site review for various reasons such as changes in schedule, insufficient material, financial infeasibility, red flags identified with past uses of the source site, etc. Details of each source site review and site testing activities completed by the IEM, prior to any importation to the Site, are included in Sections 3.1.1 and 3.1.2 below.

A total of 15 of the potential source sites evaluated after October 25, 2010 and through project completion resulted in material being imported to the Site during that same time period. It is noted that all of the source site reviews included in Sections 3.1.1 and 3.1.2, are associated with the Golf Course and all cover layer material exposed at the surface within the golf course was imported from the cover layer material source sites included in Section 3.1.2 below. Refer to FMRs 1 through 241 for details related to source site reviews and site testing prior to October 25, 2010, which are included in Appendix 6.

For a list of source sites that imported material to the Site between November 18, 2005 and October 25, 2010, see the table included in Appendix 12. Refer to FMRs in Appendix 6 for source sites and estimated fill material imported to the Site prior to November 18, 2005.

The following were potential source sites that were identified by NYCDPR since October 25, 2010 where a review was not initiated:

1. 10 Byron Place (Larchmont, NY)
2. College Point
3. PS-331 (Tremont Avenue, Bronx, NY)

The following were potential shaping layer source sites that were identified by NYCDPR since October 25, 2010 with some level of source site review being completed. Source sites that resulted in a complete review and the importation of shaping layer material to the Site after October 25, 2010 are identified with bold text.

1. **PS-310 (942 62nd Street, Brooklyn, NY)**
2. PSAC
3. Barclays Arena (620 Atlantic Avenue, Brooklyn, NY)
4. JFK Jet Blue/Delta Runway (Jamaica, NY)
5. Columbia University
6. Long Island Jewish Center (270-05 76th Avenue, New Hyde Park, NY)
7. Highbridge Terrace (220 West 167th Street/Sedgewick Avenue, Bronx, NY)
8. Astoria (27-07 23rd Avenue, Queens, NY)
9. **Eastside Access (Queens Street and Jackson Avenue, Queens, NY)**

10. **Kew Gardens (Van Wyck Expressway between Grand Central Avenue and 86th Avenue, Queens, NY)**
11. PS-285 (1065 Martin Luther King Boulevard, Bronx, NY)
12. Flushing Hotel (133-63 Roosevelt Avenue/39-20 Prince Street, Queens, NY)
13. **2nd Avenue (2nd Avenue and 94th Street, New York, NY)**
14. 2nd Avenue (2nd Avenue and 72nd Street, New York, NY)
15. Alexander Hamilton Bridge (Bronx, NY)
16. **Throgg's Neck/Target/USPS (815 Hutchinson River Parkway, Bronx, NY)**
17. **PS-287 (110-10 Northern Boulevard, Queens, NY)**
18. City Point Brooklyn (1 Dekalb Avenue, Brooklyn, NY)
19. 400 Park Avenue South (New York, NY)
20. **Union Street (43-31 Union Street, Flushing, NY)**
21. **Mount Vernon Recycling Corp. (113 Edison Avenue, Mount Vernon, NY)**
22. 228th Street (Rosedale, NY)
23. Evergreen Recycling/Tully Environmental (Willets Point Boulevard, Corona, NY)
24. Waterpointe-Whitestone
25. Don Carlo Environmental/Brooklyn (1247 38th Street, Brooklyn, NY)
26. Castle Hill Recycling (1000 Zerega Avenue, Bronx, NY)
27. Springfield Gardens
28. Calvert Vaux (Brooklyn, NY)
29. 160 Myrtle Avenue (Brooklyn, NY)
30. 215 E. 68th Street (New York, NY)
31. **DEP Valhalla (10 Walker Road, Valhalla, NY)**
32. **Tilcon (Bronx) (980 East 149th Street, Bronx, NY)**
33. **NY Recycling (475 Exterior Street, Bronx, NY)**
34. Little Bay (Queens, NY)

The following were potential cover layer source sites that were identified by NYCDPR after October 25, 2010 with some level of source site review being completed. Source sites that resulted in complete reviews and the importation of cover layer material to the Site after October 25, 2010 are identified with bold text.

1. **Bloomingburg (C.M. & Sons Trucking Site, 680 Bloomingburg Road, Bloomingburg, NY)**
2. **Ranco Sand (115 South Street, Manorville, NY)**
3. **East Coast Mines (Lewis Road near Route 104, East Quogue, NY)**
4. Amboy Aggregates (415 Main Street, South Amboy, NJ)
5. **Long Island Compost/Great Gardens (445 Horseblock Road, Yaphank, NY)**

### 3.1.1 Shaping Layer Material

Materials accepted for use as shaping layer on the Site were sampled prior to acceptance and after the import of each additional 10,000 cubic yards as required by Special Condition 14 of the 2014 Permit. For recycling facilities, sampling was conducted after each additional 5,000 cubic yards. As per the November

18, 2005, Permit Modification, each soil sample was analyzed for TCLP VOCs and metals as well as total VOCs, SVOCs, priority pollutant metals, pesticides, PCBs, sulfur, and asbestos.

Fill material imported to the Site and used for the shaping layer was analyzed for the following parameters, per Special Condition 14 of the 2014 Permit. A description of which can be found below as included in Section 4.2.1.1 of the 2013 Engineering Report.

Based on source site reviews and site testing activities, the shaping layer material imported to the Site met the following chemical limits:

Total carcinogenic SVOC levels less than 10 ppm from individual fill material sources, provided that a weighted average of equal or less than 3 ppm for the entire Project. The following are the list of carcinogenic SVOCs that are subject to this 10 ppm limit: Benzo(a)pyrene, Dibenzo(a,h) anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, and Chrysene.

Total SVOCs less than 500 ppm.

Metals:

- Arsenic less than 28 ppm;
- Barium less than 2,000 ppm;
- Cadmium less than 20 ppm;
- Chromium less than 1,000 ppm;
- Copper less than 1,000 ppm;
- Lead less than 400 ppm;
- Mercury less than 0.57 ppm;
- Selenium less than 11 ppm;
- Silver less than 100 ppm

Asbestos for all layers 0.5% or less
Total sulfur for all layers 0.5% or less
Total PCBs less than 10 ppm
Total Pesticides less than 10 ppm
VOCs (all individual analytes less than TAGM 4046)

In a letter dated October 25, 2006 (included in Appendix C.1 of the 2013 Engineering Report), the NYSDEC provided a clarification adding that a carcinogenic SVOC limit of 10 ppm or lower is allowable from individual fill material sources, provided that a weighted average of equal or less than 3 ppm is achieved by the end of the Permit.

NYCDPR followed the NYSDEC's directives since receipt of each one associated with the importation of shaping layer material to the Site.

Details of the source site reviews and site testing for each potential shaping layer material source site are as follows:

#### 3.1.1.1 PS-310 (942 62nd Street, Brooklyn, NY)

Source site testing analytical results for the PS-310 site were provided to the IEM by NYCDPR in a submittal dated October 6, 2010, and reviewed by the IEM for potential shaping layer material, based on the site visit performed by Gannett Fleming (the previous IEM) on September 21, 2010, and as recommended in their memo dated September 28, 2010. Samples were collected and tested by Analytical Chemists and issued via lab reports dated October 1, 2010. Analytical results were collected from five test pits from both the fill and natural formation soil layers. An exceedance of lead relative to the Site Permit shaping layer material chemical limits was noted in the fill layer within test pit #3. This information was factored into the final memo of recommendations issued by the IEM dated October 26, 2010 regarding the approved locations and depths of shaping layer material from the source site.

The IEM was on-site on November 10, 2010 to visually inspect and confirm that all fill and petroleum impacted fill from Areas of Concern 1 and 2 were removed. The IEM was also on-site on November 12, 2010 to observe the sampling of three additional sample locations of natural formation soil. The IEM submitted a detailed email to the NYSDEC and NYCDPR summarizing the November 12, 2010 site visit. Shaping material analytical results were reviewed for the PS-310 source site for three samples collected on November 12, 2010. All parameters met Permit criteria for import to the Site.

Approximately 5,308.48 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.2 PSAC

Initial site and fill material information was provided to the IEM between October 25 and November 5, 2010 by Gannett Fleming (the previous IEM). No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.3 Barclays Arena (620 Atlantic Avenue, Brooklyn, NY)

Initial site and material information was provided to the IEM by Gannett Fleming (the previous IEM) between October 18 and November 5, 2010. An initial site visit was completed by the IEM to initially inspect site conditions and materials at the source site. The IEM issued a memo of recommendations for the source site on November 16, 2010 based on materials available at that time. Materials were not reviewed further or imported to the Site at that time.

New material became available at this source site and additional data was provided for IEM review between December 18 and December 31, 2010. The review of this additional data and associated information was initiated. The sampling plan from mid-November 2010 was resubmitted to NYCDPR for the new materials being evaluated at Barclays Arena between January 1 and January 14, 2011 as the

original plan still applied to the additional/revised materials being made available. NYCDPR subsequently notified the IEM that the site source manager did not consider the Site as a viable option at that time.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.4 JFK Jet Blue/Delta Runway (Jamaica, NY)

On December 3, 2010, NYCDPR forwarded the IEM initial lab data for this potential source site associated with a Jet Blue/Delta runway at JFK Airport. On December 6, 2010, the IEM visited the potential source site to inspect the material totaling an estimated 7,000 cubic yards. The IEM witnessed evidence of asphalt and slag in the fill material and notified NYCDPR and the NYSDEC that the material was not a viable option for import to the Site. (See section 3.2.3)

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.5 Columbia University

Initial site and material information was provided to the IEM by Gannett Fleming (the previous IEM) between October 25 and November 5, 2010.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.6 Long Island Jewish Center (270-05 76th Avenue, New Hyde Park, NY)

The IEM conducted an initial site visit on November 5, 2010. An email containing the summary of site visit activities and summary of recommendations was provided. The IEM issued a formal memo of recommendations on November 11, 2010.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.7 Highbridge Terrace (220 West 167th Street/Sedgewick Avenue, Bronx, NY)

On January 10, 2011, a formal fill source site review was initiated for the Highbridge Terrace source site. Sanborn Maps, historical topography maps, historical aerial photos, and the EDR and NYSDEC Spill Databases were reviewed. Approximately 5,900 cubic yards of potential fill material was reportedly available. Initial analytical data was provided however, the IEM was informed by NYCDPR that this potential source site was no longer a viable option at the time and further review did not occur.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.8 Astoria (27-07 23rd Avenue, Queens, NY)

A formal fill source site review was conducted for the Astoria source site February 3, 2011 and consisted of the review of historical information and existing source site sampling data and EDR information. The existing sample data was reviewed and some sample results did not meet the Site Permit limits for shaping material. Preliminarily, the site contractor estimated approximately 2,000 cubic yards of potentially approvable material. The initial review was completed and NYCDPR reported that this source site was no longer a viable option and no further action was expected.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.9 Eastside Access (Queens Street and Jackson Avenue, Queens, NY)

A coordination call was held with the IEM, NYCDPR, and the source site contractor on February 8, 2011. The IEM witnessed initial source site sampling as requested by NYCDPR at the Eastside Access source site on February 9, 2011. A total of seven grab sample collections were observed and one discrete VOC sample collection was observed. The existing stockpile was estimated to measure approximately 2,000-4,000 cubic yards based on an approximation of stockpile dimensions by the IEM.

The IEM received a submittal of information from NYCDPR between February 12 and February 25, 2011. The IEM reviewed the material and found the site to be noncompliant with the Site Permit as material could not be segregated and stockpiled at the source site. Per NYSDEC directive, NYCDPR would be coordinating directly with the NYSDEC for further site review. The site was reviewed by the NYSDEC and a site-specific analytical parameter list (for Metals) was approved by the NYSDEC between March 12 and March 25, 2011.

Between March 26 and April 8, 2011, the IEM was notified by the NYSDEC and NYCDPR that this source site had been approved to export fill materials to the Site by the NYSDEC. The IEM discussed the conditions of the approval with the NYSDEC and began witnessing sample collection of the East Side Access crushed stone material and review of lab reports.

The IEM conducted monitoring of shaping layer material sampling and loading at the East Side Access source site for materials exported to the Site. Sampling at this source site generally occurred the day before materials were expected to ship to the Site. Samples were being analyzed for metals, laboratory results were compared to the Site Permit requirements, and no exceedances of shaping material limits were identified.

Between April 2011 and December 2011, the IEM continued monitoring for this source site. The IEM witnessed sample collection of East Side Access crushed stone material every 10,000 cubic yards, reviewed lab reports, and periodically monitored loading of trucks with shaping layer materials for export to the Site as materials were shipped to the Site.

The IEM reviewed the lab results related to the IEM witnessed source site sampling conducted on December 12, 2011 for proposed shaping material at the East Side Access source site and found the sampled material to be unacceptable for import to the Site based on the fact that the detected value for Arsenic was 48.7 ppm. The permit allowable maximum concentration for Arsenic is 28 ppm. The sampled material was determined to be unacceptable for import to the Site as shaping layer material per the Permit.

NYCDPR requested that the material sampled on December 12, 2011 be removed from consideration for import to the Site and requested that a sample be collected for the next available material at the East Side Access source site. The IEM reviewed the lab results dated December 14, 2011 related to the IEM witnessed sampling conducted on December 13, 2011 for the proposed shaping material and found them to be acceptable based on the fact that the RCRA metals results fell below the Permit shaping layer material allowable maximum concentrations and the Permit USEPA referenced testing method was used. It was determined that approved shaping material to be imported to the Site could only originate from the stockpiles witnessed during the December 13, 2011 sampling event. Material previously sampled on December 12, 2011 was not imported to the Site.

NYCDPR and their associated representatives hypothesized that the unacceptable sample results for arsenic may be a result of a change in the rock removal process, which included drilling, blasting, and crushing to generate the shaping layer material. On December 16, 2011, the NYSDEC stated that if the mining technique did not change (i.e. drilling as opposed to blasting) the sampling frequency could remain unchanged on the basis of the number of successful past results. However, in the event of another failure, the sampling frequency would become one sample per 2,000 cubic yards. The IEM proceeded with observing one sample per 2,000 cubic yards based on a change in mining operations as per discussions with the source site operator.

On February 7, 2012, the NYSDEC stated that based on the number of successful test results for the East Side Access material since the December 12, 2011 failure due to high arsenic content, the NYSDEC approved NYCDPR's request for future testing of East Side Access material at a reduced frequency of one sample per 10,000 cubic yards.

On December 18, 2012, Analytical Chemists collected samples from stockpiled East Side Access Source Site shaping material at the Site that had elevated PID readings when scanned during the on-site inspection process upon import and after dumping. The six segregated loads of East Side Access shaping layer material passed the Site Permit criteria for shaping layer material based on sampling conducted at the Site. Sampling consisted of collected samples witnessed by the IEM on December 18, 2012. Therefore, the material remained on-site and was used as shaping layer material.

Approximately 191,293.87 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.10 Kew Gardens (Van Wyck Expressway between Grand Central Avenue and 86th Avenue, Queens, NY)

Initial site and material information was provided to Woodard & Curran by Gannett Fleming (the previous IEM) between October 25 and November 5, 2010.

A formal fill source site review was initiated for the Kew Gardens between November 6 and November 19, 2010 consisting of compiling and reviewing historical maps, photos, EDRs, and spills database and available information from the source site contractor.

A formal fill source site review was continued for the Kew Gardens source site between November 20 and December 3, 2010 and consisted of the review of Sanborn maps, topographic maps, aerial photographs, NYSDEC spills and remediation database, and the City Directory. A Phase II Environmental Site Assessment (ESA) and associated analytical data was reviewed and sample results did not exceed the Permit limits for shaping layer material. Preliminarily, the source site contractor estimated approximately 10,000 to 15,000 cubic yards of potentially approvable material was available.

On February 11, 2011, the IEM issued a memo of recommendations and sampling plan for the Kew Gardens source site.

The IEM conducted fill material source site sampling oversight at the Kew Gardens site on February 17, 2011. Six areas (1, 2, 3, 4, 5, and 9) were assessed by IEM desktop review and a sampling plan was submitted to, and approved by the NYSDEC for potential cover material evaluation. Representatives from the laboratory, NYCDPR, IEM, and the source site operator met prior to the initiation of sampling activities. The source site operator stated that the full extents of Areas 4, 5, and 9 would not be accessible for visual screening and analytical sample collection and soils in Area 9 were being actively loaded for off-site use. NYCDPR requested that source material evaluation proceed for accessible material. Composite grab and discrete VOC soil samples were collected for laboratory composite and analysis from Areas 1, 2, 5, and 9. Area 4 was not accessible for evaluation. Asphalt and other materials non-compliant with the Site Permit were observed on various soil horizons in Area 3, and as such, no samples were collected as the material was no longer considered for import to the Site.

On February 25, 2011, NYCDPR submitted draft analytical data from the Kew Gardens site for IEM review. At the request of NYCDPR, the IEM performed an initial review of the draft analytical data for cover material, understanding that no final determination can be made until the complete and final data package has been submitted, reviewed by the IEM, and approved by the NYSDEC. The initial IEM review identified cadmium in composite samples from Areas 1, 2, 5, and 9 at concentrations that exceed the Site Permit requirements for cover material. NYCDPR was informed and subsequently requested the material be evaluated for shaping layer material. No exceedances of the Site Permit requirements were identified in the draft data submittal. Additional draft data from the Kew Gardens source site was submitted on March 8, 2011. No exceedances of the Site Permit requirements were identified in that draft data submittal.

Final laboratory data was submitted to the IEM for review on March 18, 2011. Laboratory results were compared to the Site Permit requirements and no exceedances of shaping layer material limits were identified. Metals concentrations in the samples did exceed cover layer material limits. Fill material from

the Kew Gardens source site was approved by the NYSDEC for importation to the Site for use as shaping layer material on March 24, 2011.

Per NYCDPR request, the IEM submitted the Kew Gardens EDR files to NYCDPR on July 1, 2011.

Beginning on August 5, 2011, NYCDPR indicated to the IEM that they had renewed interest in considering shaping layer material from Area 17 at the Kew Gardens source site. The IEM provided a list of concerns and items to address in the sampling plan associated with the attempt to obtain approval for this shaping layer material. On August 11, 2011, NYCDPR indicated that the Kew Gardens review was on hold.

On September 19, 2011, IEM representatives were on-site at Area 17 of the Kew Gardens Source Site to perform a visual, physical, and PID inspection of the existing soil via a total of seven test pits excavated from ground surface to approximately 12 feet to 16 feet below the existing ground surface. The first four test pits were excavated to approximately terminal depth. The last three test pits were terminated prior to reaching terminal depth due to instability of the sidewalls as a result of the presence of dry sand material. The test pits were completed consecutively moving from south to north. The area consisted of approximately 10,000 cubic yards of proposed shaping layer material as identified by NYCDPR and the source site contractor. In addition, the IEM witnessed the collection of grab samples for chemical analysis by NYCDPR's laboratory and logged the test pit locations using handheld GPS equipment.

IEM staff observed an initial layer of organics, which contained a slight odor attributable to decomposition and yielded PID results of 0.1 to 0.5 ppm. This material was not approved for use at the Site and this was communicated directly to NYCDPR and the site contractor. The IEM indicated that any potential approval of shaping layer material from Area 17 would require the full removal of the organic layer prior to any loading and shipping of potentially approval soils to the Site, which would need to be confirmed by the IEM.

The soil below the initial organic layer (beginning approximately 0.5'-1.5' below grade) consisted of brown, silt with some sand and a trace of clay. Cobbles and boulders were also evident throughout the soil profile. No soil staining or odors were observed, and the material encountered below the organic layer was generally consistent in composition. The soil shifted to more of a sand and cobble composition as the test pits progressed towards the north. No asphalt or any other debris was observed in the soil, and the PID scans did not yield any detections.

IEM staff observed the collection of a grab samples at approximately two-foot intervals in each of the seven test pits completed at the Kew Gardens Source Site on September 19, 2011. It was estimated by NYCDPR and the site contractor that approximately 10,000 cubic yards were available from Area 17 of the source site. In addition to the required discrete sampling of VOCs/TCLP VOCs, the lab was instructed by NYCDPR to run three composite samples for the remaining analyses. The composite samples consisted of the grabs from each depth interval. The first two test pits completed represented composite sample #1, the second two test pits represented composite sample #2, and the last three test pits represented composite sample #3.

The IEM completed a preliminary review of shaping layer material originally sampled on September 19, 2011 proposed for import to the Site from Area 17. The IEM required a revised lab report from Analytical Chemists which contained the TCLP VOA and Metals results as well as the dioxin/furan scan using SW 8270. All other lab data was complete and did not exceed any of the Site Permit criteria. Prior to final

approval to import this material to the Site, NYCDPR was required to obtain the NYSDEC's approval to use the alternative dioxin/furan analysis.

NYCDPR received NYSDEC approval to use Method 8270 for analysis of dioxins/furans at this source site on January 3, 2012. The IEM completed a final review of shaping layer material (originally sampled on September 19, 2011) proposed for import to the Site from Area 17 on January 4, 2012. The review of available lab data identified that sampled material does not exceed any of the Site Permit criteria. On January 5, 2012, the IEM inspected the source site and visually confirmed the removal of the top 0.5 feet to 1.5 feet of soil which consisted of an initial layer of organics that were previously considered unacceptable for import to the Site. It was determined that the available shaping layer materials from Area 17 totaling approximately 500 cubic yards of the original estimated 10,000 cubic yards were approved for export to the Site.

The source site operator provided the IEM with a proposed excavation plan on December 5, 2012 for additional materials available at the source site. On December 8, 2012, the IEM notified NYCDPR that the previous desktop review (i.e. EDR, etc.) performed for this source site was still applicable for the latest area proposed for excavation. The IEM was on-site at the Kew Gardens source site on December 14, 2012 to witness test pits and environmental sampling for additional shaping layer materials being considered for import to the Site.

On January 3, 2013, the IEM provided a memo of recommendations to the NYSDEC regarding an additional estimated 7,500 cubic yards of shaping layer material being considered for import to the Site that was sampled on December 14, 2012. On January 4, 2013, the NYSDEC approved the importation of this material to the Site subject to the following conditions. The outer limits and depths of all areas of excavation should be clearly delineated in the field and confirmed by the IEM in the field prior to any excavation, loading, or trucking of approved soils. The approval only applied to the material samples and inspected on December 14, 2012, consisting of what appeared to be native material, free of debris and any traces of organics. The limits beyond test pit #8 consisted of observed unauthorized C&D material mixed into the soil (i.e. metal and glass, etc.), and were not approved for import to the Site. The IEM periodically inspected the excavation and hauling activities at the Kew Gardens Phase II site to perform visual and physical screening of the proposed shaping layer material. Inspection frequency was at the discretion of the IEM and the NYSDEC. The exportation of all material to the Site was conducted in accordance with the current Permit requirements (i.e. trucking manifests, etc.).

On June 5, 2013, the IEM issued a third memo of recommendations dated June 5, 2013 for the Kew Gardens source site. The IEM notified NYCDPR that the latest round of shaping layer material (approximately 5,000 CY) was acceptable for import to the Site due to the fact that the material met the Site Permit requirements. The approval applied to the material sampled and inspected on May 22, 2013, consisting of what appeared to be native material, free of debris and any traces of organics, and as delineated horizontally and vertically on the provided test pit plan. The top portion of unauthorized soil (i.e. RCA, geotextile, organic) was stripped and removed off-site to the depths and locations listed on the provided test pit plan, and this condition was witnessed by the IEM prior to importation to the Site. The importation of all material to the Site was conducted in accordance with the Permit requirements (i.e. trucking manifests, etc.).

Approximately 11,988.51 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.11 PS-285 (1065 Martin Luther King Boulevard, Bronx, NY)

On March 10 and 11, 2011 the IEM was provided with fill source site documentation for the PS-285 source site. The IEM initiated review of the source site materials provided per request of NYCDPR. Site visits to the PS-285 source site by the IEM were completed on March 14, 2011 to observe test pits and on March 25, 2011 to discuss the approval process and submittal requirements. NYCDPR requested the IEM purchase an EDR Report for the site on March 25, 2011.

The IEM witnessed additional test pits and sampling on March 29, 2011. At the time of sampling, certain portions of the source site were not accessible for sampling. Samples were collected from four test pits and composited into two samples. Lab results were provided on March 30, 2011, but were deemed incomplete by the IEM. A revised report was submitted to the IEM addressing the missing parameters, but it did not address the non-compliant dioxin/furan USEPA Test method used to generate the lab report. Final laboratory data was submitted to the IEM for review on April 5, 2011. Laboratory results were compared to the Site Permit requirements and no exceedances of shaping material limits were identified. Additional review by the IEM and the NYSDEC was required to determine if the source site was approved for material importation to the Site. The IEM completed the review of NYCDPR's EDR and desktop review, and issued a memo to the NYSDEC detailing the IEM's review results on April 5, 2011. The NYSDEC provided their review comments on April 7, 2011.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.12 Flushing Hotel (133-63 Roosevelt Avenue/39-20 Prince Street, Queens, NY)

NYCDPR requested that the IEM order and provide the EDR materials to NYCDPR for their review and submission to the IEM. The draft initial submittal was provided to the IEM over the course of several days (April 5, 6, and 7, 2011). The IEM's review commenced during this timeframe.

The IEM witnessed test pits and sampling at the Flushing Hotel source site on April 8, 2011. Final laboratory data was submitted to the IEM for review on April 19, 2011. Laboratory results were compared to the Site Permit requirements and no exceedances of shaping layer material limits were identified. Additional review by the IEM and the NYSDEC was required to determine if the source site was approved for material importation to the Site.

The IEM conducted a review of NYCDPR's EDR review, as well as a full review of the EDR, and submitted Phase I and Phase II ESA reports. The IEM reviewed the lab results provided on April 19, 2011. The IEM prepared a review document dated April 20, 2011 titled "Flushing Hotel Source Site - Desktop Submittal Review" and submitted it to NYSDEC and NYCDPR. The NYSDEC provided a response on April 21, 2011.

NYCDPR provided the IEM with supplemental historical lab data and two (2) separate Phase II reports on April 26, 2011. The IEM provided additional review comments based on the aforementioned documents to NYCDPR via conference call and email on April 29, 2011. NYCDPR provided a draft submittal response package dated May 5, 2011.

NYCDPR provided the IEM with a final submittal dated May 13, 2011 in response to IEM comments. The IEM reviewed the final submittal and transmitted that submittal to the NYSDEC for review and comment on May 18, 2011. Due to the fact that this was a complex site, final comments regarding acceptance for import to the Site was to be provided by the NYSDEC.

Conditional approval for the export of shaping material from rows 4, 5, and 6 was provided from the NYSDEC on May 27, 2011. The IEM witnessed the first day of test pits on June 3, 2011 as requested by NYCDPR. Five test pits were excavated at the source site to the maximum depth reachable by the heavy equipment available. The IEM witnessed a second day of test pits on June 6, 2011 as requested by NYCDPR. Three additional test pits were excavated to the maximum depth reachable by the heavy equipment available. NYCDPR submitted a revised site review proposal for importing shaping layer material from this source site on June 15, 2011.

A total of eight (8) test pits were excavated at the Flushing Hotel source site on June 3 and June 6, 2011. One composite sample and one discrete VOC sample was collected from each test pit. Lab results were submitted to the IEM on June 10, 2011. The IEM provided preliminary review and comments to NYCDPR regarding the source site review proposal on June 17, 2011.

The IEM submitted the memo of recommendations to the NYSDEC on June 20, 2011. The IEM visited the site on June 21, 2011 to confirm conditions within the memo of recommendations were met or could be achieved. The IEM reported conclusions to the NYSDEC via email on June 21, 2011. The observed site conditions did not allow for the source site to be approved due to the presence of asphalt, objectionable material, and stockpiles that did not allow for the confirmation of soil elevations. The NYSDEC also indicated that as of June 21, 2011, a formal submittal from NYCDPR to NYSDEC had not occurred to date. The IEM's site observations from June 21, 2011, were emailed to NYCDPR on June 23, 2011. NYCDPR submitted a revised site proposal on June 27, 2011. On June 28, 2011, the IEM indicated that items included in NYCDPR's submittal were non-complaint with the current Site Permit requirements, and therefore required approval from the NYSDEC.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.13 2nd Avenue (2nd Avenue and 94th Street, New York, NY)

The IEM witnessed fill material sampling for this potential source site on May 12 (two samples) and May 16, 2011 (one sample) regarding acceptance of crushed rock from NYCMTA's 2nd Avenue Subway construction project at 94th Street in Manhattan. Samples were analyzed for the nine RCRA metals and all passed the Site Permit requirements relative to the nine RCRA metals. One sample on May 12 was collected from material directly out of the hopper after it was deposited into a truck and the other sample was taken from a stockpile. The May 16 sample was also taken from material that came directly out of the hopper and deposited directly into a truck. The NYSDEC performed all associated reviews for this

source site similar to the East Side Access source site due to the nature of the material that was being generated from subway tunnel construction.

The NYSDEC provided approval for this source site to export shaping layer material to the Site. Shaping layer material sampling began on May 26, 2011 and occurred on a continual basis after each consecutive 2,000 cubic yards of material was imported to the Site.

Approximately 86,667.95 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.14 2nd Avenue (2nd Avenue and 72nd Street, New York, NY)

NYSDEC staff reviewed NYCDPR's submittal dated October 28, 2011 regarding acceptance of crushed rock from NYCMTA's 2nd Avenue Subway construction project at 72nd Street in Manhattan which was proposed for import to the Site. NYCDPR's proposal was acceptable to the NYSDEC provided that a composite sample of this material was tested for the proposed analytical parameters and the sample results were obtained (and approved) prior to loading material for export to the Site.

The IEM reviewed the lab results related to the IEM witnessed source site sampling conducted on December 5, 2011 for the proposed shaping layer material at the source site. The IEM identified that the sampled material was unacceptable for import to the Site based on the fact that the detected value for Arsenic was 38.4 ppm. The permit allowable maximum concentration for Arsenic is 28 ppm. The sampled material was determined to be unacceptable for import to the Site as shaping layer material per the Permit. It was determined that no material may be imported from the 2nd Avenue at 72nd Street source site to the Site. The IEM also witnessed that the physical composition of the sampled material was not that of pure stone dust as witnessed previously at the 2nd Avenue ($94^{th}$ Street) and East Side Access source sites. This material had stones as large as 12 inches to 24 inches in size. The IEM was advised that the hopper at the 2nd Avenue at 72nd Street source site used a screen that contained openings that were 24 inches by 20 inches.

On December 5, 2011, NYCDPR requested that the IEM witness one additional sample from the 2nd Avenue at 72nd Street source site. On December 6, 2011 in response to NYCDPR's request to perform one additional sample, the NYSDEC stated that if re-sampling produced acceptable results, a more stringent sampling frequency would be required for this source (i.e. one sample per 2,000 cubic yards instead of one sample per 10,000 cubic yards). NYCDPR advised the IEM that they were not pursuing material from this source site any further because it did not meet the specified physical properties for the golf course construction.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.15 Alexander Hamilton Bridge (Bronx, NY)

NYCDPR notified the IEM on February 8, 2012 that NYCDPR was interested in the opportunity to obtain potential shaping layer materials from the Alexander Hamilton Bridge source site (originally sampled July

7, 2009) which had been reviewed and approved in the past by the previous IEM. The IEM requested, obtained, and reviewed the previous files for the source site including previous approvals and corresponding lab data. On February 10, 2012, the IEM requested and received the proposed location for the recently considered shaping layer material.

The IEM visited the Alexander Hamilton Bridge source site on February 22, 2012. The IEM visually inspected a stockpile of approximately 3,000 to 5,000 cubic yards of potential shaping layer material from the previously approved source site (as per IEM records from 2009). Upon a visual inspection, it was determined that the material did not meet the Site Permit requirements due to the presence of unauthorized C&D material including asphalt and metal, as well as other miscellaneous debris. Site observations were photo documented. The IEM notified NYCDPR of its observations and NYCDPR determined that they did not want to pursue this source site any further at that time.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.16 Throgg's Neck/Target/USPS (815 Hutchinson River Parkway, Bronx, NY)

On February 28, 2012, NYCDPR requested that the IEM begin the source site review for the Throgg's Neck/Target/USPS source site. The source site was an existing USPS building that was proposed to be redeveloped with a new Target retail building. The anticipated volume of material being considered as potential shaping layer material was reported to be approximately 20,000 cubic yards per information forwarded to the IEM by NYCDPR. The IEM ordered the EDR and provided the EDR information to NYCDPR. The IEM reviewed the Phase I ESA and the Phase II ESA. The IEM completed a review of the EDR on March 9, 2012. NYCDPR provided the IEM with an EDR review memo on March 27, 2012. The IEM provided NYCDPR with some initial comments and NYCDPR submitted a revised EDR review memo on April 2, 2012.

NYCDPR provided the IEM with a proposed sample location plan with proposed depths for source site sampling on April 19, 2012. The IEM provided comments on a revised sampling plan identifying the location and quantity of test pits on April 20, 2012.

The IEM witnessed three of ten proposed test pits and the associated source site sampling at the source site on April 25, 2012. The remaining test pits were completed and witnessed by the IEM on May 11 and May 14, 2012.

The IEM reviewed the lab data (originally dated May 15 and May 24, 2012 and revised May 30, 2012) and no exceedances of shaping layer material limits were identified. The IEM prepared a memo of recommendations and submitted it to the NYSDEC on May 30, 2012. The NYSDEC reviewed the IEM's May 30, 2012 memo of recommendations for the source site. On May 31, 2012, the NYSDEC approved importation of shaping material from this source site to the Site, provided that all recommendations in the memo of recommendations were implemented. The source site commenced trucking shaping layer material to the Site.

The IEM conducted an inspection of the source site on November 6, 2012. The purpose of the inspection was to determine if site conditions warranted allowing the source site to resume importation of shaping layer material to the Site, in light of the nine truck rejections (due to presence of asphalt) that occurred on October 23, 2012 (resulting in ceasing of importation that same day). Based on the IEM inspection and observations, it was determined that importation may resume to the Site. Observations included surface asphalt had been stripped from within the approved limits of excavation between former TP-6 and TP-8, stockpiles of excavated soil from areas outside the approved excavation limits (i.e. cut along Weiner Place) were located outside the approved excavation limits, and no stockpiles of asphalt material or other poor housekeeping practices were observed within the current area in preparation for export to the Site. NYCDPR was notified that all importation must comply with all previous conditions outlined in the source site approval memo of recommendations (i.e. top +/-3 feet of fill was not approved for importation to the Site; this layer was clearly identifiable due to its color and consistency relative to the native approved material).

The IEM was on-site at the source site on February 6, 2013 to complete a source site inspection associated with a request to resume import to the Site. The site was approved to resume importation of shaping layer material on February 6, 2013 based on the IEM's inspection, which confirmed that the material originated from IEM inspected/approved areas, and the fact that the material is the native approved soil, and there are no signs of asphalt or historical fill on-site in the vicinity of the work area. The area inspected was consistent with the approved areas included in the original NYSDEC approval and IEM memo of recommendations.

Approximately 27,262.77 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.17 PS-287 (110-10 Northern Boulevard, Queens, NY)

On March 2, 2012, NYCDPR requested that the IEM begin the source site review for the PS-287 source site. The source site was a former parking facility that was being redeveloped into a new school. The anticipated volume of material being considered as potential shaping layer material was reported to be approximately 7,000 to 9,000 cubic yards per information forwarded to the IEM by NYCDPR. The source site operator expected to remove the top two feet of asphalt and historical fill, as well as a one-foot buffer. The potential shaping layer material that was being considered was what was claimed to be native soils from a depth of approximately 3 feet to 15 feet below grade. NYCDPR and the site operator wanted to proceed with sampling prior to review of the EDR. A sampling plan was provided to the IEM for review. The IEM completed a review of submitted documents including the Phase I ESA, Phase II ESA, and the proposed sampling plan and issued a review memorandum with comments on March 7, 2012. The site operator submitted a revised sampling plan for review by the IEM on March 8, 2012.

The IEM received NYCDPR's initial review of the EDR on March 14, 2012. The IEM completed a review of the EDR and forwarded a copy to NYCDPR on March 16, 2012. On March 16, 2012, the IEM requested that NYCDPR submit a revised EDR review memo incorporating the identified Recognized Environmental Concerns ("RECs") and other site conditions that were not included in the original review memo.

On March 22, 2012, the IEM received sample results for shaping layer source site sampling that occurred on March 15, 2012. The IEM completed an initial review of the sample data and although there were no exceedances relative to the Site Permit limits for the parameters that were analyzed in the lab reports, there were multiple parameters missing from the lab report.

The IEM received a revised lab report for the PS-287 source site on March 28, 2012. The IEM reviewed the revised lab report for the previously missing lab data and confirmed that the tested soil met the Site Permit criteria for shaping layer material. The IEM issued a memo of recommendations for this source site to the NYSDEC on March 28, 2012. The IEM visited the source site on March 30, 2012 and confirmed that all asphalt, historic fill, and areas not being considered for import to the Site were previously removed from the source site to the appropriate depth including the one-foot buffer below the fill layer. The NYSDEC approved the PS-287 source site for shaping layer material and NYCDPR was notified of the approval on April 2, 2012.

Approximately 6,754.8 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.18 City Point Brooklyn (1 DeKalb Avenue, Brooklyn, NY)

The IEM issued a desktop review summary for the City Point Brooklyn source site to the NYSDEC on July 27, 2012. The review included information acquired or provided to the IEM including EDR files, Phase II report, and boring information. The material being considered was approximately 22,000 cubic yards of native material proposed to be used as shaping layer material.

The NYSDEC approved the City Point Brooklyn source site for further investigation (i.e. physical and visual inspection via test pits and sampling) on August 13, 2012 since all environmental samples for the source site were made available to the IEM for review.

The IEM was on-site at the source site on August 31, 2012 to witness site investigation and sampling activities for 8,000 cubic yards of potential shaping layer material.

On September 11, 2012, the IEM received sample results for source site sampling that occurred on August 31, 2012. On September 20, 2012, the IEM issued a Site Investigation Memorandum (dated September 19, 2012) to the NYSDEC for review for the source site related to IEM witnessed activities that occurred at the source site on August 31, 2012.

On September 25, 2012, the NYSDEC notified the IEM that the City Point source site was conditionally approved pending implementation of the recommendations included in the IEM's September 19, 2012 Site Investigation Memorandum and satisfactory responses to NYSDEC questions.

On October 10, 2012, the IEM notified NYCDPR that the City Point Brooklyn source site was approved by the NYSDEC considering implementation of the recommendations included in the IEM's September 19,

2012 Site Investigation Memorandum. The IEM needed to complete a final inspection of the proposed material prior to importation to the Site.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.19 400 Park Avenue South (New York, NY)

The IEM received initial documents associated with this source site beginning on July 3, 2012. The IEM performed an initial review of the submitted documents. The IEM requested a proposed sampling plan on July 11, 2012.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.20 Union Street (43-31 Union Street, Flushing, NY)

On May 15, 2012, NYCDPR submitted a request to the NYSDEC to import shaping layer material from the Union Street source site. On June 11, 2012, the NYSDEC provided NYCDPR with email approval to import up to 30,000 cubic yards of shaping layer material from the Union Street source site based on environmental testing results submitted to the NYSDEC that was not witnessed by the IEM. On June 14, 2012, NYCDPR notified the IEM that they would begin importing, no earlier than June 18, 2012, an estimated 5,000 to 10,000 cubic yards of shaping layer material from this source site to the Site. The material originated from 30 to 55 feet below grade.

Approximately 1,675.69 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.21 Mount Vernon Recycling Corp. (113 Edison Avenue, Mount Vernon, NY)

On November 27, 2012, the IEM notified NYCDPR that the topsoil on-site that originated from the Mount Vernon Recycling Corp. facility was approved as shaping layer material based on previous NYSDEC approval allowing material to be used as shaping material, and the fact that the material passed all Site Permit criteria per IEM witnessed sample collection and a review of the associated analytical reports. The IEM witnessed sampling on October 11 and November 12, 2012. The approval was pending a receipt of all truck tickets/manifests, and confirmation of the volume of on-site soil. The Site Permit requires that this material be covered with a minimum 1-foot thick layer of approved cover soil.

Approximately 3,920.0 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.22 228$^{th}$ Street (Rosedale, NY)

The IEM completed a review of initial lab data dated December 28, 2012 for the 228th Street source site. Of the 12 lab reports that were reviewed, none of the sampled soil exceeded Site Permit levels for the shaping layer parameters that were analyzed in the reports. A significant number of parameters (including some VOCs, SVOCs, pesticides, and metals) were not analyzed and NYCDPR was notified of the review

findings on January 22, 2013. Sample collection for the submitted lab reports was not witnessed by the IEM.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.23 Evergreen Recycling/Tully Environmental (Willets Point Boulevard, Corona, NY)

On January 28, 2013, the IEM notified NYCDPR that an initial review of the lab data provided for the Evergreen Recycling source site (operated by Tully Environmental) was completed. Sampling was not witnessed by the IEM. There were no exceedances relative to the Site Permit criteria for shaping layer material, however there were a significant number of parameters that were not analyzed. The IEM received a Registration Form for a Waste Management Facility (DEC Registration # 41W93) for the source site. The IEM performed a visual inspection of stockpiled material at the source site material on January 30, 2013 and identified asphalt fragments in the source site material. The stockpiled material was not acceptable for import to the Site based on the presence of asphalt.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.24 Waterpointe-Whitestone

On February 1, 2013, the IEM notified NYCDPR that an initial review of the lab data provided for the Waterpointe-Whitestone source site was completed. Sampling was not witnessed by the IEM. There were no exceedances relative to the Site Permit criteria for shaping layer material, however there were a significant number of parameters that were not analyzed.

On March 27, 2013, the NYSDEC informed NYCDPR that shaping layer material from the Waterpointe-Whitestone source site could be imported to the Site if the material meets the required Permit limits and that the NYSDEC review would continue once involved staff was available to complete the review. On April 3, 2013, the IEM forwarded the NYSDEC correspondence regarding previous NYSDEC work plan acceptance for the proposed source site, which was for work occurring as part of a separate project under NYSDEC review.

On April 3, 2013, the NYSDEC confirmed that the Waterpointe-Whitestone source site was not approved as a potential source for shaping layer material.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.25 Don Carlo Environmental/Brooklyn (1247 38th Street, Brooklyn, NY)

On February 1, 2013, the IEM notified NYCDPR that an initial review of the lab data provided for the Don Carlo Environmental/Brooklyn source site was completed. Sampling was not witnessed by the IEM. The results in the submitted report exceeded the levels in the Site Permit for shaping layer material for the

VOC's ethylbenzene (6.9 ppm vs. 5.5 ppm), toluene (2.1 ppm vs. 1.5 ppm), and xylenes (57 ppm vs. 1.2 ppm). There were a significant number of parameters that were not analyzed.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.26 Castle Hill Recycling (1000 Zerega Avenue, Bronx, NY)

On February 11, 2013, NYCDPR provided the IEM with a permit for Castle Hill Recycling (DEC Registration #03-W-94) that was being considered as a potential shaping layer material source site. The IEM was notified that the source site was creating a 2,000 cubic yard stockpile for sampling. Castle Hill Recycling was a NYSDEC registered solid waste management facility.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.27 Springfield Gardens

On February 21, 2013, the IEM completed an initial review of a soil analysis summary documentation (no lab reports) for approximately 2,500 cubic yards of potential shaping layer material at the Springfield Gardens source site as provided by NYCDPR. The IEM did not witness sample collection. The IEM notified NYCDPR that there were several parameters exceeding the Site Permit criteria and multiple required parameters were not analyzed.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.28 Calvert Vaux (Brooklyn, NY)

On February 20, 2013, NYCDPR provided the IEM and NYSDEC with lab data for the Calvert Vaux source site for approximately 500 cubic yards of shaping layer material. On February 22, 2013, the IEM was notified by the NYSDEC that the NYSDEC would be handling the review of this source site.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.29 160 Myrtle Avenue (Brooklyn, NY)

On February 20, 2013, NYCDPR forwarded the IEM initial sample data information for a potential shaping layer material source site located at 160 Myrtle Avenue, Brooklyn, NY. The potential shaping layer materials totaled approximately 40,000 cubic yards. On February 21, 2013, the IEM notified NYCDPR that the initial review of the soil analysis summary documentation (no lab reports) was completed for the information provided to the IEM. The reviewed material had exceedances for lead and mercury relative to the Site Permit criteria.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.30 215 E. 68th Street (New York, NY)

On March 7, 2013, NYCDPR requested that the IEM review initial lab data for approximately 3,000 to 4,000 cubic yards of potential shaping material at 215 E. 68th Street, New York, NY. On March 8, 2013, the IEM notified NYCDPR that there were exceedances for Mercury and total cSVOC's for multiple samples and multiple VOC, SVOC, Pesticide, and TCLP VOC parameters were missing in all samples.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.31 DEP Valhalla (10 Walker Road, Valhalla, NY)

On February 25, 2013, the IEM initiated review of potential shaping material at the DEP Valhalla source site (Catskill and Delaware Water Treatment Facility). On March 1, 2013, the IEM notified the NYSDEC that a review of the initial lab results and site background information was completed. The initial review indicated that there were no exceedances relative to shaping layer material criteria for the hardcopy data, some sample parameters were missing, and there were no records indicating unacceptable background conditions. The IEM notified the NYSDEC that there was a discrepancy in the hardcopy and electronic data and clarification was requested from NYCDPR/NYCDEP. On March 5, 2013, the IEM completed a visual and physical inspection of the potential shaping layer material at the source site. On March 6, 2013, the IEM notified NYCDPR and the NYSDEC that the potential shaping layer material passed all visual and physical inspection requirements and the material passed the Site Permit criteria for shaping layer material (hardcopy data) although not all parameters were tested. In addition, the data provided electronically on CD contained information demonstrating that previous soil investigations identified soil containing elevated levels of lead and mercury that did not pass the Site Permit criteria for shaping layer material. It was communicated to the IEM verbally that the NYCDEP has been handling all impacted soil separate from the stockpiled material that was inspected, and that all impacted soil has been disposed of off-site and tracked accordingly.

On March 13, 2013, the IEM received requested documentation from the source site owner/operator regarding conditions of the existing soil stockpile and removal of contaminated materials at the DEP Valhalla source site. On March 14, 2013, the IEM notified NYCDPR that the IEM must be notified prior to importation of shaping layer material from the DEP Valhalla source site in order to witness initial loading of trucks at the source site.

Approximately 6,631.2 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.32 Tilcon (Bronx) (980 East 149th Street, Bronx, NY)

On April 1, 2013, the IEM received initial lab data and a NYSDEC Registration Form for a Solid Waste Management Facility (NYSDEC Registration #03W39R) for the Tilcon (Bronx) source site. On April 1, 2013, the NYSDEC confirmed that the Tilcon (Bronx) source site had a valid Registration Form for a Solid Waste Management Facility. On April 2, 2013, the IEM notified NYCDPR that a review of the initial lab data was completed and noted that sampled parameters did not exceed Site Permit criteria for shaping layer

material (samples WCA-1 to WCA-6), however the following parameters were not analyzed: TCLP Metals missing for sample WCA-3, WCA-5, and WCA-6, VOC: 1,2,4-trichlorobenzene, methyl ethyl ketone, and tetrachloroethylene in all samples, SVOC: 4-chloro-3-methylphenol, 2-chlorophenol, 4-methylphenol, and naphthalene in all samples, and Pesticides: 2,4 D, dibenzo-p-dioxins, endrin ketone, gamma-bhc, gamma-chlordane, mitotane (2,4 DDD), and parathion. On April 3, 2013, the IEM witnessed sampling of approximately 4,000 cubic yards of the proposed shaping material at the Tilcon (Bronx) source site.

On April 9, 2013, the IEM notified NYCDPR that the Tilcon (Bronx) shaping layer material, totaling approximately 4,000 cubic yards, witnessed by the IEM on April 3, 2013, was acceptable for import to the Site due to the fact that environmental results met the Site Permit requirements. The IEM conducted a visual inspection of material, and the IEM confirmed that the material did not contain unauthorized materials (i.e. asphalt, C&D debris, etc.).

Approximately 3,041.8 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.33 NY Recycling (475 Exterior Street, Bronx, NY)

On April 23, 2013, NYCDPR requested that the IEM initiate review of a potential shaping layer material source site named New York Recycling. On April 24, 2013, the IEM verified that the facility's NYSDEC registration was valid and that the submitted analytical results did not reveal any exceedances relative to the Site shaping layer material Permit requirements; however, several parameters were missing including TCLP metals, TCLP VOCs, and four pesticide parameters. NYCDPR was notified that in order to proceed with this potential source site, the IEM will need to complete a site visit to the facility for visual and physical inspection of the material, and witness collection of samples for chemical testing. In addition, NYCDPR would be required to collect a sample of the fines for submittal to the NYSDEC for review. On April 25, 2013, NYCDPR requested that the IEM take a grab sample of the material fines and provide that sample to the NYSDEC as required. On April 30, 2013, the IEM performed a visual, physical, and PID inspection of the material and collected a sample of fines using a No. 35 sieve. The sample was delivered to the NYSDEC on April 30, 2013.

On Friday, May 24, 2013, the IEM notified NYCDPR that Stockpile #1 of NY Recycling shaping layer material (approximately 8,000 CY) was acceptable for import to the Site due to the fact that the source site qualified as a valid NYSDEC registered C&D processing facility, the IEM conducted a visual/physical inspection of the stockpile on April 30, 2013, the IEM confirmed that the stockpiled material did not contain unauthorized materials (i.e. asphalt, C&D debris, etc.), all PID readings measured 0 ppm, and the environmental results were acceptable per the Site Permit requirements for IEM witnessed sampling completed on May 21, 2013. In addition, a sample of fines was collected by the IEM and submitted to NYSDEC for visual review, and subsequent approval. Approved shaping material to be trucked to the Site could only originate from the stockpile witnessed during the May 21, 2013 sampling event.

On June 19, 2013, the IEM notified NYCDPR that Stockpile #2 of NY Recycling shaping layer material (approximately 10,000 cubic yards) as witnessed by the IEM on June 11, 2013, was acceptable for import

to the Site. The IEM conducted a visual/physical inspection of stockpile #2 on June 11, 2013, and the IEM confirmed that the stockpiled material did not contain unauthorized materials (i.e. asphalt, C&D debris, etc.). The site qualified as a valid NYSDEC registered C&D processing facility and the test results were acceptable per the Site Permit requirements. Approved shaping material to be trucked to the Site could only originate from the stockpile witnessed during the June 11, 2013 sampling event.

On July 16, 2013, the IEM notified NYCDPR that the latest stockpile of shaping layer material (approximately 5,000 cubic yards) from the NY Recycling source site was acceptable for import to the Site. The submitted lab report met all Permit chemical requirements for sample collection witnessed by the IEM on July 11, 2013 and met Permit visual and physical criteria as per inspection by the IEM.

On August 1, 2013, the IEM notified NYCDPR that the latest stockpile of shaping layer material (approximately 5,000 cubic yards) from the NY Recycling source site was acceptable for import to the Site. The submitted lab report met all Permit chemical requirements for sample collection witnessed by the IEM on July 29, 2013 and met Permit visual and physical criteria as per inspection by the IEM.

On October 24, 2013, the IEM notified NYCDPR that the latest 5,000 cubic yard stockpile of NY Recycling shaping layer material as represented by the submitted TAGM lab report and per samples witnessed by the IEM on October 11, 2013, was acceptable for import to the Site. The approval was based on the fact that the source site qualified as a valid NYSDEC registered C&D processing facility and the IEM conducted a visual/physical inspection of the stockpile on October 11, 2013. The IEM confirmed that the stockpiled material did not contain unauthorized materials (i.e. asphalt, C&D debris, etc.), and all PID readings registered in at 0 ppm. The test results were acceptable per the Site Permit requirements. Approved shaping material to be trucked to the Site could only originate from the stockpile witnessed during the October 11, 2013 sampling event.

Approximately 26,688.05 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.34 Little Bay (Queens, NY)

On October 16, 2013, the IEM notified NYCDPR of the findings associated with a preliminary review of available data for the Little Bay source site. The IEM reviewed lab data for Stockpiles 1 through 9 (S-1 through S-9). The lab report did not capture all of the parameters required for testing by the Site Permit, and was missing the full TCLP VOC and TCLP Metals analyses, as well as several SVOC, VOC, Pesticide/Herbicide, and PCB parameters. Based on the data presented, at a minimum, the following stockpiles did not pass the Site Permit criteria as shaping layer material: S-1 exceeded for copper, lead, mercury, and total PCBs; S-4 exceeded for mercury; S-5 exceeded for lead and mercury; and S-9 exceeded for mercury and total PCBs.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

### 3.1.2 Cover Layer Material

Materials accepted for use as cover layer on the Site were sampled prior to acceptance and after each additional 2,000 cubic yards. As per the 2005 Permit modification, the parameters for cover layer material included the complete analyte list of TAGM 4046 for total VOCs, total SVOCs, total pesticides and herbicides, total PCBs, total metals, sulfur, and asbestos.

Fill material imported to the Site and used for the cover layer was subject to the following requirements, per Special Condition 14 of the 2014 Permit and Section 4.2.1.2 of the 2013 Engineering Report. A table of the cover layer material chemical acceptance criteria listed below is included in Appendix C.2 of the 2013 Engineering Report.

In order for topsoil material to be used on the Site for the cover layer, it was sampled prior to acceptance and after the importation of each additional 2,000 cubic yards (in truck volumes). Each soil sample was analyzed for the entire analyte list in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046, total volatile organic compounds (VOCs), total semi-volatile organic compounds (SVOCs), pesticides and herbicides, polychlorinated biphenyls (PCBs), and metals (including Resource Conservation and Recovery Act (RCRA) metals).

Based on source site reviews and site testing activities, the cover layer material imported to the Site met the following chemical limits:

TAGM 4046 Table 1 – Volatile Organic Compounds (VOCs)

TAGM 4046 Table 2 – Semi-Volatile Organic Compounds (SVOCs)

TAGM 4046 Table 3 – Pesticides/Herbicides and Polychlorinated Biphenyls (PCBs)

TAGM 4046 Table 4 – Metals

Total Asbestos 0.5% or less

Total Sulfur 0.5% or less

The following additional criteria were directed in NYSDEC correspondence:

April 30, 2009 – Directed NYCDPR not to accept or place on the Site any cover layer materials with arsenic concentrations greater than 16 ppm or lead concentrations greater than 400 ppm.

July 28, 2009 – Provided a table to NYCDPR listing modified heavy metal chemical limits for the cover layer at the Site.

September 25, 2009 – Revised and clarified the chromium chemical limits for the cover layer previously presented in the July 28, 2009 letter.

NYCDPR followed the NYSDEC's directives since receipt of each one associated with the importation of cover layer material to the Site.

Details of the source site reviews and site testing for each potential cover layer material source site are as follows.

#### 3.1.2.1 Bloomingburg (C.M. & Sons Trucking Site, 680 Bloomingburg Road, Bloomingburg, NY)

NYCDPR requested that the IEM witness fill material sampling for this potential source site on May 9, 2011. The Site is a sand and gravel supply yard. Material was separated into sand and gravel of various sizes and stockpiled. The source site had been importing sand and gravel material from a nearby real estate development under construction. Material being considered for the Site included two stockpiles (SP-1 and SP-2) of a brown, medium to coarse sand. Both stockpiles were from material generated on-site. Each stockpile was approximately 25,000 cubic yards. Prior to sample collection the piles were screened in various locations using a calibrated PID. No detections of VOCs were observed. The material was inspected using a 3/4-inch screen. No prohibited materials were observed in the screened material. The IEM witnessed a total of six samples collected from two separate stockpiles. Per the AES sampling plan, three samples were collected from each stockpile. Each sample consisted of 20 grabs (depths ranging from the surface to three feet into the pile) which were composited. One discrete grab per sample was collected specifically for VOC analysis without being composited.

NYCDPR provided the IEM authorization to commence review of this source site on May 24, 2011. NYCDPR requested this source site review be put on hold on May 27, 2011. It was requested by NYCDPR that the IEM witness sampling for physical parameters on June 1, 2011. NYCDPR provided authorization to the IEM to order the EDR on NYCDPR's behalf on June 8, 2011.

On June 24, 2011, the IEM emailed the final source site review updates to NYCDPR which identified that Sample #2 for SP-1 failed to meet the cover layer material Permit requirements due to an Antimony exceedance. NYCDPR requested that the source site review be put on hold on June 24, 2011. On June 30, 2011, NYCDPR requested that the IEM resume the source site review. The IEM notified NYCDPR that the review was completed on June 24, 2011 and forwarded the original June 24, 2011 review findings/comments to NYCDPR. On July 1, 2011, NYCDPR requested that the IEM provide the EDR files to NYCDPR which were ordered for the site in June. The IEM resubmitted the EDR files to NYCDPR.

On July 8, 2011, NYCDPR submitted a preliminary review of the EDR to the IEM via email. The IEM provided comments to NYCDPR via email. On July 11, 2011, NYCDPR submitted a preliminary site review submittal via email and the IEM provided comments to NYCDPR via email. On July 12, 2011, NYCDPR submitted the site review submittal to the NYSDEC and the IEM via email. On July 12, 2011, the NYSDEC requested that the IEM provide preliminary comments of NYCDPR's submittal and the IEM provided comments to the

NYSDEC via email. On July 15, 2011, the NYSDEC provided comments to the IEM and a request for clarification on NYCDPR's submittal.

The IEM provided NYCDPR a review status update with respect to this source site via phone and email on July 20, 2011. The update contained action items required for NYCDPR to advance the review process. The IEM provided the NYSDEC with an update on the status of NYCDPR submittals for this source site on July 22, 2011 via email. NYCDPR provided the cover layer material permeability testing results to the IEM on July 22, 2011. The IEM consulted with the NYSDEC beginning on July 22, 2011 regarding the permeability results and the IEM notified NYCDPR on July 28, 2011 that the cover soil permeability rate of 1.51 X 10-2 cm/s (21.4 in/hr.) did not meet the NYSDEC maximum allowable permeability of 1 x 10-2 cm/s (14.7 in/hr.). The IEM also requested clarification on NYCDPR's intent on handling the SP-1 Antimony exceedance as identified in lab reports.

NYCDPR requested the analytical lab data from the IEM on August 8, 2011 and indicated that they would be submitting a final proposal to the NYSDEC regarding the request to import cover material from the Bloomingburg source site by addressing outstanding metals and permeability requirements. The IEM forwarded requested lab data to NYCDPR via email on August 8, 2011.

IEM staff visited the Bloomingburg source site to inspect the cover layer material on October 6, 2011 and the existing material appeared to be the same material that the IEM inspected originally in May 2011 with the exception that SP-1 had been removed off-site and was no longer available. The results of the site visit were consistent with what the IEM was told by the site operator earlier on October 6, 2011. The IEM confirmed that the GPS coordinates of the stockpile (SP-2) were consistent with the original location, the soil appeared to be the same color and consistency, and the stockpile had vegetation growing on it, indicative that it had been untouched for an extended period. The IEM witnessed the loading of one truck on October 6, 2011 headed to the Site, which was carrying approximately 26 cubic yards of cover layer material. IEM staff was on-site at Bloomingburg on October 7, 2011 to witness the initial rounds of cover layer material loading.

In general, the NYSDEC allowed up to 16,000 cubic yards of approved cover material (from all cover material source sites) to be stockpiled in the rough of holes 4 and 5 (8,000 cubic yards per hole) prior to satisfying the conditions associated with spreading the cover material on the Site. These conditions included meeting permeability and shaping layer thickness requirements. On October 21, 2011, the NYSDEC provided NYCDPR with a conditional approval to allow NYCDPR to import cover layer material with a permeability of up to 30 inches per hour pending NYCDPR submitting for approval of an amendment to the Stormwater Pollution Prevention Plan (SWPPP). With this permeability approval, NYCDPR was notified that they could spread cover material on-site at their own risk pending shaping layer thickness compliance which occurred at a later time.

Approximately 4,768.0 cubic yards of cover layer material were imported to the Site from this source site.

#### 3.1.2.2 Ranco Sand (115 South Street, Manorville, NY) [LAWS]

On December 2, 2011, the IEM was directed by NYCDPR to order the EDR for the Ranco Sand source site located in Manorville, NY. The IEM visited the Ranco Sand source site on December 8, 2011 to inspect a stockpile of approximately 10,000 to 12,000 cubic yards of proposed cover soil. The soil was inspected and visually appeared to be 100% sand, free of any debris. The material appeared to be native as it was mined from a NYSDEC permitted facility, extending approximately 100 feet below original grade. The stockpile of sand that was inspected was mined from below the water table.

The IEM witnessed the collection of six composite soil samples and six discrete VOC samples, as well as a physical sample to be analyzed for permeability. The IEM logged the location of the perimeter of the stockpile via GPS. The source site owner and NYCDPR were made aware that the stockpile must remain untouched in order for the material to be considered for approval.

NYCDPR/LAWS submitted a copy of a previous NYSDEC mining permit containing the source site's previous permit number (1-4722-00218/00001). LAWS was informed by the source site representative that the source site is operating under a NYSDEC authorized permit extension.

The EDR was ordered on December 9, 2011. The IEM performed a review of the EDR and provided observations and a list of RECs to the NYSDEC. The IEM received the lab data (from the December 8, 2011 sample event) from LAWS on December 19, 2011. The IEM completed review of the lab data on December 19, 2011 and found that the material met the Site Permit criteria for cover layer soil. The IEM reviewed the NYCDPR submittal associated with the EDR for the source site. Based on review of the NYCDPR EDR review memo, site visits, inspections, and data review, the IEM did not have any objections associated with proceeding with this source site. Prior to receiving approval for importation of this cover material to the Site, the NYSDEC needed to receive and review the permeability testing data.

On January 4, 2012, the IEM forwarded the NYSDEC the permeability data for review. On January 9, 2012, the NYSDEC identified that this source site was conditionally approved as a source for cover material based on samples meeting the approved permeability specification at a frequency of one sample per five hundred cubic yards for the initial 2,000 cubic yards (analysis for permeability only). Thereafter, sampling for permeability would be performed at a frequency of one sample per 2,000 cubic yards if the permeability results for the initial 2,000 cubic yards were satisfactory. This conditional approval was based upon information provided by NYCDPR in its January 5, 2012 email and the IEM's January 4, 2012 email to the NYSDEC. Additional permeability sampling witnessed by the IEM was required since only one IEM witnessed sample has occurred (i.e. January 2, 2012). The IEM witnessed permeability testing at the source site on January 10, 2012.

NYCDPR transmitted additional percolation testing results to the NYSDEC on January 26, 2012. The results were for IEM witnessed sampling completed on January 10, 2012 and January 23, 2012. On January 26, 2012, the NYSDEC provided NYCDPR with approval to use the average of twenty permeability test results as representative of the 12,000 cubic yards of stockpiled cover layer material at the source site. This

approval was based on the fact that loading, transporting, stockpiling, and spreading of the material would result in thorough mixing. The initial 12,000 cubic yards were approved for import to the Site.

On February 1, 2012, IEM staff was on-site to observe loading and transportation of cover layer materials from the approved stockpile and completion of trucking manifests. On February 7, 2012, IEM staff notified NYCDPR and NYSDEC that the IEM had reviewed the environmental sample data for the second round of environmental sampling completed on January 30, 2012 for cover soil (i.e. eight composite samples from an approximately 15,000 cubic yard stockpile). Per the results in the lab report transmitted to the IEM, the IEM verified that the material complied with the Site permit criteria for cover layer material. On February 9, 2012, the IEM reviewed the infiltration rate test results for the second stockpile of cover layer material, and all of the sample results met the Site Permit criteria (i.e. less than 29.4 in/hr.). Based on a review of the submitted environmental data and the infiltration testing data, the second stockpile (up to 16,000 cubic yards) was approved for import to the Site since it met all of the Site Permit criteria.

The IEM was on-site at the Ranco Sand source site on February 22, 2012 to witness sampling of a new stockpile of potential cover layer material (stockpile #3). The IEM witnessed the collection of five samples from the stockpile consisting of approximately 10,000 cubic yards of potential cover layer material.

The IEM reviewed the environmental sampling results from the February 22, 2012 sampling event for this source site and found that the sample results fell below the Site Permit limits. The IEM reviewed the percolation test results and found that the percolation rates for stockpile #3 exceeded the established threshold of 29.4 inches/hour. The IEM required a proposal from NYCDPR on an acceptable approach to remedy the percolation rate exceedance.

On March 15, 2012, the NYSDEC notified the IEM that the environmental testing (TAGM) frequency for this source site had been reduced from one sample per 2,000 cubic yards to one sample per 10,000 cubic yards of cover layer material. The percolation testing frequency remained unchanged at one sample per 2,000 cubic yards.

On March 15, 2012, the NYSDEC found NYCDPR's proposed truck loading and mixing protocol acceptable to address elevated percolation rates for the stockpile #3 materials. On March 19, 2012, the IEM informed NYCDPR that stockpile #3 at the Ranco Sand source site had been approved for import as cover layer material based upon the acceptable environmental testing results and the percolation results in conjunction with the required mixing and truck loading protocol. The IEM witnessed the appropriate truck loading protocol of the first round of trucks at the source site on March 16, 2012. Trucks were loaded in an alternating pattern from both stockpile #2 and stockpile #3.

The IEM witnessed source site sampling at this source site on March 30, 2012. The IEM received a lab report on April 5, 2012 containing infiltration testing data for ten samples collected from stockpile #4. The IEM reviewed the infiltration testing data and confirmed that the results met the permeability requirement for cover soil.

The IEM received the environmental (TAGM) lab report on April 6, 2012 for the samples collected for stockpile #4 on March 30, 2012. On April 9, 2012, the IEM confirmed that sample results for stockpile #4 did not exceed any of the Permit criteria for cover material and the material was acceptable for import to the Site.

The IEM received the environmental (TAGM) lab report on May 9, 2012 for the samples collected for stockpile #5 on April 30, 2012. On May 10, 2012, the IEM confirmed that sample results for stockpile #5 did not exceed any of the Permit criteria for cover material and the material was acceptable for import to the Site. The IEM reviewed the infiltration testing data on May 17, 2012 and confirmed that the results met the permeability requirement for cover soil.

The IEM approved Ranco stockpile #5 on May 17, 2012, as the environmental testing results did not exceed any of the Permit criteria for cover layer material. The 20,000 cubic stockpile from Ranco that was tested and witnessed by the IEM met the Site Permit criteria and was acceptable for import to the Site. Infiltration testing was also approved by the IEM. The NYSDEC lowered the frequency of infiltration testing to one infiltration sample per 10,000 cubic yards for this source site on May 11, 2012. Through May 17, 2012, this source site was approved to export 78,000 cubic yards of cover material to the Site.

The IEM was on-site at this source site on June 8, 2012 to witness the collection of samples from stockpile #6. Two samples were collected for environmental and infiltration analysis for the approximate 20,000 cubic yard stockpile. The IEM received infiltration testing data on June 14, 2012. Infiltration test results were reviewed and approved on June 19, 2012. The IEM received environmental testing lab results on June 18, 2012. The environmental testing lab results were reviewed and approved on June 19, 2012. Stockpile #6 (20,000 CY) did not exceed any of the Site Permit criteria for cover layer material and infiltration requirements and was therefore acceptable for import to the Site.

The IEM was on-site at this source site on July 17, 2012 to witness sampling of stockpile #7 consisting of 10,000 cubic yards of cover layer material. On July 26, 2012, the IEM notified NYCDPR and LAWS that the material from stockpile #7 was acceptable for import to the Site based on the fact that the submitted environmental and infiltration lab reports met the Site Permit requirements.

The IEM reviewed the infiltration and environmental lab reports for stockpile #8 of cover layer material (10,000 cubic yards) sampled on August 14, 2012. The IEM notified NYCDPR on August 22, 2012 that the material was approved for import to the Site as both infiltration and environmental results were acceptable per the Site permit requirements.

On September 17, 2012, the IEM notified NYCDPR that the 10,000 cubic yard stockpile #9 of cover layer material sampled at this source site on September 7, 2012 was acceptable for import to the Site as both environmental and infiltration lab results met the Site Permit requirements.

On October 1, 2012, the IEM notified NYCDPR that the 10,000 cubic yard stockpile #10 of cover layer material sampled at this source site on September 21, 2012 was acceptable for import to the Site as both environmental and infiltration lab results met the Site Permit requirements.

On November 7, 2012, the IEM notified NYCDPR that the 10,000 cubic yard stockpile #11 of cover layer material sampled at this source site on October 17, 2012 was acceptable for import to the Site as both environmental and infiltration lab results met the Site Permit requirements.

On December 10, 2012, the IEM notified NYCDPR that the 10,000 cubic yard stockpile #12 of cover layer material sampled at this source site on November 16, 2012 was acceptable for import to the Site as both environmental and infiltration lab results met the Site Permit requirements.

IEM staff was on-site February 1, 2013 at this source site to perform the visual inspection and witness sampling of the cover soil for environmental and infiltration testing associated with stockpile #13 (10,000 cubic yards). The IEM witnessed collection of one environmental sample and one infiltration sample.

On February 19, 2013, the IEM notified NYCDPR that the latest round of cover layer material for this source site was acceptable for import to the Site based on the fact that both the environmental and infiltration results met the Site Permit requirements. The results were for sampling witnessed by the IEM on February 1, 2013 for stockpile #13.

The IEM witnessed sample collection for stockpiles #14 and #15 totaling 20,000 cubic yards worth of proposed cover layer material at this source site on March 19, 2013. Based on review of submitted lab results, the proposed cover layer material was approved for import to the Site as both infiltration and environmental results were acceptable per the Site Permit requirements.

On June 3, 2013, the IEM notified NYCDPR that the latest round of cover layer material for stockpiles #16 and #17 totaling approximately 20,000 cubic yards were acceptable for import to the Site as both infiltration and environmental results met the Site Permit requirements. Submitted infiltration and environmental lab reports were for sampling witnessed by the IEM on May 22, 2013.

On August 5, 2013, the IEM notified NYCDPR that the latest round of cover layer material for stockpile #18 (approximately 10,000 cubic yards) was acceptable for import to the Site. The submitted infiltration and environmental lab reports for sampling witnessed by the IEM on July 26, 2013 met the Site Permit requirements.

On August 29, 2013, the IEM notified NYCDPR that the latest stockpile of cover layer material for stockpile #19 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on August 21, 2013.

On September 13, 2013, the IEM notified NYCDPR that the latest stockpile of cover layer material for stockpile #20 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on September 6, 2013.

On October 3, 2013, the IEM notified NYCDPR that the latest stockpile of cover layer material for stockpile #21 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on September 25, 2013.

On October 28, 2013, the IEM notified NYCDPR that the latest stockpile of cover layer material for stockpile #22 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on October 16, 2013.

On November 8, 2013, the IEM notified NYCDPR that the latest cover layer material stockpile #23 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on October 25, 2013.

On November 18, 2013, the IEM notified NYCDPR that the latest cover layer material stockpile #24 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on November 8, 2013.

On March 14, 2014, the IEM notified LAWS and NYCDPR that the cover layer material stockpile #24, originally sampled and witnessed on November 8, 2013 was acceptable for importation. On March 14, 2014, the IEM completed a site visit and performed a visual inspection of the existing stockpile on-site.

#### 3.1.2.2.1 Ranco Sand (115 South Street, Manorville, NY) [MFM]

On July 10, 2012, the IEM received lab results for a 10,000 cubic yard stockpile of cover layer material sampled at the Ranco Sand source site on July 2, 2012 for MFM. On July 11, 2012, the IEM confirmed that the environmental lab testing results did not exceed any of the Site Permit criteria for cover layer material environmental analyses however the stockpile could not be approved for import as infiltration test results were not reviewed and approved.

The NYSDEC approved the infiltration test results on August 21, 2012 for stockpiled cover layer material (10,000 cubic yards) sampled on July 2, 2012. Based on the NYSDEC approval of the infiltration results, the IEM notified NYCDPR on August 22, 2012 that the stockpiled material was approved for import to the Site as both infiltration and environmental results were acceptable per the Site Permit requirements.

#### 3.1.2.2.2 Ranco Sand (115 South Street, Manorville, NY) [Triton]

On June 6, 2013, the IEM notified NYCDPR that the revised environmental lab report for a 5,000 cubic yard stockpile met the Site Permit requirements for IEM witnessed sampling completed on May 31, 2013. On June 7, 2013, the IEM notified NYCDPR that the infiltration testing results did not meet the Site Permit requirements.

On June 24, 2013, the IEM notified NYCDPR that the additional infiltration tests analyzed for a 5,000 cubic yard stockpile did not meet the Site Permit requirements for IEM witnessed sampling completed on May 31, 2013 and it was not approved for import to the Site. On June 24, 2013, NYCDPR notified the IEM that this material would not be sampled any further.

Approximately 271,801.2 cubic yards of cover layer material were imported to the Site from this source site based on approved materials noted above in Sections 3.1.2.2 and 3.1.2.2.1.

#### 3.1.2.3 East Coast Mines (Lewis Road near Route 104, East Quogue, NY)

Between August 10 and August 12, 2011, NYCDPR and the IEM coordinated a site visit to the East Coast Mines source site (DEC Facility ID: 1-4736-00539), and discussed review requirements. The EDR was ordered by the IEM on August 12, 2011, and the initial EDR files were forwarded to NYCDPR.

The IEM visited the source site on August 17, 2011 to inspect two stockpiles each consisting of approximately 2,000 cubic yards of soil. The soil was inspected and visually appeared to be sand, free of any debris. The material appeared to be native as it was mined from roughly 80-100 feet below original grade. The stockpiles were inspected with a PID, which yielded no detections. The IEM witnessed the collection of a composite and discrete VOC sample from each stockpile, as well as a physical sample to be analyzed for permeability.

The IEM visited the site again on September 29, 2011 to inspect a separate stockpile of proposed cover layer material of approximately 2,000 cubic yards of soil. The soil was inspected and visually appeared to be sand and free of any debris. The material appeared to be native as it was mined from roughly 80-100 feet below original grade. The IEM witnessed the collection of a composite and discrete VOC sample from the stockpile, as well as a physical sample to be analyzed for permeability. The IEM logged the location of the perimeter of the stockpile via GPS. The source site owner and NYCDPR were aware that the stockpiles must remain untouched in order for them to be considered for approval. NYCDPR performed a review of the EDR. The IEM performed a review of NYCDPR's review submittal, as well as a review of the EDR. No RECs were identified. NYCDPR submitted the facility's NYSDEC mining permit to the IEM.

On October 11, 2011, the NYSDEC identified that they had reviewed the initial analytical data for the East Coast Mines source site and authorized the importation of two stockpiles of cover material totaling approximately 3,500 cubic yards. This approval was associated with cover material that was sampled on August 17, 2011. This material was approved for only stockpiling on-site, and had not been approved for spreading on-site. Cover material was stockpiled in the rough of holes 4 and 5 pending NYSDEC approval for spreading. The NYSDEC had not reviewed the September 29, 2011 analytical data resulting in a

maximum allowable import volume from this source site of 3,500 cubic yards. In general, the NYSDEC allowed up to 16,000 cubic yards of approved cover material (from all cover material source sites) to be stockpiled in the rough of holes 4 and 5 (8,000 cubic yards per hole) prior to satisfying the conditions associated with spreading the cover material on-site. These conditions included meeting permeability and shaping layer thickness requirements. On October 21, 2011, the NYSDEC provided NYCDPR with a conditional approval to allow NYCDPR to import cover layer material with a permeability of up to 30 inches per hour pending NYCDPR submitting for approval of an amendment to the Stormwater Pollution Prevention Plan (SWPPP). With this permeability approval, NYCDPR was notified that they could spread cover material on-site at their own risk pending shaping layer thickness compliance.

On April 18, 2012, NYCDPR requested that the IEM witness source site sampling for two 2,000 cubic yard stockpiles at this source site.

The IEM witnessed source site sampling at this source site on April 23, 2012. Four samples were collected for environmental testing and four samples were collected for agronomic testing. The IEM reviewed the environmental and infiltration testing data and confirmed that the environmental results met the Site Permit requirements for cover layer material and three of four stockpiles met the NYSDEC permeability requirements. The stockpile SP2 infiltration rate exceeded the Permit limit. Material from SP2 was not acceptable for import to the Site.

The East Coast Mines stockpiled material sampled on April 23, 2012 was formally approved by the NYSDEC on May 15, 2012. Although the environmental results passed the Site Permit criteria, one of the four stockpiles (each stockpile was 2,000 cubic yards) did not meet the Site Permit infiltration criteria. However, the NYSDEC, after a review of a NYCDPR submittal request, granted approval of the four stockpiles by allowing averaging of the four stockpile infiltration results; the average of the four stockpiles met the Site Permit criteria.

The IEM forwarded the Site environmental testing criteria per the Permit for cover layer material to the lab on July 2, 2012. On July 4, 2012, the IEM notified NYCDPR, the lab, and the source site contact of parameters that had to be re-analyzed or re-reported to coincide with the required Permit limits for potential cover layer material sampled on June 22, 2012. On July 5, 2012, the IEM reviewed the revised lab report for material sampled on June 22, 2012 and determined that the material (6,000 cubic yards) was acceptable for import to the Site. On July 10, 2012, the IEM received a lab report associated with a 10,000 cubic yard stockpile sampled on July 2, 2012. On July 10, 2012, the material was found to be acceptable for import to the Site based upon review of the submitted lab report and NYSDEC review and approval of the infiltration testing results. The NYSDEC approved the infiltration results based on the condition that the stockpiled materials were mixed at the source site prior to import to the Site.

The NYSDEC notified NYCDPR on July 18, 2012 that the proposed 1:3 ratio of mixing for cover layer material stockpiles #1, #3, and #6 at East Coast Mines source site was acceptable and subject to verification by the IEM. The IEM notified NYCDPR and the source site operator on July 18, 2012 that the submitted lab report was missing the analysis of dibenzofuran. NYCDPR and the source site operator

submitted revised lab reports on July 18, 2012. The IEM notified NYCDPR and the source site operator that the two separate stockpiles of material (8,000 cubic yards each) sampled at the East Coast Mines source site on July 11, 2012 were conditionally acceptable for import based upon proper mixing of the stockpiles. The IEM was on-site at the East Coast Mines source site to witness sampling of a new 10,000 cubic yard stockpile and the mixing of the cover soil stockpiles on July 23, 2012. The IEM notified NYCDPR and the source site operator that the sampled materials were acceptable for import to the Site on July 24, 2012.

The IEM was on-site at the East Coast Mines source site on July 31, 2012 to witness mixing of cover layer material stockpiles. On August 6, 2012, the IEM notified NYCDPR that the cover layer materials sampled on July 23, 2012 at the East Coast Mines source site, totaling 14,000 cubic yards, were acceptable for import to the Site based on review of submitted environmental and infiltration lab reports.

On August 20, 2012, the IEM notified NYCDPR that the 8,000 cubic yard stockpile of cover layer material sampled on July 31, 2012 was approved for import to the Site. The approval was based on the submitted environmental results meeting the Site Permit requirements, approval from the NYSDEC to mix and average the infiltration test results, and the mixing of the stockpiled material at the source site which was witnessed by the IEM on August 14, 2012.

On August 30, 2012, the IEM notified NYCDPR that the 12,000 cubic yards of cover layer material sampled on August 14, 2012 was approved for import to the Site. The approval was based on the submitted environmental results meeting the Site Permit requirements, approval from the NYSDEC to mix and average the infiltration test results (August 23, 2012 email), and the mixing of the stockpiled material at the source site which was witnessed by the IEM on September 4, 2012.

On September 12, 2012, the IEM notified NYCDPR that a portion of the 14,000 cubic yards of cover layer material sampled on September 4, 2012 was approved for import to the Site. Stockpile SW consisting of 6,000 cubic yards of cover layer material was approved based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results. Stockpile DSS consisting of 8,000 cubic yards had acceptable environmental results meeting the Site Permit requirements but was not approved due to infiltration results not meeting the Permit requirements. On September 14, 2012, the IEM notified NYCDPR that Stockpile DSS consisting of 8,000 cubic yards of cover layer material was approved for import to the Site since the IEM witnessed thorough mixing of the stockpiled material at the source site on the morning of September 14, 2012.

On September 20, 2012, the IEM notified NYCDPR that a portion of the 14,000 cubic yards of cover layer material sampled on September 14, 2012 was approved for import to the Site. Stockpile FFS consisting of 6,000 cubic yards of cover layer material was approved was based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results. Stockpile NW consisting of 8,000 cubic yards had acceptable environmental results meeting the Site Permit requirements but was not approved due to infiltration results not meeting the Permit requirements. On September 21, 2012, the IEM notified NYCDPR that Stockpile NW consisting of 8,000 cubic yards of cover layer material was

approved for import to the Site since the IEM witnessed thorough mixing of the stockpiled material at the source site on the morning of September 21, 2012.

On September 28, 2012, the IEM notified NYCDPR that a portion of the 12,000 cubic yards of cover layer material sampled on September 21, 2012 was approved for import to the Site. Stockpile SW consisting of 2,000 cubic yards of cover layer material was approved based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results. Stockpile DSS consisting of 10,000 cubic yards had acceptable environmental results meeting the Site Permit requirements but was not approved due to infiltration results not meeting the Permit requirements. On October 2, 2012, the IEM notified NYCDPR that Stockpile DSS consisting of 10,000 cubic yards of cover layer material was approved for import to the Site since the IEM witnessed thorough mixing of the stockpiled material at the source site on the morning of October 2, 2012.

On October 8, 2012, the IEM notified NYCDPR that all of the 16,000 cubic yards of cover layer material sampled on October 2, 2012 was approved for import to the Site. Stockpile SW consisting of 6,000 cubic yards of cover layer material was approved based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results. Stockpile NW consisting of 10,000 cubic yards which had acceptable environmental results meeting the Site Permit requirements was approved based on the fact that the average of the infiltration test results met the Permit requirements and the IEM witnessed thorough mixing of the stockpiled material at the source site on the morning of October 9, 2012.

On October 18, 2012, the IEM notified NYCDPR that all of the 16,000 cubic yards of cover layer material sampled on October 9, 2012 was approved for import to the Site. The stockpiled cover layer material was approved was based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results.

On November 7, 2012, the IEM notified NYCDPR that all of the 16,000 cubic yards of cover layer material sampled on October 24, 2012 was approved for import to the Site. Stockpile SW consisting of 6,000 cubic yards of cover layer material and Stockpile NW consisting of 10,000 cubic yards of cover layer material were approved based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results.

On May 8, 2013, the IEM inspected previously tested and approved cover layer material (sampled October 24, 2012) at the source site and notified NYCDPR that import may resume for the previously approved material.

On July 25, 2013, the IEM notified NYCDPR that the latest round of East Coast Mines cover layer material (approximately 8,000 cubic yards) was acceptable for import to the Site. The submitted infiltration and environmental lab reports for sampling witnessed by the IEM on July 19, 2013 met the Site Permit requirements.

Approximately 167,007.05 cubic yards of cover layer material were imported to the Site from this source site.

#### 3.1.2.4 Amboy Aggregates (415 Main Street, South Amboy, NJ)

The IEM reviewed the infiltration and environmental lab reports for cover layer material (2,000 cubic yards) sampled on August 27, 2012. The IEM notified NYCDPR on September 6, 2012 that the environmental results were acceptable per the Site Permit requirements, however the infiltration results did not pass the Permit requirements for cover layer material. The IEM's involvement on this source site was limited to witnessing the collection of the soil samples for testing and a review of the lab results.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.2.5 Long Island Compost/Great Gardens (445 Horseblock Road, Yaphank, NY)

On November 16, 2012, the IEM notified NYCDPR and LAWS that the Long Island Compost/Great Gardens source site (DEC Permit Number: 1-4722-03647/00001) was conditionally approved to allow for the import of topsoil to be used as cover layer material pending IEM visual inspection and witnessing the collection of soil samples of the proposed material at the source site.

On December 7, 2012, the IEM notified NYCDPR that the 2,000 cubic yard stockpile of cover layer material sampled at this source site on November 30, 2012 was acceptable for import to the Site as both environmental lab results and visual inspection met the Site Permit requirements. The NYSDEC waived infiltration testing requirements for this material as long as the material was used solely in tree pits.

The IEM witnessed sample collection for a 2,000 cubic yard stockpile of proposed cover layer material at this source site on March 20, 2013. On March 28, 2013, the IEM notified NYCDPR and LAWS that the submitted sample results did not pass the Site Permit criteria due to the fact that Benzo(a)pyrene exceeded the permit limit of .061 mg/kg in sample 49369 with a value of .097 mg/kg and Chromium exceeded the permit limit of 19.4 mg/kg in sample 49369 with a value of 22.9 mg/kg. The material was not approved for import to the Site as cover layer material at that time.

On April 9, 2013, the IEM notified NYCDPR and LAWS that the submitted sample results for a 2,000 cubic yard stockpile of proposed cover layer material at this source site (sampled on March 20, 2013) did not pass the Site Permit criteria due to the fact that Benzo(a)pyrene exceeded the permit limit of .061 mg/kg in sample 49369 with a value of .097 mg/kg. The revised lab report dated April 8, 2013 addressed concerns with the analysis of trivalent and hexavalent chromium (the previous lab report had only analyzed total chromium). On April 10, 2013, the NYSDEC notified NYCDPR that after further review of the revised lab results, the 2,000 cubic yards of material was acceptable for import to the Site.

On April 29, 2013, the IEM notified NYCDPR and LAWS that the submitted sample results for a 2,000 cubic yard stockpile of proposed cover layer material at this source site (sampled on April 19, 2013) did not pass the Site Permit criteria due to the fact that Benzo(a)pyrene exceeded the permit limit of 0.061 mg/kg with

a value of 0.140 mg/kg and Dibenzo(a,h)anthracene exceeded the permit limit of 0.014 mg/kg with a value of 0.020 mg/kg. On May 1, 2013, NYCDPR requested approval to use the material as backfill for the tree pits only. On May 1, 2013, the NYSDEC notified NYCDPR that the 2,000 cubic yards of material was acceptable for import to the Site.

On May 14, 2013, the IEM notified NYCDPR and Triton that the submitted environmental and infiltration sample results for 2,000 cubic yards of proposed cover layer material at this source site (witnessed by the IEM and sampled on April 30, 2013) was acceptable for import to the Site as both environmental and infiltration results met the Site Permit requirements.

On October 28, 2013, the IEM notified NYCDPR that that a review was completed for a 2,000 cubic yard stockpile of proposed cover layer material from this source site. The proposed material was visually inspected and sampling was witnessed by the IEM on October 16, 2013. Although the material passed the IEM's physical/visual inspections and did not yield any PID detections, the sampled material did not comply with Site Permit criteria for the following parameters: Benzo(a)pyrene exceeded the permit limit of 0.061 mg/kg in sample GBF65277 with a value of 0.150 mg/kg; Dibenzo(a,h)anthracene exceeded the permit limit of 0.014 mg/kg in sample GBF65277with a value of 0.024 mg/kg; and Dieldrin exceeded the permit limit of 0.044 mg/kg in sample GBF65277 with a value of 0.100 mg/kg. On October 29, 2013, NYCDPR submitted additional documentation to the NYSDEC for evaluation. Based on review of submitted information, the NYSDEC notified NYCDPR on October 29, 2013 that this material may be imported to Site and used solely for backfilling the parking lot curb planters and shall not be used as capping material.

On March 11, 2014, the IEM notified LAWS and NYCDPR that the 2,000 cubic yard stockpile of cover layer material originally sampled and witnessed on October 16, 2013 was acceptable for importation. On March 11, 2014, the IEM completed a site visit and performed a visual inspection of the existing stockpile at the source site.

Approximately 8,434.85 cubic yards of cover layer material were imported to the Site from this source site.

## 3.2 On-Site Fill Importation Inspections

### 3.2.1 Process

As required under Special Condition 24 of the 2014 Permit, all fill importation was inspected at the Site by the IEM. Fill material volume (truck volume) was measured and recorded for each delivery of fill material as it arrived on-site by NYCDPR's appointed representative. The fill material was then inspected by the IEM at the observation platform near the entrance to the Site. At this time, the fill material was visually and chemically inspected. The visual inspection included observations of the material, disturbing the material with a shovel, and close-up observations of the material retrieved by shovel while still in the truck or trailer. Chemical inspection of the fill material was executed using a calibrated PID. If the fill material failed to meet the Permit requirements for reasons such as a PID reading above ambient air, the presence of asphalt or some other unauthorized debris, etc., the load was rejected immediately prior to

dumping. If the material was rejected, the truck was not allowed to dump on-site and was directed to exit the site immediately.

If the fill material passed the initial inspection at the IEM observation platform, either it was allowed to dump directly at a work location for immediate use as shaping layer material or cover layer material or it was transported to, and dumped at, a stockpile location. At the dump location, the IEM screened the fill material visually and with a PID for a second time prior to spreading if dumped at an active work location. If the fill material did not meet the permit requirements at the dump location, it was immediately rejected, loaded back onto the same truck, and transported off-site.

After the second round of inspection and after the material was dumped on-site and accepted for use, the IEM recorded dump and stockpile locations utilizing handheld GPS units. The data was uploaded to a web-based GIS system intermittently throughout the process in order to provide real-time data to authorize users including the NYSDEC and NYCDPR and to generate figures used to track the dump locations in the biweekly FMRs. The web-based GIS database was maintained by the IEM. Figure 2, included in each FMR beginning with FMR 246, identifies where fill materials were being used and dumped on the Site during construction activities.

A flow chart detailing the on-site fill importation inspection process is included as Appendix 21.

### 3.2.2 Trucking Manifests

Trucking manifests were utilized for all imported shaping layer and cover layer materials. A 5-ply manifest form was completed for each load of material to track each load of material from origination at the source site to destination at the Site. The manifest contained information including but not limited to a manifest number, the source site name and address, the truck driver's name, truck and trailer license plate numbers, as well as the time of departure from the source site and arrival time at the Site. See fill import manifests included in Appendix 13.

Note that manifests for material approved for importation prior to November 2008 cannot be retrieved and are not included in Appendix 13. The manifest information was stored in a NYCDPR document repository that was damaged by flooding and the files have been lost. However, the FMRs for the time period prior to 2008 comment on the nature of this work.

### 3.2.3 Rejected Trucks & Materials (JFK Consent Order Material & Misc. Debris)

Generally, materials were either rejected upon initial inspection at the IEM observation platform or rejected upon dumping at the work area or stockpile location. The most common reasons for rejection were the presence of asphalt or other unauthorized debris mixed with the material or elevated PID readings.

Details for all rejected trucks were included in each bi-weekly Fill Management Report (FMR). Trucking manifests associated with rejected truckloads were marked with the word "REJECTED" by the IEM. Trucking manifests for rejected trucks are included as Appendix 13.

During 2010, fill material from one particular source at JFK Airport was brought on-site and placed in seven different stockpiles ultimately being used as fill material beneath the clubhouse and maintenance building parking lots. The material was believed to be in conformance with permit conditions. However, the material was found to be in violation of 2005 Permit Special Conditions 1, 9, and 16, during NYSDEC and IEM inspections. On January 10, 2011, NYCDPR signed an Administrative Order on Consent (Consent Order), Case No. R2-20100521-172, related to this fill material. The Consent Order is included as Appendix I, of the 2013 Engineering Report included in Appendix 20.

## 3.3 Fill Tracking

Special Condition 9 of the 2014 Permit required quantification of all imported fill material. Fill importation was continuously tracked by the IEM. To account for the difference in truck volume and in-place volume, the IEM applied a 41.7% correction factor for shaping layer material and an 18% correction factor for cover layer material as set forth in the Permit. Additional details and methodology related to calculation of the shaping layer correction factor is included in a December 11, 2009 letter included in Appendix 19.

The cover layer material correction factor was separated from the shaping layer correction factor and revised in accordance with a NYCDPR submittal dated April 1, 2013 and revised April 8, 2013. The methodology for calculating the cover layer material correction factor is included in the revised April 8, 2013 submittal, which is included in Appendix 19.

As shaping layer and cover layer fill materials were imported to the Site, the IEM tracked volumes for each source site with respect to authorized volume based on approved sample analysis results for each source at the required sampling frequency (i.e. per 10,000 cubic yards for shaping layer material and per 2,000 cubic yards for cover layer material as included in Special Condition 14 of the 2014 Permit). The volume of imported material was tracked real-time as the IEM uploaded source, truck, and fill material volume information as each load of material was dumped on the Site. The fill tracking process, as part of the overall environmental monitoring and database management web-GIS system developed by the IEM and utilized beginning on October 25, 2010, was awarded a New York Chapter American Council of Engineering Companies (ACEC) Platinum Award in April of 2013. The web-GIS system allowed the IEM to upload and store data related to each load of fill material entering the Site, map its location, and allow real-time access to the data and mapping for NYCDPR, NYSDEC, the Contractor, and the general public.

At various times throughout fill importation activities, source site, shaping layer, or cover layer material totals were modified for various reasons. Additional details related to corrections and modifications can be found in Section 4 of corresponding Fill Management Reports, notably FMRs 213, 266, 277, 290, and 305.

Effective with FMR 290 and retroactive to October 25, 2010 (i.e. Woodard & Curran's first day as the IEM on-site at the Site), shaping layer and cover layer material volumes were tracked based upon the calculated volumes within each truck, as calculated by TRC and provided to the IEM (i.e. Tables 4-2 and 4-3 of each FMR). This provided for the most accurate and consistent approach to monitoring the volume

of imported fill materials. Prior to receipt of the calculated volumes from TRC, the IEM tracked estimated volumes as trucks dumped on the Site.

The Fill Delivery Summary Table included in Appendix 11 contains information related to the total amount of shaping layer and cover layer materials imported to the Site. The total volume of shaping layer material imported to the Site since October 18, 2002 was 2,681,338.15 cubic yards (truck volume) or approximately 93.4% of the authorized amount under the Permit. The total volume of cover layer material imported to the Site since October 18, 2002 was 480,959.49 cubic yards (truck volume) or 100.1% of the authorized amount under the Permit.

On April, 17, 2014, the NYSDEC confirmed via email that a minor exceedance of the cover layer in-place volume as included in the Permit is acceptable considering no additional shaping material will need to be imported and that the exceedance could be addressed via as-built drawings and in the final construction certification report. A copy of the email is included in Appendix 19.

The Bronx-Whitestone Bridge bound the “Site” to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue and St. Raymond’s Cemetery to the north, and the East River to the south. The project was originally managed under Ferry Point Partners, LLC (FPP).
On July 17, 2000 the New York State Department of Environmental Conservation (NYSDEC) issued Part 360, Solid Waste Management Permit No. 2-6006-00014-000110 jointly to the New York City Department of Parks and Recreation (NYCDPR) and FPP to allow a total of 1,000,000 cubic yards of fill to be imported and placed on the Site. Importation began in August 2000.

On October 18, 2002 the NYSDEC issued Part 360, Solid Waste Management Permit No. 2-6006-00014-000113 (2002 Permit) to allow a total of 1,522,300 cubic yards of fill to be imported and placed on the Site. The fill material was to consist of approximately 1,272,300 cubic yards of select exempt construction and demolition debris for the shaping layer, and approximately 250,000 cubic yards of uncontaminated soil for the cover layer. The 2002 Permit also stated that, “approximately 415,000 cubic yards of fill was deposited on the Site prior to the effective date of the permit and the projection for in-place fill material to complete the project was 1,107,300 cubic yards, consisting of approximately 857,300 cubic yards (in-place volume) of select exempt construction debris for the shaping layer and approximately 250,000 cubic yards (in-place volume) of uncontaminated soil for the cover layer.

In 2003, it was determined that the tournament quality and signature status of the course could be significantly improved by making the facility a "links" style course. The changes from the 2002 Permit include:

- Increasing the support mounding between golf holes and grading the course in a links style.
- Re-routing of holes 11, 12 and 13 to reverse their direction in order to improve player circulation and playing time.
- Moving Hole 9 to the west of the golf driving range in order to improve

the safety zone of the driving range and remove the need for high netting.

- Realigning the centerlines of holes: 10, 16, 17 and 18 to improve the strategic layout and visual experience of the golf course.
- Lowering the elevations of tee 4 and 6. This will eliminate the retaining wall proposed at the northeast comer of the Site.
- Adding a golf training area at the north end of the driving range. This required shifting the centerline of Hole 8 slightly north and increasing the support mounding around this area to buffer the adjacent holes.
- Increasing the mounding adjacent to the TBTA toll plaza in order to block noise and adjacent traffic from view.
- Shifting the Site roadway along the east side of the bridge to accommodate a TBTA easement that extends 25 feet east of the bridge. This required changes to the parking lot at the clubhouse and the location of detention/water quality basin, and waterfront park.
- Eliminating the Boathouse Grill restaurant in the Waterfront Park. A restaurant will now be located within the banquet facility. Parking spaces for the banquet facility were increased to accommodate the restaurant. A restaurant may be constructed within the waterfront park in a future phase, based on economic demands.
- Modifying the parking lot for the Waterfront Park. The 120 parking' spaces for the Waterfront Park will be located near the Whitestone Bridge approach structure.

These proposed changes to the golf course would have increased the total in-place fill volume for the project to 2,370,000 cubic yards to shape the course in a links style.

The quantification of the imported fill material was to be continuously tracked by both truck volume and periodic topographic surveys of in-place volumes. Initially it was assumed that truck volume would be reduced by 25% when compacted into place, but a new correction factor was to be calculated. On November 1, 2004, the NYSDEC approved a revised truck reduction factor of 42.4%, which was based upon an October 10, 2003 30% aerial topographic survey, and On December 7, 2004, the NYSDEC approved a revised truck reduction factor of 41%, which was based upon a July 17, 2004 60% aerial topographic survey. These recalculations were performed by dividing the actual in-place volume by the total cubic yards of truck volume delivered to the site as of the date of the survey as per the “2002 Permit

TRC Raymond Keyes Associates, A Division of TRC Engineers, Inc. prepared an, “Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY – Engineering Report; Dated May 31, 2005; Revised June 30, 2005” which comprised of Volume #1, Volume #2 and a twenty six (26) sheet drawing set entitled, “Ferry Point Park Public Recreational Facility Bulk Earthwork, Bronx, New York, Supplement No. 2” (2005 Report) . The 2005 Report represented the following scope of work:

- An eighteen (18) hole golf course with practice area.
- Maintenance Area in the northwest corner of the Site.
- Clubhouse Parking Lot in the southwest portion of the Site.
- Banquet Facility in the southwest portion of the site (along Emerson Avenue)
- Community Park
- Waterfront Park with parking lot.
- Drawing G-3 and G-4 of "Ferry Point Park Public Recreational Facility Bulk Earthwork, Bronx, New York, Supplement No. 2", showed the deviations in grading between the plans approved on 10/18/02 with the proposed plan.

On November 18, 2005 the NYSDEC issued Part 360, Solid Waste Management Permit No. 2-6006-00014-000113 ("2005 Permit") authorizing the importation of a total of 2,370,000 cubic yards of in-place fill material to the Site. The fill material was to consist of approximately 2,120,000 cubic yards of select exempt construction and demolition debris for the shaping layer, and approximately 250,000 cubic yards of uncontaminated soil for the cover layer. The truck reduction factor was 41% and could be further modified.

In 2007, TRC Engineers, Inc. ("TRC") was awarded a one (1) year contract to provide "Civil, Environmental and Construction Services for Compliance with DEC permit Related to the Construction of a Golf Course at Ferry Point Park". The order to work date for that contract was October 25, 2007. The scheduled completion date was October 23, 2008. The contract was extended an additional year to October 24, 2009. On October 26, 2009, "TRC" issued a "Year 2 End Project Summary" and estimated that approximately 202,000 total cubic yards of material was imported to the Site by October 22, 2007.

On October 26, 2007, the NYCDPR and FPP terminated the license agreement to develop, construct and operate the Project at the site and on February 29, 2008 FPP submitted an application to transfer the "2005 Permit" solely to the NYCDPR. On August 12, 2008, the NYSDEC notified the NYCDPR and FPP that the "2005 Permit" had been transferred to the NYCDPR.

The order to work date for construction of the Community Park was August 11, 2008. Fill importation continued as witnessed by the Independent Environmental Monitor (Gannett Fleming). On September 30, 2009, Thomas Balsley Associates, NYCDPR design consultant issued a revised drawing changing the limit of the Community Park. The new Site was reduced in size by moving the fence line in the south further north and by moving the fence along the proposed golf course closer to Balcom Avenue.

On January 22, 2009, in accordance with Special Condition #10 of the "2005 Permit", TRC Engineers, Inc. (TRC) submitted a revised truck reduction factor of 40.3%. On February 11, 2010, NYSDEC approved a truck reduction factor of 41.7%.

The order to work date for construction of the Ferry Point Golf Course was October 23, 2009. The golf course layout that the NYCDPR bid was modified from that which shown in the 2005 Report. One major

change was the total removal of the Banquet Facility in the southeast part of the Site. There were also changes in the placement, alignment and grading of some holes.

On February 1, 2013, the NYSDEC granted a permit modification to increase the limit of cover material to 394,000 cubic yards with the stipulation that the Agency revisit the compaction factor. It was determined that the compaction factor for the granular cover material (sand) would be 18%. This would revise the "trucked in" quantity to 480,488 cubic yards. The compaction factor for cover layer material approved per April 26, 2013 letter from NYSDEC to DPR.

On May 21, 2014, the NYSDEC issued Part 360, Solid Waste Management Permit No. 2-6006-00014-00013 (SW) & 2-6006-00014-00013 (TW) to the NYCDPR to allow a total of 2,514,000 cubic yards of material in-place volume (2,120,000 cubic yards in-place shaping material/394,000 cubic yards in-place cover material).

## 3.4 Total Carcinogenic Semi-Volatile Organic Compound Tracking

As identified in Special Condition 14 of the 2014 Permit, the NYSDEC Acting Regional Director letter dated October 25, 2006, authorized the import of shaping material with a total carcinogenic SVOC (tcSVOC) level of up to ten parts per million (ppm), which would not otherwise be acceptable, provided the tcSVOC weighted average of all imported material is equal to or less than 3 ppm at the end of each quarter. The tcSVOC weighted average is defined as the sum of the products of the material volume and the material tcSVOC, for each material source, divided by the total volume of the material imported. The weighted average was calculated over the course of construction and the final weighted average for shaping layer and cover layer materials imported to the Site was 0.70 ppm, less than the 3 ppm maximum. The total carcinogenic SVOC weighted average table and computations are included in Appendix 12 for materials imported to the Site after November 18, 2005.

SVOCs were not sampled for at the East Side Access and 2nd Avenue (94th Street) source sites due to the source being undisturbed, virgin rock material generated from subway tunnel boring. NYSDEC email correspondence dated April 15, 2011 stated that the IEM should apply one-half of the method detection limit (MDL) from the latest lab report sampled at that time for materials originating from those two source sites.

# 4 Construction

## 4.1 General Construction

### 4.1.1 Community Park

Construction of the Community Park consisted with capping the 11 acre site, installing baseball fields, a basketball court, walkways, a comfort station, and a landscaped stormwater retention area. Construction started on August 11, 2008. As of December 31, 2011, the stormwater retention pond, passive landfill gas (LFG) vents, and recreation facilities were considered complete. The Order to Work date for the comfort

station was March 19, 2014. The original scheduled completion date was September 15, 2014. The anticipated completion date is currently the Fall of 2015.

### 4.1.2 Golf Course

Generally, construction for the Golf Course was completed from the northeast to the southwest. The sequence of construction started by grading, rough shaping and compacting each hole, installing major drainage lines and inlet drains, installing irrigation lines and fine shaping the holes, installing branch drainage lines, constructing the greens and tees, installing demarcation material, grading cover material, fine grading cover material, and final stabilization by hydro-seeding. Each hole was constructed individually and then turned over to Trump, who is contracted with NYCDPR to maintain and operate the grounds and golf course, for care and maintenance during the grown-in period and prior to course operations.

LAWS completed construction work, including punch list items associated with their construction contract, and demobilized from the site in July 2014. Trump has and continues to perform various earth disturbance related work on the Site, in addition to standard maintenance of the Site. All permit related activity, including earthwork, general construction, and fill deliveries have been coordinated with the IEM, and the IEM has witnessed the work activity and documented inspection observations in the Daily Observation Reports. Specifically, IEM oversight related to Trump's on-site activity includes, but is not limited to, the replacement and relocation of trees, construction of a clock tower and associated subsurface concrete footing, excavation of trenches and installation of utilities to support various on-site facilities including the temporary clubhouse, installation of a cart barn, re-grading of an existing shaping and cover layer earthen berm and subsequent installation of concrete block letters at the surface, and installation of asphalt. For a detailed description of Trump's work activities requiring IEM oversight subject to the Permit conditions, refer to the Daily Observation Reports located in Appendix 5 beginning on June 19, 2014.

### 4.1.3 Waterfront Park

Special Condition 37 of the 2014 Permit requires that NYCDPR submit a revised design for the Waterfront Park and provides NYCDPR the flexibility to remove the Waterfront Park from the NYSDEC Part 360 Permit and permit the project under a separate NYSDEC tidal wetlands permit. The Waterfront Park is currently in the process of being conceptually scaled back in magnitude due to the impacts of Hurricanes Irene and Sandy, and design plans are being value engineered and developed. NYCDPR intends to submit plans to the NYSDEC upon completion of an approved design, and handling the construction via a separate NYSDEC tidal wetlands permit. Any SEQR related documents will be updated accordingly. The final end use of the Waterfront Park is anticipated to be publically accessible and consists of a passive recreational feature. NYCDPR will not be performing post-construction monitoring in this area of the Site until construction is completed and approved, and will restrict public access until such time.

## 4.2 Environmental Controls/Construction

### 4.2.1 Wells (Landfill gas, groundwater and water balance analysis)

NYSDEC requested NYCDPR on August 6, 2010 to demonstrate that soil being used for final cover material (not specifically the uppermost layer) would have a sufficiently low coefficient of permeability and percentage of organic material to minimize infiltration of water into the lower layer of fill material. These comments were submitted as additional comments to the November 25, 2009 permit application submittal.

NYCDPR performed a site-wide water balance evaluation to predict post-construction infiltration rates. EPA's Hydrologic Evaluation of Landfill Performance (HELP) model was used for this evaluation. The results were presented to NYSDEC on May 13, 2011 as well as incorporated in Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East, Bronx New York October 15, 2013. The model used criteria including a typical one-foot thick soil landfill cover with the proposed soil cover material as designed for the facility. The model also accounted for impermeable areas of the site, irrigation of the golf course, drainage system stormwater capture and the lining of ponds.

The soil cover permeability of 14 inches per hour was used for the overall site model. Using this infiltration rate the overall volume of water penetrating the site would be lowered by approximately 9,700 gallons per day. A subsequent water balance analysis was submitted to NYSDEC on August 10, 2011 presenting infiltration rates with a soil permeability of 30 inches per hour that also lowered the overall volume of water infiltrating the site following completion of construction. Discussion and request for confirmation that the site drainage was adequate for a 30 inch per hour permeability took place and the final maximum permeability of 30 inches per hour was approved by NYSDEC for cover material. Cover material imported to the site was tested subsequent to this approval to insure it was able to meet the goal for material permeability. More specifically, testing was combined from individual stockpiles and sources and the average from those was used to determine acceptability of material. Individual variability in sample results was expected because loading, unloading, stockpiling and spreading over the site was recognized as providing a homogeneous layer over the site. Samples were collected at a frequency of one per 2,000 cubic yards moving forward from January 26, 2012 until importation of material was completed.

Additional impacts on water balance came from lined irrigation and retention ponds. There is one large irrigation pond located on the course and several small retention ponds located throughout the open course. The irrigation pond's purpose is to collect storm runoff during storm events and stor it to be utilized for irrigation of the upper cover layer during non-storm periods. The grading and drainage for the stormwater collection and retention were provided in the November 25, 2009 permit application. NYSDEC requested that infiltration beyond the upper layer of cover material be minimized to the maximum extent possible on August 6, 2010 and this included lining each of the five on-site retention ponds to limit infiltration as much as could be done.

The subsequent changes to cover permeability and the lining of irrigation and retention ponds required a review of the Stormwater Pollution Prevention Plan (SWPPP) in order to confirm the additional flow would

not exceed the design criteria for the storm system. The engineering review conducted at that time (October 18, 2011) confirmed the stormwater system design was adequate to carry this flow.

NYSDEC granted a conditional approval for the Ferry Point Site to accept a 30 in. percolation rate per hour cover material on October 21, 2011. The conditional approval was based on a request for DPR to "submit for approval an amendment to the Stormwater Pollution Prevention Plan (SWPPP) dated November 13, 2009, with plans and computations that reflect the partial lining of the stormwater basins." DPR provided this in a technical memorandum to NYSDEC on November 16, 2011. The memorandum presented a formal submittal of the pond liner design to NYSDEC and included excerpts of calculations from the November 13, 2009, SWPPP. An approval was provided by NYSDEC on December 2, 2011.

Municipal solid waste (MSW) filling operations ceased at the Site in the 1960s, prior to the implementation of the comprehensive environmental regulations now in place, and a formal groundwater sampling program was not required at that time. Information on groundwater quality at a former landfill site such as Ferry Point Park East can be used to help evaluate existing groundwater conditions. For the 2005 Permit application, the Site's history was reviewed and a geotechnical investigation was performed to evaluate the potential for adverse impacts on the Site's groundwater due to the placement of fill during construction of the golf course and parks.

A summary provided in the 2005 Engineering Report concluded "that the placement of fill would not have an adverse impact on pre-development groundwater conditions at the site and that the proposed golf course construction would not result in an increased flow of contamination into the river through groundwater flow." (TRC 2005a).

In their comments of June 25, 2010, NYSDEC asked DPR whether any new information was available regarding groundwater conditions at the Site, and if any new, relevant information was available, to verify the conclusions of the geotechnical portion of the 2005 Engineering Report (TRC 2005a).
Following several discussions with DPR, and because no prior sampling had been required, NYSDEC requested that DPR undertake a groundwater sampling program and develop a reference point for background water quality conditions at the Site.

To comply with this request, DPR prepared written field procedures for new well installations, well development, and groundwater sampling (see Appendix G.1).
The field procedures were submitted to, and approved by, NYSDEC prior to the start of the work effort. Prior to installation, the locations of the monitoring wells were approved by NYSDEC during a meeting held with DPR on September 22, 2011.

Landfill gas monitoring over the entire Site has incorporated various different types and configurations of monitoring points. These include perimeter and interior wells and vents that have been monitored over time on a regular frequency. Monitoring has been recorded and reported according to Special Conditions Monitoring as referenced in the March 2014 permit and results dictate continued additional monitoring when that has been necessary. This monitoring continues under the Post Closure Monitoring

requirements and in accordance with the Landfill Gas Management Plan. A total of thirty seven passive vents were installed throughout the Golf Course and Community Park on an average spacing of approximately one vent for every five acres. These vents are considered passive and allow the natural venting of subsurface gases to take place without any additional vacuum or fans. Additional active vapor removal does take place at each of the constructed buildings on the site. This includes the comfort station and maintenance shed on the Golf Course and comfort station at the Community Park. Active systems operate at both of these locations on a continual basis and vent the subsurface area beneath the associated slabs to the atmosphere. There are no structures planned for or constructed on the Waterfront Park parcel at this time.

Passive gas vents are installed throughout the golf course and are included along the perimeter within the venting trenches, within the overall golf course as individual stand-alone vents and in combined systems of interconnected piping to carry landfill gas from beneath irrigation ponds.
Landfill gas monitoring includes perimeter probes located along an approximate 250 linear ft. interval on the north, east and southern site boundaries; off-site monitoring points along Buttrick, Balcom, Schley, Miles and Emerson Avenues; a passive vent trench installed along the eastern and northern perimeters of the course with piezometers installed along the vent trench to allow for monitoring of the groundwater levels associated with the vent trenches; individual passive vents within the golf course and community park space; a passive vent system of interconnected piping serving the irrigation pond; and sub-slab depressurization systems beneath the enclosed buildings located within the golf course and community park.

In February 2012, eleven new groundwater monitoring wells were installed across the Site to obtain information on current groundwater conditions. Design documents for the groundwater monitoring wells are included in Appendix G.2 of the 2013 Engineering Report, included in Appendix 20. An initial sampling event was completed in February 2012 and included the testing activities described below.

■ Groundwater Elevation Measurements: Water depths were measured at the 11 groundwater monitoring wells. Two measurements were taken from each well within one hour each of high and low tides, starting at the shoreline and moving inland.
■ Elutriate Testing: One soil core sample per well was collected during well installation in order to perform elutriate analysis. Samples were selected from shaping material zones based on visual observation of the soil cores.
■ Groundwater Testing: Groundwater samples were collected at each of the 11 wells and shipped for laboratory analysis in accordance with the required testing as referenced in the 2002 permit.
■ Hydraulic Conductivity Testing: In situ slug testing for hydraulic conductivity was completed at each of the 11 groundwater monitoring wells.

The initial groundwater monitoring data from February 2012 was submitted to NYSDEC by email on March 28, 2012. This data is included in the report for the initial groundwater monitoring event (see Appendix G.5 of the 2013 Engineering Report, included in Appendix 20). At that time, DPR requested direction from

NYSDEC concerning procedures for future sampling events. That is, should future sample collection be modified due to the high turbidity.
(>1,000 nephelometric turbidity units [NTUs]) observed in the initial samples. A call was held with NYSDEC on May 8, 2012, to discuss the initial data and provide guidance on future monitoring (see Appendix G.3 of the 2013 Engineering Report, included in Appendix 20 for call minutes.) Also during this call, NYSDEC directed DPR to perform inorganic analyses on both filtered and unfiltered samples collected during the next sampling event. If the next round of results is found to be in expected ranges, then future sampling events will utilize only filtered samples for inorganic analyses.

NYSDEC provided DPR with requirements for future groundwater monitoring in their FPP Groundwater Characterization/Monitoring Objective, on May 8, 2012 (see Appendix G.4 of the 2013 Engineering Report, included in Appendix 20). DPR implemented the groundwater monitoring program in accordance with the schedule and monitoring parameters requested by NYSDEC.

The schedule included two additional quarterly sampling events, followed by approximately three semi-annual events (through completion of construction) and three post-construction annual sampling events. After the third annual sampling event, DPR may request to reduce the sampling frequency or cease the groundwater sampling program at the Site. Table 4-1 provides a schedule of the monitoring events that will be performed to complete this program and the parameters that will be analyzed for during each event.

Post-construction groundwater monitoring and groundwater monitoring well maintenance requirements are incorporated into the Post-Construction Custodial Care Plan for the Site (see Appendix I).

### 4.2.2 Liners

A single irrigation pond has been constructed at the Site. The purpose of this pond is to collect and store stormwater runoff and reuse it later for irrigation and maintenance of the golf course vegetative cover. This pond is fully lined to maximize the retention of irrigation water. The irrigation pond design documents were included in the November 25, 2009, permit application package. In addition, there are five smaller water quality ponds designed to provide active stormwater retention and limit the off-site migration of sediment. The geometry and grading (engineering design) of these ponds were also provided in the November 25, 2009, permit application package. DPR considered various methods to meet NYSDEC's request of August 6, 2010, to minimize the infiltration of water through "the lower layers of material to the maximum extent possible." Based on this consideration, DPR is implementing a recommendation contained in the November 16, 2010, memorandum (see Appendix D.1 of the 2013 Engineering Report, included in Appendix 20) to line the five on-site water quality ponds to limit water exfiltration. The pond system has been included in the overall water budget evaluation that was submitted and approved by NYSDEC in addition to the permeability of the upper imported fill material.

Supplemental drawings and specifications for the lining of these ponds are provided in Appendix D.4 of the 2013 Engineering Report, included in Appendix 20. The pond liner designs are consistent with the

previously approved geometry and grading (engineering design) presented in the November 25, 2009, permit application package.

### 4.2.3 Gas Venting

#### 4.2.3.1 Active

According to the 2009 permit the site wide active landfill gas control system consistent with the proposed with the 2005 permit was withdrawn as a design modification. Active systems were installed at buildings and initially proposed for the irrigation lake.

Based on the Final Engineering report, due to the explosive nature, LFG is not allowed to accumulate within any enclosed structure at the site. Therefore active sub-slab depressurization systems (SSDS) have been installed at each of the enclosed buildings at the site. These systems have continuous explosive gas monitoring components of the design. The irrigation lake was not made active and continues as a passive system as per the September 2009 permit modification application.

The SSDS engineering drawings for the golf course facilities (maintenance building and comfort station) are provided in Appendix F.3 of the 2013 Engineering Report, included as Appendix 20. The Community Park comfort station design was provided in the November 25, 2009, permit application. The Waterfront Park comfort station has not been designed. Maintenance of the SSDS and their monitoring equipment will be performed in accordance with the operations, monitoring, and maintenance (OM&M) program for the Site's Landfill Gas management system (see Section 4.4.4). The design of any additional structures at the Site will be completed in accordance with New York City Department of Buildings requirements. The need for LFG mitigation systems for any future Site structures will be evaluated as part of their design.

#### 4.2.3.2 Passive

The LFG management system as redesigned for the Site (since the November 25, 2009, permit application submittal) is an update of prior conceptual passive LFG designs and includes a passive system for the venting of LFG in all areas not covered by enclosed facilities. The primary goals for the design of the Site's LFG management system are to provide safe operating conditions and protect human health.

The proposed passive system is consistent with the plans presented in the 1999 EAS (AKRF 1999), the 2002 Technical Environmental Assessment (AKRF 2002), and the 2005 Engineering Reports (TRC 2005a, b) and was approved under the 2005 Part 360 Permit. It deviates from the 2009 permit renewal application prepared by TRC Engineers (TRC), which recommended an active system. An active system uses blowers or fans to extract gas through vents from the landfills subsurface, whereas a passive system uses vents without blowers or fans. Supplemental Site investigations and extraction testing performed by TRC Engineers at the Site in 2009 and 2010 were reviewed by Walsh Environmental Scientists and Engineers, LLC (Walsh) in 2010. Emissions modeling was also performed by EEEPC in 2010, as discussed in Section 4.4.1. Based on these evaluations and modeling of Site conditions, a Landfill Gas Management Plan (LFGMP) was prepared (see Appendix F.1 of the 2013 Engineering Report, included in Appendix 20). The plan concluded that a passive venting system is sufficient to achieve safe operating conditions for users and workers of the golf course and parks. A description and details of the Site's LFG management system

are presented in the LFGMP. The LFG management system as currently designed is consistent with the proposed venting system described in the 2005 Permit.

### 4.2.4 Vent Trench

The landfill gas perimeter trench was the primary gas-management structure installed in or about 2001. The Trench was initially proposed in the 1999 conceptual LFG control system. The purpose of the vent trench was to capture and prevent the off-site migration of LFG. The 2002 AKRF Report included installation details and certified drawings of the trench and its details.

The LFG trench was constructed along the eastern and a portion of the northern perimeter and was completed in 2001. The trench begins at the water's edge at the foot of Emerson Avenue, continues along the length of the Balcom Avenue Site boundary and continues approximately 1050 ft. in a westerly direction past the intersection of Schley and Buttrick Avenues.

The LFG passive trench is essentially a stone-filled /geotextile-wrapped envelope that begins three feet below the groundwater surface and extends upward to just below the ground surface. The upper 6 inches of the trench is dressed and finished with a layer of wood chips that allow LFG entering the trench to vent to the atmosphere. During the construction there were some areas where stability of the fill material at the water table was noted to be an issue and in these areas the trench was extended to a depth of one foot below the groundwater surface. In addition to the gravel filling of the trench to allow for a porous medium allowing LFG to move upward and escape, a continuous 4 to 6 inch diameter perforated PVC pipe was buried in the upper portion of the stone backfill. Vertical passive vents are connected to this horizontal piping to allow for future modifications should the top of the trench need a cap installed above it. The trench will collect and disperse any and all LFG that comes into it but it was primarily designed to remove methane from passing beyond the site boundary. The vent trench was specifically installed below the elevation of measured groundwater in order to maintain a constant layer of saturation within the lower part of the trench. This groundwater layer would prevent landfill gas from migrating beneath the trench and off of the site. Passive vents were also installed within the trench to allow a rapid ascent of LFG out of the trench and into the atmosphere. Concentrations of LFG that could be an issue within the trench would immediately be diffused in the atmosphere and reduced to a concentration that is not a concern.

Following the installation of the trench, methane concentrations were noted to have declined significantly, demonstrating the effectiveness in controlling LFG in the area.

Landfill gas migration is influenced by a number of factors including barometric pressure, diffusion gradients, composition and distribution of subsurface soil and fill material and groundwater. As landfill gas builds up and accumulates, it moves outward from the points or areas /zones where it is generated, spreading into other areas. Landfill gas migrating vertically will reach the surface and diffuse when it mixes with ambient atmospheric air. The other main concern for migration from the landfill was horizontal migration from the landfill to areas off-site. This horizontal migration can be controlled and to a significant extent can be eliminated through the use of LFG trenches. The LFG trench configuration can prevent accumulated gas from passing beyond the site because it creates an area allowing for diffusion and mixing of LFG with ambient air. The overall trench is constructed and filled with material of a higher

permeability than the surrounding soil or fill and typically offers a more direct connection to the open atmosphere. The base of the trench is extended into the water table which performs two functions that both increase the opportunity for LFG to be removed and thus prevent it from migrating offsite. The first offers a more open contact of the shallow groundwater surface to ambient air allowing dissolved concentrations to be volatilized out of the water column into the air and the second prevents LFG that exits from the landfill soil from travelling beneath the trench out beyond the site.

Approximately 5,350 feet of LFG passive vent trench was constructed along the site boundary between May 2001 and December 2001.

Routine inspections of the LFG passive vent trench included the following observations, depth of wood chip layer over geotextile, excessive fine grained materials, vegetation, erosion along the vent trench and any other condition that may have a potential to compromise the ability of the LFG passive vent trench to intercept and transmit LFG to the atmosphere. Refer to the non-conformance table. Monitoring includes routine bi-weekly observations and inspection of the following specific components of the trench:

- Observation of the covering wood chips to insure they extend to and are level with the ground surface and are free of excessive fine grained materials that would restrict the flow of LFG from the trench once it is intercepted.
- Observation of the vertical hard piping risers to insure they do not show signs of cracking bends or breaks;
- Observation of the vertical riser piping to insure they remain vertical and anchored as they were installed;
- Observation of the vertical vents and openings to insure they remain open.

Continued monitoring of the trench is described in Special Conditions 30 of the modified Permit with NYSDEC. This includes monitoring of groundwater levels in the adjacent monitoring wells. If the groundwater is noted below the bottom of the trench, the following actions are initiated:

1. Evaluate the methane concentrations in nearby perimeter methane monitoring wells and semi-permanent monitoring points. If the methane concentrations measured that day are below the site-specific action level of 25% LEL, continue the normal (bi-weekly) methane monitoring frequency and increase the groundwater level measurements at the location of concern to bi-weekly.
2. If the groundwater level measured at the initial bi-weekly monitoring event is above the base of the vent trench, then defer back to the routine monthly piezometer monitoring frequency.
3. If the groundwater level remains below the trench bottom for the first additional bi-weekly monitoring event, but nearby perimeter methane monitoring wells and semi-permanent monitoring points are below the site-specific methane action level of 25% LEL, continue groundwater level and methane monitoring at a bi-weekly frequency until such time as the

groundwater level is above the base of the trench. Then defer back to the routine monthly piezometer monitoring frequency.

4. If the groundwater level remains below trench bottom for the first additional bi-weekly monitoring event, and nearby perimeter methane monitoring wells and semi-permanent monitoring points are at or above the site-specific methane action level of 25% LEL, then continue monitoring the groundwater levels and methane concentrations for the second bi-weekly event.
5. If the groundwater level remains at or below the trench bottom for the second bi-weekly monitoring event, and the nearby perimeter monitoring wells and semi-permanent monitoring points remain at or above the site-specific methane action level of 25% LEL, further recommendations will be made to NYSDEC.

### 4.2.5 Landfill Cap

In accordance with provisions of the Permit dated May 21, 2014 the landfill was capped with minimum of one foot of shaping layer material over the landfill and one foot of cover layer material over top of the shaping layer material. In areas where there was less than 4 feet of shaping material over the waste layer, a layer of demarcation material was installed. See Section 4.4 for additional information related to the landfill cap construction.

The permit authorized importation of 2,514,000 cubic yards of material to the Site for overall capping of the waste material. This consisted of approximately 2,120,000 cubic yards of select exempt construction and demolition (C&D) debris for the shaping layer, and approximately 394,000 cubic yards of cover material. Specific restrictions were incorporated into the material and those restrictions were maintained and are described under the importation section of this Report. Final surface components of the cap including; greens, contour, heights and top soil) were incorporated into the site under the Nicklaus Design Technical Specification of the June 30, 2005 Engineering Report. This included:

- Greens-Mix imported to the site and tested as per the material testing requirements. Fertilizer and soil amendments applied on the greens after spreading to construction specifications and then grassed as per the specifications.
- Topsoil-Imported to be consistent with native topsoil, and free of rock and debris greater than three quarters of an inch as per Exhibit C of the Engineering Report. Soil amendments, fertilizer applications and seed were added to tee, fairway and rough areas as per Exhibit C of the June 30, 2005 Engineering Report.

### 4.2.6 Environmental Controls On-Site Structures

Due to its potentially explosive nature, LFG shall not be allowed to accumulate within any enclosed structure at the Site. To protect the occupants, an under slab vent system for each enclosed building shall be installed and continuously operated. The LFGMP (see Appendix F.1 of the 2013 Engineering Report, included in Appendix 20) describes the active sub-slab depressurization systems (SSDS) that have been designed for the under-slab of each enclosed building at the Site. These systems will have continuous explosive gas monitoring with local and remote alarm capabilities. The SSDS engineering drawings for the

golf course facilities (maintenance building and comfort station) are provided in Appendix F.3 of the 2013 Engineering Report, included in Appendix 20. The Community Park comfort station design was provided in the November 25, 2009, permit application.
Maintenance of the SSDS and their monitoring equipment will be performed in accordance with the operations, monitoring, and maintenance (OM&M) program for the Site's Landfill Gas management system (see Section 4.4.4). The design of any additional structures at the Site will be completed in accordance with New York City Department of Buildings requirements. The need for LFG mitigation systems for any future Site structures will be evaluated as part of their design

Low-permeability soil/bentonite collars ("soil collars") will be installed for all utility trenches that contain permeable bedding in order to prevent the migration of LFG into enclosed buildings at the Site. The soil collars will be installed around the water and sewer pipelines, within the trenches at the subsurface location where the pipeline crosses above the building foundation (the building line). Each soil collar will be passively vented as described in the LFGMP (see Appendix F.1 of the 2013 Engineering Report, included in Appendix 20) and as shown on the engineering design drawings in Appendix F.2 of the 2013 Engineering Report, included in Appendix 20. Similarly, conduit seals will be used for electrical conduits that are installed in trenches using permeable bedding materials. The conduit seals will be installed at the building lines. Other utility LFG controls include the under slab passive venting for the aboveground double-check valve (DCV) enclosure. The DCV enclosure is for the potable water supply line as it enters the golf course site. Detailed design drawings for the venting the DCV enclosures are provided in Appendix F.4 of the 2013 Engineering Report, included in Appendix 20. The need for LFG venting for any future Site subsurface vaults will be evaluated as part of their design.

## 4.3 Municipal Solid Waste (MSW)

Municipal solid waste ("MSW") was generated throughout site development and excavation activities. MSW material was not utilized as fill material on-site after it was encountered and excavated during construction activities with the exception of MSW excavated and reused on-site in accordance with an Order On Consent issued by the NYSDEC and fully executed as of January 4, 2004 (Order On Consent No. R2-20030724-187). A copy of the executed consent order is included in Appendix 19. In accordance with Special Condition 8 of the 2014 Permit, upon encountering MSW during site development, the material was transported and properly secured into segregated stockpile locations prior to off-site disposal. MSW material consisted of metal, glass, tires, plastics, rubber, paper, fabrics, and miscellaneous debris not suitable for the shaping layer. Refer to Section 4.5 of this report to review further details regarding the minimum fill cover over top of the MSW.

Prior to stockpiling any excavated MSW, the existing ground surface was covered with an impermeable plastic membrane. The stockpile was then encircled with silt fence and the stockpile was covered with an impermeable plastic that was secured with sand bags after the MSW was stockpiled and prior to off-site disposal.

Waste characterization sampling was performed prior to off-site removal as required prior to acceptance by each solid waste facility. Prior to disposal, waste samples were collected from each of the stockpiles

and analyzed to determine if the material was hazardous and to determine a suitable NYSDEC facility for disposal by way of a permitted hauler. A January 22, 2010 letter approving Seneca Meadows Landfill as a disposal facility is included in Appendix 19.

Residual MSW excavated by Trump associated with utility and drilling work at the Golf Course stockpiled in the adjacent Waterfront Park have been removed.

### 4.3.1 Manifests

Manifests were collected for each load of MSW generated and disposed of off-site. Manifests were completed for each load of MSW prior to leaving the Site. Completed manifests contained the following information: driver signatures and appropriate transporter information, facility designation including the address for the facility that was receiving the material, a description of the material being transported, the site generator's mailing and site address, and a total quantity of the material leaving the Site. The weight of MSW was determined by weighing the material (in tons) during the loading process. The MSW was loaded with a pay loader with a scale attached to the bucket. A receipt for the weight of each load was printed and was presented to NYCDPR with the manifest for review. NYCDPR and/or their designated representative signed the manifests as the generator, and then the manifests were then presented to the IEM for final verification.

Copies of the MSW disposal manifests are included in Appendix 14.

Note that MSW manifests accounting for material prior to October 25, 2010 (i.e. Woodard & Curran's first day on-site as the IEM), cannot be retrieved and are not included in the appendix. The information was stored in a NYCDPR document repository that was damaged and the files have been lost. However, the FMRs prior to October 25, 2010 comment on the nature of this work.

## 4.4 Earthwork/Fill Placement

Earthwork and fill placement for this Project were performed in accordance with the Permit. A response received from NYSDEC on July 28, 2009 (included in Appendix C.2 of the 2013 Engineering Report, included in Appendix 20), provided additional clarification regarding what are considered active and passive recreational areas. As per this letter:

Active Recreation – "…all other areas that are not covered with a building or other impermeable cover system… are deemed active recreational areas."

Passive Recreation – "…the golf course is deemed a "passive recreational area" and is required to have a one foot thick cover layer over a demarcation layer."

Following this directive, NYCDPR requested clarification from NYSDEC regarding the demarcation layer requirement for the extent of the Golf Course. The request for clarification was based on the need for further specificity regarding the use of a demarcation layer on the Golf Course.

In response, NYSDEC and NYSDOH reviewed a summary of the analytical data for all the shaping material imported to the Site. Upon review of the data set, confirmatory analytical sampling of the in-place shaping material was requested by the NYSDEC and NYSDOH. NYCDPR conducted test pit sampling and analysis under an approved work plan and submitted the data to the NYSDEC on February 16, 2011.

In their letter dated March 9, 2011, the NYSDEC stated that "NYSDOH reviewed the shaping layer test pit data and determined that it confirmed existing shaping layer data." The NYSDEC and NYSDOH agreed that a demarcation layer would not be required at areas of the golf course having a fill thickness of five or more feet of combined shaping and cover layer materials. The March 9, 2011 letter is included in Appendix C.3 of the 2013 Engineering Report, included in Appendix 20.

The aforementioned directives were the basis for the earthwork, fill placement, and landfill capping process. Additional details related to shaping layer material placement, demarcation layer installation, cover layer material installation, and related construction is as follows.

### 4.4.1 Shaping Layer Material

The Permit requires a minimum of one foot of clean shaping layer material to be installed over top of the existing MSW prior to cover layer material placement. Specific to the Golf Course, grading and compaction activities associated with the shaping layer material were generally completed by hole, consistent with the golf course architect's design. Once grading and compaction of the shaping layer material was completed, NYCDPR completed topographic surveys of the newly graded shaping material layer to assist in determining the depth of clean shaping layer material that was present over the pre-existing landfill surface. These shaping layer material surveys were generated intermittently as shaping layer material installation was completed in sections of the Golf Course.

An analysis was conducted by the IEM, which compared compiled historic surveys from 1998 to the final shaping layer surface surveys completed by NYCDPR. The 1998 surveys included elevations representative of the landfill surface for the Site prior to the earthwork associated with the Project. Based on an analysis and comparison of the survey data, portions of the Site that had less than four feet of approved shaping layer material were identified in a series of earthwork analysis drawings that were provided to the NYSDEC. The earthwork analysis drawings are included in Appendix 10. These plans identify the depth of shaping layer material and show the general progression of shaping layer material filling across the Site. Figure SP-001 entitled "Shaping Layer Material Earthwork Analysis via Surveys" includes a site wide earthwork analysis compiled from the various Site surveys and earthwork analyses completed as construction progressed at the Site.

In areas identified on the earthwork analysis drawings to have less than one foot of clean, in-place shaping material, test pits were performed by the Contractor and observed by the IEM to verify that a minimum of one foot of shaping layer material was present over the MSW, per the plans and Permit requirements.

If areas were found to have less than the required one-foot minimum of shaping material and could not receive additional fill based on the design plans, these areas were adjusted by over excavating the MSW

and backfilling with clean shaping layer material. This process was necessary in order to maintain the designed grades and comply with the Permit conditions. With oversight by the IEM, areas with MSW encountered at shallow depths in the tests pits were excavated outwards from the test pit location until one foot of clean shaping layer material was present. See Figure SP-100 entitled "Shaping Layer Material Test Pit Plan", which includes test pit locations superimposed on an earthwork analysis that visually represents the frequency, location, and presence of MSW within the required one foot minimum shaping layer section prior to reshaping. All test pit locations and the limits of the over-excavation were GPS located by the IEM utilizing a handheld GPS unit. Test pit locations were spaced 50 feet apart over the entire areas that the survey analysis estimated to have less than one foot of shaping layer material. In addition, if MSW material was encountered within the one-foot minimum shaping layer, the frequency of test pits were increased at the IEM's discretion to more accurately determine the extent of over-excavation required. Observations of test pit activities associated with evaluating the shaping layer material thickness are detailed in the IEMs Daily Observation Reports.

### 4.4.2 Demarcation Layer

Consistent with Special Condition 14 of the 2014 Permit, a demarcation layer was installed at the Site, specifically the Golf Course, where the combined thickness of shaping layer and cover layer materials combined were less than five feet. For this Project, "demarcation layer" meant a brightly colored, permeable plastic material placed on top of the Site's shaping layer material and directly beneath the Site's final cover layer material that is easily recognizable during an excavation. The request was made for the protection of Site workers during any future excavation work beneath the cover layer at the Site. Demarcation layer material for this Project consisted of orange construction fencing for the Golf Course.

On July 10, 2012, the NYSDEC confirmed that a nine-inch thick asphalt and subbase layer for the cart paths did not require any underlying cover material or demarcation layer. A black geo-grid material was installed under the cart paths associated with the Golf Course as part of the design. A copy of the correspondence is included in Appendix 19.

On November 21, 2012, the NYSDEC notified NYCDPR that demarcation layer may be eliminated from under ponds as NYCDPR identified that demarcation layer was not required as part of the Permit. A copy of the November 21, 2012 correspondence is included in Appendix 19.

NYCDPR prepared a Demarcation Layer Plan based on a comparison of final design grades and the top of waste elevations extrapolated from soil boring data. The Demarcation Layer Plan is included in Appendix C.4 of the 2013 Engineering Report (Appendix 20). Field verification that the demarcation requirements were being met was performed continuously and routinely by the IEM to confirm Permit compliance as outlined in the shaping layer material section above. Based on the data gathered from the earthwork analysis plans and the test pit excavations, actual areas requiring demarcation layer were identified.

In instances where NYCDPR felt that the installation of demarcation material was not necessary, test pits were excavated to four feet below grade, spaced 50 feet apart, to determine if there was more than four feet of clean shaping layer material installed over MSW. If it was determined via test pits that there was

more than four feet of clean shaping layer material present, demarcation material was not installed. The reasoning assumed a one foot thick cover layer installation and considered the March 9, 2011 NYSDEC/NYSDOH correspondence determining that demarcation layer was not required if the combined fill thickness above MSW was five feet or greater. The March 9, 2011 correspondence is included in Appendix C.3 of the 2013 Engineering Report (Appendix 20).

All areas with less than four feet of shaping layer material present that required the installation of demarcation layer material are identified on Figure SP-200 entitled "Demarcation Layer Plan". The limits of demarcation layer material, as represented on Figure SP-200, were located by the IEM using handheld GPS units at the time of installation, prior to cover layer material installation. Areas associated with the cart paths are also identified on Figure SP-200.

### 4.4.3 Cover Layer Material

Cover layer material was installed at the Site in accordance with the Permit. Special Condition 15(d) of the 2005 Permit required the following:

"The final placement (including topsoil), location, thickness, and detailed chemical limits of the final cover layers on the Site, including the community park and waterfront park, are subject to the specifications, directions and requirements determined by the NYS Department of Health (NYSDOH) to be applicable. It is the responsibility of the Permitees to obtain a written determination from NYSDOH.
The Permitees must provide the Department with a copy of NYSDOH's determination. No cover layer material may be placed on the Site, until the Department acknowledges receipt of NYSDOH's determination."

As required by Special Condition 15(d) of the 2005 Permit noted above, NYCDPR obtained such written determination from NYSDOH in a letter dated, August 2, 2006 included as Appendix C.3 of the 2013 Engineering Report (Appendix 20).

The NYSDEC's active recreational determination from July 28, 2009, required that NYCDPR install two feet of cover layer material and a demarcation layer throughout the Community Park. Soil probes confirmed extremely consistent and appropriate thickness of cover material throughout the Community Park and Golf Course.

For the Golf Course, the upper portion of the landfill was capped using Permit specified criteria for sand and/or topsoil material formally referred to as cover layer material. A sand material was used for the majority of the golf course cover layer with topsoil being used primarily in tree planting pits and other landscaped areas. The IEM observed capping activities associated with the cover layer material including, inspecting cover material at each source site and at the Site per the conditions set forth in the Permit and supporting reference documents. After installation of the shaping layer material and demarcation layer (as required), the cover layer material was installed. The IEM confirmed the depth of cover layer material placed on the Site in accordance with the Permit at the time of installation.

A minimum of one foot of cover layer material was placed over top of the shaping layer material consistent with the passive recreational determination at the Golf Course. Cover layer material was installed by means of either transporting stockpiled material that was previously inspected and approved by the IEM or by directly dumping the material in the work areas as it was imported to the Site. The material was then spread by bulldozers and specialty golf course shaping equipment. The IEM confirmed the depth of the cover layer material placed on the Golf Course area utilizing a graduated rod as the material was being installed.

Confirmation of the minimum of one foot of cover layer material installation on the Golf Course is included on Figure SP-200 entitled "Cover Layer Material Plan". This plan identifies the DOR report numbers and corresponding dates for when the IEM witnessed and measured a minimum of one foot of cover layer material being installed on the Golf Course. The cover layer material depth checks were completed by the IEM using a graduated rod to confirm that the final placement consisted of a minimum of one foot of cover layer material soil. Individual DORs documenting the IEM's observations are included in Appendix 5.

In addition to the IEM checking and confirming the minimum one foot thickness of cover layer material immediately upon installation, post-construction soil probes were completed in March 2015, and dug by hand to confirm the depth of cover layer material throughout the Golf Course. Prior to March 2015, once the site construction concluded and the vegetation was established throughout the Golf Course, an aerial survey (including topography) was performed by LAWS in Spring/Summer 2014 and provided to NYCDPR and subsequently to the IEM in December 2014. In addition, NYCDPR performed a Golf Course wide ground topographic field survey.

The IEM was provided with electronic AutoCAD files of both surveys that captured the final topography of the cover layer material surface. The IEM performed a cut/fill analysis using Civil 3D software by comparing each cover layer material survey to the previously generated shaping layer material surveyed surface (also field surveyed by NYCDPR). Based on a review of the cut/fill analysis results and subsequent discussions with the NYSDEC and NYCDPR, it was agreed by all parties that both survey results were inconclusive, and could not accurately reflect the thickness of the cover layer material on the Site. Since the 12-inch minimum cover layer material thickness could not be verified via survey, NYCDPR then moved forward with field investigations using handheld soil probing equipment in order to perform comprehensive Golf Course wide physical confirmation depth checks.

The IEM was on-site and witnessed all soil probes, and documented all soil probe locations and depth results using handheld GPS equipment. The soil probing work was completed by NYCDPR staff. Soil probe fieldwork commenced on March 11, 2015 and was completed on March 27, 2015. Soil probes were initially completed on a 50-foot grid but were increased to a 100-foot grid on March 19, 2015 based on the satisfactory initial field results and approval by the NYSDEC in an email dated March 18, 2015 (see Appendix 19 for the March 18, 2015 email).

Refer to Figure SP-003 entitled "Cover Layer Material Soil Probe Investigation Results" which illustrates the results of the soil probing investigation. The final results of the soil probing investigation were reviewed on-site with NYSDEC staff, and the NYSDEC required that NYCDPR correct an area in the vicinity of the Hole 14 Green, which resulted in cover soil layer thicknesses of 3 inches and 6 inches. NYSDEC staff stated that this area would require reconstruction in order to satisfy the intent of the 12-inch cover layer material thickness as required by the Permit. NYSDEC staff concluded that the remaining soil probe results sufficiently addressed the intent of the 12-inch cover layer material thickness Permit requirement, and the remaining Golf Course area did not require any further reconstruction or evaluation of the cover layer material.

As per the IEM's Daily Observation Reports, the IEM witnessed the subsequent field delineation the of the area deemed to be of insufficient cover layer material thickness (i.e. the area adjacent to Hole 14 that resulted in cover layer material depths of 3 inches and 6 inches via soil probe results) during the week of April 20, 2015. This was performed by using the soil probe equipment to accurately delineate the limits of the area having a cover layer material thickness of less than 12 inches, and resulted in an area of approximately 6 feet by 12 feet.

On May 4, 2015, the IEM observed the Trump Organization construction crew over-excavate the previously delineated areas that had less than 12 inches of required cover material, adjacent to Hole 14 Green. The area was over-excavated approximately 24 inches below grade, and 24 inches of Cover Material was backfilled and graded over the excavated area. The excavated area was GPS mapped using a hand held Trimble device. Excavated surplus shaping material was transported to a shaping stockpile adjacent to Pond P2.

Similar to the Golf Course, the 24 inch minimum cover layer/shaping layer materials thickness could not be verified via survey. NYCDPR moved forward with field investigations using soil probes in order to perform physical confirmation depth checks. The IEM was on-site and witnessed all soil probes, and documented all soil probe locations and depth results using handheld GPS equipment. The soil probing work was completed by a NYCDPR subcontractor. Soil probe fieldwork commenced on May 18, 2015 and was completed on May 22, 2015. Soil probes were completed on a 50-foot grid. Refer to Figure SP-004, entitled "Community Park Cover/Shaping Layer Material Soil Probe Investigation Results", which illustrates the results of the soil probing investigation.

#### 4.4.4 Greens and Tees Mix, Bunker Sand

Consistent with Section 2.1.2 "Cover Layer Fill Specifications" included in Volume #2 of the 2005 Engineering Report, environmental testing was not required, consistent with cover layer material requirements for the green and tees mix or bunker sand, and therefore was not completed for these materials.

On June 8, 2012, the NYSDEC confirmed that the sand material used for the tees, greens, and bunkers should not be counted towards the Permit stated allowable cover soil maximum. A copy of the June 8,

2012 correspondence is included in Appendix 19. NYCDPR's consultants estimated the required sand material volumes as follows: Tees and Greens (24,705 cubic yards), Driving Range Tee (3,025 cubic yards), and bunkers (6,076 cubic yards). Since these values were estimated, calculated by NYCDPR's consultants, it shall be noted that actual installed volumes may have fluctuated from the volumes identified above. This information is based on an email from Joe Voss to Faisal Choudhury on June 13, 2012.

Special Condition 15 of the 2005 Permit did require that the tees and greens mix imported to the site to be tested as per material testing requirements to meet the project technical specifications. Fertilizer and soil amendments could be applied on the tees and greens mix after spreading to construction specifications and finally grassed, as per the specifications provided by the agronomist.

#### 4.4.5 Topsoil

Topsoil was used on the Site, in lieu of sand, specifically in tree planting pits and other landscape areas. Any topsoil that was imported and used on the Site was approved and met all of the cover layer material Permit requirements including the specification included in Exhibit C of the 2005 Engineering Report.

## 4.5 Meetings

On a bi-weekly basis during construction of the Community Park and the Golf Course, progress meetings occurred in the NYCDPR field office trailer on the Site. Various representatives from NYCDPR, Trump, LAWS, KSE, TRC, the IEM, and appointed representatives attended the meetings to discuss construction progress, current issues, and scheduling.

Available meeting minutes from construction progress meetings are attached as Appendix 9.

## 4.6 As-Built Survey, Record Drawings, Deviations from Approved Design Plans

This section deals specifically with as built drawings, final record drawings and deviations that occurred during construction. It is further broken down into work performed in the Community Park, the Golf Course, the Waterfront Park, deviations to NYSDEC Permit as it pertained to fill importation quantities, modifications to the landfill gas vent trench and additions to the golf course made by the concessionaire.

#### 4.6.1 Community Park

The Community Park project consists of the following features and was designed by Thomas Balsley Associates:

- A softball field and smaller peewee/T-ball field with new drainage
- Two basketball courts
- New formalized park entrances
- Play areas for tots to pre-teens
- Seating areas and lawn for non-programmed activities
- A path and trail system that winds throughout the park
- A detention pond which collectives drainage from the eastern part of the golf course
- Foot bridges
- Shade structure

- Timber deck overlook
- Herbaceous plant materials
- Temporary below grade utilities to service a standard DPR Comfort Station (constructed under a separate contract),
- Below grade infrastructure to service Community Park lighting and fountains,
- Modifications to the Landfill Gas Vent Trench system
- New perimeter fence.
- New Comfort Station. (The comfort station construction is still in progress and expected to be completed in the Fall of 2015)

Deviations to the Community Park project consist of the following:

- The reconfiguration of the location of the perimeter fence on the south and west sides of the Community Park reducing the area of the site[1].
- One missing Vertical Landfill Gas vent just south of the most southerly entrance to the park.
- The relocation of a drain inlet in the softball field[2].
- The utilities servicing the Comfort Station are constructed as of December 10, 2015,[3] which represents the date in which the sanitary sewer connection was completed.

It is noted that below grade features were not examined during a NYCDPR field inspection conducted during July 2014. Community Park as-built information and documentation are included in Appendix 16 and includes a November 18, 2011 letter from LAWS indicating that the Community Park construction was completed as designed (exclusive of the comfort station) as well as three as-built drawings associated with the pond liner construction dated July 14, 2010 as prepared and certified by LAWS (Appendix 16).

### 4.6.2 Golf Course

The Ferry Point Park Golf Course project consisted of the following:

- A Maintenance Building with an active sub-slab depressurization system.
- A comfort station with as active sub-slab depressurization system, which includes a snack bar.
- A unenclosed rain shelter
- An 18 hole links style golf course
- A practice area
- Fill and topsoil importation
- A site drainage system and retention ponds
- A new irrigation pond and irrigation system
- All the necessary plumbing, electrical, gas, environmental monitoring and control devices for the golf course, maintenance facility and comfort station
- Roadway and parking area construction, paving, striping and drainage in compliance with the DEC permit
- Perimeter fencing and appropriate landscape screenings.

[1] See App. 4; Community Park Contract Drawings; Thomas Balsley Associates Constr. Dwg L1.3 & L1.6 dated 03/06/09, revised 09/30/09.

[2] See App. 4; Community Park Contract Drawings; Thomas Balsley Associates Constr. Sketch dated 2/11/09

[3] See App. 4; Community Park Contract Drawings; Thomas Balsley Associates Constr. Comfort Station Dwg P-2 dated 1/26/09

Deviations to the Golf Course consist of the following:

- The active venting system around the Irrigation Pond was converted into a passive system. Fiberglass manholes were changed to concrete manholes and additional piping added around the entire pond. Six (6) vertical passive vents were added, one at each box location and installed October 2014, following NYSDEC discussion. On May 22, 2015 the NYSDEC approved the removal of vertical passive vent #5 thereby leaving five (5) vertical passive vents in operation.
- Modifications to the grading plan did occur as well as minor modifications to drainage and are documented in "Ferry Point Site" visit notes produced by "Nicklaus" from 2010 through 2013 and as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- Retention ponds were lined as per NYSDEC requirements as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The golf cart path surface material was changed to asphalt and additional drainage was added as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The Clubhouse Parking Lot paved footprint was increase/installed as per NYSDEC Consent Order # R2-20100521-172. The Clubhouse Parking Lot was completed in May 2014 as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The irrigation pond pipe penetrations were revised as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The Turf Nursery was revised as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The active venting system inside of the Comfort Station was modified as per Integral Engineering, Inc. design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015). System is functioning, and requires the installation of sensor components of the vapor detection system. Contractor procurement for the installation of the sensor components is in its final stage of approval. Implementation is anticipated by Spring 2016 and the final signed and stamped as-built drawing will be submitted to NYSDEC following prompt inspection of the installation.

### 4.6.3 Waterfront Park

Construction has not begun in the area designated "Waterfront Park".

### 4.6.4 Additions to the Golf – Concessionaire

The concessionaire running the Golf Course is the Trump Organization. Since in their possession (NYCDPR Use Inspections were held for various parts of the project from September 2012 through March 2014) the following additions/deviations have occurred (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015, revised 4/23/2015, 6/25/2015 & 7/13/2015):

- The construction of a Golf Cart Barn (currently under construction)

- The construction of a sign (currently under construction) and curb line realignment
- The construction of a temporary clubhouse including temporary utility services (trailers placed upon the asphalt parking lot)
- The construction of a "starter" kiosk including utility services as well as minor golf cart path widening around it.
- The construction of a clock.
- The construction of a weather vane/station.
- Minor irrigation changes.
- Additional planting along the perimeter fence line. Removal of the aluminum fence along the Waterfront Park and the Golf Course and the installation of a fiber optic sonar alert system in its place (installation of the fiber optic sonar alert system occurred from July 25, 2015 to August 19, 2015 and was witnessed by the IEM).

# 5 Environmental Monitoring

## 5.1 SWPPP

On November 20, 2003, NYCDPR received an Acknowledgement of Notice of Intent for coverage under SPDES General Permit for Stormwater Discharges from Construction Activity (General Permit No. GP-02-01), permit identification number NYR10D547, which transitioned SPDES General Permit coverage previously held under GP-93-06. On May 12, 2009, NYCDPR received an Acknowledgement of Notice of Intent for coverage under SPDES General Permit GP-0-8-001; permit identification number NYR10R112, which was maintained throughout construction completion. A copy of the SPDES General Permit Acknowledgement and Notice of Intent are included in Appendix 1.

In compliance with NYSDEC guidelines for State Pollution Discharge Elimination System (SPDES) General Permit (GP-0-8-001) and General Condition 9 of the 2014 Permit, a Storm Water Pollution Prevention Plan (SWPPP) was implemented during the course of construction at the Site. All work was completed in compliance with the final SWPPP, dated December 22, 2009.

In addition to intermittent IEM SWPPP inspections, NYCDPR representatives also performed SWPPP inspections. NYCDPR performed bi-weekly inspections and associated Site Assessment Reports (filed at the FPP document repository) to ensure compliance with Permit requirements. SWPPP inspections were carried out through the spring of 2014. The SPDES permit will remain effective until completion of ongoing construction including the Golf Course Clubhouse.
Every possible action was taken to avoid non-compliance, such as turbid water leaving the Site. The following is a list of permanent features that were installed at the Site, beyond the SWPPP requirements:

- French drain at the eastern, western, and northern perimeters of the Site to control surface flow of stormwater;
- All ponds were lined, to prevent stormwater infiltration into the solid waste layer; and
- A new trash rack and rock outlet dam at the 60-inch Whitestone sewer outfall draining to the East River.

## 5.2 Landfill and Off-Site Gas Monitoring

The entire Ferry Point Site is equipped with a Landfill Gas (LFG) Management system to cover both on and off site monitoring. The systems purpose is to allow use of the site in its intended purpose as a golf course without having the occupants on the site and users of the golf course being exposed to harmful conditions that would be the direct result of the existence of the landfill. The Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, New York May/August/Oct 2013, referenced the summary of prior LFG efforts. These included preparation of a model for surface methane emissions using data collected during 2009 and 2010. Data for these studies also included a health impact analysis that is summarized in this final Certification Report and is attached with the 2013 Supplemental Engineering Report as an Appendix 20.

The generation rates for LFG were estimated as far back as 1999 using EPA Guidance documents and the results indicated the LFG rates for Ferry Point were consistent with municipal solid waste landfill rates for a facility of this era and overall age. The analysis in 2010 also evaluated hazardous air pollutants (HAPs) in areas of the course as well as community park. In 2011, NYSDEC concluded that there was not an ambient air impact from gas vent emissions and that there was no health impact in the park. This was a major component that allowed the discontinuation of monitoring the passive vents installed in 12 locations throughout the park. Monitoring of the passive vents is included as Appendix E.3 in the Supplemental Engineering Report (Appendix 20).

The following were included as components of the Ferry Point Park Landfill Gas Control System:

1. Irrigation Lake Venting System-Passive
2. Water Quality Ponds Venting System-Passive
3. Sub-Slab Depressurization Systems
    a. Maintenance Facility-Active
    b. Comfort Station in Golf Course-Active
    c. Comfort Station Community Park-Active
4. LFG Venting for subsurface utilities entering enclosed spaces-Passive
5. Perimeter Vent Trench-Passive
6. Perimeter Vent Trench/East-Passive
7. Golf Course 25 In-ground vents-Passive

The Ecology & Environment 2011 Landfill Gas Management Report describes in detail the landfill gas generation rates, composition, migration pathways and methods for diffusion (Appendix 20). It also discusses both the horizontal and vertical migration of LFG across the landfill. Figure 3-1 in the LFG Report (MSW Fill Progression Map, March 11, 2015) shows the historical fill progression that occurred over the landfill lifespan between 1951 to 1959 and how significant areas of open water was filled in over the life of the landfill .

As far back as 1999, Landfill Gas generation rates were noted to be low and in the range of .00004 cubic feet per minute per square foot or about 2cfm per acre of surface area. These generation rates provided discussion and recommendation for installation of an active system beneath planned structures. A 1999 Report referenced in the Ferry Point East Landfill Gas Management Plan did not recommend installation of active venting systems in open spaces with the exception of specific turf grass areas. The 1999 Report also included numerous LFG Control Systems including; interceptor and venting systems, impermeable liner systems for irrigation ponds, soil plugs and conduit seals for underground utilities that enter buildings (Appendix 20).

The main facility LFG management structure was the perimeter vent trench installed in 2001. The specific purpose was to prevent offsite migration of landfill gas. This was designed, and installed with oversight by TRC. The entire trench was installed along the eastern site boundary and allowed a gas barrier to be present between the site and the neighboring residential homes. Construction included extending the trench from the water's edge at Emerson Avenue along Balcom Avenue and the site boundary, approximately 1050 ft. past the intersection of Schley and Buttrick Avenues.

Monitoring of the venting trench began using a number of wells that were installed along the trench. In 2001 monitoring performed after the trench was installed indicated there was an off-site source of methane. This was identified by AKRF and further evaluation along the venting trench indicated there were additional off-site LFG readings. Test pits were identified to have MSW beyond the site and this was one potential source of the elevated readings. The second was the historic filling in the northeastern portion of the site on a former tidal or marsh wetland. No methane was reported in ambient air at that time and the source of methane was concluded by AKRF to have originated from an off-site source.

The initial facility LFG system was proposed to be installed as an active system. Following the 2009 landfill permit modification submittal, the conceptual passive LFG system was updated to include all areas not covered by enclosed structures. In summary, the passive LFG system meets a number of historic reports including the 1999 EAS (AKRF), 2002 referenced in the Landfill Gas Management Plan (Appendix 20) and Volume #2 Application for Modification to the Solid Waste Permit Engineering Report, June 30, 2005, Appendix 20) and was approved under the 2005 NYSDEC Part 360 permit (Appendix 1). In the 2009 DEC Part 360 Permit Modification Request (November 25, 2009, Appendix 20), an active system was recommended. Supplemental Site investigations and extraction testing was performed by TRC Engineers in the period between 2009 and 2010. This information was reviewed by Walsh Environmental Scientists and Engineers in 2010 (Ferry Point Landfill Gas Report, November 2010, Appendix 20). The resulting analysis and evaluation concluded that the Site was able to be operated safely with a passive venting system which was consistent with the 2005 Permit.

The July 2000 NYSDEC Part 360 Permit (Appendix 1) and February 2002 Part 360 Permit Modification (Appendix 1) approved by NYSDEC included numerous conditions related to material importation and capping. The permit was also specific in requiring the installation of a series of perimeter-based landfill gas monitoring wells. Twenty-one (21) perimeter monitoring wells were initially recommended and a final total of 25 were installed at intervals of approximately 250-300 ft. around the perimeter (PZ-01 to PZ-25),

(SH-21 Groundwater Monitoring Well Construction; November 8, 2011. The perimeter for purposes of these wells would be the edge of the golf course portion of the landfill and the adjacent residential neighborhood. An additional 56 monitoring points were required to be installed as the main component of the off-site monitoring network. The off-site wells were referenced in the modified 360 permit. The combined perimeter and off-site wells comprise the full gas monitoring system for the golf course fill area.

Modifications to the overall Landfill Gas Collection systems were based on and included the following:

- In 1986, a passive venting system was reportedly installed with outflow venting. In 2002, there was a plan presented by TRC to perform test pits in order to identify this system and more specifically, to identify the outflow vent location and to determine if connective piping was functioning. The system was never located and has not been able to be incorporated into any LFG system.
- 2005 Engineering Report Vol. 1 (June 30, 2005, Appendix 20) included several LFG components and systems that were aimed to maintain a similar program to the 1999 proposed EAS. This included active systems for all enclosed buildings and sealed penetrations for utility connections. All perimeter and off-site monitoring wells would be monitored bi-weekly for both methane and oxygen. Monitoring showed several points off-site with elevated levels indicating a source that was also located beyond the site. Groundwater was monitored on a monthly basis to evaluate water level in concert with the LFG trench elevation. Irrigation Lake and ponds were recommended to have gas-venting layers and liners installed at their base to allow for collection and discharge of gas collected from beneath them. Specific instances of impermeable barrier installation could be noted where turf health was necessary to be maintained. Most specifically, the 2005 Report did not recommend LFG venting systems in open space areas (Appendix 20).
- A 2009 Extraction Pilot test was conducted to better understand generation rates for on-site LFG. The interpretation of the results of this test prompted a proposal for a low-flow active LFG system that covered the overall golf course. The reason referenced in the Supplemental Engineering Report for the Solid Waste Facility Permit Application, October 13, Appendix 20) was that methane levels in the subsurface was not expected to be able to be made safe by the opening of the golf course. The irrigation pond system was also included in the plan to be connected to the landfill venting system. One caution in this report was the potential for pulling large volumes of ambient atmospheric air into the subsurface which could cause fires and explosions. The system included some forty control zones of extraction wells, green and tee collection piping all connected to vent flares with in-line fans. This system was never instituted.

Modifications to the gas monitoring system included the design and installation of a landfill gas (LFG) vent trench along much of the eastern park boundary. This trench extends from the water's edge at the foot of Emerson Avenue, along the entire length of the site boundary of Balcom Avenue and along Schley Avenue. The trench continues approximately 1050 linear feet to the west past the intersection of Schley and Buttrick Avenues. The trench totals just over 1 mile in length (5350 feet) and construction began in May 2001 and was completed by the end of December 2001. This trench does not cover the entire upland

perimeter. The remaining portion was covered with an existing trench along Miles Avenue. This was planned to remain following the golf course development and provided an effective cutoff for off-site migration in that direction. The final construction included the trench and drainage.

The LFG passive vent trench was designed to intercept landfill gases (primarily methane) originating and leaving the site. The limits of the municipal solid waste extend beyond the park boundaries and the LFG passive trench was not designed to facilitate collection of or negate the impact of gas generated from that material. The trench presents a sound engineering control that will intercept gas migrating through preferential pathways and other routes of least resistance that intersect it. The LFG trench acts to briefly capture LFG moving out of the park and then allows it to vent to the atmosphere. The trench is designed to have a very high relative permeability with increased porosity in comparison to the landfill waste material. As gas enters the trench is can easily and rapidly mix with ambient air in the pore space and then rise out where it can be discharge to the atmosphere. One of the key components of the trench is that the bottom remains into the water table. As long as the bottom of the trench is submerged in the shallow water table, LFGs at the Park cannot migrate beneath and beyond the trench.

The 25 perimeter monitoring wells (also referred to during the construction as piezometers) were located immediately adjacent to the LFG passive vent trench and along the site perimeter adjacent to Miles Avenue. The specific purpose was to provide consistent data comparing the trench bottom and top of the water table to identify locations where the water table may have dropped below the trench, thus indicating the ability for the trench to intercept and capture all LFG along its entire length.

The LFG passive vent trench was constructed of a geotextile wrapped stone envelope that extends from .5 ft. below the ground surface down to a depth of approximately 3 ft. below the surface of the water table. The upper .5 ft. of the trench has a loose covering of wood chips to allow LFG that has entered the trench to exit and discharge to the atmosphere. There were areas where the final depth of the trench only reached to 1 ft. below the water table. These locations were caused by an unstable sidewall after the groundwater table was reached. The trench was also constructed with horizontal perforated 4 to 6 inch polyethylene tubing placed beneath the wood chips near the top of the stone backfill. The horizontal tubing was installed to allow connection to vertical risers in the event the trench surface is covered at some point in the future with an impervious surface.

LFG monitoring has been performed in accordance with Special Condition 30 from the modified Solid Waste Permit (Response Action Plan, December 10, 2002, Appendix 19). This included monthly monitoring during construction in order to determine if water levels were maintained above the bottom of the trench. Specific protocols were required to be performed in the event groundwater was determined to be below the bottom of the trench.
The following Action Plan items were incorporated for low groundwater levels:

1. Evaluate methane concentrations in nearby perimeter methane monitoring wells and semi-permanent monitoring points. If methane concentrations measured are below site-

specific action levels (25% LEL), the normal frequency methane monitoring will continue and the groundwater level measurements will increase to bi-weekly.

2. When groundwater levels increase to fall back into the envelope of the recovery trench, measurements will return to monthly.
3. If groundwater remains below the trench bottom for one additional bi-weekly monitoring event but nearby well methane levels remain below the action level, groundwater monitoring will continue until such time as routine monitoring can be reinstated.
4. When groundwater is measured below the trench and methane levels are at or above the action level, both groundwater and methane measurements will continue at bi-weekly frequency.
5. If both groundwater and methane remain below the trench bottom and above the action level (respectively) for a second consecutive week, a recommendation for further action will be made to NYSDEC.

During the 2014 Solid Waste Facility issuance several references to continuing monitoring and the documents that would be covered under were made (DEC No. 2-6006-00014/00013 (2-6006-0014/00016 Permit Issuance – Solid Waste Management Facility (Tidal Wetlands), May 21, 2004, Appendix 1). The Ferry Point Park East Post Construction Custodial Care Plan is specifically called out as the governing set of protocols for this. Monthly LFG vent trench monitoring is to be performed during the duration of the permit (October 2013, Appendix 20). Additionally under Special Condition 25 there is continued monthly inspection required for the gas venting trench integrity as well as mulch cover. All repairs are required to be made within two weeks and therefore prior to the next inspection. The mulch cover is required to be replaced each spring. Trench maintenance is also described in the Supplemental Engineering Report, Volume 3, Appendix F (Appendix 20).

Landfill methane monitoring has shown from collection of data within the site to be above general action levels of 25%LEL as well as LEL from within the MSW layer. The resulting measurements between 2008 and 2009 supported the hypothesis that methane was generally present throughout the entire MSW layer rather than just from individual locations. Measurements from the shaping layer above the MSW indicated that concentrations decline rapidly once out of the fill layer. These measurements appear to present a better picture of the landfill gas presence and production because the extraction test performed in 2009 referenced a 2003 Journal of Air &Waste Management with fatal flaws for infiltration of atmospheric air into the landfill. In addition, the 2009 extraction test did not reportedly follow the EPA testing methods and would then incorrectly estimate the presence and production of methane. Testing reportedly used differential pressure at surrounding test wells. EPA specified determining radius of influence based on absolute pressures under static and active extraction conditions. EPA measures ambient air intrusion by percent volume of nitrogen and the testing identified ambient air intrusion by percent oxygen. The conclusions that were reached at that time indicated that atmospheric intrusion noted during the testing would have caused the LFG extraction rate to be significantly higher than actual LFG generation rates within the area of the pilot test. If the entire LFG generation rates were then based on pilot test results, the resulting estimate would be potentially far over the actual LFG generation. Historic data from monitoring indicated that LFG generation rates had sharply declined since the initial

2000 measurements began. The reduction was referenced largely as readings from over 100% LEL to non-detect. While there were a few exceptions, this overall reduction was credited to, among other things, the perimeter venting trench and overall LFG decline. One specific area in the vicinity of MW-0 found to continue to present elevated readings was believed to be impacted from an off-site source.

The Ferry Point Landfill Gas Report (November 2010, Appendix 20) was a summary of various testing across the landfill including flux chamber testing that was used to determine the surface emission rates from the overall landfill. The resulting emission rates were important in making the determinations for receptors and potential impacts of methane and hazardous air pollutants. During this review of testing data and as it was presented in several reports, no methane was detected in field measurements from any of the sample locations. This lack of detectable methane was attributed to rapid attenuation of methane as it passed from the MSW into the shaping material and out into the atmosphere. Hazardous air pollutants in the form of certain VOCs were detected in flux box sampling but all below the reported standards or at levels similar to those identified as background.

Testing within the Community Park was also conducted and methane was also not detected in flux box testing indicating it is not emitted at the ground surface at concentrations that are measureable. This meets NYCRR Part 360 criteria. Measurements from within the top 2 ft. of the shaping material were below 25% of the LEL which also falls within the NYCRR Part 360 requirements for on and off-site structures. Perimeter methane was below Part 360 criteria with the exception of the vicinity of MW-0 along Buttrick Avenue where methane was above 100% LEL. This particular area was beyond the site and consisted of early tidal marsh and pre-1945 MSW filling that is believed to be the contributing source of methane. All measurements from the Community Park vents were below ambient concentrations and well below NYSDEC standards indicating no impact above public exposure thresholds in the vicinity of the vents (Ferry Point Landfill Gas Management Plan, October 2011, Appendix 20).

Modelling of the emissions over several efforts conducted between 1999 to 2010 showed that methane levels were very low and in locations where methane was identified, levels were expected to continue to diminish over time. In order to provide adequate ventilation for enclosed spaces and especially where there is a source of ignition (electrical connections or machinery), mitigation methods would be implemented including Sub Slab depressurization systems (SSDS) at each building. This was further described as conservative as methane concentrations exceeded LEL within the MSW layer back during 2008/2009 in TRC testing of the subsurface. Also during this same monitoring period, methane was not present within the shaping material above the NYCRR Part 360 limit of 25% LEL in any location of proposed buildings. Passive venting of the MSW was recommended as a precautionary measure where no buildings were planned and active venting below or within building footprints.

The Golf Course portion of the Site also includes a sizable irrigation lake and water quality ponds. The purpose for these water bodies covers two positive issues. The first is to help control and limit precipitation and infiltration through the cover material and into the solid waste and the second is to help collect water for controlled release and irrigation. Golf course ponds are typically used for storage and

irrigation regardless of the overall construction. The ponds and lake were each designed to be lined in order to contain as much runoff as possible making it available for irrigation. A gas transmission layer was constructed beneath the irrigation lake. This was connected to perforated piping installed around the lake. The 2009 Part 360 Permit Modification Request included Contract drawings showing this piping as a passive venting system surrounding the lake (Appendix 20).

Water quality ponds were proposed to be lined up to the permanent water level capacity with low permeability low density polyethylene (LDPE) liners with the incorporation of a passive venting system. Ponds where MSW was encountered within the excavation would be lined for the entire volume.

The smaller ponds have also been designed and constructed with a gas transmission layer to promote passive venting. This layer consists of permeable gravel and perforated collection piping extending beneath the ponds and exiting from vent stacks that extend above the breathing zone. The drawings and specifications for the water quality pond liners and passive venting systems were included in the Supplemental Engineering Report Appendices (Appendix 20).

The Community Park portion of Ferry Point Park is located along the northeastern side of the site. This includes walking paths, open space and a single comfort station structure. The LFG components of the Community Park portion consist of 12 LFG vents and an active sub-slab depressurization system beneath the comfort station. Sampling and monitoring of the vents has shown that since at least 2011 there has been no measurable flow in the vents and detectable methane in 3 of the 12 vents. Ranges of methane were between 7.5% to 100% LEL as referenced in the 2011 Ferry Point Landfill Gas Management Plan (Appendix 20).

Twenty-five stand-alone vertical passive vents were installed across the golf course and twelve passive vents were installed in the Community Park. The total area not covered by buildings and water features is approximately 190 acres and the ratio of vents per acre is one per five acres. A greater ratio was applied to the community park which has twelve passive vents in open spaces. All landfill and community park vents operate based on changes to water level, atmospheric pressure and also production of landfill gas. Gas can move through the fill material to a point where it is able to be removed through a vent. Additional smaller gas volumes can move upward into the shaping material to be passed along the surface interface. Based on readings, these concentrations are both low and rapidly diffused indicating the overall volume is much lower.

Following the revision of the active venting proposal for the entire Site, the enclosed buildings and structures were left with the earlier requirement for active venting systems. This was required due to the explosive and accumulating nature of methane and other oxygen displacing gases that exist in landfill conditions as well as being precautionary to prevent the potential of accumulation of explosive gases in these locations. In order to protect occupants and visitors of enclosed structures from accumulation of LFG, active venting of the sub-slab area was recommended. The active sub-slab systems prevent accumulation of gas by actively removing it to the atmosphere and increase the flow of air beneath the buildings. This creates a change in pressure from beneath the slab and the inside of the building which

prevents LFG from entering the building in its more concentrated form. Once LFG leaves the confined space from beneath the landfill and mixes with ambient air, the concentrations are rapidly diminished to levels that are not detectable above background.

The three enclosed buildings (maintenance and two comfort stations) located on the Golf Course and Community Park were required to have SSDS incorporated into the slab design and foundation plan.

Two initial buildings within the golf course (maintenance and comfort station) and one in the community park (comfort station) were recommended to be outfitted with active sub slab venting systems. The maintenance building and comfort station in the golf course and comfort station in the Community Park were each proposed and were outfitted with an active SSDS. The designs were initially submitted in the 2009 DEC Part 360 Permit Modification Request (Appendix 20). Operation and maintenance of the systems (once active) is provided in the Operations, Monitoring and Maintenance Plan and in the Post Construction Custodial Care Plan. Systems will have monitoring, notification controls and remote capabilities in order to allow monitoring of conditions.

Sub slab systems for the three existing structures on site function in a similar fashion by reducing the air pressure beneath the foundation and inducing a slight negative pressure. The negative pressure prevents upward migration, accumulation and infiltration of LFG into the aboveground space. Systems can incorporate varying designs in order to accommodate structural requirements, utilities and layout of the overall building.

The maintenance building and community park systems consist of more typical sub slab systems with perforated piping placed in the backfill material above the municipal solid waste but beneath the foundation slab. Piping is connected to a vacuum blower that exhausts the sub slab gas from a high single point into the atmosphere. The comfort station within the golf course uses a similar manner of equipment with the major difference being the foundation design was modified to include the creation of isolated vaults sandwiched between the lower mat slab and upper floor. No access can be made into those vault spaces and they are filled with low density foam. Vent piping was installed into the sealed vaults and the vapor extraction system effectively creates a higher vacuum (negative pressure) in this vault space than would typically be seen below an open foundation. The piping penetrated the floor in the main portion of the building and was extended into the attic where the blower was mounted. Exhaust was vented through the top of the roof in a dedicated stack. The system was installed in March 2015 and put in operation prior to opening the golf course on April 1, 2015. The comfort system details are also described in the deviations section of this report.

The Maintenance building was constructed with a pile supported slab that covers the entire footprint of the building. The system was constructed as shown on drawings X-001.00 through X-006.00 (Contract drawings for: Construction of a Maintenance Building, A Comfort Station, and One Rain Shelter Within the Ferry Point Golf Course – Contract No. X1256-209M, November 11, 2011, Appendix 4). Prior to pouring the slab, the existing ground surface was prepared with geo-textile fabric, a minimum 12 in. layer of aggregate that is gas permeable to allow flow from all areas beneath the slab into the collection piping,

rigid insulation all covered by an impermeable barrier such as liquid boot or other equivalent. Liquid boot and all barriers used are compatible with the known and identified volatile organics identified at the site. Liquid boot was applied to provide a 60 mil thickness. A special capping material was also placed above the liquid boot to protect it from perforations when the rebar reinforcing rods were set in place. Six inch dia. PVC piping was installed beneath the center of the Maintenance Building floor and this was connected to a vertical riser that would exhaust through the roof. The blower was located as the piping exited the slab into the building and exhaust extended up through the roof. The system was combined with combustible gas meters located in each of the occupied spaces of the building that monitor the atmosphere in each area and are connected to a central alarm. Sub slab monitoring points were also installed along the length of one side of the building to allow for sampling. Each point was installed through the slab into the permeable aggregate and the penetration through the slab was sealed. This system was operational prior to the opening of the golf course as the building was being occupied prior to opening of the golf course.

The system in the comfort station at the Community Park was installed in a similar fashion with a smaller footprint building. This system was a single length piping system installed beneath the foundation using the same construction layering as the maintenance building. The blower and equipment has been completed and the system not yet initiated as that area is not currently open. The system is expected to become active in the very near future.

The comfort station within the golf course was also outfitted with an active system but the slab design for this building was modified so as not to require pile supports. This foundation design included a vapor barrier placed on the prepared subgrade. No MSW was exposed and the fill beneath the building was consistent with shaping material consisting of sand and gravel. A mat slab that was 1.5 ft. thick was poured over the vapor barrier and then 4 ft. vertical walls were formed on the slab to cover the perimeter as well as divide the slab into 4 roughly equal sections. The inner sections of the slab were then filled with solid foam up to just below the top of the walls. Six inch PVC piping similar to that used in the maintenance building sub slab was used and extended to the outer two segments. A vertical riser penetrated the floor inside of the building and was extended up into the attic space where the blower was located. The blower exhaust was directed out of the roof through a vent. The system was designed to create and maintain a lower pressure vacuum on the entire four-chamber sub slab area in order to prevent any sub slab gas from accumulating within that space. Pressure testing of the entire area showed that negative pressure was able to be generated and maintained between the mat slab and floor of the comfort station. This system was installed and began operating prior to opening of the golf course and occupation of the building.

Additional controls installed within the buildings included soil/bentonite collars around utilities servicing the buildings. Foundation penetrations were sealed with these engineering methods to prevent infiltration both into the void spaces and up through foundation slabs where utilities are installed. Additionally, soil/bentonite collars were installed in utility corridors where permeable pipe bedding was used in order to prevent LFG from migrating laterally. All conduit and utility penetrations into floor slabs

were also closed with soil/bentonite seals to prevent those corridors from acting as preferential pathways for LFG migration up into occupied spaces.

The Community Park Comfort Station was constructed in an area of MSW at shallow depths below grade and within the foundation envelope. The foundation was designed to incorporate piles for slab support. All utility trenches that were excavated to the building were installed in either shaping material or if MSW was encountered, it was over excavated and the trench backfilled with granular fill to allow all utilities to be place on bedding that did not contain MSW. During excavation, short duration and dewatering was occasionally necessary. Any water removed during dewatering was pumped a short distance away into existing trenches or other locations.

Off-Site monitoring for methane has been conducted back to the early 2000s. Probing was the primary early monitoring and assessment method. Probes were historically located on Schley, Buttrick, Balcom, Miles and Emerson Avenues. Since 2002, concentrations of methane have been lower than the LEL and this has been used to present the lack of significant source of methane at these off-site sources. In 2002, the Methane Monitoring Study (AKRF) identified the presence of buried MSW beyond the site boundaries. In addition to MSW, soils were logged and identified as fine organic deposits representative of the historic marsh deposits.

OM&M incorporates criteria from NYCRR Part 360-2.17(f) including the following:

- Concentrations of explosive gases must not exceed 25% of the LEL in on-site and off-site structures.
- Concentrations of explosive gases must not exceed LEL at the property boundary.

These requirements are being used to guide mandated additional monitoring under Special Conditions and to govern the construction of all future buildings. Several Special Conditions were included within the 2005 Part 360 Permit (Appendix 1) and are incorporated into regular OM&M and will continue moving forward until they are recommended for elimination as part of the permit.

Special Condition 26 includes the monthly monitoring and inspection of gas venting trenches to evaluate the mulch cover material. This will occur each spring following the winter months.

Special Condition 30 includes the monthly groundwater gauging in the perimeter piezometers in order to evaluate the depth to groundwater with respect to the bottom of the gas venting trench. This measurement will continue through the construction process and that period will be considered complete upon the approval of this Construction Certification Report. The monitoring specifies that id groundwater is measured below the bottom of the trench, DPR will implement Special Conditions monitoring. This is further described below in 5.2.2.

Special Conditions 31 includes specific notification and frequency monitoring if groundwater is identified below the bottom of the trench or if LEL of LFG is noted in adjacent monitoring probes.

Special Conditions 32 and 24 include the bi-weekly monitoring of specific perimeter gas wells and on-site monitoring wells. Results of the monitoring will direct more frequent sampling or monitoring and when monitoring may return to the regular schedule.

Special Condition 37 includes bi-weekly monitoring of the off-site gas monitoring network and the results of this monitoring will direct more frequent monitoring or testing.
Additional parameters were added in 2011 by NYSDEC to include hydrogen sulfide, VOCs and carbon monoxide, all were to be reported in parts per million (PPM) and temperature/pressure.

Work that will continue following construction is included in the Post Construction Custodial Care Plan (Appendix 20). That document covers the efforts beyond this report in order to effectively monitor and report on post construction conditions under the Part 360 Permit.
Monitoring during the entire construction period has been performed in accordance with the Landfill Gas Monitoring Plan and the approval of this Report will serve to conclude all construction monitoring.

The most recent and final documentation submitted under this construction effort is the Ferry Point Park Golf Course Irrigation Pond Vent Boxes Monitoring Final Report submitted in May 3, 2015 (Appendix 20). This Report summarized monitoring data and piping/vent/vale configurations around the irrigation pond at the golf course. The overall purpose for the preparation of the Report was to present information to NYSDEC prior to this Closure Certification Report in order to gain approval to close and remove one vent from the golf course area at vent box #5.

The Report describes and presents the configuration of the piping surrounding the irrigation pond and that the removal of this single vent would not have a detrimental effect on the overall LFG system. The entire lop surrounding the pond collects LFG under the conditions that have been evaluated and calculated over the landfill and that appears to be less than one cubic foot per minute. Based on measurements from specific vent box locations within the overall loop, the LEL readings concentrations indicate two possible theories; that methane may be coming from possibly one area and then slowly migrating or spreading to one or two other vent box areas or it may be concentrated in one area and is also being generated at much lower levels from one or two other areas.

In either case, the volume and rate of methane being generated is similar to much of the remainder of the landfill and while this area has actual vent pipes, the remainder of the landfill is direct vented to the atmosphere through the shaping layer. Removal of the single vent at Vent Box 5 will not impact the collection of methane within the underground passive piping but will only eliminate one outlet location. The valve placement at each box allows for multiple vents to be open or combinations of vents to be either open or closed. In addition, sections of the piping around the irrigation pond can be isolated. There is no specific plan other than to remove the single vent from the overall system and this would not impact the passive systems ability to remove methane from the subsurface.

Landfill and off-site gas monitoring was completed as required by the Permit Special Condition X during construction. The IEM accompanied American Environmental Solutions (AES) during landfill gas

monitoring activities at on-site and off-site locations during the course of construction. Monitoring results were transmitted to the NYSDEC by AES after monitoring was completed and monitoring reports were included in the bi-weekly FMRs for the corresponding periods. Landfill gas monitoring results are attached as Appendix C in each the FMRs which are included as Appendix 6. In addition, refer to Appendix 15 for the spreadsheet compilation of all LFG monitoring results to date in tabular and graphic format.

### 5.2.1 Bi-Weekly

Methane gas monitoring of the entire site was conducted on a bi-weekly basis. Results of these monitoring events were forwarded directly to the NYSDEC once they were available and summarized in each bi-weekly FMR (Appendix 6). In addition, refer to Appendix 15 for the spreadsheet compilation of all LFG monitoring results to date in tabular and graphic format.

A review of the historic field data associated with the perimeter LFG vent trench monitoring program from 2001 to present was conducted to evaluate LFG trends at the Site relative to the perimeter passive LFG control (Ferry Point Park East Post Construction Custodial Care Plan, October 2013, Appendix 20) and showed the following:

- After the installation of the vent trench in 2001, methane levels in the vicinity of the LFG vent trench tended to decrease significantly within a year in most LFG monitoring wells;

- Methane levels remained relatively low and below regulatory limits from 2002 through 2004, except for a few wells that sporadically exceeded the regulatory limit;

- In 2005, the measured methane levels tended to increase, likely due to the installation of more reliable monitoring points (new monitoring points and repaired wells); and

- Results from 2008-2011 generally indicate relatively consistent levels of methane, with certain limited sporadic increases above regulatory limits.

Methane levels increased for several on-site perimeter wells, on-site interior wells and off-site semi-permanent wells located during the construction period between 2010 and 2014, especially for the wells located in the northeast portion and south portions of Ferry Point Park; however, the levels were significantly lower than the beginning of the monitoring program, and the levels decreased to zero by 2015 with the exception of two on-site perimeter wells (MW-14 and MW-15) located in the southern portion of the golf course, three on-site interior monitoring wells (MW-0, MW-4 and MW-19), and three off-site semi-permanent wells located on Buttrick Avenue (10, 12R and 14R). The last recorded monitoring event on April 10, 2015 (Special Conditions Landfill Gas Monitoring Report, April 13, 2015, Appendix 7) reported the following methane concentrations (% by volume) exceeding the site specific action level in eight locations:

- MW-0 - 4.5%

- MW-4R - 50.2%
- MW-19 - 83.8%
- MW-15 - 6.7%
- MW-14 - 33.4%
- Well 14R (Buttrick Avenue) - 1.6%
- Well 12R (Buttrick Avenue) - 28.6%
- Well 10 (Buttrick Avenue) - 10.1%

### 5.2.2 Special Conditions

In accordance with Special Conditions #34 and #37c of the November 18, 2005, Permit Modification (Appendix 1), if any individual monitoring point has a bi-weekly reading that equaled or exceeded 100% LEL, or three consecutive bi-weekly readings that were greater than 25% LEL, methane monitoring of these points was conducted on a weekly basis. Monitoring returned to the bi-weekly monitoring schedule once three consecutive readings were each less than the 25% LEL action level. Results of these monitoring events were forwarded directly to the NYSDEC once they were available and summarized in each bi-weekly FMR. In addition, refer to Appendix 15 for the spreadsheet compilation of all LFG monitoring results to date in tabular and graphic format.

## 5.3 Piezometer Monitoring

On a monthly basis, groundwater elevation measurements were taken and recorded in all piezometer locations along the site perimeter vent trench in accordance with Special Condition 28 of the 2014 Permit. Measurements were manually taken using a portable water level meter. The IEM observed piezometer monitoring in the field and groundwater data was submitted to the NYSDEC. Results of these monitoring events were forwarded directly to the NYSDEC once they were available and summarized in each bi-weekly FMR. Piezometer monitoring results were incorporated into the landfill gas monitoring reports attached as Appendix C in each bi-weekly FMR, which are included as Appendix 6.

## 5.4 Settlement Plate Monitoring

Short term settlement was performed with plates installed throughout the landfill in order to evaluate settlement and compaction during the fill placement and grading. The majority of the short term plates were installed following the importation of significant amounts of fill material when the areas had been brought near to or at final grade. The 2014 NYSDEC Permit Modification (2-6006-00014/00013) Special Condition #6 required short term settlement monitoring to meet those requirements incorporated in the January 2005 Settlement Evaluation and Long Term Monitoring Plan. Short term monitoring was performed in accordance with the early 2005 Plan and as construction progressed and as per Special Condition #6. Short term settlement plates were either removed or monitoring discontinued when long term monitoring plates were installed in accordance with the revised Permit. Long term settlement plates were installed throughout the landfill in areas shown on the Figure titled Ferry Point Golf Course Settlement Plate Locations 4/11/2012 by KS Engineers, P.C. The locations of the long term plates were identified to be in the same specific vicinity of the short term plates.

The overall Program for monitoring settlement began in 2002 with the construction of 7 instrumented test fills and installation of 6 settlement plates that were located across the site. Test fills varied between 10 to 18 ft. in thickness and the specific locations were placed where future settlement would be most critical (e.g. future green areas and where significant thicknesses of fill were necessary). The majority of the settlement plates were located in the eastern portion of the site at a time when most of the fill had been imported in order to begin monitoring on-going settlement for areas that had been filled for a period of 9 months or longer. Initial settlement monitoring was conducted for a period of over 2 years and monitoring results were transmitted to NYSDEC on a bi-weekly frequency.

Settlement recorded following June 2003 was recorded but noted to have been significantly influenced by the importation if fill and the loading that this had on the areas adjacent to the test fills. Initial settlement was noted to have a range between 3 and 23 inches with the greatest variation in the western section. This was believed to be the result of a significant compressible clay layer near the surface. The recorded measurements were compared by Langan to the estimated values that had been calculated and they were found to be comparative. One positive aspect of this initial measurement and comparison showed the site to be in an optimal character for surcharge as a result of placement of larger fill loads for shorter periods of time in order to maximize the settlement as early as possible and minimize post construction settlement that is a critical issue for the sensitive surface of a golf course.

The resulting settlement analysis provided a recommendation for fill placement and long term predicted settlement. This information and comparison to settlement data is critical in monitoring the underground utilities for maintenance and repair. Piping settlement would result in lower carrying capacity and therefore storm lines were designed to be oversized with welded ends to prevent separation. Sanitary lines were also designed with the additional anticipated settlement incorporated into their long term maintenance. Increased slope, HDPE piping and flexible joints were recommended where piping would pass through areas of different fill thicknesses and therefore a differential in overall settlement would be expected to occur. Recommendations for flexible connections capable of withstanding rotation and extension were made for sewer lines exiting structures.

Settlement over the golf course surface was presented following the initial evaluation and recommendations for anticipated settlement were determined to be within the initially anticipated settlement and possibly sooner for areas where more substantial thicknesses of material were placed. Additional influences on long term settlement will be thickness and depth to the compressible clay layer. The variation in settlement was estimated to be between 3 to 15 inches over a 30 year period. Non-uniform settlement is also anticipated over the life of the golf course due primarily to the variable thickness of imported material and could equal up to 6 inches. Slope stability is not anticipated to be adversely impacted as a result of the long term settlement anticipated at the site.

Areas where significant amounts of fill were identified to be placed, such as the area between the irrigation pond and Hole #1 was required to be placed in a more controlled manner in order to allow the pore pressure to be evenly reduced. This method would prevent slope failures caused by buildup of pore

pressure. Placement of fill was specified to be in 2 ft. lifts per week which would allow for dissipation of pore water in the clay layer.

Special Condition #7 of the revised 2014 NYSDEC Permit specified long term settlement requirements and that they would continue to conform to those established in the earlier permit. Locations of the replacement long term settlement plates shown on the 2012 Figure were referenced and approved as part of the 2014 Permit Modification.

Long term settlement monitoring will be performed at the initially 8 recommended settlement monitoring plates located throughout the golf course for a period of 30 years following completion of construction.

The plates are located in variable subsurface conditions but in general have been placed where the greatest concentrations of fill material have been placed in connection with the thickest compressible soil layers. The locations were also chosen to be adjacent to underground utilities such as water and sewer mains and/or adjacent to green areas where differential settlement is most critical.

The date being used as the construction completion is April 1, 2015. This was described in the March 30, 2015 executed letter between NYSDEC and NYCDPR which referenced the Substantial Completion of Construction Certification allowing the golf course to open on April 1, 2015. The letter states that NYSDEC and NYCDPR agree that the April 1, 2015 opening of the golf course constitutes completion of the filling operation on the Site and construction of the earthwork portion of the Project as contemplated under the NYSDEC Permit (No. 2-6006-00014/00013 and 2-6006-00014/00016). As a result of this completion date, monitoring will continue until April 1, 2045 or until a point that NYSDEC authorizes monitoring to cease if it is prior to April 1, 2045.

Long term settlement will be documented as it is referenced in the Post Construction Custodial Care Plan (October 2013). This includes providing NYSDEC with an annual inspection report certified by a licensed NYS professional engineer. The monitoring will document the following information during the timeframes referenced:

1. Beginning within 60 days of the approval of this Engineering Certification Report and continuing for a period of 5 years, the quarterly monitoring results will be summarized and submitted on an annual basis.
2. Immediately following the initial 5 year period and continuing for an additional 5 years (10 years from the date of Engineering Certification Report approval) monitoring will continue on a reduced bi-annual basis and the results will be summarized annually.
3. Immediately following the year 10 bi-annual report summaries, monitoring will be performed and reported on a reduced annual basis. This annual monitoring and reporting will continue for the duration of the 30 year period or for 20 years.
4. Following the initial 5 year quarterly monitoring period, NYCDPR may petition NYSDEC for a decrease in the monitoring frequency or for cessation of monitoring altogether. In the event that NYSDEC approves terminating the monitoring for any monitoring plates, NYCDPR will evaluate the settlement plates for either abandonment or removal. This evaluation will be performed within

the first year following approval of monitoring cessation. The abandonment or removal documentation will be signed and certified by a NYS licensed professional engineer and provided to NYSDEC within the concurrent post closure reporting period after the completion of the work.

Special Conditions 6 and 7 of the 2014 Permit and the recommendations provided in the Settlement Evaluation and Long-Term Monitoring Plan dated January 26, 2005, prepared by Langan Engineering and Environmental Services, Inc. set forth settlement monitoring requirements related to the placement of fill material across the Site. A copy of the Settlement Evaluation and Long Term Monitoring Plan is included in Appendix 20. Settlement plate monitoring was performed on-site in accordance with the Permit. Settlement monitoring reports are attached as Appendix D in each of the FMRs, which are included as Appendix 6. Monitoring was conducted on-site as follows. Results of these monitoring events were forwarded directly to the NYSDEC once they were available and summarized in each bi-weekly FMR.

### 5.4.1 Short Term

The short-term settlement monitoring program began in December 2002 with the bi-weekly monitoring of seven test fills and six settlement plates located throughout the Site. Test fills consisted of an engineered soil fill ranging from 10 to 18 feet deep, generally located on-site in areas where significant thicknesses of fill were required. Settlement plates consisted of a subsurface plate beneath a casing and a flush-mount monitoring access port, similar to a monitoring well. Settlement plates that were part of the short-term settlement monitoring program were generally located in areas of the Site already at or close to final grade. The Settlement Evaluation and Long-Term Monitoring Plan recommended the following adjustments be made to the monitoring program during construction:

- Test fills that obstructed construction activities should be replaced with a settlement plate to be monitored near the location of the test fill.

- Settlement plates that needed to be moved for construction purposes should be relocated to the same general area and monitored until long-term monitoring points were installed.

Monitoring at short-term monitoring points was discontinued as required due to interference with ongoing construction. In an email correspondence dated May 1, 2012, included in Appendix H of the 2013 Engineering Report (Appendix 20), the NYSDEC informed NYCDPR that these short-term monitoring locations did not need to be replaced as long as construction at the Site progressed. As construction was concluded in each area of the Site, long-term monitoring plates were to be installed as described below. Short-term settlement monitoring continued to be performed bi-weekly at the Site until October 14, 2013. The design of the long term settlement monitoring points is presented in a January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc. and outlined in a May 21, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by New York State Department of Environmental Conservation. These documents outline the long term settlement plate monitoring locations, detail and required monitoring intervals. Monitoring of final settlement plates began on October 30, 2013 and continued throughout the remainder of construction. As previously stated, the monitoring and reporting schedule will be

modified as the post construction period extends into the future. This has been included in the Post Construction Custodial Care Plan (October 2013).

The following summarizes the efforts with respect to conformance to project design documents:

The approved May 21, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by NYSDEC refers to Appendix H of an October 15, 2013 *Supplemental Engineering Report* for a long term monitoring location plan. Appendix H of the permit which is included as Appendix 20 here, references and includes the April 11, 2012 *Ferry Point Golf Course Settlement Plate Locations* plan prepared by KS Engineers, P.C.

The February 20, 2014 *Ferry Point Golf Course as Built Drawing* prepared by Contractors Line & Grade South, LLC shows the as-built locations of the long term settlement monitoring plates in conformance with the above referenced April 11, 2012 KS Engineers plan. An additional monitoring point between golf course Hole 6 and Hole 7 was added and approved in the May 1, 2012 *Re: Settlement Plates Email* prepared by NYSDEC.

A January 26, 2005 Settlement Evaluation and Long-Term Monitoring Plan prepared by Langan Engineering and Environmental Services, Inc. states that:

> *"These settlement points will be utilized to determine future settlements during the golf course operation. They should be installed once filling operations are completed to within 1 foot of final grades or in other words, during placement of soil cover materials. After their installation, monitoring of the settlement points should be performed once every other month until the construction is complete. Subsequent monitoring should be performed once every 3 months during the first year of golf park operation and once every 6 months for the second year."*

The description above is a deviation from the Post Construction Custodial Care Plan where quarterly monitoring and annual summary reporting will be performed for an initial period of 5 years followed by an opportunity to evaluate and proposed changes. The frequency would without any additional recommendation be reduced to semi-annually following 5 years. This reference accepts a switch to semi-annual monitoring and annual reporting following the first year. This is the only approved change in the settlement monitoring plan outside of the approved 2013 document.

The data from the November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran indicate that settlement plate monitoring was conducted every two weeks in conformance with the minimum requirements of the above referenced monitoring plan.

Monitoring of final settlement plates began on October 30, 2013 and continued throughout the remainder of construction. Results of the monitoring are available in the November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran.

The November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran do not document any non-conformance issues regarding the construction of the long-term settlement monitoring locations. A settlement monitoring plate detail is provided in the January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc. does not identify any deviations from the location plan and all long term settlement plates installed were specifically located as replacements for short term plates installed earlier during construction

### 5.4.2 Long Term

The design of the long term settlement monitoring points is presented in a January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc. and outlined in a May 21, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by New York State Department of Environmental Conservation. These documents outline the long term settlement plate monitoring locations, detail and required monitoring intervals. Monitoring of final settlement plates began on October 30, 2013 and continued throughout the remainder of construction. As previously stated, the monitoring and reporting schedule will be modified as the post construction period extends into the future. This has been included in the Post Construction Custodial Care Plan (October 2013).

The following summarizes the efforts with respect to conformance to project design documents:

The approved h, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by NYSDEC refers to Appendix H of an October 15, 2013 *Supplemental Engineering Report* for a long term monitoring location plan. Appendix H of the permit which is included as Appendix 20 here, references and includes the April 11, 2012 *Ferry Point Golf Course Settlement Plate Locations* plan prepared by KS Engineers, P.C

The February 20, 2014 *Ferry Point Golf Course as Built Drawing* prepared by Contractors Line & Grade South, LLC shows the as-built locations of the long term settlement monitoring plates in conformance with the above referenced April 11, 2012 KS Engineers plan. An additional monitoring point between golf course Hole 6 and Hole 7 was added and approved in the May 1, 2012 *Re: Settlement Plates Email* prepared by NYSDEC.

A January 26, 2005 Settlement Evaluation and Long-Term Monitoring Plan prepared by Langan Engineering and Environmental Services, Inc. states that:

> *"These settlement points will be utilized to determine future settlements during the golf course operation. They should be installed once filling operations are completed to within 1 foot of final grades or in other words, during placement of soil cover materials. After their installation, monitoring of the settlement points should be performed once every other month until the construction is complete. Subsequent monitoring should be performed once every 3 months during the first year of golf park operation and once every 6 months for the second year."*

The description above is a deviation from the Post Construction Custodial Care Plan where quarterly monitoring and annual summary reporting will be performed for an initial period of 5 years followed by an opportunity to evaluate and proposed changes. The frequency would without any additional recommendation be reduced to semi-annually following 5 years. This reference accepts a switch to semi-annual monitoring and annual reporting following the first year. This is the only approved change in the settlement monitoring plan outside of the approved 2013 document.

The data from the November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran indicate that settlement plate monitoring was conducted every two weeks in conformance with the minimum requirements of the above referenced monitoring plan.

Monitoring of final settlement plates began on October 30, 2013 and continued throughout the remainder of construction. Results of the monitoring are available in the November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran.

The November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran do not document any non-conformance issues regarding the construction of the long-term settlement monitoring locations. A settlement monitoring plate detail is provided in the January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc. does not identify any deviations from the location plan and all long term settlement plates installed were specifically located as replacements for short term plates installed earlier during construction

The long term settlement monitoring was performed at the locations shown on the revised Settlement Plate Location Plan and a sketch that includes an additional monitoring point between golf course Hole 6 and Hole 7 included in Appendix H of the Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, NY dated May 31, 2012 (Revised August 31, 2012, October 15, 2013) as described in Appendix I of that report. These locations were approved by NYSDEC in an email dated May 1, 2012. The long-term settlement monitoring points were installed as construction was completed in each area of the Site. Upon installation, the long-term settlement plates were monitored in accordance with the criteria set forth in Special Condition 7 of the Permit.

As a component of this Report section the following list of documents were used:

- A January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc.;
- A May 21, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by New York State Department of Environmental Conservation;
- A April 11, 2012 *Ferry Point Golf Course Settlement Plate Locations* plan prepared by KS Engineers, P.C.;
- A November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran;
- A undated *additional settlement plate sketch;*
- A February 20, 2014 *Ferry Point Golf Course as Built Drawing* prepared by Contractors Line & Grade

South, LLC; and,

- A May 1, 2012 *Re: Settlement Plates Email* prepared by NYSDEC.

The long term settlement monitoring was performed at the locations shown on the revised Settlement Plate Location Plan and a sketch that includes an additional monitoring point between golf course Hole 6 and Hole 7 included in Appendix H of the 2013 Engineering Report and as described in Appendix I of that report. These locations were approved by NYSDEC in an email dated May 1, 2012, which is included in Appendix H of the 2013 Engineering Report (Appendix 20). The long-term settlement monitoring points were installed as construction was completed in each area of the Site. Upon installation, the long-term settlement plates were monitored in accordance with the criteria set forth in Special Condition 7 of the 2014 Permit.

## 5.5 Groundwater Monitoring

The overall setting of the Ferry Point Park Site with respect to the groundwater regime can be described as an area covering approximately 220 acres bounded along the waters of the East River to the south, Saint Raymond's Cemetery to the north, Balcom and Emerson Avenues to the east and the Bronx-Whitestone Bridge and ramp to the west. The entire site was a former operating municipal solid waste landfill that ended accepting fill material in the 1960's. The overall landfill footprint extended beyond the boundary of the Ferry point Park Site. The period of operation predated the existence of current Solid Waste Facility design and construction requirements and therefore, no groundwater assessment or survey was performed for the construction or during operations of the landfill.

A review of aerial photography was conducted at the time this report was being prepared. The photographs are available on the New York City public website and include those showing the overall site and surrounding area from a period beginning in 1924 and up until 2012. The earliest photo of 1924 shows nearly the entire footprint of the Ferry point Park Site was formerly open water, existing as a large bay of the East River. A review of the 1951 aerial photograph of the same scale shows the northwest portion of the landfill site was filled with what appears to be very light colored fill material. The photo shows filling operations to be expanding from the northwest corner outward and based upon the extreme contrast in color of existing land and fill material to be sand material possibly sourced from in-water dredge operations. This practice was performed in many other areas of the City at this time when harbor deepening and widening took place from 1940 onward. There were no photos between 1951 and 1996 and so there was no further photographic record in this collection to show the progression of landfilling. This period of filling (pre-1951) predated the DSNY recordkeeping and existence and there would not be any expected record of the placement of this fill in Sanitation Department documents. The existence of these photos is important to present the hydrogeologic origin of site groundwater for comparison to that of other groundwater. This history places the entire Site at the base of a larger drainage basin and in direct connection with the East River system of salt and brackish waters. Using this as the basis for the hydrogeologic model, shallow groundwater at the Site would now be considered to be part of the upland groundwater table as a result of the filling and extension of the shoreline into the river. Groundwater

within the fill material could be expected to be tidally influenced but the inland limit of this influence would be dictated by the fill material, its composition and compaction.

As part of the Volume #1 Application for Modification to the Solid Waste Management Facility Permit for Construction of the Ferry Point Park Recreation Facility Engineering Report (June 30, 2005; Appendix 20), a specific groundwater impact assessment was presented. This was based on a qualitative assemblage of data and information from other related studies but not specifically from a focused groundwater evaluation.
A May 31, 2005 letter on the Influence of Fill Placement on Groundwater prepared by Langan Engineering assessed the impact of fill material on the groundwater (found in Appendix VII of Volume #1 Application for Modification to the Solid Waste Management for Construction of Ferry Point Park Recreation Facility Engineering Report, June 30, 2005, Appendix 20). This was based upon information and conditions gathered during geotechnical evaluations and site history knowledge. The findings presented at that time indicated the development of the Ferry Point Park Site as a golf course would not further impact or change groundwater flow patterns or conditions and would therefore not further impact the East River beyond the existing conditions.

Much of the description presented in the Langan assessment focused on the site development and the addition of engineering controls that would become part of the site. These included: paved path and parking areas, significant stormwater collection systems, site grading to control flow, control devices and systems as well as importation and capping of the entire site with a varied but significant layer of clean cover materials that would all have a positive impact and reduce the amount of surface water filtering through the landfill and into the groundwater. The overall completed site development in the 2005 Engineering Report included a total of 26 acres of impervious area and collection of stormwater in detention facilities (Appendix 20).

A total of 26 piezometers were installed to monitor shallow groundwater along and immediately adjacent to the Landfill Gas passive trench. These piezometers, while used for depth to groundwater measurements are not incorporated into the groundwater evaluation as they were specifically used to assist in the design and monitoring of the LFG vent trench. The principal purpose for the piezometers and their association with the LFG trench was to monitor the level of groundwater to determine if groundwater levels went below the LFG passive recovery trench. Groundwater elevation measurements collected from the piezometer locations along the site perimeter vent trench (Special Condition 28) are addressed in section 5.3 (Piezometer Monitoring) of this report. Section 5.5 addresses the baseline groundwater monitoring requirements established in 2010.

The NYSDEC Permit issued on November 18, 2005 for the construction of the 222 acre golf course did not include a specific requirement for a groundwater monitoring plan outside of the singular focus of monitoring groundwater elevation for landfill gas control in the trenches (Appendix 1). In 2010, NYSDEC requested additional information regarding groundwater conditions and if any new, relevant information was available to verify the conclusions of the geotechnical portion of the 2005 Engineering Report (June

30, 2005, Appendix 20). As no information was available, recommendations were made in 2011 by NYSDEC for the installation of a monitoring well network.

A Technical Memorandum was prepared by Ecology & Environment Engineering, P.C. (E&E) outlining the field procedures for establishing reference point groundwater characterization methods including the installation, development, sampling, well gauging and slug testing of 11 new monitoring wells at the Site (Technical Memorandum re: Field Sampling Procedures for Ferry Point Site – Reference Groundwater Characterization, September 19, 2011, Appendix 20). At the time of monitoring well installation (February 2012), construction activities were well underway and estimated to be 80% complete. The baseline characterization was expected to capture the potential measurable impacts to groundwater. Future monitoring is expected to capture the impacts representing a more complete construction condition

The well installation program included consistent and standard well installation and construction methods, well development, baseline sampling, water level survey and aquifer testing. A figure showing the well construction details and installation elevations and locations is presented as S-H21 dated 11/8/2011. Well construction methods included the installation of shallow 2 inch diameter PVC wells with 10 ft. of slotted screen penetrating into the upper surface of the water table and standard construction finishing. All of the wells were developed and monitored using consistent criteria (turbidity, pH, conductivity and temperature), Table 1 and 2, respectively, Fieldwork Summary Report (as part of Groundwater Characterization) (May 31, 2012; Appendix 20). Each of the newly installed wells was then sampled to establish the initial baseline conditions and each was surveyed to determine groundwater level and flow direction conditions. Basic site hydrogeological information was also characterized during this effort, including direction of flow, groundwater elevation gradients, and flow velocity. Based on the initial measurements, flow direction was found to be relatively consistent in that groundwater flow was in the south-southeasterly direction toward the East River (Figure 1, Fieldwork Summary Report, May 31, 2012, Appendix 20). There was one important item noted from the initial conditions assessment and this was the lack of measureable tidal influence on any of the monitoring wells.

One soil sample was collected from each borehole from the shaping material zone with an additional quality assurance sample collected from MW-02. The soils were sampled for synthetic precipitate leaching procedure (SPLP) semi-volatile organic compounds (SVOCs), PCB/pesticides, metals, and cyanide. Seven metals and one SVOC (phenol) were detected in the 13 samples sent to the laboratory
SPLP analysis. For comparison purposes, these results are shown along with the NYSDEC Technical and Operational Guidance Standard 1.1.1, for Class GA groundwater. Four metals, and one SVOC (phenol) were detected with concentrations higher than the comparison standard (Table 6, Fieldwork Summary Report, May 31, 2012, Appendix 20).

Slug testing was performed on each of the wells to evaluate hydraulic conductivity and while this is not a critical measurement for wells installed within landfill material, it is useful in evaluating the consistency of all wells in the system. The results of the slug testing presented a fairly uniform range of hydraulic conductivities within the landfill material.

The results of the baseline groundwater analysis showed that with the exception of metals, the analytical results were in line with a landfill of this type and age. All metal detections were higher than the NYSDEC Class GA groundwater standard, which was used for comparison purposes. It is noted that these samples had high turbidities (e.g., greater than 1000 NTU) and this likely impacted the metals test results. Phenolics and ammonia leachate parameters were also detected higher than the comparison standard (Table 7, Fieldwork Summary Report, May 31, 2012, Appendix 20). As a result, NYSDEC requested that both filtered and unfiltered samples be collected. If the results were consistent, subsequent events would be completed using filtered samples only for the inorganic parameters (May 8, 2012 Ferry Point Groundwater Characterization Conference Call, May 9, 2012, Appendix 20). Filtered and unfiltered groundwater samples were collected during subsequent events.

NYSDEC also provided DPR with requirements for future groundwater monitoring (e.g., Post Construction Monitoring) in their FPP Groundwater Characterization Monitoring Objective on May 8, 2012 (Appendix 20). The objective included the following requirements: reference point/background characterization in three quarterly rounds of sampling for all parameters listed in 6 NYCRR Subpart 360-2.11 baseline parameters. Following completion of the characterization sampling, baseline sampling would continue on a biannual basis after the initial three quarterly rounds until the FPP landfill end use (golf course) is operational. Table 5-X below summarizes the reference point/background characterization events.

Table 5-1. Summary of Reference Point/Background Characterization Events

| Sampling Frequency | Wells Sampled | Status |
|---|---|---|
| Quarterly 1 | GMW-1 – GWM-11 | Completed February 2012 |
| Quarterly 2 | GMW-1 – GWM-11 | Completed May 2012 |
| Quarterly 3 | GMW-1 – GWM-11 | Completed August 2012 |
| Bi-Annual | GMW-1 -GMW-11 | Completed March 2013 |
| Bi-Annual | GMW-1, GMW-2, GMW-3, GMW-4, GMW-5, GMW-6, GMW-7, GMW-8, and GMW-10 | Completed March 2014 |
| Bi-Annual | GMW-2, GMW-3, GMW-4, GMW-5, GMW-6, GMW-7 and GMW-8 | June 20, 2014 |
| | GMW-1, GMW-7, GMW-10, and GMW-11 | July 31, 2014 |

The three quarterly sample events were completed without modification. The Bi-Annual events were modified following the March 2013 event due to construction of the golf course which limited access to the Site. The modifications include the following:

- No September 2013 Bi-Annual sample event.
- No sample was collected from GMW-9 (well was dry) and GMW-11 (access) during the March 2014 sample event.
- The second biannual sample event for 2014 was split into two events completed in June and July. GMW-9 was not sampled. Groundwater samples were collected from the site on July 22, 2014; however the samples were not analyzed due to compliance issues with the Standard Operating Procedures.

Table 5-1 presents the overall groundwater and analysis date for monitoring wells GMW-1 through GMW-11 covering the period between February 2012 through July 2014 and are consistent with the baseline sample events: metals, phenolics and ammonia compounds, isolated and sporadic VOCs (except for chlorobenzene detected in well GMW-01 and GMW-06 during multiple events) and SVOCs (primarily PAHs) were detected above the NYSDEC Technical and Operational Guidance Class GA Groundwater Criteria. The Class GA Groundwater Criteria were used for screening purposes as groundwater is not used for potable resources. The results of the filtered (dissolved) metals samples are significantly lower than the non-filtered metals samples and in most cases exceedances of non-filtered samples are non-detect or below the Class GA Groundwater Criteria in the filtered samples.

In accordance with the Post Construction Custodial Care Plan (Appendix 20), groundwater monitoring will be performed at all 11 permanent monitoring wells throughout the golf course. Approval of this Closure Certification Report signifies the commencement of operations at the golf course beginning the period of post construction monitoring. Sampling will be performed on an annual basis with collection and analysis of groundwater for those constituents listed in 6 NYCRR Part 360-2.11 routine parameters. This sampling information and data will be summarized and included with the overall annual facility monitoring and inspection report. Monitoring and reporting will begin 60 days following the approval of this closure report and will continue for a period of three years.

Following the completion of the initial 3 year post-operations monitoring, DPR may submit documentation to NYSDEC to request a reduction in sampling or complete cessation of sampling. The initial 3 year period will form the data set to be used in the event a reduction or change in monitoring is requested. The goal of the monitoring will be to provide data showing if the park adversely impacts water quality with respect to leachate quality or quantity and to compare the 2013 permit performance criteria to existing and current conditions.

Should a request for modification or cessation be approved, monitoring wells will be assessed for abandonment or removal within a 1 year period following the ending point of monitoring. Closure documentation will be provided by a New York Professional Engineer during the same annual reporting period.

Upon commencement of operation of the golf course, the frequency of groundwater monitoring changes to annual with samples being analyzed for all constituents listed in 6 NYCRR Subpart Part 360-

2.11 routine parameters and parameters of concern identified during the reference point characterization period. The golf course began operation in April 2015 and post construction monitoring will be initiated in September 2015. Post construction groundwater monitoring is discussed in detail in Section 5.7.4.

Design documents for the groundwater monitoring wells are included in Appendix G.2 of the 2013 Engineering Report (Appendix 20). An initial sampling event was completed in February 2012 and included the testing activities described below.

Groundwater monitoring results are attached in Appendix 15.

## 5.6 Deed Restriction

Special Condition 32 of the 2014 Permit requires that the Permittee executes and files a NYSDEC approved deed restriction, which shall run with the land in perpetuity, and shall recite and require compliance with the Part 360 Permit's provisions as regards to the custodial care requirements described in Appendix I of the 2013 Engineering Report (Appendix 20).

NYCDPR is in the process of reviewing the language in Attachment A transmitted with the 2014 Permit, and will use this language as the model for the deed restriction. NYCDPR will contact the NYSDEC in the event NYCDPR has any proposed additions, deletions, and/or revisions to the general text of Attachment A.

## 5.7 Post Construction Monitoring

Post construction monitoring of the Golf Course, Community Park, and Waterfront Park is the responsibility of NYCDPR and will be completed as required by the Permit. Post closure monitoring will be completed in accordance with the plans set forth in Ferry Point Park East Post Construction Custodial Care Plan dated October 2013 included as Appendix I of the 2013 Engineering Report (Appendix 20).

The following table includes each monitoring component, the frequency, and the duration of monitoring dependent upon the cessation of activity:

| Component | Frequency | Duration |
|---|---|---|
| Final Cover System | Quarterly | 5 years |
| LFG System | Quarterly | 5 years |
| Infrastructure | Bi-Annually<br>Annually | 10 years<br>15 years |
| Groundwater Monitoring | Annually | 3 years* |
| Long Term Settlement Plates | Quarterly | 5 years* |
| Parking Lot Asphalt Cover (April & October) | Bi-Annually<br>Annually | 5 years*<br>20 years* |

*Denotes Dependent on Cessation of Activity

NYCDPR will not be performing post-construction monitoring for the Waterfront Park portion of the Site until construction is complete and approved, and will restrict public access until such time.

NYCDPR is in the process of engaging a full service environmental firm to conduct the post construction monitoring requirements and will complete the post construction monitoring required to comply with the Permit in accordance with the Post Construction Custodial Care Plan and as follows.

### 5.7.1 Golf Course Operations

The Site will be operated as part of the New York City Department of Parks and Recreation system. The Community Park and the Waterfront Park will be operated and maintained by the NYCDPR Borough of the Bronx Operations and Maintenance division or an appointed representative. NYCDPR has entered into a contract with a golf course concessionaire, Trump Ferry Point LLC to implement post construction care necessary to maintain the Golf Course for operational purposes. Golf Course maintenance and operations exclude those requirements specific to post construction monitoring and maintenance of existing environmental conditions and infrastructure as installed by NYCDPR and specifically defined in this report as being landfill gas systems, groundwater monitoring, and long-term settlement plates.

### 5.7.2 Landfill Gas Monitoring

NYCDPR will implement post construction monitoring necessary to fulfill the requirements of the Post Construction Custodial Care Plan for landfill gas monitoring. The landfill gas monitoring program includes monitoring for on-site and off-site landfill gas wells, piezometers, passive vent trench, passive vents, sub-slab depressurization systems, and Irrigation Lake venting system. Any necessary repairs or maintenance required as a result of inspection and monitoring activities will be the responsibility of NYCDPR or an appointed representative.

The Site's landfill gas management system will be inspected and monitored in accordance with the Operations, Monitoring, & Maintenance ("OM&M") actions presented in Section 6 of the Landfill Gas Management Plan ("LFGMP") located in Appendix F.1 of the 2013 Engineering Report (Appendix 20).

Monitoring and inspection will commence concurrently within 60 days of the approval of this construction certification report unless otherwise noted within the OM&M plan. Adjustments to monitoring frequencies will be requested of NYSDEC upon meeting the performance criteria thresholds identified in Section 6.3.4.2 of the LFGMP. NYCDPR will submit a request with supporting documentation to NYSDEC 30 days prior to the desired date of the proposed change in monitoring. NYCDPR will not change monitoring frequencies until the request has been approved.

### 5.7.3 Long Term Settlement Monitoring

NYCDPR will implement post construction monitoring necessary to fulfill the requirements of the Post Construction Custodial Care Plan for nine settlement monitoring plates on the Golf Course.

Monitoring will commence concurrently within 60 days of the approval of this construction certification report for a period of three years. Based on the results of the initial five years of monitoring, NYCDPR may

petition for decreased monitoring or a cessation in monitoring frequencies. NYCDPR will not change monitoring frequencies until the request has been approved.

### 5.7.4 Groundwater Characterization Monitoring

NYCDPR will implement post construction monitoring to fulfill the requirements of the Ferry Point Park East Post Construction Custodial Care Plan (October 2013). Groundwater monitoring will be performed at the eleven well locations located within the golf course.

Upon commencement of operation of the golf course (April 2015), groundwater sampling will take place annually with samples being analyzed for constituents listed in 6 NYCRR Subpart Part 360-2.11 routine parameters. The results of the groundwater sampling will be presented in a groundwater monitoring report and a summary will be submitted to NYSDEC as a part of the annual monitoring and inspection report. Monitoring and inspection will commence concurrently within 60 days of the approval of the construction certification report for a period of three years with the goal of demonstrating whether operation of the park adversely impacts on water quality with respect to leachate quality or quantity, and whether operation of the park meets the performance criteria established in the Permit.

Post Closure monitoring is anticipated to be conducted on the following schedule:

| Sampling Frequency | Requirement | Wells Sampled | Status |
|---|---|---|---|
| Annual - Year 1 | Post-Construction Monitoring | GMW-1 – GWM-11 | Anticipated September 2015 |
| Annual - Year 2 | Post-Construction Monitoring | GMW-1 – GWM-11 | Anticipated September 2016 |
| Annual Year 3 | Post-Construction Monitoring | GMW-1 – GWM-11 | Anticipated September 2017 |

Upon completion of 3 years of post-operation annual routine groundwater sampling, DPR may submit documentation to NYSDEC in furtherance of a request to reduce or cease groundwater sampling at the Ferry Point Park golf course (Ferry Point Park East Post Construction Custodial Care Plan, October 2013). The Groundwater monitoring and sampling program will cease either at the three year completion or ten years from the date of the initial groundwater sampling event. When the request for cessation is accepted, the groundwater monitoring wells will be evaluated for either abandonment or removal within the first year of the cessation of monitoring. The abandonment or removal documentation, signed and

certified by a licensed NYS Engineer will be provided to DEC within the concurrent post closure reporting period after the completion of the work.

Monitoring and inspection will commence concurrently within 60 days of the approval of this construction certification report for a period of three years. Upon completion of three years of post-operation annual routine groundwater sampling NYCDPR may submit documentation to the NYSDEC in furtherance of a request to reduce or cease groundwater sampling at the golf course. NYCDPR agrees to perform operational groundwater sampling, data analysis and reporting for a minimum of three years after construction, with the goal of demonstrating whether operation of the park adversely impacts water quality with respect to leachate quality or quantity, and whether operation of the park meets the performance criteria established in the Permit. NYCDPR will not change monitoring frequencies until the request has been approved.

### 5.7.5 Final Cover System

The integrity of the final cover system will be inspected routinely by NYCDPR, or their duly appointed representative, to fulfill the requirements of the Post Construction Custodial Care Plan. Inspections and maintenance will be completed in association with the Maintenance Guidelines for Trump Golf Links at Ferry Point Park included in Appendix I of the 2013 Engineering Report (Appendix 20).

Monitoring and inspection will commence within 60 days of the submittal of this construction certification report and then undertaken annually within 30 days of the submittal of the initial report. NYCDPR agrees to a rolling five-year plan, whereby NYCDPR may petition to modify or terminate the final cover inspection requirements by demonstrating that the integrity of the final cover system has been maintained in accordance with performance criteria established in the Permit.

### 5.7.6 Parking Lot Asphalt Cover (Consent Order)

During 2010, fill material from a JFK Airport source site was brought on-site and placed in seven different stockpiles. The material was believed to be in conformance with permit conditions. However, the material was found to be in violation of 2005 Permit Special Conditions 1, 9, and 16, during NYSDEC and IEM inspections. On January 10, 2011, NYCDPR signed an Administrative Order on Consent (Consent Order), Case No. R2-20100521-172, related to this fill material, which was used to construct the base of the clubhouse and maintenance facility parking lots.

Specific requirements within the Consent Order as they pertain to post construction operations are as follows:

From Consent Order No R2-20100521-172: “Attachment “A” Proposed Handling of Ferry Point Park Soil Stockpile, Item 6, Once the asphalt top course is installed, the asphalt surfaces of the clubhouse and maintenance facility parking lots will be inspected during April and October every year by a licensed professional engineer (“engineer”) who is registered to practice in New York State. Within thirty days (30) days of such inspections, the engineer will submit to the Department a stamped and certified written detail report, including photo documentation, regarding the condition of the asphalt surfaces and their

adequacy, including photo documentation, regarding the condition of the asphalt surfaces and their adequacy to effectively function as covers. A description of any needed repairs will be included in the engineer's report.

Item 7, any repairs deemed necessary by the engineer must be completed by New York City Department of Parks and Recreation ("NYC Parks") within fifteen (15) days of the notification by the Department to NYCDPR to begin such repairs. A certification, including supporting written and photo documentation must be submitted by NYC Parks within fifteen (15) days after completion of repairs."

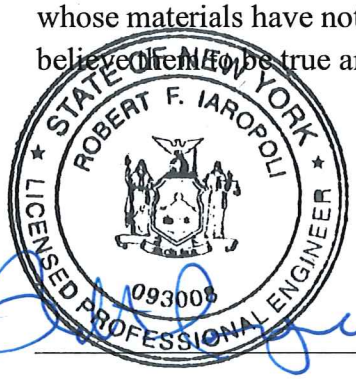
# 6 Summary

Construction activity at the Site began in July 2000 and concluded in July 2014 with physical completion of the Golf Course. Although the Golf Course construction is complete, some incidental work continues to occur at the Site associated with specific improvements necessary for golf course operations by the golf course concessionaire. Construction activity included clearing and grubbing, excavation, grading, importation of fill material, construction of the Community Park and Golf Course and associated appurtenances, installation of site utilities and infrastructure, installation of plantings, and installation of asphalt parking lot. A representative of the NYCDPR was present during all construction activities. To the best of our knowledge, a representative of the IEM was present during all earth moving and soil importation activities. For this project, fill importation followed the Permit requirements and resulted in a large scale earthwork fill conducted in general accordance with NYSDEC requirements as documented in the daily, bi-weekly, and quarterly reports and as summarized herein.

# 7 Certification

Certification Statement

I, Robert Iaropoli, PE, LS, an employee of the New York City Department of Parks and Recreation, exercising independent judgment and discretion do hereby certify that this Final Construction Certification Report was prepared under my direction and supervision. This Final Construction Certification Report was prepared in accordance with the NYSDEC requirements in 6 NYCRR Part 360, the current Part 360 Permit and approved Part 360 Permit Modification documents. The information contained herein is based upon: 1) Work which I have personally inspected both during and after construction from November 2012 to date; 2) Information provided to me by those directly employed by or under contract with the New York City Parks and Recreation and the New York City Department of Design and Construction as construction project managers;3) Design Consultants; 4) Contractors responsible for construction pursuant to their contracts except as indicated; and 5) third parties, such as manufactures, suppliers, etc., whose materials have not been personally verified by me for accuracy and/or adequacy but believe them to be true and accurate[4].




Robert Iaropoli, PE, LS

Oct. 19th 2015

Date

New York City Department of Parks and Recreation

[4] Certification means a statement of professional opinion based upon investigation, analysis, knowledge and belief that is stated to be true and accurate. 6 NYCRR Part 360-1.2(b) 24.

# 8 Delineation Page

## Delineation Page

Construction Certification Report
Ferry Point Park Golf Course and Community Park

The drawings, analysis and certification of the fill operation performed by the Independent Environmental Monitor, Woodard & Curran, 709 Westchester Avenue - Suite L2, White Plains, NY 10604 incorporated in this Construction Certification Report have not been verified.

Engineers Planners Surveyors Landscape Architects Environmental Scientists

MASER CONSULTING P. A.

# Final Construction Certification Report
# Subslab Depressurization System & Gas Line Installation
# NYSDEC Permit #2-6006-00014 / 00013 (Solid Waste)

Trump Ferry Point Golf Links Permanent Clubhouse
500 Hutchinson River Parkway
Block 5622, Lot 1
Bronx, New York

November 26, 2019

*Prepared For*

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## EXECUTIVE SUMMARY

Maser Consulting P.A. (Maser Consulting), on behalf of The Trump Organization, has prepared this Certification Report for the construction of the permanent Clubhouse at the Trump Ferry Point Golf Links located at 500 Hutchinson River Parkway, Bronx, New York. This report has been prepared pursuant to 6 NYCRR Part 360 of the New York State Solid Waste Management Program and the 2013 Ferry Point Park East Post Construction Custodial Care Plan. This report also includes a summary of a supplemental project to install a new gas main as part of the Clubhouse Construction project.

Acting as the Independent Environmental Monitor (IEM), Maser Consulting witnessed, recorded and confirmed construction of the new Trump Links Clubhouse, including the installation of support pilings, importation of suitable materials used for cover; the application, installation and testing of the Liquid Boot® Vapor Barrier System and the associated Sub-slab Depressurization System (SSDS); and the installation, calibration and testing of the interior Methane Detection System. For each construction and testing component, Maser Consulting confirms compliance with the Permits, plans and specifications of the project. Minor deviations to the plans and specifications are noted in this report and in the As-Built documents contained herein. Minor deviations to the specifications were the result of two main issues: the need to relocate system components to avoid conflicts and interferences with utilities and appurtenances; and the substitution of the materials of construction that were equivalent or superior to the original specifications.

The IEM also monitored, tested and confirmed that soil materials imported for the new Clubhouse construction were derived from pre-approved sources. The IEM conducted periodic surveillance of trucks being loaded at the approved facilities and transported to the Construction Site. For material imports, the IEM visually evaluated loads and scanned loads with direct reading instruments for signs of contamination. Only those loads meeting project permit and specifications standards were permitted to be unloaded at the site.

At times when imported soil materials had to be stockpiled on-site, the IEM took steps to ensure that a controlled staging area was secured. The staging area was established in the parking lot to the west of the new Clubhouse site. The IEM also took steps to ensure that the stockpile was properly covered to prevent erosion by wind and water, and that catch basins in the parking lot were properly protected to ensure that sediments would not enter the storm water system. Weekly erosion control inspections were conducted by the IEM in accordance with NYSDEC's Construction Site Management Program. The IEM immediately communicated deficiencies in the erosion control features to the General Contractor (JCS) such that immediate mitigative action could be taken.

Maser Consulting also acted as the IEM for a supplemental project associated with the new Clubhouse construction. The supplemental project consisted of the installation of an approximately 5,500-foot long, 6-inch diameter gas pipeline installation. The new gas supply line was deemed necessary to provide heating, ventilation, air conditioning and other utility service to the new Clubhouse. The gas pipeline was connected to a Consolidated Edison main located north of the clubhouse along Schley Avenue. The pipeline route generally traverses the western property line before turning east toward the new clubhouse in the vicinity of the Clubhouse parking lot. As IEM for this supplemental project, Maser Consulting witnessed, recorded and confirmed that the gas pipeline installation was conducted in accordance and incompliance with the project permits, plans and specifications.

Similar to the Clubhouse construction project, cover material importation was required for the gas main installation project. The IEM took appropriate measures to ensure that the source material was inspected and tested. Soil quality analytical results have been included within this report. Analyzed permit parameters were found to be acceptable. The IEM also visually assessed and field screened each load to ensure that the quality of the material met project permit requirements and project plans and specifications.

**FINAL CONSTRUCTION CERTIFICATION REPORT**
**TRUMP FERRY POINT GOLF LINKS PERMANENT CLUBHOUSE**
**SUBSLAB DEPRESSURIZATION SYSTEM & GAS LINE INSTALLATION**

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Appendix P – CETCO/Minerals Technologies Letter to EAI Inc. re: "Liquid Boot Spraying Temp" dated November 9, 2017 & EAI Inc. letter to Maser Consulting P.A. re: "Vapor Remediation System Installation, Ferry Point Clubhouse, Ferry Point Park, Bronx, NY" dated October 18, 2019
Appendix Q – Drawings titled "Ferry Point Clubhouse, 500 Hutchinson Parkway, Bronx, NY" showing new gas line prepared by Victor Famulari Architect P.C. dated July 25, 2018
Appendix R – DORs for Installation of New 6-Inch Gas Line to Clubhouse

# I. INTRODUCTION

## A. Purpose

This Final Construction Certification Report for the Trump Ferry Point Golf Links clubhouse is submitted to the New York State Department of Environmental Conservation (NYSDEC) and the New York City Department of Parks & Recreation (NYCDPR) upon completion of the construction of a new clubhouse at Ferry Point Park East. Built on top of a former municipal landfill, the major elements of the Clubhouse construction project consisted of the installation of over 200 steel support pilings driven through the former landfill material and into competent rock at an average depth of 75 below grade. During the support piling installation, Maser Consulting (acting as the IEM) measured the ambient air quality for signs of methane gas release from the subsurface. When detected on rare occasions, immediate measures were taken to mitigate methane from the work and breathing zones with the use of engineering controls including physical barriers and the use of industrial explosion-proof fans to ventilate the work zones.

Following the installation of the support pilings, Maser Consulting observed the installation of two added protective elements – a Liquid Boot® Vapor Barrier System and a corresponding SSDS. Both systems were designed to mitigate the intrusion of methane and other landfill gases into the new Clubhouse.

As a means to assess the effectiveness of the Vapor Barrier and the SSDS, a Methane Detection System was installed inside the new Clubhouse. The methane detection system consists of a network of in-floor methane sampling ports as well as a series of methane detectors located throughout the main banquet and reception areas as well as in the smaller offices, the kitchen and other employee and publicly-accessible areas.

This report certifies that the construction of the Liquid Boot® vapor barrier system and the SSDS for the new clubhouse have been completed in accordance with the 6 NYCRR Part 360 Solid Waste Management Permit for Ferry Point Park (copy provided as **Appendix A**). This report further certifies that Methane Detection system was also installed, tested and calibrated in compliance with the project permits, plans and specifications.

## B. Report Organization

This report has been generated to provide a written post-construction certification report to comply with the requirements of the above-referenced Part 360 Permit. The narrative and supporting information provided in this report have been organized such that any individual, especially those not familiar with the new clubhouse construction, can gain a concise understanding of the history of improvements at the Site (a former solid waste management facility, i.e. landfill).

The report has been organized into the following sections:

- Section I which briefly describes the purpose and scope of the project, provides details pertaining to the Site background including a Site description, key agencies involved, and permitting history

- Section II describes the Part 360 Permits and modifications, Permit reference documents, nonconformance issues, operational upsets, emergencies, and unusual circumstances, and reporting completed associated with the new clubhouse

- Section III details the fill importation Quality Assurance / Quality Control (QA/QC) program, specifically source site reviews for cover layer material, on-site fill importation inspection, trucking manifests, rejected trucks and materials, fill tracking, and total carcinogenic semi-volatile organic compound (SVOC) tracking

- Section IV provides details related to construction activities on-site including construction of the new clubhouse, environmental controls such as landfill gas monitoring, municipal solid waste handling, earthwork and fill placement, demarcation layer, construction progress meetings, and deviations from the approved design plans and/or Permit requirements with as-built surveys

- Section V details the environmental monitoring completed during the Project including Stormwater Pollution Prevention Plan (SWPPP) erosion control inspections.

- Section VI provides a summary of the report

- Section VII provides report certification

## C. Background Information

### a. Project Scope

Ferry Point Park in the Bronx (the "Site") is a former landfill covering 222 acres that is bounded by the Bronx-Whitestone Bridge and Hutchinson River Parkway to the west; Balcom, Miles, and Emerson Avenues to the east; Schley Avenue and St. Raymond's Cemetery to the north; and the East River to the south. The project was originally managed under Ferry Point Partners, LLC and was taken over solely by the City of New York Department of Parks and Recreation in October 2007.

The original project scope included the construction of three main elements including a golf course, a community park, and a waterfront park over the 222-acre Site as follows:

- An 18-hole golf course with practice facility, driving range, clubhouse, maintenance facility, irrigation lake, stormwater retention ponds, and a parking lot (192.5 acres);
- A passive recreation waterfront park with walkways and a comfort station (19.5 acres); and
- A community park with baseball fields, basketball court, walkways, comfort station, and landscaped stormwater retention area (10 acres)

A new element of the project was initiated in 2017 with the construction of a permanent clubhouse in the southern corner of the Site. The project began in July 2017 and was completed in August 2018.

A supplemental component of the Clubhouse project was deemed necessary when the existing 2-inch gas service line to the facility was determined to not be capable of providing the volume of gas necessary to support the heating, ventilation and air conditioning units as well as other facility utilities such as the kitchen and other amenities. Construction of the Gas Main Installation began in late August 2018 and was substantially completed by November 2018.

## b. Project Site[1]

The origins of the site date back to the early 1900s. At that time, an available 1900 map of the Bronx showed the western edge of the site which now contains the expressway and Whitestone Bridge was a long narrow peninsula extending out to the same area that the northern landing of the Whitestone Bridge now extends. Immediately east of this peninsula was a large open bay which is the area that the Ferry Point Golf Course is now located. Northeast of the bay and well inland was the Baxter Creek that drained into the bay. The eastern landfall of this embayment area is a larger peninsula that contains roadways and a residential development. The road patterns do not resemble the roadways that currently exist in that area and appear to have been changed.

A 1938 aerial photo showing the construction of the Whitestone Bridge shows the Bay, mooring, residential area and land to the west to be virtually the same as shown in the 1900 map. The significant change is in the widening of the western peninsula where the expressway was being constructed leading to the bridge ramps. The widening was not significant at this time but a rectangular area in the extreme northwest corner of what is now the site appears to be filled and graded – possibly to support construction staging area for the bridge/expressway. Areas of filling can be readily identified in the photograph by the contrasting lighter color typically indicative of sandy dredge sand placement. Other areas along the shoreline can be seen as containing a lighter-colored band of fill material and this includes much of the new Ferry Point Park located west of the Whitestone Bridge. Much of the park area was filled and graded by 1938. Bulkheads were constructed with linear components to present a smooth shoreline but one that does not appear to contain a beach where water diminishes in depth to 0. Photos of the eastern area of the bay where mooring and docks can be seen showing large vessels moored against the shore. This would indicate the water had significant depth all of the way to the center of the bay.

Aerial photographs from the 1950s show a drastic change in the area currently referred to as the site. Large expansion of the filling that was evident in 1938-39 up in the northeast corner can be clearly seen. The filling extends well into the bay and it appears that a connective bridge

[1] *Reference: "Ferry Point Park Golf Course & Community Park, Bronx New York, Final Construction Certification Report, NYSDEC Permit #2-6006-00014 / 00013 (SW)" prepared by the City of New York Department of Parks and Recreation dated October 19, 2015 – a.k.a. the 2015 Final Construction Certification Report*

was constructed from the eastern shore to the fill area. It is difficult to discern if this is a usable structure for crossing or if it had some other purpose. The filling operation appears from the photo to consist of the same light-colored material that was placed in the Ferry Point Park and from photos showing a large number of barges in the water filled with material of the same light color. There is specific documentation that presents the specific origin and consistency of the material. but from the prior aerials showing filling and this large expansion, it appears to be of a similar origin which would be dredge sand. In the 1951 aerial, no specific municipal solid waste dumping and disposal can be seen; however, records indicate the landfill operated during this approximate time period. It is therefore assumed that municipal solid waste was disposed shortly after the photo was taken. The landfilling shown in the aerial may have been the initial construction of the upper portion of the landfill with the tidal gate or bridge closing in the upper bay area. Additional aerials of the landfilling were not identified and more recent aerials document the completion of filling as well as the more recent golf course construction.

What can be discerned from this compilation of photos is that the landfill could be located in an area that may have been open water as well as some area that was previously reclaimed land with dredge material.

The Site operated as a landfill from before 1951 to the 1960s. The landfill reportedly accepted municipal solid waste during its operating period and was closed and covered in the mid-1960s, with additional closure operations conducted more recently in the 1980s. Prior Site use was determined from historic aerial photographs from 1938 thru 1991. The aerial photographs span the entire operational period of the prior landfill, from its initial operations to the present, and provides substantial information about the Site's development.

### c. Key Agencies

The following were the key agencies associated with the project providing oversight, administration, design, construction, and monitoring services. The following is not intended to be an exhaustive list of involved entities related to the Project:

Primary Regulatory Agency:
New York State Department of Environmental Conservation Region 2 ("NYSDEC")

Project Permittee:
City of New York Department of Parks & Recreation ("NYCDPR")

Primary Design, Engineering, Construction, and Monitoring Consultants:
Hart Howerton Planning, Architecture and Landscape Architecture, P.C. ("Hart Howerton")
French & Parrello Associates ("FPA")

Independent Environmental Monitor ("IEM"):
Maser Consulting P.A. ("Maser Consulting")
Woodard & Curran ("W&C")

General Contractor:
Golf Course Clubhouse: JCS Construction Group, Inc. ("JCS")

Subcontractor for the SSDS and Liquid Boot® Vapor Barrier Installation:
EAI, Inc. ("EAI")

Golf Course Concessionaire/Operator:
The Trump Organization ("Trump")

See **Appendix B** for a list of project participants.

### d. Independent Environmental Monitor

The requirement for an IEM on this project was associated with an increased level of monitoring exceeding normal review and oversight practices of the NYSDEC in order to protect public health and the environment. The increased level of review and oversight for this Project was mainly associated with the effort required for evaluation of fill material sources, source site testing and inspection, importation of the fill material, environmental monitoring required at the clubhouse construction site, and later along the gas main installation route. IEM services were also necessary during the installation of over 200 support piles through the former waste pile located beneath the new Clubhouse.

In accordance with Special Condition 24 of the 2014 Permit (**Appendix A**), NYCDPR was responsible to retain an IEM, accountable to NYSDEC, to provide environmental oversight of activities authorized under the Permit including but not limited to the quantification, importation and placement of fill, and the monitoring of the clubhouse construction site. Particular activities performed by the IEM for this Project included the following:

- Report deviations from or non-compliance with permitted activities to NYSDEC;
- Evaluate and inspect fill sources;
- Evaluate, monitor and mitigate methane intrusions during the installation of steel support pilings for the new clubhouse foundation;
- Witness source site investigation, sampling, and compare lab test results to Permit requirements;
- Visual and Photoionization Detector (PID) inspection of imported fill materials to the Site;
- Monitor offloading of trucks and reject unacceptable materials from being dumped on the Site and used for construction;
- Monitor environmental sampling on the Site (i.e. landfill gas);
- Monitor fill operations on the Site, particularly the installation of minimum thickness of shaping layer and cover layer materials as well as demarcation layer installation;
- Complete and submit Daily Observation Reports to NYCDPR;
- Complete weekly Erosion Control Reports; and
- Attend weekly Construction Progress Report meetings

The selection, continued retention, discharge, or replacement of the IEM was subject to the approval of NYSDEC at its sole discretion.

### e. Project and Part 360 Permitting History

The following represents an overview of project and permitting history outlining key events:

On May 21, 2014 NYSDEC issued Permit No. 2-6006-00014 / 000013 for a Solid Waste Management Facility for the Ferry Point Park Golf Course; this permit establishes an IEM. A copy of this permit is provided in **Appendix A**.

On June 12, 2017 the Ferry Point Park SSDS Plan prepared by FPA for the proposed permanent clubhouse was submitted to NYSDEC. A copy of this submittal is provided in **Appendix C**.

On June 22, 2017 NYSDEC issued a letter to The Trump Organization approving the Ferry Point Park SSDS Plan. A copy of this letter is provided in **Appendix D**.

On June 7, 2018 Maser Consulting (through The Trump Organization) submitted a Construction Certification for the SSDS to NYSDEC to allow for the temporary, one-day opening of the new clubhouse on June 11, 2018. A copy of this submittal is provided in **Appendix E**.

On July 2, 2018 NYSDEC issued a review letter with comments on the June 7, 2018 Maser Consulting Construction Certification for the SSDS. A copy of this letter is provided in **Appendix F**.

On July 11, 2018 Maser Consulting provided a letter response to NYSDEC's July 2, 2018 review letter. A copy of this letter response is provided in **Appendix G**.

### f. Construction Drawings

Construction drawings for the SSDS are included in **Appendix C**.

## II. PART 360 PERMIT

### A. Part 360 Permits and Modifications

The following permit was issued for this Project:

NYSDEC Permit No. 2-6006-00014 / 000013 (Solid Waste Management Facility – Ferry Point Park Golf Course, Bronx NY) issued on May 21, 2014 (copy provided in **Appendix A**).

### B. Reference Documents

Refer to the 2015 Final Construction Certification Report for a list of Permit reference documents. These documents support the original Permit and/or provide basis for subsequent permits renewals and modifications.

### C. Non-Conformance Issues

In accordance with Special Condition 24 of the 2014 Permit, the IEM reported on Permit-related non-conformance issues during the duration of construction of the permanent clubhouse and on the gas main installation project. Non-conforming issues identified during the construction of the new facility were immediately addressed and remedied so that activities were in conformance with applicable plans, specifications and permits.

### D. Operational Upsets, Emergencies, and Unusual Circumstances

No evidence of security breaches, unauthorized entries, injuries, fires, theft, vandalism etc. were observed during construction of the permanent clubhouse. The only post-construction upset was related to damage caused to the outdoor lighting system from wildlife borrowing and chewing. Corrective measures were undertaken with normal and routine maintenance actions by The Trump Organization maintenance staff.

### E. Reporting

The IEM was responsible for daily and weekly reporting to the NYCDPR regarding the status of the work. The IEM participated in weekly on-site construction meetings and submitted weekly Erosion Control Reports during the construction period. Daily Observation Reports ("DOR") were also submitted to the NYCDPR for review and comment.

The IEM reported to the NYCDPR on a generally daily basis on the following information: weather conditions, fill materials imported to the site, detailed notes of construction activities, and non-conformance issues related to the Permit conditions. Non-conformance issues were immediately addressed by the contractors under the supervision of the IEM. The IEM also reported weekly to the NYCDPR on the construction status and pertinent observations regarding the erosion control measures around the construction site and at the imported soil stockpile area.

DORs are provided in **Appendix I** beginning on July 19, 2017 through February 5, 2019.

### F. Authorized Fill Volumes

Imported fill material was derived from two pre-approved sources, one for cover material associated with the new Clubhouse and one for cover material used in the installation of the new 6-inch gas main.

New York Recycling located at 475 Exterior Road, Bronx, NY was the source of the material used for the new Clubhouse. A table in **Appendix K** indicates the volumes of material imported from this facility. This material met the soil quality standards set forth in the Permit requirements. During the course of the importation process, the material was re-sampled in order to reconfirm its quality. Analytical testing data can be reviewed in **Appendix J**. A total of 1,062 cubic yards of material was imported from this source site between November 2017 and March 2018.

Ranco Sand and Gravel located at 151 South Street, Manorville, New York was the source site for materials imported for the gas main installation project. A site source inspection was conducted in advance of the imports and analytical testing was performed to establish that imported material would meet all Permit conditions and requirements. A table in **Appendix L** provides a summary of the imports from Ranco Sand & Gravel. A of total 690 cubic yards of material was imported between September and October 2018.

# III. FILL IMPORTATION QA/QC PROGRAM

## A. Background

Fill material importation for construction of the permanent clubhouse commenced on November 27, 2017 and the last day for fill import was March 12, 2018. The fill importation QA/QC program implemented for the Project based on the Permit and associated reference documents was adhered to. The fill importation consisted of two main components: source site reviews and on-site inspections. A source site review was conducted by the IEM prior to fill material being imported to the Site and additional visual and PID inspections were completed by the IEM upon the material entering the Site at the IEM inspection area and again once the material was dumped at the work or stockpile location on the Site.

## B. Source Site Reviews

Prior to cover layer material being imported to the Site, each potential source was thoroughly evaluated by the IEM. An environmental review was performed for proposed source sites in accordance with Special Condition 24 of the 2014 Permit. The source site review process criteria were specified in the Report on Fill Management, Operations and Maintenance, prepared by TRC on May 16, 2000, and revised June 30, 2005 (Volume #2 of the 2005 Engineering Report). The source site review process was modified over time as compared to the original process outlined in the various engineering reports and permit modification requests. The process generally consisted of the following main components:

- NYCDPR would notify the IEM of a new potential source site. NYCDPR would provide the IEM with the site name and location as well as any available historical site information and soil environmental analytical results that existed for the potential source site.

- Once NYCDPR confirmed that their desire to move forward with pursuing the potential source site, NYCDPR authorized the IEM to retrieve available site information. NYCDPR then completed an initial review of the existing site information, generated a sampling plan, and provided the results of the initial review and sampling plan to the IEM. NYCDPR then authorized the IEM to conduct a desktop review of the existing site information, available soil environmental analytical results, and NYCDPR's sampling plan. The IEM provided NYCDPR with comments related to their review and their sampling plan in consultation with NYSDEC. Once a final sampling plan was agreed upon, the source site investigation was initiated and executed per the NYCDPR sampling plan with IEM oversight. For source sites with in-situ material, test pits

were typically completed with additional soil samples inspected, collected, and analyzed in accordance with the Permit requirements. Once the sampling was completed, the IEM reviewed sample results and the IEM generated a memorandum summarizing the review process and provided recommendations and requirements necessary for NYCDPR to address in order to continue pursuing the potential source site. The recommendations typically included conditions associated with overseeing the excavation, loading, and importing of the source site material to the Site in accordance with the Permit. The IEM submitted the memo of recommendations to NYSDEC for review and comment prior to issuing the final memorandum to NYCDPR. NYSDEC would provide final comments and approval of the source site with any additional required conditions.

- If NYCDPR determined that the potential source site was worth pursuing considering site-specific conditions, schedules, etc., they coordinated with the source site operator and IEM on importation schedule and requirements. The IEM provided oversight to confirm that the loading, hauling, and overall import of the approved material was completed in accordance with the memorandum of recommendations, NYSDEC conditions, and the Permit.

- The IEM provided oversight during export from the approved source sites on an as needed basis and provided oversight at each source site during additional sampling activities if the source site was exporting more than the minimum sampling frequency outlined in the Permit (i.e. 10,000 cubic yards for shaping layer material and 2,000 cubic yards for cover layer material).

If at any time during the review process there were reasons for concern identified by the IEM resulting in the potential source site being classified as a "complex" source site, NYSDEC became the primary reviewer and made final recommendations related to additional site investigation requirements or approval/rejection of the potential source site with support from the IEM. A complex source site was defined by the presence of an abundance of or particular Recognized Environmental Concerns ("RECs") and NYSDEC made decisions related to approval and/or associated conditions for further evaluation or import of the fill material.

For both source sites used in this Construction Project, no complex source site determinations were made.

Details of source site review and site testing activities are included in the report text and specific DORs. Source site review supporting information and testing data is included in the 2015 Final Construction Certification Report.

### C. Cover Layer Material

Materials accepted for use as cover layer on the Site were sampled prior to acceptance and after each additional 2,000 cubic yards. As per the 2005 Permit modification, the parameters for cover layer material included the complete analyte list of TAGM 4046 for total VOCs, total SVOCs, total pesticides and herbicides, total PCBs, total metals, sulfur, and asbestos.

Based on source site reviews and site testing activities, the cover layer material imported to the Site met the following chemical limits:

| Analyte | Shaping Layer |
|---|---|
| **RCRA Metals (mg/kg = ppm)** | |
| Arsenic | 28 |
| Barium | 2,000 |
| Cadmium | 20 |
| Chromium | 1,000 |
| Copper | 1,000 |
| Lead | 400 |
| Mercury | 0.57 |
| Selenium | 11 |
| Silver | 100 |
| **TCLP Metals (mg/l)** | |
| Arsenic | 5.0 |
| Barium | 100.0 |
| Cadmium | 1.0 |
| Chromium | 5.0 |
| Lead | 5.0 |
| Mercury | 0.2 |
| Selenium | 1.0 |
| Silver | 5.0 |
| **Volitile Organic Compounds (mg/kg)** | |
| Acetone | 0.2 |
| Benzene | 0.06 |
| Benzoic Acid | 2.7 |
| 2-Butanone (i.e. MEK) | 0.3 |
| Carbon Disulfide | 2.7 |
| Carbon Tetrachloride | 0.6 |
| Chlorobenzene | 1.7 |
| Chloroethane | 1.9 |
| Chloroform | 0.3 |
| Dibromochloromethane | N/A |
| 1,2-Dichlorobenzene | 7.9 |
| 1,3-Dichlorobenzene | 1.6 |
| 1,4-Dichlorobenzene | 8.5 |
| 1,1-Dichloroethane | 0.2 |
| 1,2-Dichloroethane | 0.1 |
| 1,1-Dichloroethene | 0.4 |
| 1,2-Dichloroethene (trans) | 0.3 |
| 1-3 dichloropropane | 0.3 |
| Ethylbenzene | 5.5 |
| 113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane) | 6 |
| Methylene chloride | 0.1 |
| 4-Methyl-2-Pentanone (i.e. MIBK) | 1 |
| Tetrachloroethene | 1.4 |
| 1,1,1-Trichloroethane | 0.8 |
| 1,1,2,2-Tetrachloroethane | 0.6 |
| 1,2,3-trichloropropane | 0.4 |
| 1,2,4-trichlorobenzene | 3.4 |
| Toluene | 1.5 |
| Trichloroethene | 0.7 |
| Vinyl chloride | 0.2 |
| Xylenes | 1.2 |
| **TCLP Volitile Organic Compounds (mg/l)** | |
| Benzene | 0.5 |
| Carbon Tetrachloride | 0.5 |
| Chlorobenzene | 100 |
| Chloroform | 6 |
| 1,4-Dichlorobenzene | 7.5 |
| 1,2-Dichloroethylene | 0.5 |
| 1,1-Dichloroethylene | 0.7 |
| Methyl ethyl ketone | 200 |
| Tetrachloroethylene | 0.7 |
| Trichloroethene | 0.5 |
| Vinyl chloride | 0.2 |

| Semi-Volatile Organic Compounds * (mg/kg) | |
|---|---|
| Acenaphthene | N/A |
| Acenaphthylene | N/A |
| Aniline | N/A |
| Anthracene | N/A |
| Benzo(g,h,i)perylene | N/A |
| bis(2-ethylhexyl)phthalate | N/A |
| Butylbenzylphthlate | N/A |
| 4-Chloroaniline | N/A |
| 4-Chloro-3-methylphenol | N/A |
| 2-Chlorophenol | N/A |
| Dibenzofuran | N/A |
| 3,3'-Dichlorobenzidine | N/A |
| 2,4-Dichlorophenol | N/A |
| 2,4-Dinitrophenol | N/A |
| 2,6 Dinitrotoluene | N/A |
| Diethylphthlate | N/A |
| Dimethylphthlate | N/A |
| Di-n-butyl phthalate | N/A |
| Di-n-octyl phthlate | N/A |
| Fluoranthene | N/A |
| Fluorene | N/A |
| Hexachlorobenzene | N/A |
| Isophorone | N/A |
| 2-methylnaphthalene | N/A |
| 2-Methylphenol | N/A |
| 4-Methylphenol | N/A |
| Naphthalene | N/A |
| Nitrobenzene | N/A |
| 2-Nitroaniline | N/A |
| 2-Nitrophenol | N/A |
| 4-Nitrophenol | N/A |
| 3-Nitroaniline | N/A |
| Pentachlorophenol | N/A |
| Phenanthrene | N/A |
| Phenol | N/A |
| Pyrene | N/A |
| 2,4,5-Trichlorophenol | N/A |
| Dibenzo(a,h)anthracene | 10 |
| Benzo(a)pyrene | 10 |
| Benzo(a)anthracene | 10 |
| Benzo(b)fluoranthene | 10 |
| Ideno(1,2,3-cd)pyrene | 10 |
| Benzo(k)fluoranthene | 10 |
| Chrysene | 10 |
| Total SVOCs | 500 |
| Total cVOCs | 10 |
| **Organic Pesticides/Herbicides and PCBs (mg/kg)** | |
| Aldrin | N/A |
| alpha-BHC | N/A |
| beta-BHC | N/A |
| delta-BHC | N/A |
| Chlordane | N/A |
| 2,4-D | N/A |
| 4,4'-DDD | N/A |
| 4,4'-DDE | N/A |
| 4,4'-DDT | N/A |
| Dibenzo-P-dioxins (PCDD) 2,3,7,8 TCDD | N/A |
| Dieldrin | N/A |
| Endosulfan I | N/A |
| Endosulfan II | N/A |
| Endosulfan Sulfate | N/A |
| Endrin | N/A |
| Endrin keytone | N/A |
| gamma-BHC (Lindane) | N/A |
| gamma-chlordane (trans chlordane) | N/A |
| Heptachlor | N/A |
| Heptachlor epoxide | N/A |
| Methoxychlor | N/A |
| Mitotane (2,4' DDD) | N/A |
| Parathion | N/A |
| PCBs | N/A |
| Polychlorinated dibenzo-furans (PCDF) | N/A |
| Silvex | N/A |
| 2,4,5-T | N/A |
| Total PCBs | 10 |
| Total Pesticides | 10 |
| **Other** | |
| Asbestos | 0.50% |
| Total Sulfur | 0.50% |

N/A = Not Available
SB = Site Background
* = Total SVOCs must be less that 500ppm. Total carcinogenic SVOCs must be less than 3 ppm if any one of the cSVOCs** exceeds TAGM.
** = cSVOC list includes: Benzo(a)pyrene, Dibenzo(a,h)anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, and Chrysene.
*** = Some forms of Cyanide are complex and very stable while other forms are pH dependent and hence are very unstable. Site-specific form(s) of Cyanide should be taken into consideration when establishing soil cleanup objective
**** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.
MDL = Method Detection Limit

### a. New York Recycling

Details of the New York Recycling (475 Exterior Street, Bronx NY) source site review and site testing for this cover layer material source site are included in the DORs. Analytical sampling and testing was completed at the site in September 2017. A site inspection was performed concurrently with the sampling event.

Approximately 1,062 cubic yards of cover layer material were imported to the Site from this source site for construction of the permanent clubhouse between November 2017 and March 2018. The majority of the material was used to raise the grade elevation in the immediate vicinity of the Clubhouse foundation and the landscape beds surrounding same.

### b. Ranco Sand & Stone

The source site review for Ranco Sand & Stone (151 South Street, Manorville NY) consisted of an August 25, 2018 site visit to collect samples of this cover layer material for laboratory analysis; results are included in **Appendix N**. Results indicated that analyzed parameters met the permit standards.

Approximately 690 cubic yards of cover layer material were imported to the Site from this source site for cover material related to the gas main installation project.

## D. On-Site Fill Importation Inspections

### c. Process

As required under Special Condition 24 of the 2014 Permit, fill importation was inspected at the Site by the IEM. Fill material volume (truck volume) was measured and recorded for each delivery of fill material as it arrived on-site by NYCDPR's appointed representative. The fill material was then inspected by the IEM at the entrance to the Site. At this time, the fill material was visually inspected and field screened for signs of contamination. The visual inspection included observations of the material, disturbing the material with a shovel, and close-up observations of the material retrieved by shovel while still in the truck or trailer. Field screening of the fill material was executed using a PID. If the fill material failed to meet the Permit requirements for reasons such as a PID reading above ambient air, the presence of asphalt, concrete or brick components, or some other unauthorized debris, the load was rejected immediately prior to dumping. If the material was rejected, the truck was not allowed to dump on-site and was directed to exit the site immediately.

During the material imports for the Clubhouse and the gas main installation project, the IEM found no reason to reject the imported loads. Loads met the visual and field screening tests and were subsequently accepted.

If the fill material passed the initial inspection at the IEM observation area, either it was allowed to dump directly at a work location for immediate use as cover layer material or it was transported to, and dumped at, a stockpile location. At the dump location, the IEM screened the fill material visually and with a PID for a second time prior to spreading if dumped at an active work location. If the fill material did not meet the permit requirements at the dump location, it was immediately rejected, loaded back onto the same truck, and transported off-site. During the material imports for the Clubhouse and the gas main installation project, the IEM found no reason to reject the imported loads. Loads met the visual and field screening tests and were subsequently accepted.

#### d. Trucking Manifests

Trucking manifests were utilized for imported cover layer materials. A three-part manifest form was completed to track each load of material from origination at the source site to destination at the Site. The manifest contained information including but not limited to a manifest number, the source site name and address, the truck driver's name, truck and trailer license plate numbers, volume of material, as well as the time of departure from the source site and arrival time at the Site. Copies of fill import manifests are provided in **Appendix K**.

#### e. Rejected Trucks & Materials

Materials imported to the Site met the IEM's importation inspections, and none were rejected.

### E. Fill Tracking

Testing per 2,000 cubic yards for cover layer material is included in Special Condition 14 of the 2014 Permit).

Cover layer material volumes were tracked based upon the calculated volumes within each truck. This provided for the most accurate and consistent approach to monitoring the volume of imported fill materials. Prior to receipt of the calculated volumes, the IEM tracked estimated volumes as trucks dumped on the Site.

The total volume of cover layer material imported to the Site for construction of the permanent clubhouse was 1,530 cubic yards (truck volume) or 0.39 percent of the authorized amount under the Permit.

### F. Total Carcinogenic Semi-Volatile Organic Compound Tracking

As identified in Special Condition 14 of the 2014 Permit, the NYSDEC Acting Regional Director letter dated October 25, 2006 authorized the import of shaping material with a total carcinogenic SVOC (tcSVOC) level of up to 10 parts per million (ppm), which would not otherwise be acceptable, provided the tcSVOC weighted average of all imported material is equal to or less than 3 ppm at the end of each quarter. The tcSVOC weighted average is defined as the sum of the products of the material volume and the material tcSVOC, for each material source, divided by the total volume of the material imported. The weighted average was calculated over the course of construction and the final weighted average for shaping layer and cover layer materials imported to the Site was 0.70 ppm, less than the 3 ppm maximum. The total carcinogenic SVOC weighted average table and computations are included in the 2015 Final Construction Certification Report for materials imported to the Site after November 18, 2005.

SVOCs were sampled for New York Recycling on September 28, 2017. The tcSVOC level did not exceed 10 ppm. A copy of the laboratory report is provided in **Appendix J**.

SVOCs were sampled for Ranco Sand & Stone on August 25, 2018. The tcSVOC level did not exceed 10 ppm. A copy of the laboratory report is provided in **Appendix N**.

# IV. PERMANENT CLUBHOUSE CONSTRUCTION

## A. General

From July 2017-September 2018, Trump Golf Links at Ferry Point constructed a permanent clubhouse facility. The 14,100 square foot one-story building is located in the far southern section of the Site (immediately west of the 18th fairway) and includes locker rooms, showers, a bar room, a kitchen and associated facilities, ballrooms, administrative offices and a golf pro shop. The Trump Organization contracted with JCS Construction, Inc. to build this facility on piles, as it was formerly a landfill.

## B. Environmental Controls / Construction

### a. Landfill Gas Monitoring

Steel beams were driven to intermediate depths of approximately 40 feet, welded to another steel beam of the same length, driven to completion depths of approximately 75 feet, then cut to grade. Prior to welding/cutting, the piles were checked at the inlet (i.e. ground surface elevation) with a four-gas MiniRAE Meter. The meter alarm was triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) were above OSHA exposure limits; the alarm was not triggered for the vast majority of field activities, and on the few occasions when triggered, soil was placed over the inlet until the meter alarm was not triggered prior to welding/cutting activities. As an added measure of protection, when the meter alarm activated, explosion-proof industrial ventilation fans were activated to vent the work area and disperse gases emanating from the subsurface.

### b. Imported Soils Monitoring

Fifty-nine (59) loads of soil (approximately 1,062 cubic yards) were imported from New York Recycling, a donor source located at 475 Exterior Street in the Bronx; and 27 loads of soil (approximately 690 cubic yards) were imported from Ranco Sand & Stone, a donor source located at 151 South Street in Manorville NY. Air monitoring performed during the course of the workday revealed no detections above background on the PID. Visual observation and PID monitoring of each load of soil from New York Recycling and from Ranco Sand & Stone showed no evidence of VOCs or visual signs of debris within the material.

### C. Municipal Solid Waste

A Royal Carting commercial municipal solid waste (MSW) six-yard container was available on Site during the duration of clubhouse construction activities. MSW was not encountered or generated during digging, earth-moving or excavation activities associated with the new clubhouse or the gas main installation activities.

### D. Earthwork / Fill Placement

Earthwork and fill placement for this Project were performed in accordance with the Permit.

#### a. Cover Layer Material

Cover layer material was installed at the Site in accordance with the 2014 Permit (**Appendix A**).

Imported soil from New York Recycling and from Ranco Sand & Stone was backfilled and graded around the perimeter of the concrete sub-structure. The soil from New York Recycling was characterized as brown fine-coarse sand with occasional crushed stone roughly 1-1.5 inches in diameter. Materials imported from Ranco Sand & Gravel was characterized as clean, well-rounded white to gray medium sands.

#### b. Topsoil

Topsoil was used on the Site (in lieu of sand) specifically in tree planting pits and other landscape areas. Topsoil was imported from commercially available sources (i.e. Home Depot) and used on the Site as approved. This material met the cover layer material Permit requirements including the specification included in the 2014 Permit.

### E. Meetings

On a weekly basis during construction of the permanent clubhouse, progress meetings were held in the JCS field office trailer or in the temporary clubhouse on site. Various representatives from NYCDPR, the Trump Organization, JCS and the IEM (Maser Consulting) attended the meetings to discuss construction progress, current issues and scheduling.

Available meeting minutes from construction progress meetings are provided in **Appendix M**.

### F. SSDS / Liquid Boot® Installation

From November 2-7, 2017 the SSDS was installed. Lateral collection piping was laid, and the SSDS pits were excavated and connected to the lateral collection piping. The IEM provided oversight, including taking measurements of the as-built SSDS component installed locations for use in this report.

Stone cover was then poured over the SSDS prior to Liquid Boot® installation.

From November 8-15, 2017 the stone cover was lined (base fabric), sprayed with Liquid Boot®, and allowed to cure. Smoke testing was then performed, with leaks identified and resprayed. Coupon samples were measured to ensure that the cured thickness met the design requirement. Once smoke testing, coupon measurements and leak repairs were complete, a cover fabric was placed over the floor footprint prior to pouring the slab.

On two separate occasions after the initial spraying, curing and smoke testing of the vapor barrier, repairs had to be made to the barrier layer. IEM observations of damage to the cover fabric provided the impetus for additional spraying and testing. The first event took place in January/February of 2018 when weather conditions and mild temperatures prevailed. A final smoke test and barrier layer repair took place before the concrete floor was poured and once the Clubhouse was being enclosed. During both re-spray events, defects were located, repaired and re-tested for integrity. Like the previous smoke tests, the final smoke test indicated no signs of vapor barrier leaks, tears or defects.

On one occasion, Liquid Boot® was sprayed at temperatures below the recommended 45 degrees F. However, it was determined by experienced applicators and inspectors—based on site specific conditions—that the curing of the spray was acceptable. See documentation from CETCO/Minerals Technologies (the Liquid Boot® manufacturer) dated November 9, 2017 (**Appendix P**).

A letter of completion provided by EAI is provided in **Appendix P**.

### G. Six-Inch Gas Main Construction

In July 2018, the existing 2-inch gas service line was determined by FPA engineers to be insufficient to support the demands of the new Clubhouse facility. A new 6-inch gas main was required to meet the demand. Installed between August and October 2018, the new main provides sufficient volumes of natural gas to support the new Clubhouse facility and its amenities.

The new gas line was connected to a Con Ed main located on Schley Drive, north of the golf course. The new pipeline runs along the western perimeter of the site along fairways #6, #7 and #8. The line doglegs to the west side of the maintenance area and generally follows the service cart path along the west side of the property. The line turns to the east toward the new Clubhouse in the general vicinity of the parking lot.

The service connection to the Clubhouse is located in a vault approximately 50 feet west of the Clubhouse, near the driveway entrance.

Architect drawings for this gas main are provided in **Appendix Q**. DORs are provided in **Appendix R** beginning on August 24, 2018 through October 22, 2018.

### H. Record Drawings & Deviations from Approved Design Plans

The permanent clubhouse project consisted of the following features and was designed by Hart Howerton and FPA:

- Golf pro shop
- Women's and men's locker rooms
- Dining room
- Bar/grill
- Kitchen
- Terraces
- Offices
- Vestibule and porch
- SSDS/Vapor Barrier

Deviations to the permanent clubhouse construction project were as follows:

- Drawing No. FO-500.00 "Vapor Remediation Underslab Plan" – lateral piping to SSDS pits DP-2B & DP-2C built approximately 2 feet offset from design due to piping conflicts
- Drawing No. FO-501.00 "Vapor Remediation Floor Plan" – riser piping for fan units SF-1 & SF built within walls to conceal system and prevent unauthorized access; gas sensors in Hall 124, Vestibule 101 & Electrical 113 ceilings built approximately 3-5 feet from design due to piping conflicts; monitoring point MP-1 built approximately 9 feet from design due to piping conflicts; monitoring point MP-8 built approximately 50 feet from design due to piping conflicts; monitoring point MP-9 built approximately 14 feet from design due to piping conflicts; monitoring point MP-10 built approximately 14 feet from design due to piping conflicts; monitoring point MP-2 was installed at the location shown in the Plan, however, it appears to have been tiled-over and is no longer accessible as a sampling point
- Drawing No. FO-502.00 "Vapor Remediation Attic & Mezzanine Plan" – fan unit SF-1 built approximately 10 feet to the left of design due to piping conflicts
- Drawing No. FO-504.00 "Vapor Remediation Details" – detail 1B built using hollow (instead of solid) concrete blocks; 'Methane Gas Sensor Detail (option 1)' & 'Methane Gas Sensor Detail (option 2)' added for sensor plenum boxes
- Drawing No. SD201 "Methane Monitoring System Ceiling Plan (As Built)" – methane gas sensor S16 built approximately 5 feet from design due to piping conflicts; methane gas sensor S19 built approximately 4.5 feet from design due to piping conflicts; methane gas sensor S28 built approximately 5 feet from design due to piping conflicts

Copies of the drawings issued for construction are provided in **Appendix C**. Copies of the drawings showing deviations from design are provided in **Appendices E and O**.

## V. ENVIRONMENTAL MONITORING

### A. Stormwater Pollution Prevention Plan (SWPPP)

The IEM performed weekly erosion control inspections to ensure compliance with Permit requirements. Erosion control inspections were carried out through the duration of permanent clubhouse construction. The SPDES permit remained effective until completion of ongoing construction including the permanent clubhouse. Copies of erosion control inspection reports are provided in **Appendix H**.

### B. Landfill Gas Monitoring

NYCDPR will implement post-construction monitoring necessary to fulfill the requirements of the Post-Construction Custodial Care Plan for landfill gas monitoring per the 2015 Final Construction Certification Report.

## VI. SUMMARY

Construction of a permanent clubhouse in the southern corner of the Site began in July 2017 and was substantially completed in October 2018. Activities included clearing and grubbing, excavation, installation of support pilings, grading, importation of fill material, construction of the permanent clubhouse with a protective vapor barrier system and associated SSDS and associated appurtenances, installation, testing and calibration of an interior methane detection system, installation of utilities and infrastructure, installation of plantings, and installation of a new gas main. A representative of the IEM was present during construction activities. For this project, fill importation and SSDS/Vapor Barrier construction followed the Permit and NYSDEC requirements as documented in the DORs as summarized herein.

## VII. CERTIFICATION

Certification Statement

I, Donald Bowman, an employee of Maser Consulting P.A. and a Registered Professional Engineer licensed by the State of New York, exercising independent judgment and discretion do hereby certify that this Subslab Depressurization System (SSDS) for the Trump Golf Links at Ferry Point Clubhouse was constructed under my direction and supervision. The information contained herein is based upon: (1) work which I have personally inspected both during and after construction from July 2017 to date; (2) information provided to me by those directly employed by Maser Consulting P.A.; (3) Design Consultants; and (4) contractors responsible for construction pursuant to their contracts except as indicated[2].

I certify that, from July 2017 to date, Maser Consulting representatives observed the installation of the critical elements of the SSDS for the Trump Golf Links at Ferry Point Clubhouse, with the following deviations from design:

- Drawing No. FO-500.00 "Vapor Remediation Underslab Plan" – lateral piping to SSDS pits DP-2B & DP-2C built approximately 2 feet offset from design due to piping conflicts
- Drawing No. FO-501.00 "Vapor Remediation Floor Plan" – riser piping for fan units SF-1 & SF built within walls to conceal system and prevent unauthorized access; gas sensors in Hall 124, Vestibule 101 & Electrical 113 ceilings built approximately 3-5 feet from design due to piping conflicts; monitoring point MP-1 built approximately 9 feet from design due to piping conflicts; monitoring point MP-8 built approximately 50 feet from design due to piping conflicts; monitoring point MP-9 built approximately 14 feet from design due to piping conflicts; monitoring point MP-10 built approximately 14 feet from design due to piping conflicts; monitoring point MP-2 was installed at the location shown in the Plan, however it appears to have been tiled-over and is no longer accessible as a sampling point
- Drawing No. FO-502.00 "Vapor Remediation Attic & Mezzanine Plan" – fan unit SF-1 built approximately 10 feet to the left of design due to piping conflicts
- Drawing No. FO-504.00 "Vapor Remediation Details" – detail 1B built using hollow (instead of solid) concrete blocks; 'Methane Gas Sensor Detail (option 1)' & 'Methane Gas Sensor Detail (option 2)' added for sensor plenum boxes

[2] Certification means a statement of professional opinion based upon investigation, analysis, knowledge and belief that is stated to be true and accurate. 6 NYCRR Part 360-1.2(b)24.

- Drawing No. SD201 "Methane Monitoring System Ceiling Plan (As Built)" – methane gas sensor S16 built approximately 5 feet from design due to piping conflicts; methane gas sensor S19 built approximately 4.5 feet from design due to piping conflicts; methane gas sensor S28 built approximately 5 feet from design due to piping conflicts




Donald Bowman, P.E.
Maser Consulting P.A.

11/26/2019
Date

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# E-9

Bally's Bronx
Ferry Point Park Golf Course and Community Park
New York Final Construction Certification Report
*Prepared by: New York City Department of Parks and Recreation*

LANGAN




**City of New York Department of Parks and Recreation**

# Ferry Point Park Golf Course & Community Park
# Bronx, New York

**Final Construction Certification Report**
**NYSDEC Permit #2-6006-00014 / 00013 (SW)**
**October 19, 2015**

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# 1 Introduction

## 1.1 Purpose

This Final Construction Certification Report for the Ferry Point Park Golf Course is submitted to the New York State Department of Environmental Conservation upon completion of the construction of Ferry Point Park East, a solid waste management facility, which includes the resultant information prepared in accordance with 6NYCRR Part 360 of the New York State Solid Waste Management Program.

This report is to certify that the construction of Ferry Point Park East has been completed in accordance with the 6NYCRR Part 360 and the Ferry Point Park Part 360 permits. Therefore, this report will present in great detail each specific approved component of the project – what was approved, what was actually constructed initially (with pictures), the changes that were made, and the final status and design as of the date of this report (with pictures).

## 1.2 Report Organization

This report has been generated to provide a written post-construction certification report to comply with the requirements of the Project's Part 360 Permits. The narrative and supporting information provided in this report have been organized such that any individual, especially those not familiar with the project, can gain a concise understanding of the history of improvements at the Site. As such, the report has been organized into the following sections:

- This report begins with this introductory chapter (Section 1) which briefly describes the purpose and scope of the project, provides details pertaining to the Site background including a Site description, key agencies involved, and Project and permitting history.

- Section 2 describes the Part 360 Permits and modifications, Permit reference documents, non-conformance issues, operational upsets, emergencies, and unusual circumstances, and reporting completed associated with the Project.

- Section 3 details the fill importation QA/QC program, specifically source site reviews for shaping layer and cover layer material, on-site fill importation inspection, trucking manifests, rejected trucks and materials, fill tracking, and total carcinogenic semi-volatile organic compound tracking.

- Section 4 provides details related to construction activities on-site including construction of the Community Park and the Golf Course, status of the Waterfront Park, environmental controls such as landfill gas wells, groundwater wells, liners, gas venting systems, vent trench, landfill cap, municipal solid waste handling, earthwork and fill placement, demarcation layer, miscellaneous golf course materials such as greens and tees mix, construction progress meetings, and deviations from the approved design plans and/or Permit requirements with as-built surveys.

- Section 5 details the environmental monitoring completed during the Project including Stormwater Pollution Prevention Plan (SWPPP), landfill gas, piezometer, settlement plate, and groundwater monitoring as well as information related to the deed restriction and post construction monitoring requirements at the Site.

- Section 6 provides a summary of the report.

- Report certification is provided in Section 7.

## 1.3 Background Information

### 1.3.1 Project Scope

Ferry Point Park in the Bronx (the "Site") is a former landfill covering 222 acres that is bounded by the Bronx-Whitestone Bridge and Hutchinson River Parkway to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue and St. Raymond's Cemetery to the north, and the East River to the south (See Figure 1-1 Ferry Point Park Project Area Map). The project was originally managed under Ferry Point Partners, LLC and was taken over solely by the City of New York Department of Parks and Recreation in October 2007.

The original project scope (the "Project") included the construction of three main elements including a golf course, a community park, and a waterfront park over the 222-acre Site (see Figure 2-1 Ferry Point Park Site Layout) as follows:

1. An 18-hole golf course with practice facility, driving range, clubhouse, maintenance facility, irrigation lake, stormwater retention ponds, and a parking lot (192.5 acres);
2. A passive recreation waterfront park with walkways and a comfort station (19.5 acres); and
3. A community park with baseball fields, basketball court, walkways, comfort station, and landscaped stormwater retention area (10 acres).

### 1.3.2 Project Site

The origins of the site for purposes of presenting a description of the site and surrounding area for this report extend back to the early 1900's. At that time an available 1900 map of the Bronx (Figure 2-2) showed the western edge of the site which now contains the expressway and Whitestone Bridge was a long narrow peninsula extending out to the same area that the northern landing of the Whitestone Bridge now extends to. Immediately east of this peninsula was a large open bay which is the area that the Ferry Point Golf Course is located within. Further to the northeast of this bay and well inland and beyond the current golf course was the Baxter Creek that drained into the bay. The eastern landfall of this embayment area is a larger peninsula that contains roadways and what appears to be residential development. The road patterns do not resemble the roadways that currently exist in that area and appear to have been changed.

A 1938 aerial photo (Figure 2-3) showing the construction of the Whitestone Bridge shows the Bay, mooring, residential area and land to the west to be virtually the same as shown in the 1900 map (Fig. 2-2). The significant change is in the widening of the western peninsula where the expressway was being constructed leading to the bridge ramps. The widening was not significant at this time but a rectangular area in the extreme northwest corner of what is now the site does appear to be filled and graded possible for bridge and expressway construction staging or support. Areas of filling can be readily identified by the contrasting lighter color typically indicative of sandy dredge sand placement. Other areas along the shoreline can be seen as containing a lighter colored band of fill material and this includes much of the new Ferry Point Park located west of the Whitestone Bridge. Much of the park area was filled, graded and completed by 1938. Bulkheads were constructed with linear components to present a smooth shoreline but one that does not appear to contain a beach where water diminishes in depth to 0. Photos of the eastern area of the bay where mooring and docks can be seen showing large vessels moored against the shore. This would indicate the water has significant depth all of the way to the center of the bay.

Aerial photographs from the 1950's (Figure 2-4) show a drastic change in the area currently referred to as the site. Large expansion of the filling that was evident in 1938-39 up in the northeast corner can be clearly seen. The filling extends well into the bay and it appears that a connective bridge was constructed from the eastern shore to the fill area. It is difficult to discern if this is a usable structure for crossing or if it had some other purpose. The filling operation appears from the photo to consist of the same light colored material that was placed in the Ferry point Park and from photos showing a large number of barges in the water filled with material of the same light color. There is no specific logs and documentation that presents the specific origin and consistency of the material but from the prior aerials showing filling and this large expansion, it appears to be of a similar origin which would be dredge sand. In the 1951 aerial, no specific municipal solid waste dumping and disposal can be seen but the records indicate the landfill operated from this approximate time period. So it can be assumed that municipal solid waste was dumped within the site area very soon after that. The filling shown in the aerial may very well have been the initial construction of the upper portion of the landfill with the tidal gate or bridge closing in the upper bay area. Additional aerials of the landfilling were not identified and more recent aerials document the completion of filling as well as the more recent golf course construction.
What can be discerned from this compilation of photos is that the landfill was located on area that may have been completely filled open water as well as some area that was previously reclaimed land with dredge material.

The Site operated as a landfill from before 1951 to the 1960's. The landfill reportedly accepted municipal solid waste during its operating period and was closed and covered in the mid-1960's, with additional closure operations conducted more recently in the 1980's. Prior Site use was determined from historic aerial photographs from 1951 thru 1991. The aerial photographs span practically the entire operational period of the prior landfill, from its initial operations to the present, and provides substantial information about the Site's development.

### 1.3.3 Key Agencies

The following were the key agencies associated with the project providing oversight, administration, design, construction, and monitoring services. The following is not intended to be an exhaustive list of involved entities related to the Project. A more extensive list of project participants is included in Appendix 18.

Primary Regulatory Agency:
New York State Department of Environmental Conservation Region 2 ("NYSDEC")

Project Permittee (Prior to October 2007):
Ferry Point Partners, LLC ("FPP")
City of New York Department of Parks and Recreation ("NYCDPR")

Project Permittee (Post October 2007):
City of New York Department of Parks and Recreation ("NYCDPR")

Primary Design, Engineering, Construction, and Monitoring Consultants:
Sanford Golf Design ("Sanford")
Nicklaus Design ("Nicklaus")
TRC Companies, Inc. ("TRC")
Langan Engineering & Environmental Services, Inc. ("Langan")
Ecology and Environment, Inc. ("E&E")
KS Engineers PC ("KSE")
Wesler Cohen Associates ("WCA")
The Pignato Group ("TPG")
Thomas Balsley Associates ("TBA")
Green Bases, Inc. ("GBI")

Independent Environmental Monitor ("IEM"):
ARCADIS/Geraghty & Miller (July 2000 – December 2000)
Gannett Fleming (December 2000 – October 24, 2010)
Woodard & Curran ("WC") (October 25, 2010 – Project Completion)

General Contractor:
Golf Course and Community Park: LAWS Construction Corp. ("LAWS")
Community Park Comfort Station: TJM Construction Corp. / Long Island Concrete, Inc.
Golf Course Maintenance Building, Rain Shelter, Comfort Station: Triton Structural Concrete, Inc.
Golf Course Cover Layer Material Importation: MFM Contracting Corp.

Golf Course Concessionaire/Operator:
The Trump Organization ("Trump")

### 1.3.4 Independent Environmental Monitor

The requirement for an Independent Environmental Monitor ("IEM") on this project was associated with an increased level of monitoring exceeding normal review and oversight practices of the NYSDEC in order to protect public health and the environment. The increased level of review and oversight for this Project was mainly associated with the extensive effort required for evaluation of fill material sources, source site testing and inspection, importation of the fill material, extensive earthwork, and environmental monitoring required at the 222-acre Site.

In accordance with Special Condition 24 of the 2014 Permit, NYCDPR was responsible to retain an IEM, accountable to the NYSDEC, to provide environmental oversight of all activities authorized under the Permit including but not limited to the quantification, importation and placement of fill, and the monitoring of the Site. Particular activities performed by the IEM for this Project included the following:

- Report deviations from or non-compliance with permitted activities to the NYSDEC;
- Evaluate and inspect fill sources;
- Witness source site investigation, sampling, and compare lab test results to Permit requirements;
- Visual and Photo-Ionization Detector (PID) inspection of imported fill materials to the Site;
- Monitor offloading of all trucks and reject unacceptable materials from being dumped on the Site and used for construction;
- Monitor environmental sampling on the Site (i.e. landfill gas, piezometer, groundwater, settlement, etc.);
- Monitor all aspects of fill operations on the Site, particularly the installation of minimum thickness of shaping layer and cover layer materials as well as demarcation layer installation; and
- Complete and submit to the NYSDEC Daily Observation Reports, bi-weekly Fill Management Reports, and Quarterly Reports related to Project activities.

The selection, continued retention, discharge, or replacement of the IEM was subject to the approval of the NYSDEC, at its sole discretion.

### 1.3.5 Project and Part 360 Permitting History

The following represents an overview of project and permitting history outlining key events associated with the Project. For more detailed and additional supporting information, reference the updated Permit Modification application package titled "Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East", dated May 31, 2012 and subsequently revised on August 31, 2012, June 20, 2013, and October 15, 2013 ("2013 Engineering Report") included in Appendix 20.

In May 1997, a Request for Proposals was released for the development of the Site. In May of 1998 Ferry Point Partners, LLC ("FPP") was selected as the developer and in the late May 2000, the City of New York Department of Parks and Recreation ("NYCDPR") initially entered into a license agreement with FPP to develop, construct, and operate the new recreation facility. The facility included a Jack Nicklaus signature golf course, a community park, a waterfront park, and related facilities (the "Project"). At that time, all required reviews for the Project were completed under the City Environmental Quality Review (CEQR),

State Environmental Quality Review Act (SEQRA), and New York City's Uniform Land Use Review Procedure (ULURP).

On July 17, 2000, the NYSDEC issued a Part 360 Solid Waste Management Permit (DEC No. 2-6006-00014-00011) (the "2000 Permit") jointly to NYCDPR and FPP (the "Permittee"), for a non-specific "facility" under Part 360-1.9(b) at the Site (see Appendix 1 for a copy of the permit). This permit allowed the Permittee to import and place fill necessary to construct the Project. This permit allowed for 1,000,000 cubic yards of fill material (in-place volume) to be imported and placed on the Site. The Permittee prepared an Engineering Report, dated April 11, 2000 and a Report on Fill Management Operations & Maintenance, dated May 16, 2000 as part of the permit application.

After the receipt of the original Part 360 Permit in July 2000, FPP entered into a contract with LAWS Construction Company, Inc. (the "Contractor") to construct the golf course, parks and other features of the Project, and to identify, secure and import the off-site fill material to be used to meet the design elevations of the grading plans referenced in the 2000 Permit.

Initially ARCADIS/Geraghty & Miller, Inc. was retained as the IEM. ARCADIS/Geraghty & Miller, Inc. was retained as the IEM for a period from July 2000 to December 2000 and was replaced as the IEM by Gannett Fleming Engineers and Architects, P.C. in December 2000.

FPP began importing fill to the Site in August 2000 and continued, with some interruptions, until January 2002 when fill deliveries were halted pending the modification of the 2000 Permit.

On January 10, 2001, the NYSDEC issued a letter addressing quality control protocol for potential sources of material from sites that previously experienced backfilling with soil, but not with waste materials, for the use in the shaping layer.

On May 21, 2001, the NYSDEC issued a Fill Procurement Protocol letter addressing acceptance of uncontaminated, unprocessed construction and demolition debris ("C&D") from registered C&D processing facilities.

On May 24, 2001, the NYSDEC issued a Fill Procurement Protocol letter addressing paragraph b in the May 21, 2001 letter and clarifying the definition of processed material.

From May to December 2001, based on the results of the Site perimeter methane gas monitoring, the NYSDEC required the construction of a landfill gas passive vent trench along most stretches of the Site perimeter from the water's edge near the foot of Emerson Avenue, along the entire length of the Site boundary with Balcom Avenue, and along Schley Avenue and continuing approximately 1,050 feet to the west past the intersection of Schley Avenue and Buttrick Avenue. In total, approximately 5,350 feet of passive vent trench was constructed (see Section B.3.a of Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx,

NY, Engineering Report, dated June 30, 2005 (revised) for additional information). Additional discussion related to the vent trench construction is included in Sections 4.2.4 and 4.6 of this report.

In February 2002, the Permittee requested a modification to the 2000 Permit to increase the volume of in-place fill to approximately 1,550,000 cubic yards and changes in design features. The Permittee prepared a Supplement to the Engineering Report, dated February 11, 2002 and a Response to Request for the Additional Information, dated July 2, 2002 as part of the permit modification.

On October 18, 2002, the NYSDEC issued a Part 360 Solid Waste Management Permit (DEC No. 2-6006-0014-00013) (the "2002 Permit") to allow the Permittee to place 1,522,300 cubic yards of in-place fill on the Site (see Appendix 1 for a copy of the permit modification). Prior to October 18, 2002, 446,500 cubic yards of shaping material had been imported to the Site.

After the NYSDEC issued the 2002 Permit in October 2002, FPP resumed importing fill to the Site. The importation of fill to the Site was performed in accordance with the 2000 Permit, the 2002 Permit, the 2000 Fill Report and the Fill Procurement Protocol per the NYSDEC letters dated January 10, 2002, May 21, 2001 and May 24, 2001.

On December 10, 2002, NYCDPR submitted the Response Action Plan ("RAP") as required by Special Condition 31 of the 2002 Permit. A copy of the RAP is included in Appendix 19.

On March 10, 2003, NYCDPR submitted a proposal to the NYSDEC to repair and replace methane monitoring system components. A copy of the proposal is included in Appendix 19.

In response to NYCDPR's March 10, 2003 request to repair and replace methane monitoring system components, the NYSDEC approved replacement of 34, 25-foot spaced, semi-permanent monitoring wells with eighteen, 50-foot spaced, monitoring wells along Miles and Emerson Avenues, in accordance with Special Condition #37 of the 2002 Permit, on March 17, 2003. Installation of the replacement monitoring wells was completed in May 2003.

On November 18, 2003, the NYSDEC approved the Work Plan for the Final Consent Order, Case No. R2-20030724-187, dated November 18, 2003. This provided for the placement on Site of the solid waste material excavated during the construction of the gas venting trench, the size reduction of concrete on Site, and the processing and composting of existing wood on Site. The solid waste material was moved and placed in January 2004 and the processing and composting of the wood was completed in the spring of 2004. A copy of the approval is included in Appendix 19.

On January 12, 2004, the NYSDEC transmitted a copy of the executed Order on Consent No. R2-20030724-187 to NYCDPR. A copy of the fully executed consent order is included in Appendix 19.

On November 1, 2004, the NYSDEC approved the revised truck compaction factor of 42.4% based on the October 10, 2003 30% aerial topographic survey as was required per the 2002 Permit.

On December 7, 2004, the NYSDEC approved the revised truck compaction factor of 41% based on the July 17, 2004 60% aerial topographic survey as was required per the 2002 Permit.

In May 2005, the Permittee requested a modification to the permit to increase the volume of in-place fill to approximately 2,370,000 cubic yards among other items in order to reshape the Golf Course related to a revised design by the golf course architect. The Permittee prepared Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associated dated June 30, 2005 (revised) and Volume #2, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associated dated June 30, 2005 (collectively known as the "2005 Engineering Report"). A copy of the 2005 Engineering Report is included in Appendix 20.

On August 2, 2005, NYCDPR responded to NYSDEC comments on the previously submitted June 30, 2005 Permit Modification and Engineering Report. A copy of the comment response is included in Appendix 19.

On November 18, 2005, the NYSDEC issued the modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013) to place a total of 2,543,729 cubic yards of in-place fill on the Site (see Appendix 1 for a copy of the permit modification). This action was followed by a December 27, 2005, revision (No. 2-6006-00014/00013) that amended the total in-place fill volume to 2,370,000 cubic yards (the "2005 Permit").

On April 4, 2006, NYCDPR submitted a request for a determination related to cover layer material chemical criteria to the NYSDOH. On August 2, 2006, the NYSDOH provided written determination related to fill material chemical criteria required under Permit Special Condition 15(d) of the 2005 Permit. The submission and response are included in Appendix 19.

On October 25, 2006, the NYSDEC authorized the importation of shaping layer material from otherwise allowable sites with a total carcinogenic SVOC level in exceedance of the site limit, but 10 ppm or lower provided that a weighted average equal to or less than 3 ppm would be achieved by the end of each quarter of each year. A copy of the correspondence is included in Appendix C.1 of the 2013 Engineering Report (Appendix 20).

On October 26, 2007, the NYCDPR terminated the license agreement with Ferry Point Partners, LLC and took over site development activities. Ferry Point Partners, LLC was no longer involved with the Project or a Permittee.

On February 29, 2008, FPP submitted an application to the NYSDEC to transfer the Part 360 Permit solely to NYCDPR.

On July 25, 2008, a permit renewal application package to the 2005 Permit was submitted by NYCDPR. This submittal requested a modification of the 2005 Permit to allow the use of dredge and processed dredge material (PDM) as fill and the barge delivery of such fill material to the Site.

On August 12, 2008, the NYSDEC notified NYCDPR and FPP that the Part 360 Permit had been transferred to NYCDPR.

On October 24, 2008, the NYSDEC issued a Notice of Incomplete Application and comments to the July 25, 2008 submittal.

On December 2, 2008, the NYSDEC issued a letter to advise NYCDPR that the 2005 Part 360 Permit (with the corresponding November 30, 2008, expiration date) remained in full force and effect until NYSDEC approved the permit renewal application, as per Section 401(2) of the State Administrative Procedure Act (SAPA). See Appendix A of the 2013 Engineering Report (Appendix 20) for a copy of the SAPA letter.

On December 26, 2008, a response to NYSDEC's comments of October 24, 2008 was submitted by NYCDPR with a supplemental permit application package to the 2005 Permit.

On April 8, 2009, the NYSDEC issued comments to the December 26, 2008, permit application submittal. A copy of the comment letter is included in Appendix 19.

On April 9, 2009, the NYCDPR withdrew its request for a permit modification to allow the use of Processed Dredged Material ("PDM") as fill.

On April 30, 2009, the NYSDEC directed NYCDPR to not accept or place on the Site any cover layer materials with arsenic concentrations greater than 16 ppm or lead concentrations greater than 400 ppm. A copy of the correspondence is included in Appendix C.2 of the 2013 Engineering Report (Appendix 20).

On July 9, 2009, NYCDPR submitted proposed cover layer material chemical criteria to NYSDEC for review and approval. A copy of the correspondence is included in Appendix C.3 of the 2013 Engineering Report (Appendix 20).

On July 28, 2009, the NYSDEC notified NYCDPR that cover material is divided between two classifications: Active (suitable for use in Active or Passive Recreation areas), and Passive (suitable for use in Passive Recreation areas only). NYSDEC provided a table to NYCDPR listing modified heavy metal chemical limits for the cover layer at the Site. A copy of the correspondence is included in Appendix C.2 of the 2013 Engineering Report (Appendix 20).

On September 18, 2009, NYCDPR submitted rationale for a revised shaping layer correction factor based on the latest survey and fill imports volumes at that time. A December 11, 2012 letter evaluating the September 18, 2009 submittal was also submitted to the NYSDEC. The submissions are included in Appendix 19.

On September 25, 2009, the NYSDEC revised and clarified the chromium chemical limits for the cover layer previously presented in the July 28, 2009 correspondence. A copy of the correspondence is included in Appendix C.2 of the 2013 Engineering Report (Appendix 20).

On November 25, 2009, a response to NYSDEC's comments of April 8, 2009, was submitted by NYCDPR with a second supplemental permit application package to the 2005 Permit. This submittal withdrew the request to allow the use of dredge material and PDM as fill and the barge delivery of such fill material to the Site. This submittal also proposed a design modification for a Site-wide active landfill gas control system. The 2005 Permit included passive venting systems for the Site, with active systems proposed only in enclosed structures. The November 25, 2009 permit renewal application is included in Appendix 20.

On June 25, 2010, the NYSDEC issued a Notice of Incomplete Application and comments on the November 25, 2009, permit application submittal. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On August 6, 2010, the NYSDEC issued additional comments on the November 25, 2009, permit application submittal. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On September 29, 2010, a response to NYSDEC's comments of June 25 and August 6, 2010, was submitted by NYCDPR with a third supplemental permit application package for the 2005 Permit. This submittal withdrew the proposed design modification of a Site-wide active landfill gas control system and proposed a system consistent with the 2005 Permit. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On October 7, 2010, a supplemental response to NYSDEC's comments of June 25 and August 6, 2010, was submitted by NYCDPR to accompany the September 29, 2010, permit renewal application submittal. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On October 25, 2010, Woodard & Curran replaced Gannett Fleming, assuming the duties of the IEM for the Project.

On December 17, 2010, NYCDPR submitted supplemental information to the NYSDEC related to the Landfill Gas Report originally submitted to the NYSDEC on November 16, 2010 to address requests from the NYSDEC from a December 2, 2010 meeting. The November 2010 Landfill Gas Report and the December 17, 2010 supplemental information are included in Appendix E of the 2013 Engineering Report (Appendix 20).

On January 3, 2011, the NYSDEC issued a letter directing NYCDPR to collect and provide additional landfill gas data to better elucidate the subsurface conditions at a frequency described in the 2005 Permit. The letter requested that NYCDPR expand the landfill gas monitoring to include concentrations of hydrogen

sulfide, volatile organic compounds, and carbon monoxide, well temperature, and well pressure. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On January 10, 2011, NYCDPR signed an Administrative Order on Consent (Consent Order), Case No. R2-20100521-172, related to fill material imported to the Site that violated the Permit. During 2010, fill material was brought on-site and placed in seven different stockpiles. The material was believed to be in conformance with Permit conditions. However, the material was found to be in violation of 2005 Permit Special Conditions 1, 9, and 16, during NYSDEC and IEM inspections. Under the terms of the consent order, the material was allowed to remain on-site under controlled conditions. The material was used to construct the base of the clubhouse and maintenance facility parking lots. Additional details are included in the Order on Consent, which is included in as Appendix I of the 2013 Engineering Report (Appendix 20).

On January 12, 2011, NYSDEC issued a response to NYCDPR's Request for Explanation of NYSDEC Request for Expansion of Ferry Point Park Landfill Gas Monitoring Parameters. Additional parameters included collecting data for hydrogen sulfide, volatile organic compounds and carbon monoxide, well temperature and well pressure. A copy of the correspondence is included in Appendix J of the 2013 Engineering Report (Appendix 20).

On February 16, 2011, NYCDPR submitted test pit analytical data to NYSDEC for review related to demarcation layer installation requirements. A copy of the correspondence is included in Appendix C.3 of the 2013 Engineering Report (Appendix 20).

On March 9, 2011, the NYSDEC issued a response to NYCDPR's February 16, 2011 correspondence requiring demarcation layer to be installed on the Site only in areas where there was less than five feet of shaping and cover layer materials. A copy of the correspondence is included in Appendix C.3 of the 2013 Engineering Report (Appendix 20).

On May 13, 2011, NYCDPR issued a memorandum to the NYSDEC presenting the results of a site-wide water balance based on a cover layer material permeability of 14 inches per hour, which indicated that there would be a reduction in the infiltration rate over the entire Site. A copy of the correspondence, which includes additional details on the topic, is included in Appendix D.1 of the 2013 Engineering Report (Appendix 20).

On May 26, 2011, NYCDPR requested confirmation from the NYSDEC that the use of USEPA Analytical Method 625/8270 was an acceptable alternative method for the analysis of dioxin and furan constituents. The NYSDEC provided verbal confirmation that this was an acceptable method to be used. A copy of the correspondence is included in Appendix C.5 of the 2013 Engineering Report (Appendix 20).

NYCDPR issued a June 2011 report to the NYSDEC regarding sampling and analysis of landfill gas vents at the Community Park. A copy of the report, which includes further details of this sampling and analysis, is included in Appendix E.3 of the 2013 Engineering Report (Appendix 20). On July 1, 2011, the NYSDEC concluded that there were no ambient air impacts due to the landfill gas emissions from the twelve vents

located in the Community Park and that no further monitoring was necessary beyond routine maintenance.

On August 10, 2011, NYCDPR issued a subsequent water balance memorandum indicating that a higher cover layer material permeability of 30 inches per hour would also result in a lower volume of water infiltrating through the surface of the Site after completion of construction. Section 4.2.1 includes the description relating to the site permeability modifications. Additional details related to the water balance are included in Appendix D.2 of the 2013 Engineering Report (Appendix 20).

On September 19, 2011, NYCDPR prepared technical memorandum Field Sampling Procedures for Ferry Point Site related to groundwater characterization. The memorandum is included in Appendix G of the 2013 Engineering Report (Appendix 20).

On October 18, 2011, NYCDPR submitted a technical drainage review memorandum to the NYSDEC for review regarding the final cover material and site wide water balance. A copy of the correspondence is included in Appendix D.5 of the 2013 Engineering Report (Appendix 20).

On October 21, 2011, the NYSDEC provided a response to NYCDPR's October 18, 2001 technical drainage review memorandum including a conditional approval allowing cover layer material to have a percolation rate of up to 30 inches per hour. The condition was that NYCDPR was required to submit for approval an amendment to the Stormwater Pollution Prevention Plan (SWPPP) including plans and computations that reflect the partial lining of stormwater basins. A copy of the correspondence is included in Appendix D.5 of the 2013 Engineering Report (Appendix 20).

On November 16, 2011, NYCDPR provided NYSDEC with a technical memorandum addressing the conditions included in the October 21, 2011 conditional approval for the cover layer material percolation rate. A copy of the correspondence is included in Appendix D.6 of the 2013 Engineering Report (Appendix 20).

On December 2, 2011, the NYSDEC provided an approval for NYCDPR's SWPPP amendment via email. A copy of the correspondence is included in Appendix D.6 of the 2013 Engineering Report (Appendix 20).

On January 26, 2012, the NYSDEC clarified that the average percolation rate from all samples collected within one cover layer material stockpile could be used as the representative percolation rate of that stockpile due to the mixing that occurred during loading, unloading, transport, stockpiling, and spreading of the material. A copy of the correspondence is included in Appendix 19.

On March 28, 2012, NYCDPR submitted to the NYSDEC initial groundwater monitoring data from the installation of 11 new monitoring wells installed and sampled in February 2012. NYCDPR requested additional direction from the NYSDEC concerning procedures for future sampling events.

On May 1, 2012, the NYSDEC acknowledged that settlement plate monitoring at several points has been discontinued due to interference with ongoing construction, and informed NYCDPR that the short-term monitoring locations did not need to be replaced as long as construction at the Site progressed and the long-term plates were installed as construction was completed. A copy of the correspondence is included in Appendix H of the 2013 Engineering Report (Appendix 20).

On May 8, 2012, a conference call was held between NYCDPR and the NYSDEC to discuss the initial groundwater monitoring data submitted on March 28, 2012 and to discuss guidance for future groundwater monitoring. The NYSDEC provided NYCDPR with requirements for future groundwater monitoring in their May 8, 2012 Ferry Point Park Groundwater Characterization/Monitoring Objective. Meeting minutes are included in Appendix G of the 2013 Engineering Report (Appendix 20).

On May 24, 2012, the NYSDEC verified via email that there were no outstanding enforcement actions for the Site. A copy of the correspondence is included in Appendix B of the 2013 Engineering Report (Appendix 20).

In May 2012, the Permittee requested a modification to the Permit presenting studies, modeling, investigations, and design work that were performed to resolve outstanding comments that were received by the Permittee after the April 8, 2009 Notice of Incomplete Application and the November 25, 2009 permit application to the NYSDEC. NYCDPR submitted the initial version of the Supplemental Engineering Report dated May 31, 2012.

On June 8, 2012, the NYSDEC confirmed that the sand material used for the tees, greens, and sand traps (bunkers) should not be counted towards the Permit stated allowable cover soil maximum of 250,000 cubic yards. Based on information provided to the IEM by NYCDPR, NYCDPR's consultants have estimated the required sand material volumes as follows: Tees and Greens (24,705 cubic yards), Driving Range Tee (3,025 cubic yards), and bunkers (6,076 cubic yards). Since these values were estimated and calculated by NYCDPR's consultants, it shall be noted that actual installed volumes may fluctuate from the volumes identified above. Information is from an email from Joe Voss to Faisal Choudhury on June 13, 2012. A copy of the correspondence is included in Appendix 19.

On January 23, 2013, NYCDPR submitted the rationale for increasing the amount of cover layer material that could be imported to the Site under the Permit. A copy of the correspondence is included in Appendix 19.

On February 1, 2013, The NYSDEC issued an amendment to the 2005 Permit (last modified October 17, 2012) authorizing the Permittee to import a total of 2,514,000 cubic yards of in-place fill totaling approximately 2,120,000 cubic yards of shaping layer material and approximately 394,000 cubic yards of cover layer material. A copy of the amendment is included in Appendix 1.

On April 26, 2013, the NYSDEC notified NYCDPR that the compaction factor for cover layer material was revised to 18%, approving NYCDPR's revised April 8, 2013 submittal. A copy of the approval letter and submittal are included in Appendix 19.

On October 15, 2013, NYCDPR submitted the final version of the "2013 Engineering Report", entitled Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, NY dated May 31, 2012 (Revised August 31, 2012, October 15, 2013) to address concerns raised by the NYSDEC since the Notice of Incomplete Application of November 25, 2009 to modify the 2005 Permit. The 2013 Engineering Report is attached in Appendix 20.

On April, 17, 2014, the NYSDEC confirmed via email that a minor exceedance of the cover layer in-place volume as included in the Permit is acceptable considering no additional shaping material will need to be imported and that the exceedance could be addressed via as-built drawings and in the final construction certification report. A copy of the email is included in Appendix 19.

On May 21, 2014, the NYSDEC issued the modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013 (SW)) and Tidal Wetlands Permit (No. 2-6006-00014/00016 (TW)) (the "2014 Permit"). See Appendix 1 for a copy of the permit.

On October 29, 2014, the NYSDEC issued an amendment to Special Condition 24 of the 2014 Permit stating that during fill delivery and earthwork, NYCDPR should submit quarterly reports to the NYSDEC summarizing all Site activities set forth in the Permit. Each report should provide details of all rejected fill material, quantify the amount of material imported to the Site using truck volumes, and the results of all on-site monitoring for that period. All fill tracking, earthwork activities, landfill gas monitoring, and associated reporting requirements typically contained within each Fill Management Report would be addressed by Quarterly Reports moving forward and Fill Management Reports would no longer be issued. FMRs were no longer being issued due to a significant reduction in fill importation and earthwork activities at the Site. A copy of the letter is included in Appendix 1.

For a detailed history of site operations and activities prior to June 30, 2005, see Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associated dated June 30, 2005 (revised) which is attached in Appendix 20.

### 1.3.6 Construction Drawings

The project included a substantial number of different construction drawings associated with the Project. Construction drawings are included in Appendix 4.

# 2 Part 360 Permit

## 2.1 Part 360 Permits and Modifications

The following is a list of the permits and modifications issued for this Project:

On July 17, 2000, the NYSDEC issued a Part 360 Solid Waste Management Permit (DEC No. 2-6006-00014-00011) (the "2000 Permit").

On October 18, 2002, the NYSDEC issued a Part 360 Solid Waste Management Permit (DEC No. 2-6006-0014-00013) (the "2002 Permit").

On November 18, 2005, the NYSDEC issued a modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013), followed by a December 27, 2005 revision (the "2005 Permit").

On May 21, 2014, the NYSDEC issued a modified Part 360 Solid Waste Management Permit (No. 2-6006-00014/00013 (SW)) and a Tidal Wetlands Permit (No. 2-6006-00014/00016 (TW)) (the "2014 Permit").

Note that a separate SPDES General Permit for Stormwater Discharges from Construction Activity (GP-08-001) was obtained for the Project and the Acknowledgement of Notice of Intent is dated May 12, 2009 (Permit Identification No. NYR10R112).

Copies of the aforementioned permits and modifications are included in Appendix 1.

## 2.2 Reference Documents

Refer to Appendix 2 for a list of Permit reference documents. These documents support the original Permit and/or provide basis for subsequent permits renewals and modifications.

## 2.3 Non-Conformance Issues

In accordance with Special Condition 24, the IEM reported on Permit related non-conformance issues during the duration of construction at the Site. A complete list of all non-conformance issues observed and corrective actions taken during the Project is included in Appendix 3.

## 2.4 Operational Upsets, Emergencies, and Unusual Circumstances

### 2.4.1 Security breaches, Unauthorized Entries, Injuries, Fires, Theft, Vandalism, etc.

The following information was gathered from TRC, NYCDPR's design and construction consultant:

In July/August of 2013, a CBS film crew received authorization from the Agency to scout and film areas within the Ferry Point Golf Course proper. There were no known issues with those activities.

TRC did not have specific detailed reports for thefts or vandalism that occurred on the Site. To the best of their knowledge, there were two incidents of vandalism to contractor equipment (broken glass

windows and spray painted vehicles), and a few incidents when the perimeter fence was damaged (bent/scratched vertical bars). Landfill gas vent caps were damaged, but there was no evidence of vandalism; the vent caps may have been damaged by lawn mowers or other equipment running over them.

There were no known major fires or injuries during the construction time period.

The only unusual event was the discovery of the body of a construction worker who had fallen from the Throggs Neck Bridge and washed up at the Waterfront Park. For several days there was police presence and other related activity. However, that event was not related to the work at the golf course nor did it delay or adversely affect the progress of the project.

As reported by the IEM:

On the evening of August 18, 2011, the Site was broken into by unknown persons. LAWS equipment storage containers were forced open and various tools and copper piping was stolen. The trespassers appeared to have entered the Site at the back entrance to the golf course along Balcom Avenue. The fence was observed cut open in that area.

Upon arrival at the Site on August 26, 2011, IEM staff observed that the IEM trailer had been broken into by unidentified persons. On-site security and LAWS representatives were notified as well as the local police (by LAWS). Two digital cameras were stolen from the IEM trailer.

On June 25, 2012, the IEM witnessed a trailer of imported fill material slide off its frame during dumping activities. No injuries were reported.

On October 31 and November 1, 2012, IEM staff performed on-site inspections to assess damage caused by Hurricane Sandy. IEM staff observed many areas around the Site where restoration work needs to be performed on the vent trench, silt fence repair, site security fence repair, and garbage/debris removal. The southern site boundary was observed to have significant damage and washout. The entire south end of the Site was open without protection and it was filled with debris from the storm.

On October 25, 2012, the IEM witnessed both a truck and a trailer roll over onto their side during dumping activities. No injuries were reported.

Various Permit non-conformance issues were observed related to unsatisfactory security at the Site beginning with non-conformance issue 12 on October 1, 2003 where security fence and other controls were not properly maintained on-site allowing for unauthorized entry to the Site. Site security, control, and unauthorized access were the subject of non-conformance issues 15, 72, 90, 93, 97, 98, 122, and 127. Ultimately, all of these non-conformance issues were resolved and closed out during construction on an ongoing/as-needed basis.

There was a presence of coyotes at the Site as tracked and studied as part of the Gotham Coyote Project. The work was conducted under NYCDPR permits and information was released to NYCDPR for informational purposes. Coyotes were initially monitored by game camera in Ferry Point Park beginning in January 2012 through 2013. Coyote monitoring did not occur at the Site in 2014.

## 2.5 Reporting

The IEM was responsible for reporting to the NYSDEC related to Permit activities and compliance for the Project in accordance with Special Condition 24 of the 2014 Permit. The IEM prepared and submitted to the NYSDEC Daily Observation Reports ("DOR"), bi-weekly Fill Management Reports ("FMR"), and Quarterly Reports ("QR"). These reports are attached as appendices to this report and available at the NYCDPR Bronx Borough Headquarters (Ranaqua) document repository and are part of the public record. The address of the repository is 1 Bronx River Parkway, Bronx, NY 10462, telephone: (718) 430-1800.

### 2.5.1 Daily Observation Reports (DOR)

The IEM reported to the NYSDEC on a daily basis on the following information: weather conditions, municipal solid waste material removal from the site, fill materials imported to the site, detailed notes of construction activities, and non-conformance issues related to the Permit conditions.

DORs are attached in Appendix 5 beginning on October 25, 2010. Daily site activity observations for the time period prior to October 25, 2010 are summarized in the IEM's Fill Management Reports.

### 2.5.2 Fill Management Reports (FMR)

The IEM prepared Fill Management Reports (FMRs) that were submitted to the NYSDEC on a bi-weekly basis. Generally, the FMRs contained the following information and data: a project summary including an overview of site activities, Permit non-conformance issues, fill source site review activities and associated data, site testing activities, filling and shaping activities, and environmental monitoring. FMRs contained figures identifying imported material dump locations and any active filling, grading, and shaping areas associated with the landfill cap.

FMRs were discontinued on October 31, 2014 with FMR 346. FMRs were discontinued because the importation of shaping layer and cover layer materials and earthwork activities were significantly reduced in scope and scale on the Site. In a Permit amendment issued to NYCDPR on October 29, 2014, the NYSDEC stated that all fill tracking, earthwork activities, landfill gas monitoring, and associated reporting requirements would be addressed by Quarterly Reports thereafter.

FMRs 1 through 346 are attached in Appendix 6.

### 2.5.3 Quarterly Reports

The IEM prepared Quarterly Reports (QRs) that were submitted to the NYSDEC on a quarterly basis. Generally, the QRs contained summarized and aggregated information included in FMRs over each quarterly reporting period.

QRs beginning with the 4th Quarter of 2002 through the 1st Quarter of 2015 (with the exception of the 1st Quarter of 2011) are attached in Appendix 7. Observations for site activities for the 1st Quarter of 2011 are included in FMRs 247 through 253.

## 2.6 Authorized Fill Volumes

On July 17, 2000, the NYSDEC issued 2000 Permit jointly to NYCDPR and FPP to allow for a total of 1,000,000 cubic yards of fill to be imported and placed on the Site including approximately 750,000 cubic yards of in-place shaping layer material and 250,000 cubic yards of in-place cover layer material.

On October 18, 2002, the NYSDEC issued the 2002 Permit to allow a total of 1,522,300 cubic yards of fill (in-place) to be imported and placed on the Site. The fill material was to consist of approximately 1,272,300 cubic yards of select exempt construction and demolition debris for the shaping layer, and approximately 250,000 cubic yards of uncontaminated soil for the cover layer. The 2002 Permit also stated that, "approximately 415,000 cubic yards of fill was deposited on the Site prior to the effective date of the Permit and the projection for in-place fill material to complete the project was 1,107,300 cubic yards, consisting of approximately 857,300 cubic yards (in-place volume) of select exempt construction debris for the shaping layer and approximately 250,000 cubic yards (in-place volume) of uncontaminated soil for the cover layer.

In 2003, the golf course architect determined that the tournament quality and signature status of the course could be significantly improved by making the facility a "links" style golf course. The changes to the Project as compared to the work authorized under the 2002 Permit included:

- Increasing the support mounding between golf holes and grading the course in a links style.
- Re-routing of holes 11, 12 and 13 to reverse their direction in order to improve player circulation and playing time.
- Moving Hole 9 to the west of the golf driving range in order to improve the safety zone of the driving range and remove the need for high netting.
- Realigning the centerlines of holes: 10, 16, 17, and 18 to improve the strategic layout and visual experience of the golf course.
- Lowering the elevations of tees 4 and 6. This eliminated the retaining wall proposed at the northeast corner of the Site.
- Adding a golf training area at the north end of the driving range. This required shifting the centerline of Hole 8 slightly north and increasing the support mounding around this area to buffer the adjacent holes.
- Increasing the mounding adjacent to the TBTA toll plaza in order to block noise and adjacent traffic from view.
- Shifting the Site roadway along the east side of the bridge to accommodate a TBTA easement that extends 25 feet east of the bridge. This required changes to the parking lot at the clubhouse and the location of detention/water quality basin and Waterfront Park.
- Eliminating the Boathouse Grill restaurant in the Waterfront Park. A restaurant would be located within the banquet facility. Parking spaces for the banquet facility were increased to

accommodate the restaurant. A restaurant may be constructed within the Waterfront Park in a future phase, based on economic demands.

- Modifying the parking lot for the Waterfront Park. The 120 parking spaces for the Waterfront Park will be located near the Whitestone Bridge approach structure.

These proposed changes to the Project increased the total needed in-place fill volume for the project to 2,370,000 cubic yards to shape the golf course in a links style.

The quantification of the imported fill material was continuously tracked by both truck volume and periodic topographic surveys of in-place volumes. Initially it was assumed that truck volume would be reduced by 25% when compacted into place, but a new correction factor was to be calculated. On November 1, 2004, the NYSDEC approved a revised truck correction factor of 42.4%, which was based upon an October 10, 2003 30% aerial topographic survey, and on December 7, 2004, the NYSDEC approved a revised truck correction factor of 41%, which was based upon a July 17, 2004 60% aerial topographic survey. These recalculations were performed by dividing the actual in-place volume by the total cubic yards of truck volume delivered to the Site as of the date of the survey, as required by the 2002 Permit.

TRC prepared the 2005 Engineering Report, which comprised of Volume #1, Volume #2, and a 26 sheet drawing set entitled, "Ferry Point Park Public Recreational Facility Bulk Earthwork, Bronx, New York, Supplement No. 2". The 2005 Engineering Report is included in Appendix 20 and represented the following scope of work:

- An 18 hole golf course with practice area;
- Maintenance Area in the northwest corner of the Site;
- Clubhouse parking lot in the southwest portion of the Site;
- Banquet Facility in the southwest portion of the Site (along Emerson Avenue);
- Community Park;
- Waterfront Park with parking lot; and
- Drawing G-3 and G-4 of "Ferry Point Park Public Recreational Facility Bulk Earthwork, Bronx, New York, Supplement No. 2", showed the deviations in grading between the plans approved on October 18, 2002 with the proposed plan.

On November 18, 2005, the NYSDEC issued the 2005 Permit authorizing the importation of a total of 2,370,000 cubic yards of in-place fill material to the Site. The fill material was to consist of approximately 2,120,000 cubic yards of select exempt construction and demolition debris for the shaping layer, and approximately 250,000 cubic yards of uncontaminated soil for the cover layer. The correction factor was 41% at that time and could be further modified.

On January 22, 2009, in accordance with Special Condition 10 of the 2005 Permit, TRC submitted a revised truck reduction factor of 40.3%. On September 18, 2009 TRC submitted a truck reduction factor of 43.3% based on a May 10 2009 aerial topographic survey. On February 11, 2010, the NYSDEC approved a truck reduction factor of 41.7% as submitted by the IEM on December 11, 2009 (included in Appendix 19).

The Golf Course layout that NYCDPR moved forward with was modified from what was shown in the 2005 Engineering Report as revised by the 2013 Engineering Report. One major change was the complete removal of the Banquet Facility in the southeast part of the Site. There were also changes in the placement, alignment, and grading of some holes on the Golf Course.

On February 1, 2013, the NYSDEC granted a permit modification to increase the limit of cover material from 250,000 to 394,000 cubic yards with the stipulation that NYCDPR revisit the correction factor for cover layer material. It was determined that the correction factor for the granular cover material (sand) was 18%. This revised the truck volume to 480,488 cubic yards. The correction factor for cover layer material was approved per an April 26, 2013 letter from NYSDEC to NYCDPR as included in Appendix 19.

On May 21, 2014, the NYSDEC issued the 2014 Permit to NYCDPR to allow the import of a total of 2,514,000 cubic yards of in-place fill material including 2,120,000 cubic yards of in-place shaping layer material and 394,000 cubic yards of in-place cover layer material.

# 3 Fill Importation QA/QC Program

Fill material importation commenced on August 2, 2000 and the last day for fill import was May 5, 2015. The fill importation QA/QC program implemented for the Project based on the Permit and associated reference documents was adhered to. The fill importation consisted of two main components including source site reviews and on-site inspections. A source site review was conducted by the IEM prior to any fill material being imported to the Site and additional visual and photo-ionization detector (PID) inspections were completed by the IEM upon the material entering the Site at the IEM inspection platform and again once the material was dumped at the work or stockpile location on the Site.

## 3.1 Source Site Reviews

Prior to any shaping layer or cover layer material being imported to the Site, each potential source was thoroughly evaluated by the IEM. An environmental review was performed for all proposed source sites in accordance with Special Condition 24 of the 2014 Permit. The source site review process criteria was specified in the Report on Fill Management, Operations and Maintenance, prepared by TRC on May 16, 2000, and revised June 30, 2005 (Volume #2 of the 2005 Engineering Report). The source site review process was modified over time as compared to the original process outlined in the various engineering reports and permit modification requests. The process generally consisted of the following main components:

1. NYCDPR would notify the IEM of a new potential source site. NYCDPR would provide the IEM with the site name and location as well as any available historical site information and soil environmental analytical results that existed for the potential source site.

2. Once NYCDPR confirmed that they wanted to move forward with pursuing the potential source site, NYCDPR authorized the IEM to retrieve any available site information from Environmental Data Resources, Inc. (EDR) which included environmental and historical land use records for the source site property under evaluation including Sanborn maps, city directories, topographic maps, and aerial photographs. NYCDPR then completed an initial review of the existing site information,

generated a sampling plan, and provided the results of the initial review and sampling plan to the IEM. NYCDPR then authorized the IEM to conduct a desktop review of the existing site information (i.e. EDR), any available soil environmental analytical results, and NYCDPR's sampling plan. The IEM provided NYCDPR with comments related to their review and their sampling plan in consultation with the NYSDEC. Once a final sampling plan was agreed upon, the source site investigation was initiated and executed per the NYCDPR sampling plan with IEM oversight. For source sites with in situ material, test pits were typically completed with additional soil samples inspected, collected, and analyzed in accordance with the Permit requirements. Once all the sampling was completed, the IEM reviewed sample results and the IEM generated a memorandum summarizing the review process and provided recommendations and requirements necessary for NYCDPR to address in order to continue pursuing the potential source site. The recommendations typically included conditions associated with overseeing the excavation, loading, and import of the source site material to the Site in accordance with the Permit. The IEM submitted the memo of recommendations to the NYSDEC for review and comment prior to issuing the final memorandum to NYCDPR. The NYSDEC would provide final comments and approval of the source site with any additional required conditions.

3. If NYCDPR determined that the potential source site was worth pursuing considering site-specific conditions, schedules, etc., they coordinated with the source site operator and IEM on importation schedule and requirements. The IEM provided oversight to confirm that the loading, hauling, and overall import of the approved material was completed in accordance with the memorandum of recommendations, NYSDEC conditions, and the Permit.

4. The IEM provided oversight during export from the approved source sites on an as needed basis and provided oversight at each source site during additional sampling activities if the source site was exporting more than the minimum sampling frequency outlined in the Permit (i.e. 10,000 cubic yards for shaping layer material and 2,000 cubic yards for cover layer material).

If at any time during the review process there were reasons for concern identified by the IEM resulting in the potential source site being classified as a "complex" source site, the NYSDEC became the primary reviewer and made final recommendations related to additional site investigation requirements or approval/rejection of the potential source site with support from the IEM. A complex source site was defined by the presence of an abundance of or particular Recognized Environmental Concerns ("RECs") and the NYSDEC made any decisions related to approval and/or associated conditions for further evaluation or import of the fill material.

A flow chart detailing the source site review process is included as Appendix 21.

Details of source site review and site testing activities are included in the report text and tables of each bi-weekly Fill Management Report issued by the IEM. Source site review supporting information and testing data is included in Appendix 8.

The following is a listing of source site reviews completed by the IEM since October 25, 2010. Since October 25, 2010, Woodard & Curran's first day as the IEM, 42 potential source sites were formally identified as potential fill source options by NYCDPR. Of the 42 potential source sites identified since October 25, 2010, 39 were advanced to at least a preliminary review stage. Potential source sites did not advance to a full source site review for various reasons such as changes in schedule, insufficient material, financial infeasibility, red flags identified with past uses of the source site, etc. Details of each source site review and site testing activities completed by the IEM, prior to any importation to the Site, are included in Sections 3.1.1 and 3.1.2 below.

A total of 15 of the potential source sites evaluated after October 25, 2010 and through project completion resulted in material being imported to the Site during that same time period. It is noted that all of the source site reviews included in Sections 3.1.1 and 3.1.2, are associated with the Golf Course and all cover layer material exposed at the surface within the golf course was imported from the cover layer material source sites included in Section 3.1.2 below. Refer to FMRs 1 through 241 for details related to source site reviews and site testing prior to October 25, 2010, which are included in Appendix 6.

For a list of source sites that imported material to the Site between November 18, 2005 and October 25, 2010, see the table included in Appendix 12. Refer to FMRs in Appendix 6 for source sites and estimated fill material imported to the Site prior to November 18, 2005.

The following were potential source sites that were identified by NYCDPR since October 25, 2010 where a review was not initiated:

1. 10 Byron Place (Larchmont, NY)
2. College Point
3. PS-331 (Tremont Avenue, Bronx, NY)

The following were potential shaping layer source sites that were identified by NYCDPR since October 25, 2010 with some level of source site review being completed. Source sites that resulted in a complete review and the importation of shaping layer material to the Site after October 25, 2010 are identified with bold text.

1. **PS-310 (942 62nd Street, Brooklyn, NY)**
2. PSAC
3. Barclays Arena (620 Atlantic Avenue, Brooklyn, NY)
4. JFK Jet Blue/Delta Runway (Jamaica, NY)
5. Columbia University
6. Long Island Jewish Center (270-05 76th Avenue, New Hyde Park, NY)
7. Highbridge Terrace (220 West 167th Street/Sedgewick Avenue, Bronx, NY)
8. Astoria (27-07 23rd Avenue, Queens, NY)
9. **Eastside Access (Queens Street and Jackson Avenue, Queens, NY)**

10. **Kew Gardens (Van Wyck Expressway between Grand Central Avenue and 86th Avenue, Queens, NY)**
11. PS-285 (1065 Martin Luther King Boulevard, Bronx, NY)
12. Flushing Hotel (133-63 Roosevelt Avenue/39-20 Prince Street, Queens, NY)
13. **2nd Avenue (2nd Avenue and 94th Street, New York, NY)**
14. 2nd Avenue (2nd Avenue and 72nd Street, New York, NY)
15. Alexander Hamilton Bridge (Bronx, NY)
16. **Throgg's Neck/Target/USPS (815 Hutchinson River Parkway, Bronx, NY)**
17. **PS-287 (110-10 Northern Boulevard, Queens, NY)**
18. City Point Brooklyn (1 Dekalb Avenue, Brooklyn, NY)
19. 400 Park Avenue South (New York, NY)
20. **Union Street (43-31 Union Street, Flushing, NY)**
21. **Mount Vernon Recycling Corp. (113 Edison Avenue, Mount Vernon, NY)**
22. 228th Street (Rosedale, NY)
23. Evergreen Recycling/Tully Environmental (Willets Point Boulevard, Corona, NY)
24. Waterpointe-Whitestone
25. Don Carlo Environmental/Brooklyn (1247 38th Street, Brooklyn, NY)
26. Castle Hill Recycling (1000 Zerega Avenue, Bronx, NY)
27. Springfield Gardens
28. Calvert Vaux (Brooklyn, NY)
29. 160 Myrtle Avenue (Brooklyn, NY)
30. 215 E. 68th Street (New York, NY)
31. **DEP Valhalla (10 Walker Road, Valhalla, NY)**
32. **Tilcon (Bronx) (980 East 149th Street, Bronx, NY)**
33. **NY Recycling (475 Exterior Street, Bronx, NY)**
34. Little Bay (Queens, NY)

The following were potential cover layer source sites that were identified by NYCDPR after October 25, 2010 with some level of source site review being completed. Source sites that resulted in complete reviews and the importation of cover layer material to the Site after October 25, 2010 are identified with bold text.

1. **Bloomingburg (C.M. & Sons Trucking Site, 680 Bloomingburg Road, Bloomingburg, NY)**
2. **Ranco Sand (115 South Street, Manorville, NY)**
3. **East Coast Mines (Lewis Road near Route 104, East Quogue, NY)**
4. Amboy Aggregates (415 Main Street, South Amboy, NJ)
5. **Long Island Compost/Great Gardens (445 Horseblock Road, Yaphank, NY)**

### 3.1.1 Shaping Layer Material

Materials accepted for use as shaping layer on the Site were sampled prior to acceptance and after the import of each additional 10,000 cubic yards as required by Special Condition 14 of the 2014 Permit. For recycling facilities, sampling was conducted after each additional 5,000 cubic yards. As per the November

18, 2005, Permit Modification, each soil sample was analyzed for TCLP VOCs and metals as well as total VOCs, SVOCs, priority pollutant metals, pesticides, PCBs, sulfur, and asbestos.

Fill material imported to the Site and used for the shaping layer was analyzed for the following parameters, per Special Condition 14 of the 2014 Permit. A description of which can be found below as included in Section 4.2.1.1 of the 2013 Engineering Report.

Based on source site reviews and site testing activities, the shaping layer material imported to the Site met the following chemical limits:

Total carcinogenic SVOC levels less than 10 ppm from individual fill material sources, provided that a weighted average of equal or less than 3 ppm for the entire Project. The following are the list of carcinogenic SVOCs that are subject to this 10 ppm limit: Benzo(a)pyrene, Dibenzo(a,h) anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, and Chrysene.

Total SVOCs less than 500 ppm.

Metals:

- Arsenic less than 28 ppm;
- Barium less than 2,000 ppm;
- Cadmium less than 20 ppm;
- Chromium less than 1,000 ppm;
- Copper less than 1,000 ppm;
- Lead less than 400 ppm;
- Mercury less than 0.57 ppm;
- Selenium less than 11 ppm;
- Silver less than 100 ppm

Asbestos for all layers 0.5% or less
Total sulfur for all layers 0.5% or less
Total PCBs less than 10 ppm
Total Pesticides less than 10 ppm
VOCs (all individual analytes less than TAGM 4046)

In a letter dated October 25, 2006 (included in Appendix C.1 of the 2013 Engineering Report), the NYSDEC provided a clarification adding that a carcinogenic SVOC limit of 10 ppm or lower is allowable from individual fill material sources, provided that a weighted average of equal or less than 3 ppm is achieved by the end of the Permit.

NYCDPR followed the NYSDEC's directives since receipt of each one associated with the importation of shaping layer material to the Site.

Details of the source site reviews and site testing for each potential shaping layer material source site are as follows:

#### 3.1.1.1 PS-310 (942 62nd Street, Brooklyn, NY)

Source site testing analytical results for the PS-310 site were provided to the IEM by NYCDPR in a submittal dated October 6, 2010, and reviewed by the IEM for potential shaping layer material, based on the site visit performed by Gannett Fleming (the previous IEM) on September 21, 2010, and as recommended in their memo dated September 28, 2010. Samples were collected and tested by Analytical Chemists and issued via lab reports dated October 1, 2010. Analytical results were collected from five test pits from both the fill and natural formation soil layers. An exceedance of lead relative to the Site Permit shaping layer material chemical limits was noted in the fill layer within test pit #3. This information was factored into the final memo of recommendations issued by the IEM dated October 26, 2010 regarding the approved locations and depths of shaping layer material from the source site.

The IEM was on-site on November 10, 2010 to visually inspect and confirm that all fill and petroleum impacted fill from Areas of Concern 1 and 2 were removed. The IEM was also on-site on November 12, 2010 to observe the sampling of three additional sample locations of natural formation soil. The IEM submitted a detailed email to the NYSDEC and NYCDPR summarizing the November 12, 2010 site visit. Shaping material analytical results were reviewed for the PS-310 source site for three samples collected on November 12, 2010. All parameters met Permit criteria for import to the Site.

Approximately 5,308.48 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.2 PSAC

Initial site and fill material information was provided to the IEM between October 25 and November 5, 2010 by Gannett Fleming (the previous IEM). No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.3 Barclays Arena (620 Atlantic Avenue, Brooklyn, NY)

Initial site and material information was provided to the IEM by Gannett Fleming (the previous IEM) between October 18 and November 5, 2010. An initial site visit was completed by the IEM to initially inspect site conditions and materials at the source site. The IEM issued a memo of recommendations for the source site on November 16, 2010 based on materials available at that time. Materials were not reviewed further or imported to the Site at that time.

New material became available at this source site and additional data was provided for IEM review between December 18 and December 31, 2010. The review of this additional data and associated information was initiated. The sampling plan from mid-November 2010 was resubmitted to NYCDPR for the new materials being evaluated at Barclays Arena between January 1 and January 14, 2011 as the

original plan still applied to the additional/revised materials being made available. NYCDPR subsequently notified the IEM that the site source manager did not consider the Site as a viable option at that time.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.4 JFK Jet Blue/Delta Runway (Jamaica, NY)

On December 3, 2010, NYCDPR forwarded the IEM initial lab data for this potential source site associated with a Jet Blue/Delta runway at JFK Airport. On December 6, 2010, the IEM visited the potential source site to inspect the material totaling an estimated 7,000 cubic yards. The IEM witnessed evidence of asphalt and slag in the fill material and notified NYCDPR and the NYSDEC that the material was not a viable option for import to the Site. (See section 3.2.3)

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.5 Columbia University

Initial site and material information was provided to the IEM by Gannett Fleming (the previous IEM) between October 25 and November 5, 2010.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.6 Long Island Jewish Center (270-05 76th Avenue, New Hyde Park, NY)

The IEM conducted an initial site visit on November 5, 2010. An email containing the summary of site visit activities and summary of recommendations was provided. The IEM issued a formal memo of recommendations on November 11, 2010.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.7 Highbridge Terrace (220 West 167th Street/Sedgewick Avenue, Bronx, NY)

On January 10, 2011, a formal fill source site review was initiated for the Highbridge Terrace source site. Sanborn Maps, historical topography maps, historical aerial photos, and the EDR and NYSDEC Spill Databases were reviewed. Approximately 5,900 cubic yards of potential fill material was reportedly available. Initial analytical data was provided however, the IEM was informed by NYCDPR that this potential source site was no longer a viable option at the time and further review did not occur.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.8 Astoria (27-07 23rd Avenue, Queens, NY)

A formal fill source site review was conducted for the Astoria source site February 3, 2011 and consisted of the review of historical information and existing source site sampling data and EDR information. The existing sample data was reviewed and some sample results did not meet the Site Permit limits for shaping material. Preliminarily, the site contractor estimated approximately 2,000 cubic yards of potentially approvable material. The initial review was completed and NYCDPR reported that this source site was no longer a viable option and no further action was expected.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.9 Eastside Access (Queens Street and Jackson Avenue, Queens, NY)

A coordination call was held with the IEM, NYCDPR, and the source site contractor on February 8, 2011. The IEM witnessed initial source site sampling as requested by NYCDPR at the Eastside Access source site on February 9, 2011. A total of seven grab sample collections were observed and one discrete VOC sample collection was observed. The existing stockpile was estimated to measure approximately 2,000-4,000 cubic yards based on an approximation of stockpile dimensions by the IEM.

The IEM received a submittal of information from NYCDPR between February 12 and February 25, 2011. The IEM reviewed the material and found the site to be noncompliant with the Site Permit as material could not be segregated and stockpiled at the source site. Per NYSDEC directive, NYCDPR would be coordinating directly with the NYSDEC for further site review. The site was reviewed by the NYSDEC and a site-specific analytical parameter list (for Metals) was approved by the NYSDEC between March 12 and March 25, 2011.

Between March 26 and April 8, 2011, the IEM was notified by the NYSDEC and NYCDPR that this source site had been approved to export fill materials to the Site by the NYSDEC. The IEM discussed the conditions of the approval with the NYSDEC and began witnessing sample collection of the East Side Access crushed stone material and review of lab reports.

The IEM conducted monitoring of shaping layer material sampling and loading at the East Side Access source site for materials exported to the Site. Sampling at this source site generally occurred the day before materials were expected to ship to the Site. Samples were being analyzed for metals, laboratory results were compared to the Site Permit requirements, and no exceedances of shaping material limits were identified.

Between April 2011 and December 2011, the IEM continued monitoring for this source site. The IEM witnessed sample collection of East Side Access crushed stone material every 10,000 cubic yards, reviewed lab reports, and periodically monitored loading of trucks with shaping layer materials for export to the Site as materials were shipped to the Site.

The IEM reviewed the lab results related to the IEM witnessed source site sampling conducted on December 12, 2011 for proposed shaping material at the East Side Access source site and found the sampled material to be unacceptable for import to the Site based on the fact that the detected value for Arsenic was 48.7 ppm. The permit allowable maximum concentration for Arsenic is 28 ppm. The sampled material was determined to be unacceptable for import to the Site as shaping layer material per the Permit.

NYCDPR requested that the material sampled on December 12, 2011 be removed from consideration for import to the Site and requested that a sample be collected for the next available material at the East Side Access source site. The IEM reviewed the lab results dated December 14, 2011 related to the IEM witnessed sampling conducted on December 13, 2011 for the proposed shaping material and found them to be acceptable based on the fact that the RCRA metals results fell below the Permit shaping layer material allowable maximum concentrations and the Permit USEPA referenced testing method was used. It was determined that approved shaping material to be imported to the Site could only originate from the stockpiles witnessed during the December 13, 2011 sampling event. Material previously sampled on December 12, 2011 was not imported to the Site.

NYCDPR and their associated representatives hypothesized that the unacceptable sample results for arsenic may be a result of a change in the rock removal process, which included drilling, blasting, and crushing to generate the shaping layer material. On December 16, 2011, the NYSDEC stated that if the mining technique did not change (i.e. drilling as opposed to blasting) the sampling frequency could remain unchanged on the basis of the number of successful past results. However, in the event of another failure, the sampling frequency would become one sample per 2,000 cubic yards. The IEM proceeded with observing one sample per 2,000 cubic yards based on a change in mining operations as per discussions with the source site operator.

On February 7, 2012, the NYSDEC stated that based on the number of successful test results for the East Side Access material since the December 12, 2011 failure due to high arsenic content, the NYSDEC approved NYCDPR's request for future testing of East Side Access material at a reduced frequency of one sample per 10,000 cubic yards.

On December 18, 2012, Analytical Chemists collected samples from stockpiled East Side Access Source Site shaping material at the Site that had elevated PID readings when scanned during the on-site inspection process upon import and after dumping. The six segregated loads of East Side Access shaping layer material passed the Site Permit criteria for shaping layer material based on sampling conducted at the Site. Sampling consisted of collected samples witnessed by the IEM on December 18, 2012. Therefore, the material remained on-site and was used as shaping layer material.

Approximately 191,293.87 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.10 Kew Gardens (Van Wyck Expressway between Grand Central Avenue and 86th Avenue, Queens, NY)

Initial site and material information was provided to Woodard & Curran by Gannett Fleming (the previous IEM) between October 25 and November 5, 2010.

A formal fill source site review was initiated for the Kew Gardens between November 6 and November 19, 2010 consisting of compiling and reviewing historical maps, photos, EDRs, and spills database and available information from the source site contractor.

A formal fill source site review was continued for the Kew Gardens source site between November 20 and December 3, 2010 and consisted of the review of Sanborn maps, topographic maps, aerial photographs, NYSDEC spills and remediation database, and the City Directory. A Phase II Environmental Site Assessment (ESA) and associated analytical data was reviewed and sample results did not exceed the Permit limits for shaping layer material. Preliminarily, the source site contractor estimated approximately 10,000 to 15,000 cubic yards of potentially approvable material was available.

On February 11, 2011, the IEM issued a memo of recommendations and sampling plan for the Kew Gardens source site.

The IEM conducted fill material source site sampling oversight at the Kew Gardens site on February 17, 2011. Six areas (1, 2, 3, 4, 5, and 9) were assessed by IEM desktop review and a sampling plan was submitted to, and approved by the NYSDEC for potential cover material evaluation. Representatives from the laboratory, NYCDPR, IEM, and the source site operator met prior to the initiation of sampling activities. The source site operator stated that the full extents of Areas 4, 5, and 9 would not be accessible for visual screening and analytical sample collection and soils in Area 9 were being actively loaded for off-site use. NYCDPR requested that source material evaluation proceed for accessible material. Composite grab and discrete VOC soil samples were collected for laboratory composite and analysis from Areas 1, 2, 5, and 9. Area 4 was not accessible for evaluation. Asphalt and other materials non-compliant with the Site Permit were observed on various soil horizons in Area 3, and as such, no samples were collected as the material was no longer considered for import to the Site.

On February 25, 2011, NYCDPR submitted draft analytical data from the Kew Gardens site for IEM review. At the request of NYCDPR, the IEM performed an initial review of the draft analytical data for cover material, understanding that no final determination can be made until the complete and final data package has been submitted, reviewed by the IEM, and approved by the NYSDEC. The initial IEM review identified cadmium in composite samples from Areas 1, 2, 5, and 9 at concentrations that exceed the Site Permit requirements for cover material. NYCDPR was informed and subsequently requested the material be evaluated for shaping layer material. No exceedances of the Site Permit requirements were identified in the draft data submittal. Additional draft data from the Kew Gardens source site was submitted on March 8, 2011. No exceedances of the Site Permit requirements were identified in that draft data submittal.

Final laboratory data was submitted to the IEM for review on March 18, 2011. Laboratory results were compared to the Site Permit requirements and no exceedances of shaping layer material limits were identified. Metals concentrations in the samples did exceed cover layer material limits. Fill material from

the Kew Gardens source site was approved by the NYSDEC for importation to the Site for use as shaping layer material on March 24, 2011.

Per NYCDPR request, the IEM submitted the Kew Gardens EDR files to NYCDPR on July 1, 2011.

Beginning on August 5, 2011, NYCDPR indicated to the IEM that they had renewed interest in considering shaping layer material from Area 17 at the Kew Gardens source site. The IEM provided a list of concerns and items to address in the sampling plan associated with the attempt to obtain approval for this shaping layer material. On August 11, 2011, NYCDPR indicated that the Kew Gardens review was on hold.

On September 19, 2011, IEM representatives were on-site at Area 17 of the Kew Gardens Source Site to perform a visual, physical, and PID inspection of the existing soil via a total of seven test pits excavated from ground surface to approximately 12 feet to 16 feet below the existing ground surface. The first four test pits were excavated to approximately terminal depth. The last three test pits were terminated prior to reaching terminal depth due to instability of the sidewalls as a result of the presence of dry sand material. The test pits were completed consecutively moving from south to north. The area consisted of approximately 10,000 cubic yards of proposed shaping layer material as identified by NYCDPR and the source site contractor. In addition, the IEM witnessed the collection of grab samples for chemical analysis by NYCDPR's laboratory and logged the test pit locations using handheld GPS equipment.

IEM staff observed an initial layer of organics, which contained a slight odor attributable to decomposition and yielded PID results of 0.1 to 0.5 ppm. This material was not approved for use at the Site and this was communicated directly to NYCDPR and the site contractor. The IEM indicated that any potential approval of shaping layer material from Area 17 would require the full removal of the organic layer prior to any loading and shipping of potentially approval soils to the Site, which would need to be confirmed by the IEM.

The soil below the initial organic layer (beginning approximately 0.5'-1.5' below grade) consisted of brown, silt with some sand and a trace of clay. Cobbles and boulders were also evident throughout the soil profile. No soil staining or odors were observed, and the material encountered below the organic layer was generally consistent in composition. The soil shifted to more of a sand and cobble composition as the test pits progressed towards the north. No asphalt or any other debris was observed in the soil, and the PID scans did not yield any detections.

IEM staff observed the collection of a grab samples at approximately two-foot intervals in each of the seven test pits completed at the Kew Gardens Source Site on September 19, 2011. It was estimated by NYCDPR and the site contractor that approximately 10,000 cubic yards were available from Area 17 of the source site. In addition to the required discrete sampling of VOCs/TCLP VOCs, the lab was instructed by NYCDPR to run three composite samples for the remaining analyses. The composite samples consisted of the grabs from each depth interval. The first two test pits completed represented composite sample #1, the second two test pits represented composite sample #2, and the last three test pits represented composite sample #3.

The IEM completed a preliminary review of shaping layer material originally sampled on September 19, 2011 proposed for import to the Site from Area 17. The IEM required a revised lab report from Analytical Chemists which contained the TCLP VOA and Metals results as well as the dioxin/furan scan using SW 8270. All other lab data was complete and did not exceed any of the Site Permit criteria. Prior to final

approval to import this material to the Site, NYCDPR was required to obtain the NYSDEC's approval to use the alternative dioxin/furan analysis.

NYCDPR received NYSDEC approval to use Method 8270 for analysis of dioxins/furans at this source site on January 3, 2012. The IEM completed a final review of shaping layer material (originally sampled on September 19, 2011) proposed for import to the Site from Area 17 on January 4, 2012. The review of available lab data identified that sampled material does not exceed any of the Site Permit criteria. On January 5, 2012, the IEM inspected the source site and visually confirmed the removal of the top 0.5 feet to 1.5 feet of soil which consisted of an initial layer of organics that were previously considered unacceptable for import to the Site. It was determined that the available shaping layer materials from Area 17 totaling approximately 500 cubic yards of the original estimated 10,000 cubic yards were approved for export to the Site.

The source site operator provided the IEM with a proposed excavation plan on December 5, 2012 for additional materials available at the source site. On December 8, 2012, the IEM notified NYCDPR that the previous desktop review (i.e. EDR, etc.) performed for this source site was still applicable for the latest area proposed for excavation. The IEM was on-site at the Kew Gardens source site on December 14, 2012 to witness test pits and environmental sampling for additional shaping layer materials being considered for import to the Site.

On January 3, 2013, the IEM provided a memo of recommendations to the NYSDEC regarding an additional estimated 7,500 cubic yards of shaping layer material being considered for import to the Site that was sampled on December 14, 2012. On January 4, 2013, the NYSDEC approved the importation of this material to the Site subject to the following conditions. The outer limits and depths of all areas of excavation should be clearly delineated in the field and confirmed by the IEM in the field prior to any excavation, loading, or trucking of approved soils. The approval only applied to the material samples and inspected on December 14, 2012, consisting of what appeared to be native material, free of debris and any traces of organics. The limits beyond test pit #8 consisted of observed unauthorized C&D material mixed into the soil (i.e. metal and glass, etc.), and were not approved for import to the Site. The IEM periodically inspected the excavation and hauling activities at the Kew Gardens Phase II site to perform visual and physical screening of the proposed shaping layer material. Inspection frequency was at the discretion of the IEM and the NYSDEC. The exportation of all material to the Site was conducted in accordance with the current Permit requirements (i.e. trucking manifests, etc.).

On June 5, 2013, the IEM issued a third memo of recommendations dated June 5, 2013 for the Kew Gardens source site. The IEM notified NYCDPR that the latest round of shaping layer material (approximately 5,000 CY) was acceptable for import to the Site due to the fact that the material met the Site Permit requirements. The approval applied to the material sampled and inspected on May 22, 2013, consisting of what appeared to be native material, free of debris and any traces of organics, and as delineated horizontally and vertically on the provided test pit plan. The top portion of unauthorized soil (i.e. RCA, geotextile, organic) was stripped and removed off-site to the depths and locations listed on the provided test pit plan, and this condition was witnessed by the IEM prior to importation to the Site. The importation of all material to the Site was conducted in accordance with the Permit requirements (i.e. trucking manifests, etc.).

Approximately 11,988.51 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.11 PS-285 (1065 Martin Luther King Boulevard, Bronx, NY)

On March 10 and 11, 2011 the IEM was provided with fill source site documentation for the PS-285 source site. The IEM initiated review of the source site materials provided per request of NYCDPR. Site visits to the PS-285 source site by the IEM were completed on March 14, 2011 to observe test pits and on March 25, 2011 to discuss the approval process and submittal requirements. NYCDPR requested the IEM purchase an EDR Report for the site on March 25, 2011.

The IEM witnessed additional test pits and sampling on March 29, 2011. At the time of sampling, certain portions of the source site were not accessible for sampling. Samples were collected from four test pits and composited into two samples. Lab results were provided on March 30, 2011, but were deemed incomplete by the IEM. A revised report was submitted to the IEM addressing the missing parameters, but it did not address the non-compliant dioxin/furan USEPA Test method used to generate the lab report. Final laboratory data was submitted to the IEM for review on April 5, 2011. Laboratory results were compared to the Site Permit requirements and no exceedances of shaping material limits were identified. Additional review by the IEM and the NYSDEC was required to determine if the source site was approved for material importation to the Site. The IEM completed the review of NYCDPR's EDR and desktop review, and issued a memo to the NYSDEC detailing the IEM's review results on April 5, 2011. The NYSDEC provided their review comments on April 7, 2011.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.12 Flushing Hotel (133-63 Roosevelt Avenue/39-20 Prince Street, Queens, NY)

NYCDPR requested that the IEM order and provide the EDR materials to NYCDPR for their review and submission to the IEM. The draft initial submittal was provided to the IEM over the course of several days (April 5, 6, and 7, 2011). The IEM's review commenced during this timeframe.

The IEM witnessed test pits and sampling at the Flushing Hotel source site on April 8, 2011. Final laboratory data was submitted to the IEM for review on April 19, 2011. Laboratory results were compared to the Site Permit requirements and no exceedances of shaping layer material limits were identified. Additional review by the IEM and the NYSDEC was required to determine if the source site was approved for material importation to the Site.

The IEM conducted a review of NYCDPR's EDR review, as well as a full review of the EDR, and submitted Phase I and Phase II ESA reports. The IEM reviewed the lab results provided on April 19, 2011. The IEM prepared a review document dated April 20, 2011 titled "Flushing Hotel Source Site - Desktop Submittal Review" and submitted it to NYSDEC and NYCDPR. The NYSDEC provided a response on April 21, 2011.

NYCDPR provided the IEM with supplemental historical lab data and two (2) separate Phase II reports on April 26, 2011. The IEM provided additional review comments based on the aforementioned documents to NYCDPR via conference call and email on April 29, 2011. NYCDPR provided a draft submittal response package dated May 5, 2011.

NYCDPR provided the IEM with a final submittal dated May 13, 2011 in response to IEM comments. The IEM reviewed the final submittal and transmitted that submittal to the NYSDEC for review and comment on May 18, 2011. Due to the fact that this was a complex site, final comments regarding acceptance for import to the Site was to be provided by the NYSDEC.

Conditional approval for the export of shaping material from rows 4, 5, and 6 was provided from the NYSDEC on May 27, 2011. The IEM witnessed the first day of test pits on June 3, 2011 as requested by NYCDPR. Five test pits were excavated at the source site to the maximum depth reachable by the heavy equipment available. The IEM witnessed a second day of test pits on June 6, 2011 as requested by NYCDPR. Three additional test pits were excavated to the maximum depth reachable by the heavy equipment available. NYCDPR submitted a revised site review proposal for importing shaping layer material from this source site on June 15, 2011.

A total of eight (8) test pits were excavated at the Flushing Hotel source site on June 3 and June 6, 2011. One composite sample and one discrete VOC sample was collected from each test pit. Lab results were submitted to the IEM on June 10, 2011. The IEM provided preliminary review and comments to NYCDPR regarding the source site review proposal on June 17, 2011.

The IEM submitted the memo of recommendations to the NYSDEC on June 20, 2011. The IEM visited the site on June 21, 2011 to confirm conditions within the memo of recommendations were met or could be achieved. The IEM reported conclusions to the NYSDEC via email on June 21, 2011. The observed site conditions did not allow for the source site to be approved due to the presence of asphalt, objectionable material, and stockpiles that did not allow for the confirmation of soil elevations. The NYSDEC also indicated that as of June 21, 2011, a formal submittal from NYCDPR to NYSDEC had not occurred to date. The IEM's site observations from June 21, 2011, were emailed to NYCDPR on June 23, 2011. NYCDPR submitted a revised site proposal on June 27, 2011. On June 28, 2011, the IEM indicated that items included in NYCDPR's submittal were non-complaint with the current Site Permit requirements, and therefore required approval from the NYSDEC.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.13 2nd Avenue (2nd Avenue and 94th Street, New York, NY)

The IEM witnessed fill material sampling for this potential source site on May 12 (two samples) and May 16, 2011 (one sample) regarding acceptance of crushed rock from NYCMTA's 2nd Avenue Subway construction project at 94th Street in Manhattan. Samples were analyzed for the nine RCRA metals and all passed the Site Permit requirements relative to the nine RCRA metals. One sample on May 12 was collected from material directly out of the hopper after it was deposited into a truck and the other sample was taken from a stockpile. The May 16 sample was also taken from material that came directly out of the hopper and deposited directly into a truck. The NYSDEC performed all associated reviews for this

source site similar to the East Side Access source site due to the nature of the material that was being generated from subway tunnel construction.

The NYSDEC provided approval for this source site to export shaping layer material to the Site. Shaping layer material sampling began on May 26, 2011 and occurred on a continual basis after each consecutive 2,000 cubic yards of material was imported to the Site.

Approximately 86,667.95 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.14 2nd Avenue (2nd Avenue and 72nd Street, New York, NY)

NYSDEC staff reviewed NYCDPR's submittal dated October 28, 2011 regarding acceptance of crushed rock from NYCMTA's 2nd Avenue Subway construction project at 72nd Street in Manhattan which was proposed for import to the Site. NYCDPR's proposal was acceptable to the NYSDEC provided that a composite sample of this material was tested for the proposed analytical parameters and the sample results were obtained (and approved) prior to loading material for export to the Site.

The IEM reviewed the lab results related to the IEM witnessed source site sampling conducted on December 5, 2011 for the proposed shaping layer material at the source site. The IEM identified that the sampled material was unacceptable for import to the Site based on the fact that the detected value for Arsenic was 38.4 ppm. The permit allowable maximum concentration for Arsenic is 28 ppm. The sampled material was determined to be unacceptable for import to the Site as shaping layer material per the Permit. It was determined that no material may be imported from the 2nd Avenue at 72nd Street source site to the Site. The IEM also witnessed that the physical composition of the sampled material was not that of pure stone dust as witnessed previously at the 2nd Avenue ($94^{th}$ Street) and East Side Access source sites. This material had stones as large as 12 inches to 24 inches in size. The IEM was advised that the hopper at the 2nd Avenue at 72nd Street source site used a screen that contained openings that were 24 inches by 20 inches.

On December 5, 2011, NYCDPR requested that the IEM witness one additional sample from the 2nd Avenue at 72nd Street source site. On December 6, 2011 in response to NYCDPR's request to perform one additional sample, the NYSDEC stated that if re-sampling produced acceptable results, a more stringent sampling frequency would be required for this source (i.e. one sample per 2,000 cubic yards instead of one sample per 10,000 cubic yards). NYCDPR advised the IEM that they were not pursuing material from this source site any further because it did not meet the specified physical properties for the golf course construction.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.15 Alexander Hamilton Bridge (Bronx, NY)

NYCDPR notified the IEM on February 8, 2012 that NYCDPR was interested in the opportunity to obtain potential shaping layer materials from the Alexander Hamilton Bridge source site (originally sampled July

7, 2009) which had been reviewed and approved in the past by the previous IEM. The IEM requested, obtained, and reviewed the previous files for the source site including previous approvals and corresponding lab data. On February 10, 2012, the IEM requested and received the proposed location for the recently considered shaping layer material.

The IEM visited the Alexander Hamilton Bridge source site on February 22, 2012. The IEM visually inspected a stockpile of approximately 3,000 to 5,000 cubic yards of potential shaping layer material from the previously approved source site (as per IEM records from 2009). Upon a visual inspection, it was determined that the material did not meet the Site Permit requirements due to the presence of unauthorized C&D material including asphalt and metal, as well as other miscellaneous debris. Site observations were photo documented. The IEM notified NYCDPR of its observations and NYCDPR determined that they did not want to pursue this source site any further at that time.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.16 Throgg's Neck/Target/USPS (815 Hutchinson River Parkway, Bronx, NY)

On February 28, 2012, NYCDPR requested that the IEM begin the source site review for the Throgg's Neck/Target/USPS source site. The source site was an existing USPS building that was proposed to be redeveloped with a new Target retail building. The anticipated volume of material being considered as potential shaping layer material was reported to be approximately 20,000 cubic yards per information forwarded to the IEM by NYCDPR. The IEM ordered the EDR and provided the EDR information to NYCDPR. The IEM reviewed the Phase I ESA and the Phase II ESA. The IEM completed a review of the EDR on March 9, 2012. NYCDPR provided the IEM with an EDR review memo on March 27, 2012. The IEM provided NYCDPR with some initial comments and NYCDPR submitted a revised EDR review memo on April 2, 2012.

NYCDPR provided the IEM with a proposed sample location plan with proposed depths for source site sampling on April 19, 2012. The IEM provided comments on a revised sampling plan identifying the location and quantity of test pits on April 20, 2012.

The IEM witnessed three of ten proposed test pits and the associated source site sampling at the source site on April 25, 2012. The remaining test pits were completed and witnessed by the IEM on May 11 and May 14, 2012.

The IEM reviewed the lab data (originally dated May 15 and May 24, 2012 and revised May 30, 2012) and no exceedances of shaping layer material limits were identified. The IEM prepared a memo of recommendations and submitted it to the NYSDEC on May 30, 2012. The NYSDEC reviewed the IEM's May 30, 2012 memo of recommendations for the source site. On May 31, 2012, the NYSDEC approved importation of shaping material from this source site to the Site, provided that all recommendations in the memo of recommendations were implemented. The source site commenced trucking shaping layer material to the Site.

The IEM conducted an inspection of the source site on November 6, 2012. The purpose of the inspection was to determine if site conditions warranted allowing the source site to resume importation of shaping layer material to the Site, in light of the nine truck rejections (due to presence of asphalt) that occurred on October 23, 2012 (resulting in ceasing of importation that same day). Based on the IEM inspection and observations, it was determined that importation may resume to the Site. Observations included surface asphalt had been stripped from within the approved limits of excavation between former TP-6 and TP-8, stockpiles of excavated soil from areas outside the approved excavation limits (i.e. cut along Weiner Place) were located outside the approved excavation limits, and no stockpiles of asphalt material or other poor housekeeping practices were observed within the current area in preparation for export to the Site. NYCDPR was notified that all importation must comply with all previous conditions outlined in the source site approval memo of recommendations (i.e. top +/-3 feet of fill was not approved for importation to the Site; this layer was clearly identifiable due to its color and consistency relative to the native approved material).

The IEM was on-site at the source site on February 6, 2013 to complete a source site inspection associated with a request to resume import to the Site. The site was approved to resume importation of shaping layer material on February 6, 2013 based on the IEM's inspection, which confirmed that the material originated from IEM inspected/approved areas, and the fact that the material is the native approved soil, and there are no signs of asphalt or historical fill on-site in the vicinity of the work area. The area inspected was consistent with the approved areas included in the original NYSDEC approval and IEM memo of recommendations.

Approximately 27,262.77 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.17 PS-287 (110-10 Northern Boulevard, Queens, NY)

On March 2, 2012, NYCDPR requested that the IEM begin the source site review for the PS-287 source site. The source site was a former parking facility that was being redeveloped into a new school. The anticipated volume of material being considered as potential shaping layer material was reported to be approximately 7,000 to 9,000 cubic yards per information forwarded to the IEM by NYCDPR. The source site operator expected to remove the top two feet of asphalt and historical fill, as well as a one-foot buffer. The potential shaping layer material that was being considered was what was claimed to be native soils from a depth of approximately 3 feet to 15 feet below grade. NYCDPR and the site operator wanted to proceed with sampling prior to review of the EDR. A sampling plan was provided to the IEM for review. The IEM completed a review of submitted documents including the Phase I ESA, Phase II ESA, and the proposed sampling plan and issued a review memorandum with comments on March 7, 2012. The site operator submitted a revised sampling plan for review by the IEM on March 8, 2012.

The IEM received NYCDPR's initial review of the EDR on March 14, 2012. The IEM completed a review of the EDR and forwarded a copy to NYCDPR on March 16, 2012. On March 16, 2012, the IEM requested that NYCDPR submit a revised EDR review memo incorporating the identified Recognized Environmental Concerns ("RECs") and other site conditions that were not included in the original review memo.

On March 22, 2012, the IEM received sample results for shaping layer source site sampling that occurred on March 15, 2012. The IEM completed an initial review of the sample data and although there were no exceedances relative to the Site Permit limits for the parameters that were analyzed in the lab reports, there were multiple parameters missing from the lab report.

The IEM received a revised lab report for the PS-287 source site on March 28, 2012. The IEM reviewed the revised lab report for the previously missing lab data and confirmed that the tested soil met the Site Permit criteria for shaping layer material. The IEM issued a memo of recommendations for this source site to the NYSDEC on March 28, 2012. The IEM visited the source site on March 30, 2012 and confirmed that all asphalt, historic fill, and areas not being considered for import to the Site were previously removed from the source site to the appropriate depth including the one-foot buffer below the fill layer. The NYSDEC approved the PS-287 source site for shaping layer material and NYCDPR was notified of the approval on April 2, 2012.

Approximately 6,754.8 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.18 City Point Brooklyn (1 DeKalb Avenue, Brooklyn, NY)

The IEM issued a desktop review summary for the City Point Brooklyn source site to the NYSDEC on July 27, 2012. The review included information acquired or provided to the IEM including EDR files, Phase II report, and boring information. The material being considered was approximately 22,000 cubic yards of native material proposed to be used as shaping layer material.

The NYSDEC approved the City Point Brooklyn source site for further investigation (i.e. physical and visual inspection via test pits and sampling) on August 13, 2012 since all environmental samples for the source site were made available to the IEM for review.

The IEM was on-site at the source site on August 31, 2012 to witness site investigation and sampling activities for 8,000 cubic yards of potential shaping layer material.

On September 11, 2012, the IEM received sample results for source site sampling that occurred on August 31, 2012. On September 20, 2012, the IEM issued a Site Investigation Memorandum (dated September 19, 2012) to the NYSDEC for review for the source site related to IEM witnessed activities that occurred at the source site on August 31, 2012.

On September 25, 2012, the NYSDEC notified the IEM that the City Point source site was conditionally approved pending implementation of the recommendations included in the IEM's September 19, 2012 Site Investigation Memorandum and satisfactory responses to NYSDEC questions.

On October 10, 2012, the IEM notified NYCDPR that the City Point Brooklyn source site was approved by the NYSDEC considering implementation of the recommendations included in the IEM's September 19,

2012 Site Investigation Memorandum. The IEM needed to complete a final inspection of the proposed material prior to importation to the Site.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.19 400 Park Avenue South (New York, NY)

The IEM received initial documents associated with this source site beginning on July 3, 2012. The IEM performed an initial review of the submitted documents. The IEM requested a proposed sampling plan on July 11, 2012.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.20 Union Street (43-31 Union Street, Flushing, NY)

On May 15, 2012, NYCDPR submitted a request to the NYSDEC to import shaping layer material from the Union Street source site. On June 11, 2012, the NYSDEC provided NYCDPR with email approval to import up to 30,000 cubic yards of shaping layer material from the Union Street source site based on environmental testing results submitted to the NYSDEC that was not witnessed by the IEM. On June 14, 2012, NYCDPR notified the IEM that they would begin importing, no earlier than June 18, 2012, an estimated 5,000 to 10,000 cubic yards of shaping layer material from this source site to the Site. The material originated from 30 to 55 feet below grade.

Approximately 1,675.69 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.21 Mount Vernon Recycling Corp. (113 Edison Avenue, Mount Vernon, NY)

On November 27, 2012, the IEM notified NYCDPR that the topsoil on-site that originated from the Mount Vernon Recycling Corp. facility was approved as shaping layer material based on previous NYSDEC approval allowing material to be used as shaping material, and the fact that the material passed all Site Permit criteria per IEM witnessed sample collection and a review of the associated analytical reports. The IEM witnessed sampling on October 11 and November 12, 2012. The approval was pending a receipt of all truck tickets/manifests, and confirmation of the volume of on-site soil. The Site Permit requires that this material be covered with a minimum 1-foot thick layer of approved cover soil.

Approximately 3,920.0 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.22 228$^{th}$ Street (Rosedale, NY)

The IEM completed a review of initial lab data dated December 28, 2012 for the 228th Street source site. Of the 12 lab reports that were reviewed, none of the sampled soil exceeded Site Permit levels for the shaping layer parameters that were analyzed in the reports. A significant number of parameters (including some VOCs, SVOCs, pesticides, and metals) were not analyzed and NYCDPR was notified of the review

findings on January 22, 2013. Sample collection for the submitted lab reports was not witnessed by the IEM.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.23 Evergreen Recycling/Tully Environmental (Willets Point Boulevard, Corona, NY)

On January 28, 2013, the IEM notified NYCDPR that an initial review of the lab data provided for the Evergreen Recycling source site (operated by Tully Environmental) was completed. Sampling was not witnessed by the IEM. There were no exceedances relative to the Site Permit criteria for shaping layer material, however there were a significant number of parameters that were not analyzed. The IEM received a Registration Form for a Waste Management Facility (DEC Registration # 41W93) for the source site. The IEM performed a visual inspection of stockpiled material at the source site material on January 30, 2013 and identified asphalt fragments in the source site material. The stockpiled material was not acceptable for import to the Site based on the presence of asphalt.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.24 Waterpointe-Whitestone

On February 1, 2013, the IEM notified NYCDPR that an initial review of the lab data provided for the Waterpointe-Whitestone source site was completed. Sampling was not witnessed by the IEM. There were no exceedances relative to the Site Permit criteria for shaping layer material, however there were a significant number of parameters that were not analyzed.

On March 27, 2013, the NYSDEC informed NYCDPR that shaping layer material from the Waterpointe-Whitestone source site could be imported to the Site if the material meets the required Permit limits and that the NYSDEC review would continue once involved staff was available to complete the review. On April 3, 2013, the IEM forwarded the NYSDEC correspondence regarding previous NYSDEC work plan acceptance for the proposed source site, which was for work occurring as part of a separate project under NYSDEC review.

On April 3, 2013, the NYSDEC confirmed that the Waterpointe-Whitestone source site was not approved as a potential source for shaping layer material.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.25 Don Carlo Environmental/Brooklyn (1247 38th Street, Brooklyn, NY)

On February 1, 2013, the IEM notified NYCDPR that an initial review of the lab data provided for the Don Carlo Environmental/Brooklyn source site was completed. Sampling was not witnessed by the IEM. The results in the submitted report exceeded the levels in the Site Permit for shaping layer material for the

VOC's ethylbenzene (6.9 ppm vs. 5.5 ppm), toluene (2.1 ppm vs. 1.5 ppm), and xylenes (57 ppm vs. 1.2 ppm). There were a significant number of parameters that were not analyzed.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.26 Castle Hill Recycling (1000 Zerega Avenue, Bronx, NY)

On February 11, 2013, NYCDPR provided the IEM with a permit for Castle Hill Recycling (DEC Registration #03-W-94) that was being considered as a potential shaping layer material source site. The IEM was notified that the source site was creating a 2,000 cubic yard stockpile for sampling. Castle Hill Recycling was a NYSDEC registered solid waste management facility.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.27 Springfield Gardens

On February 21, 2013, the IEM completed an initial review of a soil analysis summary documentation (no lab reports) for approximately 2,500 cubic yards of potential shaping layer material at the Springfield Gardens source site as provided by NYCDPR. The IEM did not witness sample collection. The IEM notified NYCDPR that there were several parameters exceeding the Site Permit criteria and multiple required parameters were not analyzed.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.28 Calvert Vaux (Brooklyn, NY)

On February 20, 2013, NYCDPR provided the IEM and NYSDEC with lab data for the Calvert Vaux source site for approximately 500 cubic yards of shaping layer material. On February 22, 2013, the IEM was notified by the NYSDEC that the NYSDEC would be handling the review of this source site.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.29 160 Myrtle Avenue (Brooklyn, NY)

On February 20, 2013, NYCDPR forwarded the IEM initial sample data information for a potential shaping layer material source site located at 160 Myrtle Avenue, Brooklyn, NY. The potential shaping layer materials totaled approximately 40,000 cubic yards. On February 21, 2013, the IEM notified NYCDPR that the initial review of the soil analysis summary documentation (no lab reports) was completed for the information provided to the IEM. The reviewed material had exceedances for lead and mercury relative to the Site Permit criteria.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.30 215 E. 68th Street (New York, NY)

On March 7, 2013, NYCDPR requested that the IEM review initial lab data for approximately 3,000 to 4,000 cubic yards of potential shaping material at 215 E. 68th Street, New York, NY. On March 8, 2013, the IEM notified NYCDPR that there were exceedances for Mercury and total cSVOC's for multiple samples and multiple VOC, SVOC, Pesticide, and TCLP VOC parameters were missing in all samples.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.1.31 DEP Valhalla (10 Walker Road, Valhalla, NY)

On February 25, 2013, the IEM initiated review of potential shaping material at the DEP Valhalla source site (Catskill and Delaware Water Treatment Facility). On March 1, 2013, the IEM notified the NYSDEC that a review of the initial lab results and site background information was completed. The initial review indicated that there were no exceedances relative to shaping layer material criteria for the hardcopy data, some sample parameters were missing, and there were no records indicating unacceptable background conditions. The IEM notified the NYSDEC that there was a discrepancy in the hardcopy and electronic data and clarification was requested from NYCDPR/NYCDEP. On March 5, 2013, the IEM completed a visual and physical inspection of the potential shaping layer material at the source site. On March 6, 2013, the IEM notified NYCDPR and the NYSDEC that the potential shaping layer material passed all visual and physical inspection requirements and the material passed the Site Permit criteria for shaping layer material (hardcopy data) although not all parameters were tested. In addition, the data provided electronically on CD contained information demonstrating that previous soil investigations identified soil containing elevated levels of lead and mercury that did not pass the Site Permit criteria for shaping layer material. It was communicated to the IEM verbally that the NYCDEP has been handling all impacted soil separate from the stockpiled material that was inspected, and that all impacted soil has been disposed of off-site and tracked accordingly.

On March 13, 2013, the IEM received requested documentation from the source site owner/operator regarding conditions of the existing soil stockpile and removal of contaminated materials at the DEP Valhalla source site. On March 14, 2013, the IEM notified NYCDPR that the IEM must be notified prior to importation of shaping layer material from the DEP Valhalla source site in order to witness initial loading of trucks at the source site.

Approximately 6,631.2 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.32 Tilcon (Bronx) (980 East 149th Street, Bronx, NY)

On April 1, 2013, the IEM received initial lab data and a NYSDEC Registration Form for a Solid Waste Management Facility (NYSDEC Registration #03W39R) for the Tilcon (Bronx) source site. On April 1, 2013, the NYSDEC confirmed that the Tilcon (Bronx) source site had a valid Registration Form for a Solid Waste Management Facility. On April 2, 2013, the IEM notified NYCDPR that a review of the initial lab data was completed and noted that sampled parameters did not exceed Site Permit criteria for shaping layer

material (samples WCA-1 to WCA-6), however the following parameters were not analyzed: TCLP Metals missing for sample WCA-3, WCA-5, and WCA-6, VOC: 1,2,4-trichlorobenzene, methyl ethyl ketone, and tetrachloroethylene in all samples, SVOC: 4-chloro-3-methylphenol, 2-chlorophenol, 4-methylphenol, and naphthalene in all samples, and Pesticides: 2,4 D, dibenzo-p-dioxins, endrin ketone, gamma-bhc, gamma-chlordane, mitotane (2,4 DDD), and parathion. On April 3, 2013, the IEM witnessed sampling of approximately 4,000 cubic yards of the proposed shaping material at the Tilcon (Bronx) source site.

On April 9, 2013, the IEM notified NYCDPR that the Tilcon (Bronx) shaping layer material, totaling approximately 4,000 cubic yards, witnessed by the IEM on April 3, 2013, was acceptable for import to the Site due to the fact that environmental results met the Site Permit requirements. The IEM conducted a visual inspection of material, and the IEM confirmed that the material did not contain unauthorized materials (i.e. asphalt, C&D debris, etc.).

Approximately 3,041.8 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.33 NY Recycling (475 Exterior Street, Bronx, NY)

On April 23, 2013, NYCDPR requested that the IEM initiate review of a potential shaping layer material source site named New York Recycling. On April 24, 2013, the IEM verified that the facility's NYSDEC registration was valid and that the submitted analytical results did not reveal any exceedances relative to the Site shaping layer material Permit requirements; however, several parameters were missing including TCLP metals, TCLP VOCs, and four pesticide parameters. NYCDPR was notified that in order to proceed with this potential source site, the IEM will need to complete a site visit to the facility for visual and physical inspection of the material, and witness collection of samples for chemical testing. In addition, NYCDPR would be required to collect a sample of the fines for submittal to the NYSDEC for review. On April 25, 2013, NYCDPR requested that the IEM take a grab sample of the material fines and provide that sample to the NYSDEC as required. On April 30, 2013, the IEM performed a visual, physical, and PID inspection of the material and collected a sample of fines using a No. 35 sieve. The sample was delivered to the NYSDEC on April 30, 2013.

On Friday, May 24, 2013, the IEM notified NYCDPR that Stockpile #1 of NY Recycling shaping layer material (approximately 8,000 CY) was acceptable for import to the Site due to the fact that the source site qualified as a valid NYSDEC registered C&D processing facility, the IEM conducted a visual/physical inspection of the stockpile on April 30, 2013, the IEM confirmed that the stockpiled material did not contain unauthorized materials (i.e. asphalt, C&D debris, etc.), all PID readings measured 0 ppm, and the environmental results were acceptable per the Site Permit requirements for IEM witnessed sampling completed on May 21, 2013. In addition, a sample of fines was collected by the IEM and submitted to NYSDEC for visual review, and subsequent approval. Approved shaping material to be trucked to the Site could only originate from the stockpile witnessed during the May 21, 2013 sampling event.

On June 19, 2013, the IEM notified NYCDPR that Stockpile #2 of NY Recycling shaping layer material (approximately 10,000 cubic yards) as witnessed by the IEM on June 11, 2013, was acceptable for import

to the Site. The IEM conducted a visual/physical inspection of stockpile #2 on June 11, 2013, and the IEM confirmed that the stockpiled material did not contain unauthorized materials (i.e. asphalt, C&D debris, etc.). The site qualified as a valid NYSDEC registered C&D processing facility and the test results were acceptable per the Site Permit requirements. Approved shaping material to be trucked to the Site could only originate from the stockpile witnessed during the June 11, 2013 sampling event.

On July 16, 2013, the IEM notified NYCDPR that the latest stockpile of shaping layer material (approximately 5,000 cubic yards) from the NY Recycling source site was acceptable for import to the Site. The submitted lab report met all Permit chemical requirements for sample collection witnessed by the IEM on July 11, 2013 and met Permit visual and physical criteria as per inspection by the IEM.

On August 1, 2013, the IEM notified NYCDPR that the latest stockpile of shaping layer material (approximately 5,000 cubic yards) from the NY Recycling source site was acceptable for import to the Site. The submitted lab report met all Permit chemical requirements for sample collection witnessed by the IEM on July 29, 2013 and met Permit visual and physical criteria as per inspection by the IEM.

On October 24, 2013, the IEM notified NYCDPR that the latest 5,000 cubic yard stockpile of NY Recycling shaping layer material as represented by the submitted TAGM lab report and per samples witnessed by the IEM on October 11, 2013, was acceptable for import to the Site. The approval was based on the fact that the source site qualified as a valid NYSDEC registered C&D processing facility and the IEM conducted a visual/physical inspection of the stockpile on October 11, 2013. The IEM confirmed that the stockpiled material did not contain unauthorized materials (i.e. asphalt, C&D debris, etc.), and all PID readings registered in at 0 ppm. The test results were acceptable per the Site Permit requirements. Approved shaping material to be trucked to the Site could only originate from the stockpile witnessed during the October 11, 2013 sampling event.

Approximately 26,688.05 cubic yards of shaping layer material were imported to the Site from this source site.

#### 3.1.1.34 Little Bay (Queens, NY)

On October 16, 2013, the IEM notified NYCDPR of the findings associated with a preliminary review of available data for the Little Bay source site. The IEM reviewed lab data for Stockpiles 1 through 9 (S-1 through S-9). The lab report did not capture all of the parameters required for testing by the Site Permit, and was missing the full TCLP VOC and TCLP Metals analyses, as well as several SVOC, VOC, Pesticide/Herbicide, and PCB parameters. Based on the data presented, at a minimum, the following stockpiles did not pass the Site Permit criteria as shaping layer material: S-1 exceeded for copper, lead, mercury, and total PCBs; S-4 exceeded for mercury; S-5 exceeded for lead and mercury; and S-9 exceeded for mercury and total PCBs.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

### 3.1.2 Cover Layer Material

Materials accepted for use as cover layer on the Site were sampled prior to acceptance and after each additional 2,000 cubic yards. As per the 2005 Permit modification, the parameters for cover layer material included the complete analyte list of TAGM 4046 for total VOCs, total SVOCs, total pesticides and herbicides, total PCBs, total metals, sulfur, and asbestos.

Fill material imported to the Site and used for the cover layer was subject to the following requirements, per Special Condition 14 of the 2014 Permit and Section 4.2.1.2 of the 2013 Engineering Report. A table of the cover layer material chemical acceptance criteria listed below is included in Appendix C.2 of the 2013 Engineering Report.

In order for topsoil material to be used on the Site for the cover layer, it was sampled prior to acceptance and after the importation of each additional 2,000 cubic yards (in truck volumes). Each soil sample was analyzed for the entire analyte list in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046, total volatile organic compounds (VOCs), total semi-volatile organic compounds (SVOCs), pesticides and herbicides, polychlorinated biphenyls (PCBs), and metals (including Resource Conservation and Recovery Act (RCRA) metals).

Based on source site reviews and site testing activities, the cover layer material imported to the Site met the following chemical limits:

TAGM 4046 Table 1 – Volatile Organic Compounds (VOCs)

TAGM 4046 Table 2 – Semi-Volatile Organic Compounds (SVOCs)

TAGM 4046 Table 3 – Pesticides/Herbicides and Polychlorinated Biphenyls (PCBs)

TAGM 4046 Table 4 – Metals

Total Asbestos 0.5% or less

Total Sulfur 0.5% or less

The following additional criteria were directed in NYSDEC correspondence:

April 30, 2009 – Directed NYCDPR not to accept or place on the Site any cover layer materials with arsenic concentrations greater than 16 ppm or lead concentrations greater than 400 ppm.

July 28, 2009 – Provided a table to NYCDPR listing modified heavy metal chemical limits for the cover layer at the Site.

September 25, 2009 – Revised and clarified the chromium chemical limits for the cover layer previously presented in the July 28, 2009 letter.

NYCDPR followed the NYSDEC's directives since receipt of each one associated with the importation of cover layer material to the Site.

Details of the source site reviews and site testing for each potential cover layer material source site are as follows.

#### 3.1.2.1 Bloomingburg (C.M. & Sons Trucking Site, 680 Bloomingburg Road, Bloomingburg, NY)

NYCDPR requested that the IEM witness fill material sampling for this potential source site on May 9, 2011. The Site is a sand and gravel supply yard. Material was separated into sand and gravel of various sizes and stockpiled. The source site had been importing sand and gravel material from a nearby real estate development under construction. Material being considered for the Site included two stockpiles (SP-1 and SP-2) of a brown, medium to coarse sand. Both stockpiles were from material generated on-site. Each stockpile was approximately 25,000 cubic yards. Prior to sample collection the piles were screened in various locations using a calibrated PID. No detections of VOCs were observed. The material was inspected using a 3/4-inch screen. No prohibited materials were observed in the screened material. The IEM witnessed a total of six samples collected from two separate stockpiles. Per the AES sampling plan, three samples were collected from each stockpile. Each sample consisted of 20 grabs (depths ranging from the surface to three feet into the pile) which were composited. One discrete grab per sample was collected specifically for VOC analysis without being composited.

NYCDPR provided the IEM authorization to commence review of this source site on May 24, 2011. NYCDPR requested this source site review be put on hold on May 27, 2011. It was requested by NYCDPR that the IEM witness sampling for physical parameters on June 1, 2011. NYCDPR provided authorization to the IEM to order the EDR on NYCDPR's behalf on June 8, 2011.

On June 24, 2011, the IEM emailed the final source site review updates to NYCDPR which identified that Sample #2 for SP-1 failed to meet the cover layer material Permit requirements due to an Antimony exceedance. NYCDPR requested that the source site review be put on hold on June 24, 2011. On June 30, 2011, NYCDPR requested that the IEM resume the source site review. The IEM notified NYCDPR that the review was completed on June 24, 2011 and forwarded the original June 24, 2011 review findings/comments to NYCDPR. On July 1, 2011, NYCDPR requested that the IEM provide the EDR files to NYCDPR which were ordered for the site in June. The IEM resubmitted the EDR files to NYCDPR.

On July 8, 2011, NYCDPR submitted a preliminary review of the EDR to the IEM via email. The IEM provided comments to NYCDPR via email. On July 11, 2011, NYCDPR submitted a preliminary site review submittal via email and the IEM provided comments to NYCDPR via email. On July 12, 2011, NYCDPR submitted the site review submittal to the NYSDEC and the IEM via email. On July 12, 2011, the NYSDEC requested that the IEM provide preliminary comments of NYCDPR's submittal and the IEM provided comments to the

NYSDEC via email. On July 15, 2011, the NYSDEC provided comments to the IEM and a request for clarification on NYCDPR's submittal.

The IEM provided NYCDPR a review status update with respect to this source site via phone and email on July 20, 2011. The update contained action items required for NYCDPR to advance the review process. The IEM provided the NYSDEC with an update on the status of NYCDPR submittals for this source site on July 22, 2011 via email. NYCDPR provided the cover layer material permeability testing results to the IEM on July 22, 2011. The IEM consulted with the NYSDEC beginning on July 22, 2011 regarding the permeability results and the IEM notified NYCDPR on July 28, 2011 that the cover soil permeability rate of 1.51 X 10-2 cm/s (21.4 in/hr.) did not meet the NYSDEC maximum allowable permeability of 1 x 10-2 cm/s (14.7 in/hr.). The IEM also requested clarification on NYCDPR's intent on handling the SP-1 Antimony exceedance as identified in lab reports.

NYCDPR requested the analytical lab data from the IEM on August 8, 2011 and indicated that they would be submitting a final proposal to the NYSDEC regarding the request to import cover material from the Bloomingburg source site by addressing outstanding metals and permeability requirements. The IEM forwarded requested lab data to NYCDPR via email on August 8, 2011.

IEM staff visited the Bloomingburg source site to inspect the cover layer material on October 6, 2011 and the existing material appeared to be the same material that the IEM inspected originally in May 2011 with the exception that SP-1 had been removed off-site and was no longer available. The results of the site visit were consistent with what the IEM was told by the site operator earlier on October 6, 2011. The IEM confirmed that the GPS coordinates of the stockpile (SP-2) were consistent with the original location, the soil appeared to be the same color and consistency, and the stockpile had vegetation growing on it, indicative that it had been untouched for an extended period. The IEM witnessed the loading of one truck on October 6, 2011 headed to the Site, which was carrying approximately 26 cubic yards of cover layer material. IEM staff was on-site at Bloomingburg on October 7, 2011 to witness the initial rounds of cover layer material loading.

In general, the NYSDEC allowed up to 16,000 cubic yards of approved cover material (from all cover material source sites) to be stockpiled in the rough of holes 4 and 5 (8,000 cubic yards per hole) prior to satisfying the conditions associated with spreading the cover material on the Site. These conditions included meeting permeability and shaping layer thickness requirements. On October 21, 2011, the NYSDEC provided NYCDPR with a conditional approval to allow NYCDPR to import cover layer material with a permeability of up to 30 inches per hour pending NYCDPR submitting for approval of an amendment to the Stormwater Pollution Prevention Plan (SWPPP). With this permeability approval, NYCDPR was notified that they could spread cover material on-site at their own risk pending shaping layer thickness compliance which occurred at a later time.

Approximately 4,768.0 cubic yards of cover layer material were imported to the Site from this source site.

#### 3.1.2.2 Ranco Sand (115 South Street, Manorville, NY) [LAWS]

On December 2, 2011, the IEM was directed by NYCDPR to order the EDR for the Ranco Sand source site located in Manorville, NY. The IEM visited the Ranco Sand source site on December 8, 2011 to inspect a stockpile of approximately 10,000 to 12,000 cubic yards of proposed cover soil. The soil was inspected and visually appeared to be 100% sand, free of any debris. The material appeared to be native as it was mined from a NYSDEC permitted facility, extending approximately 100 feet below original grade. The stockpile of sand that was inspected was mined from below the water table.

The IEM witnessed the collection of six composite soil samples and six discrete VOC samples, as well as a physical sample to be analyzed for permeability. The IEM logged the location of the perimeter of the stockpile via GPS. The source site owner and NYCDPR were made aware that the stockpile must remain untouched in order for the material to be considered for approval.

NYCDPR/LAWS submitted a copy of a previous NYSDEC mining permit containing the source site's previous permit number (1-4722-00218/00001). LAWS was informed by the source site representative that the source site is operating under a NYSDEC authorized permit extension.

The EDR was ordered on December 9, 2011. The IEM performed a review of the EDR and provided observations and a list of RECs to the NYSDEC. The IEM received the lab data (from the December 8, 2011 sample event) from LAWS on December 19, 2011. The IEM completed review of the lab data on December 19, 2011 and found that the material met the Site Permit criteria for cover layer soil. The IEM reviewed the NYCDPR submittal associated with the EDR for the source site. Based on review of the NYCDPR EDR review memo, site visits, inspections, and data review, the IEM did not have any objections associated with proceeding with this source site. Prior to receiving approval for importation of this cover material to the Site, the NYSDEC needed to receive and review the permeability testing data.

On January 4, 2012, the IEM forwarded the NYSDEC the permeability data for review. On January 9, 2012, the NYSDEC identified that this source site was conditionally approved as a source for cover material based on samples meeting the approved permeability specification at a frequency of one sample per five hundred cubic yards for the initial 2,000 cubic yards (analysis for permeability only). Thereafter, sampling for permeability would be performed at a frequency of one sample per 2,000 cubic yards if the permeability results for the initial 2,000 cubic yards were satisfactory. This conditional approval was based upon information provided by NYCDPR in its January 5, 2012 email and the IEM's January 4, 2012 email to the NYSDEC. Additional permeability sampling witnessed by the IEM was required since only one IEM witnessed sample has occurred (i.e. January 2, 2012). The IEM witnessed permeability testing at the source site on January 10, 2012.

NYCDPR transmitted additional percolation testing results to the NYSDEC on January 26, 2012. The results were for IEM witnessed sampling completed on January 10, 2012 and January 23, 2012. On January 26, 2012, the NYSDEC provided NYCDPR with approval to use the average of twenty permeability test results as representative of the 12,000 cubic yards of stockpiled cover layer material at the source site. This

approval was based on the fact that loading, transporting, stockpiling, and spreading of the material would result in thorough mixing. The initial 12,000 cubic yards were approved for import to the Site.

On February 1, 2012, IEM staff was on-site to observe loading and transportation of cover layer materials from the approved stockpile and completion of trucking manifests. On February 7, 2012, IEM staff notified NYCDPR and NYSDEC that the IEM had reviewed the environmental sample data for the second round of environmental sampling completed on January 30, 2012 for cover soil (i.e. eight composite samples from an approximately 15,000 cubic yard stockpile). Per the results in the lab report transmitted to the IEM, the IEM verified that the material complied with the Site permit criteria for cover layer material. On February 9, 2012, the IEM reviewed the infiltration rate test results for the second stockpile of cover layer material, and all of the sample results met the Site Permit criteria (i.e. less than 29.4 in/hr.). Based on a review of the submitted environmental data and the infiltration testing data, the second stockpile (up to 16,000 cubic yards) was approved for import to the Site since it met all of the Site Permit criteria.

The IEM was on-site at the Ranco Sand source site on February 22, 2012 to witness sampling of a new stockpile of potential cover layer material (stockpile #3). The IEM witnessed the collection of five samples from the stockpile consisting of approximately 10,000 cubic yards of potential cover layer material.

The IEM reviewed the environmental sampling results from the February 22, 2012 sampling event for this source site and found that the sample results fell below the Site Permit limits. The IEM reviewed the percolation test results and found that the percolation rates for stockpile #3 exceeded the established threshold of 29.4 inches/hour. The IEM required a proposal from NYCDPR on an acceptable approach to remedy the percolation rate exceedance.

On March 15, 2012, the NYSDEC notified the IEM that the environmental testing (TAGM) frequency for this source site had been reduced from one sample per 2,000 cubic yards to one sample per 10,000 cubic yards of cover layer material. The percolation testing frequency remained unchanged at one sample per 2,000 cubic yards.

On March 15, 2012, the NYSDEC found NYCDPR's proposed truck loading and mixing protocol acceptable to address elevated percolation rates for the stockpile #3 materials. On March 19, 2012, the IEM informed NYCDPR that stockpile #3 at the Ranco Sand source site had been approved for import as cover layer material based upon the acceptable environmental testing results and the percolation results in conjunction with the required mixing and truck loading protocol. The IEM witnessed the appropriate truck loading protocol of the first round of trucks at the source site on March 16, 2012. Trucks were loaded in an alternating pattern from both stockpile #2 and stockpile #3.

The IEM witnessed source site sampling at this source site on March 30, 2012. The IEM received a lab report on April 5, 2012 containing infiltration testing data for ten samples collected from stockpile #4. The IEM reviewed the infiltration testing data and confirmed that the results met the permeability requirement for cover soil.

The IEM received the environmental (TAGM) lab report on April 6, 2012 for the samples collected for stockpile #4 on March 30, 2012. On April 9, 2012, the IEM confirmed that sample results for stockpile #4 did not exceed any of the Permit criteria for cover material and the material was acceptable for import to the Site.

The IEM received the environmental (TAGM) lab report on May 9, 2012 for the samples collected for stockpile #5 on April 30, 2012. On May 10, 2012, the IEM confirmed that sample results for stockpile #5 did not exceed any of the Permit criteria for cover material and the material was acceptable for import to the Site. The IEM reviewed the infiltration testing data on May 17, 2012 and confirmed that the results met the permeability requirement for cover soil.

The IEM approved Ranco stockpile #5 on May 17, 2012, as the environmental testing results did not exceed any of the Permit criteria for cover layer material. The 20,000 cubic stockpile from Ranco that was tested and witnessed by the IEM met the Site Permit criteria and was acceptable for import to the Site. Infiltration testing was also approved by the IEM. The NYSDEC lowered the frequency of infiltration testing to one infiltration sample per 10,000 cubic yards for this source site on May 11, 2012. Through May 17, 2012, this source site was approved to export 78,000 cubic yards of cover material to the Site.

The IEM was on-site at this source site on June 8, 2012 to witness the collection of samples from stockpile #6. Two samples were collected for environmental and infiltration analysis for the approximate 20,000 cubic yard stockpile. The IEM received infiltration testing data on June 14, 2012. Infiltration test results were reviewed and approved on June 19, 2012. The IEM received environmental testing lab results on June 18, 2012. The environmental testing lab results were reviewed and approved on June 19, 2012. Stockpile #6 (20,000 CY) did not exceed any of the Site Permit criteria for cover layer material and infiltration requirements and was therefore acceptable for import to the Site.

The IEM was on-site at this source site on July 17, 2012 to witness sampling of stockpile #7 consisting of 10,000 cubic yards of cover layer material. On July 26, 2012, the IEM notified NYCDPR and LAWS that the material from stockpile #7 was acceptable for import to the Site based on the fact that the submitted environmental and infiltration lab reports met the Site Permit requirements.

The IEM reviewed the infiltration and environmental lab reports for stockpile #8 of cover layer material (10,000 cubic yards) sampled on August 14, 2012. The IEM notified NYCDPR on August 22, 2012 that the material was approved for import to the Site as both infiltration and environmental results were acceptable per the Site permit requirements.

On September 17, 2012, the IEM notified NYCDPR that the 10,000 cubic yard stockpile #9 of cover layer material sampled at this source site on September 7, 2012 was acceptable for import to the Site as both environmental and infiltration lab results met the Site Permit requirements.

On October 1, 2012, the IEM notified NYCDPR that the 10,000 cubic yard stockpile #10 of cover layer material sampled at this source site on September 21, 2012 was acceptable for import to the Site as both environmental and infiltration lab results met the Site Permit requirements.

On November 7, 2012, the IEM notified NYCDPR that the 10,000 cubic yard stockpile #11 of cover layer material sampled at this source site on October 17, 2012 was acceptable for import to the Site as both environmental and infiltration lab results met the Site Permit requirements.

On December 10, 2012, the IEM notified NYCDPR that the 10,000 cubic yard stockpile #12 of cover layer material sampled at this source site on November 16, 2012 was acceptable for import to the Site as both environmental and infiltration lab results met the Site Permit requirements.

IEM staff was on-site February 1, 2013 at this source site to perform the visual inspection and witness sampling of the cover soil for environmental and infiltration testing associated with stockpile #13 (10,000 cubic yards). The IEM witnessed collection of one environmental sample and one infiltration sample.

On February 19, 2013, the IEM notified NYCDPR that the latest round of cover layer material for this source site was acceptable for import to the Site based on the fact that both the environmental and infiltration results met the Site Permit requirements. The results were for sampling witnessed by the IEM on February 1, 2013 for stockpile #13.

The IEM witnessed sample collection for stockpiles #14 and #15 totaling 20,000 cubic yards worth of proposed cover layer material at this source site on March 19, 2013. Based on review of submitted lab results, the proposed cover layer material was approved for import to the Site as both infiltration and environmental results were acceptable per the Site Permit requirements.

On June 3, 2013, the IEM notified NYCDPR that the latest round of cover layer material for stockpiles #16 and #17 totaling approximately 20,000 cubic yards were acceptable for import to the Site as both infiltration and environmental results met the Site Permit requirements. Submitted infiltration and environmental lab reports were for sampling witnessed by the IEM on May 22, 2013.

On August 5, 2013, the IEM notified NYCDPR that the latest round of cover layer material for stockpile #18 (approximately 10,000 cubic yards) was acceptable for import to the Site. The submitted infiltration and environmental lab reports for sampling witnessed by the IEM on July 26, 2013 met the Site Permit requirements.

On August 29, 2013, the IEM notified NYCDPR that the latest stockpile of cover layer material for stockpile #19 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on August 21, 2013.

On September 13, 2013, the IEM notified NYCDPR that the latest stockpile of cover layer material for stockpile #20 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on September 6, 2013.

On October 3, 2013, the IEM notified NYCDPR that the latest stockpile of cover layer material for stockpile #21 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on September 25, 2013.

On October 28, 2013, the IEM notified NYCDPR that the latest stockpile of cover layer material for stockpile #22 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on October 16, 2013.

On November 8, 2013, the IEM notified NYCDPR that the latest cover layer material stockpile #23 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on October 25, 2013.

On November 18, 2013, the IEM notified NYCDPR that the latest cover layer material stockpile #24 (approximately 10,000 cubic yards), as represented by submitted infiltration and environmental lab reports, was acceptable for import to the Site. Both infiltration and environmental results met the Site Permit requirements for sampling witnessed by the IEM on November 8, 2013.

On March 14, 2014, the IEM notified LAWS and NYCDPR that the cover layer material stockpile #24, originally sampled and witnessed on November 8, 2013 was acceptable for importation. On March 14, 2014, the IEM completed a site visit and performed a visual inspection of the existing stockpile on-site.

#### 3.1.2.2.1 Ranco Sand (115 South Street, Manorville, NY) [MFM]

On July 10, 2012, the IEM received lab results for a 10,000 cubic yard stockpile of cover layer material sampled at the Ranco Sand source site on July 2, 2012 for MFM. On July 11, 2012, the IEM confirmed that the environmental lab testing results did not exceed any of the Site Permit criteria for cover layer material environmental analyses however the stockpile could not be approved for import as infiltration test results were not reviewed and approved.

The NYSDEC approved the infiltration test results on August 21, 2012 for stockpiled cover layer material (10,000 cubic yards) sampled on July 2, 2012. Based on the NYSDEC approval of the infiltration results, the IEM notified NYCDPR on August 22, 2012 that the stockpiled material was approved for import to the Site as both infiltration and environmental results were acceptable per the Site Permit requirements.

#### 3.1.2.2.2 Ranco Sand (115 South Street, Manorville, NY) [Triton]

On June 6, 2013, the IEM notified NYCDPR that the revised environmental lab report for a 5,000 cubic yard stockpile met the Site Permit requirements for IEM witnessed sampling completed on May 31, 2013. On June 7, 2013, the IEM notified NYCDPR that the infiltration testing results did not meet the Site Permit requirements.

On June 24, 2013, the IEM notified NYCDPR that the additional infiltration tests analyzed for a 5,000 cubic yard stockpile did not meet the Site Permit requirements for IEM witnessed sampling completed on May 31, 2013 and it was not approved for import to the Site. On June 24, 2013, NYCDPR notified the IEM that this material would not be sampled any further.

Approximately 271,801.2 cubic yards of cover layer material were imported to the Site from this source site based on approved materials noted above in Sections 3.1.2.2 and 3.1.2.2.1.

#### 3.1.2.3 East Coast Mines (Lewis Road near Route 104, East Quogue, NY)

Between August 10 and August 12, 2011, NYCDPR and the IEM coordinated a site visit to the East Coast Mines source site (DEC Facility ID: 1-4736-00539), and discussed review requirements. The EDR was ordered by the IEM on August 12, 2011, and the initial EDR files were forwarded to NYCDPR.

The IEM visited the source site on August 17, 2011 to inspect two stockpiles each consisting of approximately 2,000 cubic yards of soil. The soil was inspected and visually appeared to be sand, free of any debris. The material appeared to be native as it was mined from roughly 80-100 feet below original grade. The stockpiles were inspected with a PID, which yielded no detections. The IEM witnessed the collection of a composite and discrete VOC sample from each stockpile, as well as a physical sample to be analyzed for permeability.

The IEM visited the site again on September 29, 2011 to inspect a separate stockpile of proposed cover layer material of approximately 2,000 cubic yards of soil. The soil was inspected and visually appeared to be sand and free of any debris. The material appeared to be native as it was mined from roughly 80-100 feet below original grade. The IEM witnessed the collection of a composite and discrete VOC sample from the stockpile, as well as a physical sample to be analyzed for permeability. The IEM logged the location of the perimeter of the stockpile via GPS. The source site owner and NYCDPR were aware that the stockpiles must remain untouched in order for them to be considered for approval. NYCDPR performed a review of the EDR. The IEM performed a review of NYCDPR's review submittal, as well as a review of the EDR. No RECs were identified. NYCDPR submitted the facility's NYSDEC mining permit to the IEM.

On October 11, 2011, the NYSDEC identified that they had reviewed the initial analytical data for the East Coast Mines source site and authorized the importation of two stockpiles of cover material totaling approximately 3,500 cubic yards. This approval was associated with cover material that was sampled on August 17, 2011. This material was approved for only stockpiling on-site, and had not been approved for spreading on-site. Cover material was stockpiled in the rough of holes 4 and 5 pending NYSDEC approval for spreading. The NYSDEC had not reviewed the September 29, 2011 analytical data resulting in a

maximum allowable import volume from this source site of 3,500 cubic yards. In general, the NYSDEC allowed up to 16,000 cubic yards of approved cover material (from all cover material source sites) to be stockpiled in the rough of holes 4 and 5 (8,000 cubic yards per hole) prior to satisfying the conditions associated with spreading the cover material on-site. These conditions included meeting permeability and shaping layer thickness requirements. On October 21, 2011, the NYSDEC provided NYCDPR with a conditional approval to allow NYCDPR to import cover layer material with a permeability of up to 30 inches per hour pending NYCDPR submitting for approval of an amendment to the Stormwater Pollution Prevention Plan (SWPPP). With this permeability approval, NYCDPR was notified that they could spread cover material on-site at their own risk pending shaping layer thickness compliance.

On April 18, 2012, NYCDPR requested that the IEM witness source site sampling for two 2,000 cubic yard stockpiles at this source site.

The IEM witnessed source site sampling at this source site on April 23, 2012. Four samples were collected for environmental testing and four samples were collected for agronomic testing. The IEM reviewed the environmental and infiltration testing data and confirmed that the environmental results met the Site Permit requirements for cover layer material and three of four stockpiles met the NYSDEC permeability requirements. The stockpile SP2 infiltration rate exceeded the Permit limit. Material from SP2 was not acceptable for import to the Site.

The East Coast Mines stockpiled material sampled on April 23, 2012 was formally approved by the NYSDEC on May 15, 2012. Although the environmental results passed the Site Permit criteria, one of the four stockpiles (each stockpile was 2,000 cubic yards) did not meet the Site Permit infiltration criteria. However, the NYSDEC, after a review of a NYCDPR submittal request, granted approval of the four stockpiles by allowing averaging of the four stockpile infiltration results; the average of the four stockpiles met the Site Permit criteria.

The IEM forwarded the Site environmental testing criteria per the Permit for cover layer material to the lab on July 2, 2012. On July 4, 2012, the IEM notified NYCDPR, the lab, and the source site contact of parameters that had to be re-analyzed or re-reported to coincide with the required Permit limits for potential cover layer material sampled on June 22, 2012. On July 5, 2012, the IEM reviewed the revised lab report for material sampled on June 22, 2012 and determined that the material (6,000 cubic yards) was acceptable for import to the Site. On July 10, 2012, the IEM received a lab report associated with a 10,000 cubic yard stockpile sampled on July 2, 2012. On July 10, 2012, the material was found to be acceptable for import to the Site based upon review of the submitted lab report and NYSDEC review and approval of the infiltration testing results. The NYSDEC approved the infiltration results based on the condition that the stockpiled materials were mixed at the source site prior to import to the Site.

The NYSDEC notified NYCDPR on July 18, 2012 that the proposed 1:3 ratio of mixing for cover layer material stockpiles #1, #3, and #6 at East Coast Mines source site was acceptable and subject to verification by the IEM. The IEM notified NYCDPR and the source site operator on July 18, 2012 that the submitted lab report was missing the analysis of dibenzofuran. NYCDPR and the source site operator

submitted revised lab reports on July 18, 2012. The IEM notified NYCDPR and the source site operator that the two separate stockpiles of material (8,000 cubic yards each) sampled at the East Coast Mines source site on July 11, 2012 were conditionally acceptable for import based upon proper mixing of the stockpiles. The IEM was on-site at the East Coast Mines source site to witness sampling of a new 10,000 cubic yard stockpile and the mixing of the cover soil stockpiles on July 23, 2012. The IEM notified NYCDPR and the source site operator that the sampled materials were acceptable for import to the Site on July 24, 2012.

The IEM was on-site at the East Coast Mines source site on July 31, 2012 to witness mixing of cover layer material stockpiles. On August 6, 2012, the IEM notified NYCDPR that the cover layer materials sampled on July 23, 2012 at the East Coast Mines source site, totaling 14,000 cubic yards, were acceptable for import to the Site based on review of submitted environmental and infiltration lab reports.

On August 20, 2012, the IEM notified NYCDPR that the 8,000 cubic yard stockpile of cover layer material sampled on July 31, 2012 was approved for import to the Site. The approval was based on the submitted environmental results meeting the Site Permit requirements, approval from the NYSDEC to mix and average the infiltration test results, and the mixing of the stockpiled material at the source site which was witnessed by the IEM on August 14, 2012.

On August 30, 2012, the IEM notified NYCDPR that the 12,000 cubic yards of cover layer material sampled on August 14, 2012 was approved for import to the Site. The approval was based on the submitted environmental results meeting the Site Permit requirements, approval from the NYSDEC to mix and average the infiltration test results (August 23, 2012 email), and the mixing of the stockpiled material at the source site which was witnessed by the IEM on September 4, 2012.

On September 12, 2012, the IEM notified NYCDPR that a portion of the 14,000 cubic yards of cover layer material sampled on September 4, 2012 was approved for import to the Site. Stockpile SW consisting of 6,000 cubic yards of cover layer material was approved based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results. Stockpile DSS consisting of 8,000 cubic yards had acceptable environmental results meeting the Site Permit requirements but was not approved due to infiltration results not meeting the Permit requirements. On September 14, 2012, the IEM notified NYCDPR that Stockpile DSS consisting of 8,000 cubic yards of cover layer material was approved for import to the Site since the IEM witnessed thorough mixing of the stockpiled material at the source site on the morning of September 14, 2012.

On September 20, 2012, the IEM notified NYCDPR that a portion of the 14,000 cubic yards of cover layer material sampled on September 14, 2012 was approved for import to the Site. Stockpile FFS consisting of 6,000 cubic yards of cover layer material was approved was based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results. Stockpile NW consisting of 8,000 cubic yards had acceptable environmental results meeting the Site Permit requirements but was not approved due to infiltration results not meeting the Permit requirements. On September 21, 2012, the IEM notified NYCDPR that Stockpile NW consisting of 8,000 cubic yards of cover layer material was

approved for import to the Site since the IEM witnessed thorough mixing of the stockpiled material at the source site on the morning of September 21, 2012.

On September 28, 2012, the IEM notified NYCDPR that a portion of the 12,000 cubic yards of cover layer material sampled on September 21, 2012 was approved for import to the Site. Stockpile SW consisting of 2,000 cubic yards of cover layer material was approved based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results. Stockpile DSS consisting of 10,000 cubic yards had acceptable environmental results meeting the Site Permit requirements but was not approved due to infiltration results not meeting the Permit requirements. On October 2, 2012, the IEM notified NYCDPR that Stockpile DSS consisting of 10,000 cubic yards of cover layer material was approved for import to the Site since the IEM witnessed thorough mixing of the stockpiled material at the source site on the morning of October 2, 2012.

On October 8, 2012, the IEM notified NYCDPR that all of the 16,000 cubic yards of cover layer material sampled on October 2, 2012 was approved for import to the Site. Stockpile SW consisting of 6,000 cubic yards of cover layer material was approved based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results. Stockpile NW consisting of 10,000 cubic yards which had acceptable environmental results meeting the Site Permit requirements was approved based on the fact that the average of the infiltration test results met the Permit requirements and the IEM witnessed thorough mixing of the stockpiled material at the source site on the morning of October 9, 2012.

On October 18, 2012, the IEM notified NYCDPR that all of the 16,000 cubic yards of cover layer material sampled on October 9, 2012 was approved for import to the Site. The stockpiled cover layer material was approved was based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results.

On November 7, 2012, the IEM notified NYCDPR that all of the 16,000 cubic yards of cover layer material sampled on October 24, 2012 was approved for import to the Site. Stockpile SW consisting of 6,000 cubic yards of cover layer material and Stockpile NW consisting of 10,000 cubic yards of cover layer material were approved based on the submitted environmental results meeting the Site Permit requirements and acceptable infiltration results.

On May 8, 2013, the IEM inspected previously tested and approved cover layer material (sampled October 24, 2012) at the source site and notified NYCDPR that import may resume for the previously approved material.

On July 25, 2013, the IEM notified NYCDPR that the latest round of East Coast Mines cover layer material (approximately 8,000 cubic yards) was acceptable for import to the Site. The submitted infiltration and environmental lab reports for sampling witnessed by the IEM on July 19, 2013 met the Site Permit requirements.

Approximately 167,007.05 cubic yards of cover layer material were imported to the Site from this source site.

#### 3.1.2.4 Amboy Aggregates (415 Main Street, South Amboy, NJ)

The IEM reviewed the infiltration and environmental lab reports for cover layer material (2,000 cubic yards) sampled on August 27, 2012. The IEM notified NYCDPR on September 6, 2012 that the environmental results were acceptable per the Site Permit requirements, however the infiltration results did not pass the Permit requirements for cover layer material. The IEM's involvement on this source site was limited to witnessing the collection of the soil samples for testing and a review of the lab results.

No further action was reported associated with this potential source site and no material was imported to the Site from this source site after October 25, 2010.

#### 3.1.2.5 Long Island Compost/Great Gardens (445 Horseblock Road, Yaphank, NY)

On November 16, 2012, the IEM notified NYCDPR and LAWS that the Long Island Compost/Great Gardens source site (DEC Permit Number: 1-4722-03647/00001) was conditionally approved to allow for the import of topsoil to be used as cover layer material pending IEM visual inspection and witnessing the collection of soil samples of the proposed material at the source site.

On December 7, 2012, the IEM notified NYCDPR that the 2,000 cubic yard stockpile of cover layer material sampled at this source site on November 30, 2012 was acceptable for import to the Site as both environmental lab results and visual inspection met the Site Permit requirements. The NYSDEC waived infiltration testing requirements for this material as long as the material was used solely in tree pits.

The IEM witnessed sample collection for a 2,000 cubic yard stockpile of proposed cover layer material at this source site on March 20, 2013. On March 28, 2013, the IEM notified NYCDPR and LAWS that the submitted sample results did not pass the Site Permit criteria due to the fact that Benzo(a)pyrene exceeded the permit limit of .061 mg/kg in sample 49369 with a value of .097 mg/kg and Chromium exceeded the permit limit of 19.4 mg/kg in sample 49369 with a value of 22.9 mg/kg. The material was not approved for import to the Site as cover layer material at that time.

On April 9, 2013, the IEM notified NYCDPR and LAWS that the submitted sample results for a 2,000 cubic yard stockpile of proposed cover layer material at this source site (sampled on March 20, 2013) did not pass the Site Permit criteria due to the fact that Benzo(a)pyrene exceeded the permit limit of .061 mg/kg in sample 49369 with a value of .097 mg/kg. The revised lab report dated April 8, 2013 addressed concerns with the analysis of trivalent and hexavalent chromium (the previous lab report had only analyzed total chromium). On April 10, 2013, the NYSDEC notified NYCDPR that after further review of the revised lab results, the 2,000 cubic yards of material was acceptable for import to the Site.

On April 29, 2013, the IEM notified NYCDPR and LAWS that the submitted sample results for a 2,000 cubic yard stockpile of proposed cover layer material at this source site (sampled on April 19, 2013) did not pass the Site Permit criteria due to the fact that Benzo(a)pyrene exceeded the permit limit of 0.061 mg/kg with

a value of 0.140 mg/kg and Dibenzo(a,h)anthracene exceeded the permit limit of 0.014 mg/kg with a value of 0.020 mg/kg. On May 1, 2013, NYCDPR requested approval to use the material as backfill for the tree pits only. On May 1, 2013, the NYSDEC notified NYCDPR that the 2,000 cubic yards of material was acceptable for import to the Site.

On May 14, 2013, the IEM notified NYCDPR and Triton that the submitted environmental and infiltration sample results for 2,000 cubic yards of proposed cover layer material at this source site (witnessed by the IEM and sampled on April 30, 2013) was acceptable for import to the Site as both environmental and infiltration results met the Site Permit requirements.

On October 28, 2013, the IEM notified NYCDPR that that a review was completed for a 2,000 cubic yard stockpile of proposed cover layer material from this source site. The proposed material was visually inspected and sampling was witnessed by the IEM on October 16, 2013. Although the material passed the IEM's physical/visual inspections and did not yield any PID detections, the sampled material did not comply with Site Permit criteria for the following parameters: Benzo(a)pyrene exceeded the permit limit of 0.061 mg/kg in sample GBF65277 with a value of 0.150 mg/kg; Dibenzo(a,h)anthracene exceeded the permit limit of 0.014 mg/kg in sample GBF65277with a value of 0.024 mg/kg; and Dieldrin exceeded the permit limit of 0.044 mg/kg in sample GBF65277 with a value of 0.100 mg/kg. On October 29, 2013, NYCDPR submitted additional documentation to the NYSDEC for evaluation. Based on review of submitted information, the NYSDEC notified NYCDPR on October 29, 2013 that this material may be imported to Site and used solely for backfilling the parking lot curb planters and shall not be used as capping material.

On March 11, 2014, the IEM notified LAWS and NYCDPR that the 2,000 cubic yard stockpile of cover layer material originally sampled and witnessed on October 16, 2013 was acceptable for importation. On March 11, 2014, the IEM completed a site visit and performed a visual inspection of the existing stockpile at the source site.

Approximately 8,434.85 cubic yards of cover layer material were imported to the Site from this source site.

## 3.2 On-Site Fill Importation Inspections

### 3.2.1 Process

As required under Special Condition 24 of the 2014 Permit, all fill importation was inspected at the Site by the IEM. Fill material volume (truck volume) was measured and recorded for each delivery of fill material as it arrived on-site by NYCDPR's appointed representative. The fill material was then inspected by the IEM at the observation platform near the entrance to the Site. At this time, the fill material was visually and chemically inspected. The visual inspection included observations of the material, disturbing the material with a shovel, and close-up observations of the material retrieved by shovel while still in the truck or trailer. Chemical inspection of the fill material was executed using a calibrated PID. If the fill material failed to meet the Permit requirements for reasons such as a PID reading above ambient air, the presence of asphalt or some other unauthorized debris, etc., the load was rejected immediately prior to

dumping. If the material was rejected, the truck was not allowed to dump on-site and was directed to exit the site immediately.

If the fill material passed the initial inspection at the IEM observation platform, either it was allowed to dump directly at a work location for immediate use as shaping layer material or cover layer material or it was transported to, and dumped at, a stockpile location. At the dump location, the IEM screened the fill material visually and with a PID for a second time prior to spreading if dumped at an active work location. If the fill material did not meet the permit requirements at the dump location, it was immediately rejected, loaded back onto the same truck, and transported off-site.

After the second round of inspection and after the material was dumped on-site and accepted for use, the IEM recorded dump and stockpile locations utilizing handheld GPS units. The data was uploaded to a web-based GIS system intermittently throughout the process in order to provide real-time data to authorize users including the NYSDEC and NYCDPR and to generate figures used to track the dump locations in the biweekly FMRs. The web-based GIS database was maintained by the IEM. Figure 2, included in each FMR beginning with FMR 246, identifies where fill materials were being used and dumped on the Site during construction activities.

A flow chart detailing the on-site fill importation inspection process is included as Appendix 21.

### 3.2.2 Trucking Manifests

Trucking manifests were utilized for all imported shaping layer and cover layer materials. A 5-ply manifest form was completed for each load of material to track each load of material from origination at the source site to destination at the Site. The manifest contained information including but not limited to a manifest number, the source site name and address, the truck driver's name, truck and trailer license plate numbers, as well as the time of departure from the source site and arrival time at the Site. See fill import manifests included in Appendix 13.

Note that manifests for material approved for importation prior to November 2008 cannot be retrieved and are not included in Appendix 13. The manifest information was stored in a NYCDPR document repository that was damaged by flooding and the files have been lost. However, the FMRs for the time period prior to 2008 comment on the nature of this work.

### 3.2.3 Rejected Trucks & Materials (JFK Consent Order Material & Misc. Debris)

Generally, materials were either rejected upon initial inspection at the IEM observation platform or rejected upon dumping at the work area or stockpile location. The most common reasons for rejection were the presence of asphalt or other unauthorized debris mixed with the material or elevated PID readings.

Details for all rejected trucks were included in each bi-weekly Fill Management Report (FMR). Trucking manifests associated with rejected truckloads were marked with the word "REJECTED" by the IEM. Trucking manifests for rejected trucks are included as Appendix 13.

During 2010, fill material from one particular source at JFK Airport was brought on-site and placed in seven different stockpiles ultimately being used as fill material beneath the clubhouse and maintenance building parking lots. The material was believed to be in conformance with permit conditions. However, the material was found to be in violation of 2005 Permit Special Conditions 1, 9, and 16, during NYSDEC and IEM inspections. On January 10, 2011, NYCDPR signed an Administrative Order on Consent (Consent Order), Case No. R2-20100521-172, related to this fill material. The Consent Order is included as Appendix I, of the 2013 Engineering Report included in Appendix 20.

## 3.3 Fill Tracking

Special Condition 9 of the 2014 Permit required quantification of all imported fill material. Fill importation was continuously tracked by the IEM. To account for the difference in truck volume and in-place volume, the IEM applied a 41.7% correction factor for shaping layer material and an 18% correction factor for cover layer material as set forth in the Permit. Additional details and methodology related to calculation of the shaping layer correction factor is included in a December 11, 2009 letter included in Appendix 19.

The cover layer material correction factor was separated from the shaping layer correction factor and revised in accordance with a NYCDPR submittal dated April 1, 2013 and revised April 8, 2013. The methodology for calculating the cover layer material correction factor is included in the revised April 8, 2013 submittal, which is included in Appendix 19.

As shaping layer and cover layer fill materials were imported to the Site, the IEM tracked volumes for each source site with respect to authorized volume based on approved sample analysis results for each source at the required sampling frequency (i.e. per 10,000 cubic yards for shaping layer material and per 2,000 cubic yards for cover layer material as included in Special Condition 14 of the 2014 Permit). The volume of imported material was tracked real-time as the IEM uploaded source, truck, and fill material volume information as each load of material was dumped on the Site. The fill tracking process, as part of the overall environmental monitoring and database management web-GIS system developed by the IEM and utilized beginning on October 25, 2010, was awarded a New York Chapter American Council of Engineering Companies (ACEC) Platinum Award in April of 2013. The web-GIS system allowed the IEM to upload and store data related to each load of fill material entering the Site, map its location, and allow real-time access to the data and mapping for NYCDPR, NYSDEC, the Contractor, and the general public.

At various times throughout fill importation activities, source site, shaping layer, or cover layer material totals were modified for various reasons. Additional details related to corrections and modifications can be found in Section 4 of corresponding Fill Management Reports, notably FMRs 213, 266, 277, 290, and 305.

Effective with FMR 290 and retroactive to October 25, 2010 (i.e. Woodard & Curran's first day as the IEM on-site at the Site), shaping layer and cover layer material volumes were tracked based upon the calculated volumes within each truck, as calculated by TRC and provided to the IEM (i.e. Tables 4-2 and 4-3 of each FMR). This provided for the most accurate and consistent approach to monitoring the volume

of imported fill materials. Prior to receipt of the calculated volumes from TRC, the IEM tracked estimated volumes as trucks dumped on the Site.

The Fill Delivery Summary Table included in Appendix 11 contains information related to the total amount of shaping layer and cover layer materials imported to the Site. The total volume of shaping layer material imported to the Site since October 18, 2002 was 2,681,338.15 cubic yards (truck volume) or approximately 93.4% of the authorized amount under the Permit. The total volume of cover layer material imported to the Site since October 18, 2002 was 480,959.49 cubic yards (truck volume) or 100.1% of the authorized amount under the Permit.

On April, 17, 2014, the NYSDEC confirmed via email that a minor exceedance of the cover layer in-place volume as included in the Permit is acceptable considering no additional shaping material will need to be imported and that the exceedance could be addressed via as-built drawings and in the final construction certification report. A copy of the email is included in Appendix 19.

The Bronx-Whitestone Bridge bound the “Site” to the west, Balcom, Miles, and Emerson Avenues to the east, Schley Avenue and St. Raymond’s Cemetery to the north, and the East River to the south. The project was originally managed under Ferry Point Partners, LLC (FPP).
On July 17, 2000 the New York State Department of Environmental Conservation (NYSDEC) issued Part 360, Solid Waste Management Permit No. 2-6006-00014-000110 jointly to the New York City Department of Parks and Recreation (NYCDPR) and FPP to allow a total of 1,000,000 cubic yards of fill to be imported and placed on the Site. Importation began in August 2000.

On October 18, 2002 the NYSDEC issued Part 360, Solid Waste Management Permit No. 2-6006-00014-000113 (2002 Permit) to allow a total of 1,522,300 cubic yards of fill to be imported and placed on the Site. The fill material was to consist of approximately 1,272,300 cubic yards of select exempt construction and demolition debris for the shaping layer, and approximately 250,000 cubic yards of uncontaminated soil for the cover layer. The 2002 Permit also stated that, “approximately 415,000 cubic yards of fill was deposited on the Site prior to the effective date of the permit and the projection for in-place fill material to complete the project was 1,107,300 cubic yards, consisting of approximately 857,300 cubic yards (in-place volume) of select exempt construction debris for the shaping layer and approximately 250,000 cubic yards (in-place volume) of uncontaminated soil for the cover layer.

In 2003, it was determined that the tournament quality and signature status of the course could be significantly improved by making the facility a "links" style course. The changes from the 2002 Permit include:

- Increasing the support mounding between golf holes and grading the course in a links style.
- Re-routing of holes 11, 12 and 13 to reverse their direction in order to improve player circulation and playing time.
- Moving Hole 9 to the west of the golf driving range in order to improve

the safety zone of the driving range and remove the need for high netting.

- Realigning the centerlines of holes: 10, 16, 17 and 18 to improve the strategic layout and visual experience of the golf course.
- Lowering the elevations of tee 4 and 6. This will eliminate the retaining wall proposed at the northeast comer of the Site.
- Adding a golf training area at the north end of the driving range. This required shifting the centerline of Hole 8 slightly north and increasing the support mounding around this area to buffer the adjacent holes.
- Increasing the mounding adjacent to the TBTA toll plaza in order to block noise and adjacent traffic from view.
- Shifting the Site roadway along the east side of the bridge to accommodate a TBTA easement that extends 25 feet east of the bridge. This required changes to the parking lot at the clubhouse and the location of detention/water quality basin, and waterfront park.
- Eliminating the Boathouse Grill restaurant in the Waterfront Park. A restaurant will now be located within the banquet facility. Parking spaces for the banquet facility were increased to accommodate the restaurant. A restaurant may be constructed within the waterfront park in a future phase, based on economic demands.
- Modifying the parking lot for the Waterfront Park. The 120 parking' spaces for the Waterfront Park will be located near the Whitestone Bridge approach structure.

These proposed changes to the golf course would have increased the total in-place fill volume for the project to 2,370,000 cubic yards to shape the course in a links style.

The quantification of the imported fill material was to be continuously tracked by both truck volume and periodic topographic surveys of in-place volumes. Initially it was assumed that truck volume would be reduced by 25% when compacted into place, but a new correction factor was to be calculated. On November 1, 2004, the NYSDEC approved a revised truck reduction factor of 42.4%, which was based upon an October 10, 2003 30% aerial topographic survey, and On December 7, 2004, the NYSDEC approved a revised truck reduction factor of 41%, which was based upon a July 17, 2004 60% aerial topographic survey. These recalculations were performed by dividing the actual in-place volume by the total cubic yards of truck volume delivered to the site as of the date of the survey as per the “2002 Permit

TRC Raymond Keyes Associates, A Division of TRC Engineers, Inc. prepared an, “Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY – Engineering Report; Dated May 31, 2005; Revised June 30, 2005” which comprised of Volume #1, Volume #2 and a twenty six (26) sheet drawing set entitled, “Ferry Point Park Public Recreational Facility Bulk Earthwork, Bronx, New York, Supplement No. 2” (2005 Report) . The 2005 Report represented the following scope of work:

- An eighteen (18) hole golf course with practice area.
- Maintenance Area in the northwest corner of the Site.
- Clubhouse Parking Lot in the southwest portion of the Site.
- Banquet Facility in the southwest portion of the site (along Emerson Avenue)
- Community Park
- Waterfront Park with parking lot.
- Drawing G-3 and G-4 of "Ferry Point Park Public Recreational Facility Bulk Earthwork, Bronx, New York, Supplement No. 2", showed the deviations in grading between the plans approved on 10/18/02 with the proposed plan.

On November 18, 2005 the NYSDEC issued Part 360, Solid Waste Management Permit No. 2-6006-00014-000113 ("2005 Permit") authorizing the importation of a total of 2,370,000 cubic yards of in-place fill material to the Site. The fill material was to consist of approximately 2,120,000 cubic yards of select exempt construction and demolition debris for the shaping layer, and approximately 250,000 cubic yards of uncontaminated soil for the cover layer. The truck reduction factor was 41% and could be further modified.

In 2007, TRC Engineers, Inc. ("TRC") was awarded a one (1) year contract to provide "Civil, Environmental and Construction Services for Compliance with DEC permit Related to the Construction of a Golf Course at Ferry Point Park". The order to work date for that contract was October 25, 2007. The scheduled completion date was October 23, 2008. The contract was extended an additional year to October 24, 2009. On October 26, 2009, "TRC" issued a "Year 2 End Project Summary" and estimated that approximately 202,000 total cubic yards of material was imported to the Site by October 22, 2007.

On October 26, 2007, the NYCDPR and FPP terminated the license agreement to develop, construct and operate the Project at the site and on February 29, 2008 FPP submitted an application to transfer the "2005 Permit" solely to the NYCDPR. On August 12, 2008, the NYSDEC notified the NYCDPR and FPP that the "2005 Permit" had been transferred to the NYCDPR.

The order to work date for construction of the Community Park was August 11, 2008. Fill importation continued as witnessed by the Independent Environmental Monitor (Gannett Fleming). On September 30, 2009, Thomas Balsley Associates, NYCDPR design consultant issued a revised drawing changing the limit of the Community Park. The new Site was reduced in size by moving the fence line in the south further north and by moving the fence along the proposed golf course closer to Balcom Avenue.

On January 22, 2009, in accordance with Special Condition #10 of the "2005 Permit", TRC Engineers, Inc. (TRC) submitted a revised truck reduction factor of 40.3%. On February 11, 2010, NYSDEC approved a truck reduction factor of 41.7%.

The order to work date for construction of the Ferry Point Golf Course was October 23, 2009. The golf course layout that the NYCDPR bid was modified from that which shown in the 2005 Report. One major

change was the total removal of the Banquet Facility in the southeast part of the Site. There were also changes in the placement, alignment and grading of some holes.

On February 1, 2013, the NYSDEC granted a permit modification to increase the limit of cover material to 394,000 cubic yards with the stipulation that the Agency revisit the compaction factor. It was determined that the compaction factor for the granular cover material (sand) would be 18%. This would revise the "trucked in" quantity to 480,488 cubic yards. The compaction factor for cover layer material approved per April 26, 2013 letter from NYSDEC to DPR.

On May 21, 2014, the NYSDEC issued Part 360, Solid Waste Management Permit No. 2-6006-00014-00013 (SW) & 2-6006-00014-00013 (TW) to the NYCDPR to allow a total of 2,514,000 cubic yards of material in-place volume (2,120,000 cubic yards in-place shaping material/394,000 cubic yards in-place cover material).

## 3.4 Total Carcinogenic Semi-Volatile Organic Compound Tracking

As identified in Special Condition 14 of the 2014 Permit, the NYSDEC Acting Regional Director letter dated October 25, 2006, authorized the import of shaping material with a total carcinogenic SVOC (tcSVOC) level of up to ten parts per million (ppm), which would not otherwise be acceptable, provided the tcSVOC weighted average of all imported material is equal to or less than 3 ppm at the end of each quarter. The tcSVOC weighted average is defined as the sum of the products of the material volume and the material tcSVOC, for each material source, divided by the total volume of the material imported. The weighted average was calculated over the course of construction and the final weighted average for shaping layer and cover layer materials imported to the Site was 0.70 ppm, less than the 3 ppm maximum. The total carcinogenic SVOC weighted average table and computations are included in Appendix 12 for materials imported to the Site after November 18, 2005.

SVOCs were not sampled for at the East Side Access and 2nd Avenue (94th Street) source sites due to the source being undisturbed, virgin rock material generated from subway tunnel boring. NYSDEC email correspondence dated April 15, 2011 stated that the IEM should apply one-half of the method detection limit (MDL) from the latest lab report sampled at that time for materials originating from those two source sites.

# 4 Construction

## 4.1 General Construction

### 4.1.1 Community Park

Construction of the Community Park consisted with capping the 11 acre site, installing baseball fields, a basketball court, walkways, a comfort station, and a landscaped stormwater retention area. Construction started on August 11, 2008. As of December 31, 2011, the stormwater retention pond, passive landfill gas (LFG) vents, and recreation facilities were considered complete. The Order to Work date for the comfort

station was March 19, 2014. The original scheduled completion date was September 15, 2014. The anticipated completion date is currently the Fall of 2015.

### 4.1.2 Golf Course

Generally, construction for the Golf Course was completed from the northeast to the southwest. The sequence of construction started by grading, rough shaping and compacting each hole, installing major drainage lines and inlet drains, installing irrigation lines and fine shaping the holes, installing branch drainage lines, constructing the greens and tees, installing demarcation material, grading cover material, fine grading cover material, and final stabilization by hydro-seeding. Each hole was constructed individually and then turned over to Trump, who is contracted with NYCDPR to maintain and operate the grounds and golf course, for care and maintenance during the grown-in period and prior to course operations.

LAWS completed construction work, including punch list items associated with their construction contract, and demobilized from the site in July 2014. Trump has and continues to perform various earth disturbance related work on the Site, in addition to standard maintenance of the Site. All permit related activity, including earthwork, general construction, and fill deliveries have been coordinated with the IEM, and the IEM has witnessed the work activity and documented inspection observations in the Daily Observation Reports. Specifically, IEM oversight related to Trump's on-site activity includes, but is not limited to, the replacement and relocation of trees, construction of a clock tower and associated subsurface concrete footing, excavation of trenches and installation of utilities to support various on-site facilities including the temporary clubhouse, installation of a cart barn, re-grading of an existing shaping and cover layer earthen berm and subsequent installation of concrete block letters at the surface, and installation of asphalt. For a detailed description of Trump's work activities requiring IEM oversight subject to the Permit conditions, refer to the Daily Observation Reports located in Appendix 5 beginning on June 19, 2014.

### 4.1.3 Waterfront Park

Special Condition 37 of the 2014 Permit requires that NYCDPR submit a revised design for the Waterfront Park and provides NYCDPR the flexibility to remove the Waterfront Park from the NYSDEC Part 360 Permit and permit the project under a separate NYSDEC tidal wetlands permit. The Waterfront Park is currently in the process of being conceptually scaled back in magnitude due to the impacts of Hurricanes Irene and Sandy, and design plans are being value engineered and developed. NYCDPR intends to submit plans to the NYSDEC upon completion of an approved design, and handling the construction via a separate NYSDEC tidal wetlands permit. Any SEQR related documents will be updated accordingly. The final end use of the Waterfront Park is anticipated to be publically accessible and consists of a passive recreational feature. NYCDPR will not be performing post-construction monitoring in this area of the Site until construction is completed and approved, and will restrict public access until such time.

## 4.2 Environmental Controls/Construction

### 4.2.1 Wells (Landfill gas, groundwater and water balance analysis)

NYSDEC requested NYCDPR on August 6, 2010 to demonstrate that soil being used for final cover material (not specifically the uppermost layer) would have a sufficiently low coefficient of permeability and percentage of organic material to minimize infiltration of water into the lower layer of fill material. These comments were submitted as additional comments to the November 25, 2009 permit application submittal.

NYCDPR performed a site-wide water balance evaluation to predict post-construction infiltration rates. EPA's Hydrologic Evaluation of Landfill Performance (HELP) model was used for this evaluation. The results were presented to NYSDEC on May 13, 2011 as well as incorporated in Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East, Bronx New York October 15, 2013. The model used criteria including a typical one-foot thick soil landfill cover with the proposed soil cover material as designed for the facility. The model also accounted for impermeable areas of the site, irrigation of the golf course, drainage system stormwater capture and the lining of ponds.

The soil cover permeability of 14 inches per hour was used for the overall site model. Using this infiltration rate the overall volume of water penetrating the site would be lowered by approximately 9,700 gallons per day. A subsequent water balance analysis was submitted to NYSDEC on August 10, 2011 presenting infiltration rates with a soil permeability of 30 inches per hour that also lowered the overall volume of water infiltrating the site following completion of construction. Discussion and request for confirmation that the site drainage was adequate for a 30 inch per hour permeability took place and the final maximum permeability of 30 inches per hour was approved by NYSDEC for cover material. Cover material imported to the site was tested subsequent to this approval to insure it was able to meet the goal for material permeability. More specifically, testing was combined from individual stockpiles and sources and the average from those was used to determine acceptability of material. Individual variability in sample results was expected because loading, unloading, stockpiling and spreading over the site was recognized as providing a homogeneous layer over the site. Samples were collected at a frequency of one per 2,000 cubic yards moving forward from January 26, 2012 until importation of material was completed.

Additional impacts on water balance came from lined irrigation and retention ponds. There is one large irrigation pond located on the course and several small retention ponds located throughout the open course. The irrigation pond's purpose is to collect storm runoff during storm events and stor it to be utilized for irrigation of the upper cover layer during non-storm periods. The grading and drainage for the stormwater collection and retention were provided in the November 25, 2009 permit application. NYSDEC requested that infiltration beyond the upper layer of cover material be minimized to the maximum extent possible on August 6, 2010 and this included lining each of the five on-site retention ponds to limit infiltration as much as could be done.

The subsequent changes to cover permeability and the lining of irrigation and retention ponds required a review of the Stormwater Pollution Prevention Plan (SWPPP) in order to confirm the additional flow would

not exceed the design criteria for the storm system. The engineering review conducted at that time (October 18, 2011) confirmed the stormwater system design was adequate to carry this flow.

NYSDEC granted a conditional approval for the Ferry Point Site to accept a 30 in. percolation rate per hour cover material on October 21, 2011. The conditional approval was based on a request for DPR to "submit for approval an amendment to the Stormwater Pollution Prevention Plan (SWPPP) dated November 13, 2009, with plans and computations that reflect the partial lining of the stormwater basins." DPR provided this in a technical memorandum to NYSDEC on November 16, 2011. The memorandum presented a formal submittal of the pond liner design to NYSDEC and included excerpts of calculations from the November 13, 2009, SWPPP. An approval was provided by NYSDEC on December 2, 2011.

Municipal solid waste (MSW) filling operations ceased at the Site in the 1960s, prior to the implementation of the comprehensive environmental regulations now in place, and a formal groundwater sampling program was not required at that time. Information on groundwater quality at a former landfill site such as Ferry Point Park East can be used to help evaluate existing groundwater conditions. For the 2005 Permit application, the Site's history was reviewed and a geotechnical investigation was performed to evaluate the potential for adverse impacts on the Site's groundwater due to the placement of fill during construction of the golf course and parks.

A summary provided in the 2005 Engineering Report concluded "that the placement of fill would not have an adverse impact on pre-development groundwater conditions at the site and that the proposed golf course construction would not result in an increased flow of contamination into the river through groundwater flow." (TRC 2005a).

In their comments of June 25, 2010, NYSDEC asked DPR whether any new information was available regarding groundwater conditions at the Site, and if any new, relevant information was available, to verify the conclusions of the geotechnical portion of the 2005 Engineering Report (TRC 2005a).
Following several discussions with DPR, and because no prior sampling had been required, NYSDEC requested that DPR undertake a groundwater sampling program and develop a reference point for background water quality conditions at the Site.

To comply with this request, DPR prepared written field procedures for new well installations, well development, and groundwater sampling (see Appendix G.1).
The field procedures were submitted to, and approved by, NYSDEC prior to the start of the work effort. Prior to installation, the locations of the monitoring wells were approved by NYSDEC during a meeting held with DPR on September 22, 2011.

Landfill gas monitoring over the entire Site has incorporated various different types and configurations of monitoring points. These include perimeter and interior wells and vents that have been monitored over time on a regular frequency. Monitoring has been recorded and reported according to Special Conditions Monitoring as referenced in the March 2014 permit and results dictate continued additional monitoring when that has been necessary. This monitoring continues under the Post Closure Monitoring

requirements and in accordance with the Landfill Gas Management Plan. A total of thirty seven passive vents were installed throughout the Golf Course and Community Park on an average spacing of approximately one vent for every five acres. These vents are considered passive and allow the natural venting of subsurface gases to take place without any additional vacuum or fans. Additional active vapor removal does take place at each of the constructed buildings on the site. This includes the comfort station and maintenance shed on the Golf Course and comfort station at the Community Park. Active systems operate at both of these locations on a continual basis and vent the subsurface area beneath the associated slabs to the atmosphere. There are no structures planned for or constructed on the Waterfront Park parcel at this time.

Passive gas vents are installed throughout the golf course and are included along the perimeter within the venting trenches, within the overall golf course as individual stand-alone vents and in combined systems of interconnected piping to carry landfill gas from beneath irrigation ponds.
Landfill gas monitoring includes perimeter probes located along an approximate 250 linear ft. interval on the north, east and southern site boundaries; off-site monitoring points along Buttrick, Balcom, Schley, Miles and Emerson Avenues; a passive vent trench installed along the eastern and northern perimeters of the course with piezometers installed along the vent trench to allow for monitoring of the groundwater levels associated with the vent trenches; individual passive vents within the golf course and community park space; a passive vent system of interconnected piping serving the irrigation pond; and sub-slab depressurization systems beneath the enclosed buildings located within the golf course and community park.

In February 2012, eleven new groundwater monitoring wells were installed across the Site to obtain information on current groundwater conditions. Design documents for the groundwater monitoring wells are included in Appendix G.2 of the 2013 Engineering Report, included in Appendix 20. An initial sampling event was completed in February 2012 and included the testing activities described below.

■ Groundwater Elevation Measurements: Water depths were measured at the 11 groundwater monitoring wells. Two measurements were taken from each well within one hour each of high and low tides, starting at the shoreline and moving inland.
■ Elutriate Testing: One soil core sample per well was collected during well installation in order to perform elutriate analysis. Samples were selected from shaping material zones based on visual observation of the soil cores.
■ Groundwater Testing: Groundwater samples were collected at each of the 11 wells and shipped for laboratory analysis in accordance with the required testing as referenced in the 2002 permit.
■ Hydraulic Conductivity Testing: In situ slug testing for hydraulic conductivity was completed at each of the 11 groundwater monitoring wells.

The initial groundwater monitoring data from February 2012 was submitted to NYSDEC by email on March 28, 2012. This data is included in the report for the initial groundwater monitoring event (see Appendix G.5 of the 2013 Engineering Report, included in Appendix 20). At that time, DPR requested direction from

NYSDEC concerning procedures for future sampling events. That is, should future sample collection be modified due to the high turbidity.
(>1,000 nephelometric turbidity units [NTUs]) observed in the initial samples. A call was held with NYSDEC on May 8, 2012, to discuss the initial data and provide guidance on future monitoring (see Appendix G.3 of the 2013 Engineering Report, included in Appendix 20 for call minutes.) Also during this call, NYSDEC directed DPR to perform inorganic analyses on both filtered and unfiltered samples collected during the next sampling event. If the next round of results is found to be in expected ranges, then future sampling events will utilize only filtered samples for inorganic analyses.

NYSDEC provided DPR with requirements for future groundwater monitoring in their FPP Groundwater Characterization/Monitoring Objective, on May 8, 2012 (see Appendix G.4 of the 2013 Engineering Report, included in Appendix 20). DPR implemented the groundwater monitoring program in accordance with the schedule and monitoring parameters requested by NYSDEC.

The schedule included two additional quarterly sampling events, followed by approximately three semi-annual events (through completion of construction) and three post-construction annual sampling events. After the third annual sampling event, DPR may request to reduce the sampling frequency or cease the groundwater sampling program at the Site. Table 4-1 provides a schedule of the monitoring events that will be performed to complete this program and the parameters that will be analyzed for during each event.

Post-construction groundwater monitoring and groundwater monitoring well maintenance requirements are incorporated into the Post-Construction Custodial Care Plan for the Site (see Appendix I).

### 4.2.2 Liners

A single irrigation pond has been constructed at the Site. The purpose of this pond is to collect and store stormwater runoff and reuse it later for irrigation and maintenance of the golf course vegetative cover. This pond is fully lined to maximize the retention of irrigation water. The irrigation pond design documents were included in the November 25, 2009, permit application package. In addition, there are five smaller water quality ponds designed to provide active stormwater retention and limit the off-site migration of sediment. The geometry and grading (engineering design) of these ponds were also provided in the November 25, 2009, permit application package. DPR considered various methods to meet NYSDEC's request of August 6, 2010, to minimize the infiltration of water through "the lower layers of material to the maximum extent possible." Based on this consideration, DPR is implementing a recommendation contained in the November 16, 2010, memorandum (see Appendix D.1 of the 2013 Engineering Report, included in Appendix 20) to line the five on-site water quality ponds to limit water exfiltration. The pond system has been included in the overall water budget evaluation that was submitted and approved by NYSDEC in addition to the permeability of the upper imported fill material.

Supplemental drawings and specifications for the lining of these ponds are provided in Appendix D.4 of the 2013 Engineering Report, included in Appendix 20. The pond liner designs are consistent with the

previously approved geometry and grading (engineering design) presented in the November 25, 2009, permit application package.

### 4.2.3 Gas Venting

#### 4.2.3.1 Active

According to the 2009 permit the site wide active landfill gas control system consistent with the proposed with the 2005 permit was withdrawn as a design modification. Active systems were installed at buildings and initially proposed for the irrigation lake.

Based on the Final Engineering report, due to the explosive nature, LFG is not allowed to accumulate within any enclosed structure at the site. Therefore active sub-slab depressurization systems (SSDS) have been installed at each of the enclosed buildings at the site. These systems have continuous explosive gas monitoring components of the design. The irrigation lake was not made active and continues as a passive system as per the September 2009 permit modification application.

The SSDS engineering drawings for the golf course facilities (maintenance building and comfort station) are provided in Appendix F.3 of the 2013 Engineering Report, included as Appendix 20. The Community Park comfort station design was provided in the November 25, 2009, permit application. The Waterfront Park comfort station has not been designed. Maintenance of the SSDS and their monitoring equipment will be performed in accordance with the operations, monitoring, and maintenance (OM&M) program for the Site's Landfill Gas management system (see Section 4.4.4). The design of any additional structures at the Site will be completed in accordance with New York City Department of Buildings requirements. The need for LFG mitigation systems for any future Site structures will be evaluated as part of their design.

#### 4.2.3.2 Passive

The LFG management system as redesigned for the Site (since the November 25, 2009, permit application submittal) is an update of prior conceptual passive LFG designs and includes a passive system for the venting of LFG in all areas not covered by enclosed facilities. The primary goals for the design of the Site's LFG management system are to provide safe operating conditions and protect human health.

The proposed passive system is consistent with the plans presented in the 1999 EAS (AKRF 1999), the 2002 Technical Environmental Assessment (AKRF 2002), and the 2005 Engineering Reports (TRC 2005a, b) and was approved under the 2005 Part 360 Permit. It deviates from the 2009 permit renewal application prepared by TRC Engineers (TRC), which recommended an active system. An active system uses blowers or fans to extract gas through vents from the landfills subsurface, whereas a passive system uses vents without blowers or fans. Supplemental Site investigations and extraction testing performed by TRC Engineers at the Site in 2009 and 2010 were reviewed by Walsh Environmental Scientists and Engineers, LLC (Walsh) in 2010. Emissions modeling was also performed by EEEPC in 2010, as discussed in Section 4.4.1. Based on these evaluations and modeling of Site conditions, a Landfill Gas Management Plan (LFGMP) was prepared (see Appendix F.1 of the 2013 Engineering Report, included in Appendix 20). The plan concluded that a passive venting system is sufficient to achieve safe operating conditions for users and workers of the golf course and parks. A description and details of the Site's LFG management system

are presented in the LFGMP. The LFG management system as currently designed is consistent with the proposed venting system described in the 2005 Permit.

### 4.2.4 Vent Trench

The landfill gas perimeter trench was the primary gas-management structure installed in or about 2001. The Trench was initially proposed in the 1999 conceptual LFG control system. The purpose of the vent trench was to capture and prevent the off-site migration of LFG. The 2002 AKRF Report included installation details and certified drawings of the trench and its details.

The LFG trench was constructed along the eastern and a portion of the northern perimeter and was completed in 2001. The trench begins at the water's edge at the foot of Emerson Avenue, continues along the length of the Balcom Avenue Site boundary and continues approximately 1050 ft. in a westerly direction past the intersection of Schley and Buttrick Avenues.

The LFG passive trench is essentially a stone-filled /geotextile-wrapped envelope that begins three feet below the groundwater surface and extends upward to just below the ground surface. The upper 6 inches of the trench is dressed and finished with a layer of wood chips that allow LFG entering the trench to vent to the atmosphere. During the construction there were some areas where stability of the fill material at the water table was noted to be an issue and in these areas the trench was extended to a depth of one foot below the groundwater surface. In addition to the gravel filling of the trench to allow for a porous medium allowing LFG to move upward and escape, a continuous 4 to 6 inch diameter perforated PVC pipe was buried in the upper portion of the stone backfill. Vertical passive vents are connected to this horizontal piping to allow for future modifications should the top of the trench need a cap installed above it. The trench will collect and disperse any and all LFG that comes into it but it was primarily designed to remove methane from passing beyond the site boundary. The vent trench was specifically installed below the elevation of measured groundwater in order to maintain a constant layer of saturation within the lower part of the trench. This groundwater layer would prevent landfill gas from migrating beneath the trench and off of the site. Passive vents were also installed within the trench to allow a rapid ascent of LFG out of the trench and into the atmosphere. Concentrations of LFG that could be an issue within the trench would immediately be diffused in the atmosphere and reduced to a concentration that is not a concern.

Following the installation of the trench, methane concentrations were noted to have declined significantly, demonstrating the effectiveness in controlling LFG in the area.

Landfill gas migration is influenced by a number of factors including barometric pressure, diffusion gradients, composition and distribution of subsurface soil and fill material and groundwater. As landfill gas builds up and accumulates, it moves outward from the points or areas /zones where it is generated, spreading into other areas. Landfill gas migrating vertically will reach the surface and diffuse when it mixes with ambient atmospheric air. The other main concern for migration from the landfill was horizontal migration from the landfill to areas off-site. This horizontal migration can be controlled and to a significant extent can be eliminated through the use of LFG trenches. The LFG trench configuration can prevent accumulated gas from passing beyond the site because it creates an area allowing for diffusion and mixing of LFG with ambient air. The overall trench is constructed and filled with material of a higher

permeability than the surrounding soil or fill and typically offers a more direct connection to the open atmosphere. The base of the trench is extended into the water table which performs two functions that both increase the opportunity for LFG to be removed and thus prevent it from migrating offsite. The first offers a more open contact of the shallow groundwater surface to ambient air allowing dissolved concentrations to be volatilized out of the water column into the air and the second prevents LFG that exits from the landfill soil from travelling beneath the trench out beyond the site.

Approximately 5,350 feet of LFG passive vent trench was constructed along the site boundary between May 2001 and December 2001.

Routine inspections of the LFG passive vent trench included the following observations, depth of wood chip layer over geotextile, excessive fine grained materials, vegetation, erosion along the vent trench and any other condition that may have a potential to compromise the ability of the LFG passive vent trench to intercept and transmit LFG to the atmosphere. Refer to the non-conformance table. Monitoring includes routine bi-weekly observations and inspection of the following specific components of the trench:

- Observation of the covering wood chips to insure they extend to and are level with the ground surface and are free of excessive fine grained materials that would restrict the flow of LFG from the trench once it is intercepted.
- Observation of the vertical hard piping risers to insure they do not show signs of cracking bends or breaks;
- Observation of the vertical riser piping to insure they remain vertical and anchored as they were installed;
- Observation of the vertical vents and openings to insure they remain open.

Continued monitoring of the trench is described in Special Conditions 30 of the modified Permit with NYSDEC. This includes monitoring of groundwater levels in the adjacent monitoring wells. If the groundwater is noted below the bottom of the trench, the following actions are initiated:

1. Evaluate the methane concentrations in nearby perimeter methane monitoring wells and semi-permanent monitoring points. If the methane concentrations measured that day are below the site-specific action level of 25% LEL, continue the normal (bi-weekly) methane monitoring frequency and increase the groundwater level measurements at the location of concern to bi-weekly.
2. If the groundwater level measured at the initial bi-weekly monitoring event is above the base of the vent trench, then defer back to the routine monthly piezometer monitoring frequency.
3. If the groundwater level remains below the trench bottom for the first additional bi-weekly monitoring event, but nearby perimeter methane monitoring wells and semi-permanent monitoring points are below the site-specific methane action level of 25% LEL, continue groundwater level and methane monitoring at a bi-weekly frequency until such time as the

groundwater level is above the base of the trench. Then defer back to the routine monthly piezometer monitoring frequency.

4. If the groundwater level remains below trench bottom for the first additional bi-weekly monitoring event, and nearby perimeter methane monitoring wells and semi-permanent monitoring points are at or above the site-specific methane action level of 25% LEL, then continue monitoring the groundwater levels and methane concentrations for the second bi-weekly event.
5. If the groundwater level remains at or below the trench bottom for the second bi-weekly monitoring event, and the nearby perimeter monitoring wells and semi-permanent monitoring points remain at or above the site-specific methane action level of 25% LEL, further recommendations will be made to NYSDEC.

### 4.2.5 Landfill Cap

In accordance with provisions of the Permit dated May 21, 2014 the landfill was capped with minimum of one foot of shaping layer material over the landfill and one foot of cover layer material over top of the shaping layer material. In areas where there was less than 4 feet of shaping material over the waste layer, a layer of demarcation material was installed. See Section 4.4 for additional information related to the landfill cap construction.

The permit authorized importation of 2,514,000 cubic yards of material to the Site for overall capping of the waste material. This consisted of approximately 2,120,000 cubic yards of select exempt construction and demolition (C&D) debris for the shaping layer, and approximately 394,000 cubic yards of cover material. Specific restrictions were incorporated into the material and those restrictions were maintained and are described under the importation section of this Report. Final surface components of the cap including; greens, contour, heights and top soil) were incorporated into the site under the Nicklaus Design Technical Specification of the June 30, 2005 Engineering Report. This included:

- Greens-Mix imported to the site and tested as per the material testing requirements. Fertilizer and soil amendments applied on the greens after spreading to construction specifications and then grassed as per the specifications.
- Topsoil-Imported to be consistent with native topsoil, and free of rock and debris greater than three quarters of an inch as per Exhibit C of the Engineering Report. Soil amendments, fertilizer applications and seed were added to tee, fairway and rough areas as per Exhibit C of the June 30, 2005 Engineering Report.

### 4.2.6 Environmental Controls On-Site Structures

Due to its potentially explosive nature, LFG shall not be allowed to accumulate within any enclosed structure at the Site. To protect the occupants, an under slab vent system for each enclosed building shall be installed and continuously operated. The LFGMP (see Appendix F.1 of the 2013 Engineering Report, included in Appendix 20) describes the active sub-slab depressurization systems (SSDS) that have been designed for the under-slab of each enclosed building at the Site. These systems will have continuous explosive gas monitoring with local and remote alarm capabilities. The SSDS engineering drawings for the

golf course facilities (maintenance building and comfort station) are provided in Appendix F.3 of the 2013 Engineering Report, included in Appendix 20. The Community Park comfort station design was provided in the November 25, 2009, permit application.
Maintenance of the SSDS and their monitoring equipment will be performed in accordance with the operations, monitoring, and maintenance (OM&M) program for the Site's Landfill Gas management system (see Section 4.4.4). The design of any additional structures at the Site will be completed in accordance with New York City Department of Buildings requirements. The need for LFG mitigation systems for any future Site structures will be evaluated as part of their design

Low-permeability soil/bentonite collars ("soil collars") will be installed for all utility trenches that contain permeable bedding in order to prevent the migration of LFG into enclosed buildings at the Site. The soil collars will be installed around the water and sewer pipelines, within the trenches at the subsurface location where the pipeline crosses above the building foundation (the building line). Each soil collar will be passively vented as described in the LFGMP (see Appendix F.1 of the 2013 Engineering Report, included in Appendix 20) and as shown on the engineering design drawings in Appendix F.2 of the 2013 Engineering Report, included in Appendix 20. Similarly, conduit seals will be used for electrical conduits that are installed in trenches using permeable bedding materials. The conduit seals will be installed at the building lines. Other utility LFG controls include the under slab passive venting for the aboveground double-check valve (DCV) enclosure. The DCV enclosure is for the potable water supply line as it enters the golf course site. Detailed design drawings for the venting the DCV enclosures are provided in Appendix F.4 of the 2013 Engineering Report, included in Appendix 20. The need for LFG venting for any future Site subsurface vaults will be evaluated as part of their design.

## 4.3 Municipal Solid Waste (MSW)

Municipal solid waste ("MSW") was generated throughout site development and excavation activities. MSW material was not utilized as fill material on-site after it was encountered and excavated during construction activities with the exception of MSW excavated and reused on-site in accordance with an Order On Consent issued by the NYSDEC and fully executed as of January 4, 2004 (Order On Consent No. R2-20030724-187). A copy of the executed consent order is included in Appendix 19. In accordance with Special Condition 8 of the 2014 Permit, upon encountering MSW during site development, the material was transported and properly secured into segregated stockpile locations prior to off-site disposal. MSW material consisted of metal, glass, tires, plastics, rubber, paper, fabrics, and miscellaneous debris not suitable for the shaping layer. Refer to Section 4.5 of this report to review further details regarding the minimum fill cover over top of the MSW.

Prior to stockpiling any excavated MSW, the existing ground surface was covered with an impermeable plastic membrane. The stockpile was then encircled with silt fence and the stockpile was covered with an impermeable plastic that was secured with sand bags after the MSW was stockpiled and prior to off-site disposal.

Waste characterization sampling was performed prior to off-site removal as required prior to acceptance by each solid waste facility. Prior to disposal, waste samples were collected from each of the stockpiles

and analyzed to determine if the material was hazardous and to determine a suitable NYSDEC facility for disposal by way of a permitted hauler. A January 22, 2010 letter approving Seneca Meadows Landfill as a disposal facility is included in Appendix 19.

Residual MSW excavated by Trump associated with utility and drilling work at the Golf Course stockpiled in the adjacent Waterfront Park have been removed.

### 4.3.1 Manifests

Manifests were collected for each load of MSW generated and disposed of off-site. Manifests were completed for each load of MSW prior to leaving the Site. Completed manifests contained the following information: driver signatures and appropriate transporter information, facility designation including the address for the facility that was receiving the material, a description of the material being transported, the site generator's mailing and site address, and a total quantity of the material leaving the Site. The weight of MSW was determined by weighing the material (in tons) during the loading process. The MSW was loaded with a pay loader with a scale attached to the bucket. A receipt for the weight of each load was printed and was presented to NYCDPR with the manifest for review. NYCDPR and/or their designated representative signed the manifests as the generator, and then the manifests were then presented to the IEM for final verification.

Copies of the MSW disposal manifests are included in Appendix 14.

Note that MSW manifests accounting for material prior to October 25, 2010 (i.e. Woodard & Curran's first day on-site as the IEM), cannot be retrieved and are not included in the appendix. The information was stored in a NYCDPR document repository that was damaged and the files have been lost. However, the FMRs prior to October 25, 2010 comment on the nature of this work.

## 4.4 Earthwork/Fill Placement

Earthwork and fill placement for this Project were performed in accordance with the Permit. A response received from NYSDEC on July 28, 2009 (included in Appendix C.2 of the 2013 Engineering Report, included in Appendix 20), provided additional clarification regarding what are considered active and passive recreational areas. As per this letter:

Active Recreation – "…all other areas that are not covered with a building or other impermeable cover system… are deemed active recreational areas."

Passive Recreation – "…the golf course is deemed a "passive recreational area" and is required to have a one foot thick cover layer over a demarcation layer."

Following this directive, NYCDPR requested clarification from NYSDEC regarding the demarcation layer requirement for the extent of the Golf Course. The request for clarification was based on the need for further specificity regarding the use of a demarcation layer on the Golf Course.

In response, NYSDEC and NYSDOH reviewed a summary of the analytical data for all the shaping material imported to the Site. Upon review of the data set, confirmatory analytical sampling of the in-place shaping material was requested by the NYSDEC and NYSDOH. NYCDPR conducted test pit sampling and analysis under an approved work plan and submitted the data to the NYSDEC on February 16, 2011.

In their letter dated March 9, 2011, the NYSDEC stated that "NYSDOH reviewed the shaping layer test pit data and determined that it confirmed existing shaping layer data." The NYSDEC and NYSDOH agreed that a demarcation layer would not be required at areas of the golf course having a fill thickness of five or more feet of combined shaping and cover layer materials. The March 9, 2011 letter is included in Appendix C.3 of the 2013 Engineering Report, included in Appendix 20.

The aforementioned directives were the basis for the earthwork, fill placement, and landfill capping process. Additional details related to shaping layer material placement, demarcation layer installation, cover layer material installation, and related construction is as follows.

### 4.4.1 Shaping Layer Material

The Permit requires a minimum of one foot of clean shaping layer material to be installed over top of the existing MSW prior to cover layer material placement. Specific to the Golf Course, grading and compaction activities associated with the shaping layer material were generally completed by hole, consistent with the golf course architect's design. Once grading and compaction of the shaping layer material was completed, NYCDPR completed topographic surveys of the newly graded shaping material layer to assist in determining the depth of clean shaping layer material that was present over the pre-existing landfill surface. These shaping layer material surveys were generated intermittently as shaping layer material installation was completed in sections of the Golf Course.

An analysis was conducted by the IEM, which compared compiled historic surveys from 1998 to the final shaping layer surface surveys completed by NYCDPR. The 1998 surveys included elevations representative of the landfill surface for the Site prior to the earthwork associated with the Project. Based on an analysis and comparison of the survey data, portions of the Site that had less than four feet of approved shaping layer material were identified in a series of earthwork analysis drawings that were provided to the NYSDEC. The earthwork analysis drawings are included in Appendix 10. These plans identify the depth of shaping layer material and show the general progression of shaping layer material filling across the Site. Figure SP-001 entitled "Shaping Layer Material Earthwork Analysis via Surveys" includes a site wide earthwork analysis compiled from the various Site surveys and earthwork analyses completed as construction progressed at the Site.

In areas identified on the earthwork analysis drawings to have less than one foot of clean, in-place shaping material, test pits were performed by the Contractor and observed by the IEM to verify that a minimum of one foot of shaping layer material was present over the MSW, per the plans and Permit requirements.

If areas were found to have less than the required one-foot minimum of shaping material and could not receive additional fill based on the design plans, these areas were adjusted by over excavating the MSW

and backfilling with clean shaping layer material. This process was necessary in order to maintain the designed grades and comply with the Permit conditions. With oversight by the IEM, areas with MSW encountered at shallow depths in the tests pits were excavated outwards from the test pit location until one foot of clean shaping layer material was present. See Figure SP-100 entitled "Shaping Layer Material Test Pit Plan", which includes test pit locations superimposed on an earthwork analysis that visually represents the frequency, location, and presence of MSW within the required one foot minimum shaping layer section prior to reshaping. All test pit locations and the limits of the over-excavation were GPS located by the IEM utilizing a handheld GPS unit. Test pit locations were spaced 50 feet apart over the entire areas that the survey analysis estimated to have less than one foot of shaping layer material. In addition, if MSW material was encountered within the one-foot minimum shaping layer, the frequency of test pits were increased at the IEM's discretion to more accurately determine the extent of over-excavation required. Observations of test pit activities associated with evaluating the shaping layer material thickness are detailed in the IEMs Daily Observation Reports.

### 4.4.2 Demarcation Layer

Consistent with Special Condition 14 of the 2014 Permit, a demarcation layer was installed at the Site, specifically the Golf Course, where the combined thickness of shaping layer and cover layer materials combined were less than five feet. For this Project, "demarcation layer" meant a brightly colored, permeable plastic material placed on top of the Site's shaping layer material and directly beneath the Site's final cover layer material that is easily recognizable during an excavation. The request was made for the protection of Site workers during any future excavation work beneath the cover layer at the Site. Demarcation layer material for this Project consisted of orange construction fencing for the Golf Course.

On July 10, 2012, the NYSDEC confirmed that a nine-inch thick asphalt and subbase layer for the cart paths did not require any underlying cover material or demarcation layer. A black geo-grid material was installed under the cart paths associated with the Golf Course as part of the design. A copy of the correspondence is included in Appendix 19.

On November 21, 2012, the NYSDEC notified NYCDPR that demarcation layer may be eliminated from under ponds as NYCDPR identified that demarcation layer was not required as part of the Permit. A copy of the November 21, 2012 correspondence is included in Appendix 19.

NYCDPR prepared a Demarcation Layer Plan based on a comparison of final design grades and the top of waste elevations extrapolated from soil boring data. The Demarcation Layer Plan is included in Appendix C.4 of the 2013 Engineering Report (Appendix 20). Field verification that the demarcation requirements were being met was performed continuously and routinely by the IEM to confirm Permit compliance as outlined in the shaping layer material section above. Based on the data gathered from the earthwork analysis plans and the test pit excavations, actual areas requiring demarcation layer were identified.

In instances where NYCDPR felt that the installation of demarcation material was not necessary, test pits were excavated to four feet below grade, spaced 50 feet apart, to determine if there was more than four feet of clean shaping layer material installed over MSW. If it was determined via test pits that there was

more than four feet of clean shaping layer material present, demarcation material was not installed. The reasoning assumed a one foot thick cover layer installation and considered the March 9, 2011 NYSDEC/NYSDOH correspondence determining that demarcation layer was not required if the combined fill thickness above MSW was five feet or greater. The March 9, 2011 correspondence is included in Appendix C.3 of the 2013 Engineering Report (Appendix 20).

All areas with less than four feet of shaping layer material present that required the installation of demarcation layer material are identified on Figure SP-200 entitled "Demarcation Layer Plan". The limits of demarcation layer material, as represented on Figure SP-200, were located by the IEM using handheld GPS units at the time of installation, prior to cover layer material installation. Areas associated with the cart paths are also identified on Figure SP-200.

### 4.4.3 Cover Layer Material

Cover layer material was installed at the Site in accordance with the Permit. Special Condition 15(d) of the 2005 Permit required the following:

"The final placement (including topsoil), location, thickness, and detailed chemical limits of the final cover layers on the Site, including the community park and waterfront park, are subject to the specifications, directions and requirements determined by the NYS Department of Health (NYSDOH) to be applicable. It is the responsibility of the Permitees to obtain a written determination from NYSDOH.
The Permitees must provide the Department with a copy of NYSDOH's determination. No cover layer material may be placed on the Site, until the Department acknowledges receipt of NYSDOH's determination."

As required by Special Condition 15(d) of the 2005 Permit noted above, NYCDPR obtained such written determination from NYSDOH in a letter dated, August 2, 2006 included as Appendix C.3 of the 2013 Engineering Report (Appendix 20).

The NYSDEC's active recreational determination from July 28, 2009, required that NYCDPR install two feet of cover layer material and a demarcation layer throughout the Community Park. Soil probes confirmed extremely consistent and appropriate thickness of cover material throughout the Community Park and Golf Course.

For the Golf Course, the upper portion of the landfill was capped using Permit specified criteria for sand and/or topsoil material formally referred to as cover layer material. A sand material was used for the majority of the golf course cover layer with topsoil being used primarily in tree planting pits and other landscaped areas. The IEM observed capping activities associated with the cover layer material including, inspecting cover material at each source site and at the Site per the conditions set forth in the Permit and supporting reference documents. After installation of the shaping layer material and demarcation layer (as required), the cover layer material was installed. The IEM confirmed the depth of cover layer material placed on the Site in accordance with the Permit at the time of installation.

A minimum of one foot of cover layer material was placed over top of the shaping layer material consistent with the passive recreational determination at the Golf Course. Cover layer material was installed by means of either transporting stockpiled material that was previously inspected and approved by the IEM or by directly dumping the material in the work areas as it was imported to the Site. The material was then spread by bulldozers and specialty golf course shaping equipment. The IEM confirmed the depth of the cover layer material placed on the Golf Course area utilizing a graduated rod as the material was being installed.

Confirmation of the minimum of one foot of cover layer material installation on the Golf Course is included on Figure SP-200 entitled "Cover Layer Material Plan". This plan identifies the DOR report numbers and corresponding dates for when the IEM witnessed and measured a minimum of one foot of cover layer material being installed on the Golf Course. The cover layer material depth checks were completed by the IEM using a graduated rod to confirm that the final placement consisted of a minimum of one foot of cover layer material soil. Individual DORs documenting the IEM's observations are included in Appendix 5.

In addition to the IEM checking and confirming the minimum one foot thickness of cover layer material immediately upon installation, post-construction soil probes were completed in March 2015, and dug by hand to confirm the depth of cover layer material throughout the Golf Course. Prior to March 2015, once the site construction concluded and the vegetation was established throughout the Golf Course, an aerial survey (including topography) was performed by LAWS in Spring/Summer 2014 and provided to NYCDPR and subsequently to the IEM in December 2014. In addition, NYCDPR performed a Golf Course wide ground topographic field survey.

The IEM was provided with electronic AutoCAD files of both surveys that captured the final topography of the cover layer material surface. The IEM performed a cut/fill analysis using Civil 3D software by comparing each cover layer material survey to the previously generated shaping layer material surveyed surface (also field surveyed by NYCDPR). Based on a review of the cut/fill analysis results and subsequent discussions with the NYSDEC and NYCDPR, it was agreed by all parties that both survey results were inconclusive, and could not accurately reflect the thickness of the cover layer material on the Site. Since the 12-inch minimum cover layer material thickness could not be verified via survey, NYCDPR then moved forward with field investigations using handheld soil probing equipment in order to perform comprehensive Golf Course wide physical confirmation depth checks.

The IEM was on-site and witnessed all soil probes, and documented all soil probe locations and depth results using handheld GPS equipment. The soil probing work was completed by NYCDPR staff. Soil probe fieldwork commenced on March 11, 2015 and was completed on March 27, 2015. Soil probes were initially completed on a 50-foot grid but were increased to a 100-foot grid on March 19, 2015 based on the satisfactory initial field results and approval by the NYSDEC in an email dated March 18, 2015 (see Appendix 19 for the March 18, 2015 email).

Refer to Figure SP-003 entitled "Cover Layer Material Soil Probe Investigation Results" which illustrates the results of the soil probing investigation. The final results of the soil probing investigation were reviewed on-site with NYSDEC staff, and the NYSDEC required that NYCDPR correct an area in the vicinity of the Hole 14 Green, which resulted in cover soil layer thicknesses of 3 inches and 6 inches. NYSDEC staff stated that this area would require reconstruction in order to satisfy the intent of the 12-inch cover layer material thickness as required by the Permit. NYSDEC staff concluded that the remaining soil probe results sufficiently addressed the intent of the 12-inch cover layer material thickness Permit requirement, and the remaining Golf Course area did not require any further reconstruction or evaluation of the cover layer material.

As per the IEM's Daily Observation Reports, the IEM witnessed the subsequent field delineation the of the area deemed to be of insufficient cover layer material thickness (i.e. the area adjacent to Hole 14 that resulted in cover layer material depths of 3 inches and 6 inches via soil probe results) during the week of April 20, 2015. This was performed by using the soil probe equipment to accurately delineate the limits of the area having a cover layer material thickness of less than 12 inches, and resulted in an area of approximately 6 feet by 12 feet.

On May 4, 2015, the IEM observed the Trump Organization construction crew over-excavate the previously delineated areas that had less than 12 inches of required cover material, adjacent to Hole 14 Green. The area was over-excavated approximately 24 inches below grade, and 24 inches of Cover Material was backfilled and graded over the excavated area. The excavated area was GPS mapped using a hand held Trimble device. Excavated surplus shaping material was transported to a shaping stockpile adjacent to Pond P2.

Similar to the Golf Course, the 24 inch minimum cover layer/shaping layer materials thickness could not be verified via survey. NYCDPR moved forward with field investigations using soil probes in order to perform physical confirmation depth checks. The IEM was on-site and witnessed all soil probes, and documented all soil probe locations and depth results using handheld GPS equipment. The soil probing work was completed by a NYCDPR subcontractor. Soil probe fieldwork commenced on May 18, 2015 and was completed on May 22, 2015. Soil probes were completed on a 50-foot grid. Refer to Figure SP-004, entitled "Community Park Cover/Shaping Layer Material Soil Probe Investigation Results", which illustrates the results of the soil probing investigation.

#### 4.4.4 Greens and Tees Mix, Bunker Sand

Consistent with Section 2.1.2 "Cover Layer Fill Specifications" included in Volume #2 of the 2005 Engineering Report, environmental testing was not required, consistent with cover layer material requirements for the green and tees mix or bunker sand, and therefore was not completed for these materials.

On June 8, 2012, the NYSDEC confirmed that the sand material used for the tees, greens, and bunkers should not be counted towards the Permit stated allowable cover soil maximum. A copy of the June 8,

2012 correspondence is included in Appendix 19. NYCDPR's consultants estimated the required sand material volumes as follows: Tees and Greens (24,705 cubic yards), Driving Range Tee (3,025 cubic yards), and bunkers (6,076 cubic yards). Since these values were estimated, calculated by NYCDPR's consultants, it shall be noted that actual installed volumes may have fluctuated from the volumes identified above. This information is based on an email from Joe Voss to Faisal Choudhury on June 13, 2012.

Special Condition 15 of the 2005 Permit did require that the tees and greens mix imported to the site to be tested as per material testing requirements to meet the project technical specifications. Fertilizer and soil amendments could be applied on the tees and greens mix after spreading to construction specifications and finally grassed, as per the specifications provided by the agronomist.

#### 4.4.5 Topsoil

Topsoil was used on the Site, in lieu of sand, specifically in tree planting pits and other landscape areas. Any topsoil that was imported and used on the Site was approved and met all of the cover layer material Permit requirements including the specification included in Exhibit C of the 2005 Engineering Report.

## 4.5 Meetings

On a bi-weekly basis during construction of the Community Park and the Golf Course, progress meetings occurred in the NYCDPR field office trailer on the Site. Various representatives from NYCDPR, Trump, LAWS, KSE, TRC, the IEM, and appointed representatives attended the meetings to discuss construction progress, current issues, and scheduling.

Available meeting minutes from construction progress meetings are attached as Appendix 9.

## 4.6 As-Built Survey, Record Drawings, Deviations from Approved Design Plans

This section deals specifically with as built drawings, final record drawings and deviations that occurred during construction. It is further broken down into work performed in the Community Park, the Golf Course, the Waterfront Park, deviations to NYSDEC Permit as it pertained to fill importation quantities, modifications to the landfill gas vent trench and additions to the golf course made by the concessionaire.

#### 4.6.1 Community Park

The Community Park project consists of the following features and was designed by Thomas Balsley Associates:

- A softball field and smaller peewee/T-ball field with new drainage
- Two basketball courts
- New formalized park entrances
- Play areas for tots to pre-teens
- Seating areas and lawn for non-programmed activities
- A path and trail system that winds throughout the park
- A detention pond which collectives drainage from the eastern part of the golf course
- Foot bridges
- Shade structure

- Timber deck overlook
- Herbaceous plant materials
- Temporary below grade utilities to service a standard DPR Comfort Station (constructed under a separate contract),
- Below grade infrastructure to service Community Park lighting and fountains,
- Modifications to the Landfill Gas Vent Trench system
- New perimeter fence.
- New Comfort Station. (The comfort station construction is still in progress and expected to be completed in the Fall of 2015)

Deviations to the Community Park project consist of the following:

- The reconfiguration of the location of the perimeter fence on the south and west sides of the Community Park reducing the area of the site[1].
- One missing Vertical Landfill Gas vent just south of the most southerly entrance to the park.
- The relocation of a drain inlet in the softball field[2].
- The utilities servicing the Comfort Station are constructed as of December 10, 2015,[3] which represents the date in which the sanitary sewer connection was completed.

It is noted that below grade features were not examined during a NYCDPR field inspection conducted during July 2014. Community Park as-built information and documentation are included in Appendix 16 and includes a November 18, 2011 letter from LAWS indicating that the Community Park construction was completed as designed (exclusive of the comfort station) as well as three as-built drawings associated with the pond liner construction dated July 14, 2010 as prepared and certified by LAWS (Appendix 16).

### 4.6.2 Golf Course

The Ferry Point Park Golf Course project consisted of the following:

- A Maintenance Building with an active sub-slab depressurization system.
- A comfort station with as active sub-slab depressurization system, which includes a snack bar.
- A unenclosed rain shelter
- An 18 hole links style golf course
- A practice area
- Fill and topsoil importation
- A site drainage system and retention ponds
- A new irrigation pond and irrigation system
- All the necessary plumbing, electrical, gas, environmental monitoring and control devices for the golf course, maintenance facility and comfort station
- Roadway and parking area construction, paving, striping and drainage in compliance with the DEC permit
- Perimeter fencing and appropriate landscape screenings.

[1] See App. 4; Community Park Contract Drawings; Thomas Balsley Associates Constr. Dwg L1.3 & L1.6 dated 03/06/09, revised 09/30/09.

[2] See App. 4; Community Park Contract Drawings; Thomas Balsley Associates Constr. Sketch dated 2/11/09

[3] See App. 4; Community Park Contract Drawings; Thomas Balsley Associates Constr. Comfort Station Dwg P-2 dated 1/26/09

Deviations to the Golf Course consist of the following:

- The active venting system around the Irrigation Pond was converted into a passive system. Fiberglass manholes were changed to concrete manholes and additional piping added around the entire pond. Six (6) vertical passive vents were added, one at each box location and installed October 2014, following NYSDEC discussion. On May 22, 2015 the NYSDEC approved the removal of vertical passive vent #5 thereby leaving five (5) vertical passive vents in operation.
- Modifications to the grading plan did occur as well as minor modifications to drainage and are documented in "Ferry Point Site" visit notes produced by "Nicklaus" from 2010 through 2013 and as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- Retention ponds were lined as per NYSDEC requirements as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The golf cart path surface material was changed to asphalt and additional drainage was added as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The Clubhouse Parking Lot paved footprint was increase/installed as per NYSDEC Consent Order # R2-20100521-172. The Clubhouse Parking Lot was completed in May 2014 as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The irrigation pond pipe penetrations were revised as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The Turf Nursery was revised as shown on supplemental design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015)
- The active venting system inside of the Comfort Station was modified as per Integral Engineering, Inc. design drawings. (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015 and revised 4/23/2015). System is functioning, and requires the installation of sensor components of the vapor detection system. Contractor procurement for the installation of the sensor components is in its final stage of approval. Implementation is anticipated by Spring 2016 and the final signed and stamped as-built drawing will be submitted to NYSDEC following prompt inspection of the installation.

### 4.6.3 Waterfront Park

Construction has not begun in the area designated "Waterfront Park".

### 4.6.4 Additions to the Golf – Concessionaire

The concessionaire running the Golf Course is the Trump Organization. Since in their possession (NYCDPR Use Inspections were held for various parts of the project from September 2012 through March 2014) the following additions/deviations have occurred (Refer to Appendix 16; Deviations; Construction Deviation Drawings 1 through 12, dated 4/10/2015, revised 4/23/2015, 6/25/2015 & 7/13/2015):

- The construction of a Golf Cart Barn (currently under construction)

- The construction of a sign (currently under construction) and curb line realignment
- The construction of a temporary clubhouse including temporary utility services (trailers placed upon the asphalt parking lot)
- The construction of a "starter" kiosk including utility services as well as minor golf cart path widening around it.
- The construction of a clock.
- The construction of a weather vane/station.
- Minor irrigation changes.
- Additional planting along the perimeter fence line. Removal of the aluminum fence along the Waterfront Park and the Golf Course and the installation of a fiber optic sonar alert system in its place (installation of the fiber optic sonar alert system occurred from July 25, 2015 to August 19, 2015 and was witnessed by the IEM).

# 5 Environmental Monitoring

## 5.1 SWPPP

On November 20, 2003, NYCDPR received an Acknowledgement of Notice of Intent for coverage under SPDES General Permit for Stormwater Discharges from Construction Activity (General Permit No. GP-02-01), permit identification number NYR10D547, which transitioned SPDES General Permit coverage previously held under GP-93-06. On May 12, 2009, NYCDPR received an Acknowledgement of Notice of Intent for coverage under SPDES General Permit GP-0-8-001; permit identification number NYR10R112, which was maintained throughout construction completion. A copy of the SPDES General Permit Acknowledgement and Notice of Intent are included in Appendix 1.

In compliance with NYSDEC guidelines for State Pollution Discharge Elimination System (SPDES) General Permit (GP-0-8-001) and General Condition 9 of the 2014 Permit, a Storm Water Pollution Prevention Plan (SWPPP) was implemented during the course of construction at the Site. All work was completed in compliance with the final SWPPP, dated December 22, 2009.

In addition to intermittent IEM SWPPP inspections, NYCDPR representatives also performed SWPPP inspections. NYCDPR performed bi-weekly inspections and associated Site Assessment Reports (filed at the FPP document repository) to ensure compliance with Permit requirements. SWPPP inspections were carried out through the spring of 2014. The SPDES permit will remain effective until completion of ongoing construction including the Golf Course Clubhouse.
Every possible action was taken to avoid non-compliance, such as turbid water leaving the Site. The following is a list of permanent features that were installed at the Site, beyond the SWPPP requirements:

- French drain at the eastern, western, and northern perimeters of the Site to control surface flow of stormwater;
- All ponds were lined, to prevent stormwater infiltration into the solid waste layer; and
- A new trash rack and rock outlet dam at the 60-inch Whitestone sewer outfall draining to the East River.

## 5.2 Landfill and Off-Site Gas Monitoring

The entire Ferry Point Site is equipped with a Landfill Gas (LFG) Management system to cover both on and off site monitoring. The systems purpose is to allow use of the site in its intended purpose as a golf course without having the occupants on the site and users of the golf course being exposed to harmful conditions that would be the direct result of the existence of the landfill. The Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, New York May/August/Oct 2013, referenced the summary of prior LFG efforts. These included preparation of a model for surface methane emissions using data collected during 2009 and 2010. Data for these studies also included a health impact analysis that is summarized in this final Certification Report and is attached with the 2013 Supplemental Engineering Report as an Appendix 20.

The generation rates for LFG were estimated as far back as 1999 using EPA Guidance documents and the results indicated the LFG rates for Ferry Point were consistent with municipal solid waste landfill rates for a facility of this era and overall age. The analysis in 2010 also evaluated hazardous air pollutants (HAPs) in areas of the course as well as community park. In 2011, NYSDEC concluded that there was not an ambient air impact from gas vent emissions and that there was no health impact in the park. This was a major component that allowed the discontinuation of monitoring the passive vents installed in 12 locations throughout the park. Monitoring of the passive vents is included as Appendix E.3 in the Supplemental Engineering Report (Appendix 20).

The following were included as components of the Ferry Point Park Landfill Gas Control System:

1. Irrigation Lake Venting System-Passive
2. Water Quality Ponds Venting System-Passive
3. Sub-Slab Depressurization Systems
    a. Maintenance Facility-Active
    b. Comfort Station in Golf Course-Active
    c. Comfort Station Community Park-Active
4. LFG Venting for subsurface utilities entering enclosed spaces-Passive
5. Perimeter Vent Trench-Passive
6. Perimeter Vent Trench/East-Passive
7. Golf Course 25 In-ground vents-Passive

The Ecology & Environment 2011 Landfill Gas Management Report describes in detail the landfill gas generation rates, composition, migration pathways and methods for diffusion (Appendix 20). It also discusses both the horizontal and vertical migration of LFG across the landfill. Figure 3-1 in the LFG Report (MSW Fill Progression Map, March 11, 2015) shows the historical fill progression that occurred over the landfill lifespan between 1951 to 1959 and how significant areas of open water was filled in over the life of the landfill .

As far back as 1999, Landfill Gas generation rates were noted to be low and in the range of .00004 cubic feet per minute per square foot or about 2cfm per acre of surface area. These generation rates provided discussion and recommendation for installation of an active system beneath planned structures. A 1999 Report referenced in the Ferry Point East Landfill Gas Management Plan did not recommend installation of active venting systems in open spaces with the exception of specific turf grass areas. The 1999 Report also included numerous LFG Control Systems including; interceptor and venting systems, impermeable liner systems for irrigation ponds, soil plugs and conduit seals for underground utilities that enter buildings (Appendix 20).

The main facility LFG management structure was the perimeter vent trench installed in 2001. The specific purpose was to prevent offsite migration of landfill gas. This was designed, and installed with oversight by TRC. The entire trench was installed along the eastern site boundary and allowed a gas barrier to be present between the site and the neighboring residential homes. Construction included extending the trench from the water's edge at Emerson Avenue along Balcom Avenue and the site boundary, approximately 1050 ft. past the intersection of Schley and Buttrick Avenues.

Monitoring of the venting trench began using a number of wells that were installed along the trench. In 2001 monitoring performed after the trench was installed indicated there was an off-site source of methane. This was identified by AKRF and further evaluation along the venting trench indicated there were additional off-site LFG readings. Test pits were identified to have MSW beyond the site and this was one potential source of the elevated readings. The second was the historic filling in the northeastern portion of the site on a former tidal or marsh wetland. No methane was reported in ambient air at that time and the source of methane was concluded by AKRF to have originated from an off-site source.

The initial facility LFG system was proposed to be installed as an active system. Following the 2009 landfill permit modification submittal, the conceptual passive LFG system was updated to include all areas not covered by enclosed structures. In summary, the passive LFG system meets a number of historic reports including the 1999 EAS (AKRF), 2002 referenced in the Landfill Gas Management Plan (Appendix 20) and Volume #2 Application for Modification to the Solid Waste Permit Engineering Report, June 30, 2005, Appendix 20) and was approved under the 2005 NYSDEC Part 360 permit (Appendix 1). In the 2009 DEC Part 360 Permit Modification Request (November 25, 2009, Appendix 20), an active system was recommended. Supplemental Site investigations and extraction testing was performed by TRC Engineers in the period between 2009 and 2010. This information was reviewed by Walsh Environmental Scientists and Engineers in 2010 (Ferry Point Landfill Gas Report, November 2010, Appendix 20). The resulting analysis and evaluation concluded that the Site was able to be operated safely with a passive venting system which was consistent with the 2005 Permit.

The July 2000 NYSDEC Part 360 Permit (Appendix 1) and February 2002 Part 360 Permit Modification (Appendix 1) approved by NYSDEC included numerous conditions related to material importation and capping. The permit was also specific in requiring the installation of a series of perimeter-based landfill gas monitoring wells. Twenty-one (21) perimeter monitoring wells were initially recommended and a final total of 25 were installed at intervals of approximately 250-300 ft. around the perimeter (PZ-01 to PZ-25),

(SH-21 Groundwater Monitoring Well Construction; November 8, 2011. The perimeter for purposes of these wells would be the edge of the golf course portion of the landfill and the adjacent residential neighborhood. An additional 56 monitoring points were required to be installed as the main component of the off-site monitoring network. The off-site wells were referenced in the modified 360 permit. The combined perimeter and off-site wells comprise the full gas monitoring system for the golf course fill area.

Modifications to the overall Landfill Gas Collection systems were based on and included the following:

- In 1986, a passive venting system was reportedly installed with outflow venting. In 2002, there was a plan presented by TRC to perform test pits in order to identify this system and more specifically, to identify the outflow vent location and to determine if connective piping was functioning. The system was never located and has not been able to be incorporated into any LFG system.
- 2005 Engineering Report Vol. 1 (June 30, 2005, Appendix 20) included several LFG components and systems that were aimed to maintain a similar program to the 1999 proposed EAS. This included active systems for all enclosed buildings and sealed penetrations for utility connections. All perimeter and off-site monitoring wells would be monitored bi-weekly for both methane and oxygen. Monitoring showed several points off-site with elevated levels indicating a source that was also located beyond the site. Groundwater was monitored on a monthly basis to evaluate water level in concert with the LFG trench elevation. Irrigation Lake and ponds were recommended to have gas-venting layers and liners installed at their base to allow for collection and discharge of gas collected from beneath them. Specific instances of impermeable barrier installation could be noted where turf health was necessary to be maintained. Most specifically, the 2005 Report did not recommend LFG venting systems in open space areas (Appendix 20).
- A 2009 Extraction Pilot test was conducted to better understand generation rates for on-site LFG. The interpretation of the results of this test prompted a proposal for a low-flow active LFG system that covered the overall golf course. The reason referenced in the Supplemental Engineering Report for the Solid Waste Facility Permit Application, October 13, Appendix 20) was that methane levels in the subsurface was not expected to be able to be made safe by the opening of the golf course. The irrigation pond system was also included in the plan to be connected to the landfill venting system. One caution in this report was the potential for pulling large volumes of ambient atmospheric air into the subsurface which could cause fires and explosions. The system included some forty control zones of extraction wells, green and tee collection piping all connected to vent flares with in-line fans. This system was never instituted.

Modifications to the gas monitoring system included the design and installation of a landfill gas (LFG) vent trench along much of the eastern park boundary. This trench extends from the water's edge at the foot of Emerson Avenue, along the entire length of the site boundary of Balcom Avenue and along Schley Avenue. The trench continues approximately 1050 linear feet to the west past the intersection of Schley and Buttrick Avenues. The trench totals just over 1 mile in length (5350 feet) and construction began in May 2001 and was completed by the end of December 2001. This trench does not cover the entire upland

perimeter. The remaining portion was covered with an existing trench along Miles Avenue. This was planned to remain following the golf course development and provided an effective cutoff for off-site migration in that direction. The final construction included the trench and drainage.

The LFG passive vent trench was designed to intercept landfill gases (primarily methane) originating and leaving the site. The limits of the municipal solid waste extend beyond the park boundaries and the LFG passive trench was not designed to facilitate collection of or negate the impact of gas generated from that material. The trench presents a sound engineering control that will intercept gas migrating through preferential pathways and other routes of least resistance that intersect it. The LFG trench acts to briefly capture LFG moving out of the park and then allows it to vent to the atmosphere. The trench is designed to have a very high relative permeability with increased porosity in comparison to the landfill waste material. As gas enters the trench is can easily and rapidly mix with ambient air in the pore space and then rise out where it can be discharge to the atmosphere. One of the key components of the trench is that the bottom remains into the water table. As long as the bottom of the trench is submerged in the shallow water table, LFGs at the Park cannot migrate beneath and beyond the trench.

The 25 perimeter monitoring wells (also referred to during the construction as piezometers) were located immediately adjacent to the LFG passive vent trench and along the site perimeter adjacent to Miles Avenue. The specific purpose was to provide consistent data comparing the trench bottom and top of the water table to identify locations where the water table may have dropped below the trench, thus indicating the ability for the trench to intercept and capture all LFG along its entire length.

The LFG passive vent trench was constructed of a geotextile wrapped stone envelope that extends from .5 ft. below the ground surface down to a depth of approximately 3 ft. below the surface of the water table. The upper .5 ft. of the trench has a loose covering of wood chips to allow LFG that has entered the trench to exit and discharge to the atmosphere. There were areas where the final depth of the trench only reached to 1 ft. below the water table. These locations were caused by an unstable sidewall after the groundwater table was reached. The trench was also constructed with horizontal perforated 4 to 6 inch polyethylene tubing placed beneath the wood chips near the top of the stone backfill. The horizontal tubing was installed to allow connection to vertical risers in the event the trench surface is covered at some point in the future with an impervious surface.

LFG monitoring has been performed in accordance with Special Condition 30 from the modified Solid Waste Permit (Response Action Plan, December 10, 2002, Appendix 19). This included monthly monitoring during construction in order to determine if water levels were maintained above the bottom of the trench. Specific protocols were required to be performed in the event groundwater was determined to be below the bottom of the trench.
The following Action Plan items were incorporated for low groundwater levels:

1. Evaluate methane concentrations in nearby perimeter methane monitoring wells and semi-permanent monitoring points. If methane concentrations measured are below site-

specific action levels (25% LEL), the normal frequency methane monitoring will continue and the groundwater level measurements will increase to bi-weekly.

2. When groundwater levels increase to fall back into the envelope of the recovery trench, measurements will return to monthly.
3. If groundwater remains below the trench bottom for one additional bi-weekly monitoring event but nearby well methane levels remain below the action level, groundwater monitoring will continue until such time as routine monitoring can be reinstated.
4. When groundwater is measured below the trench and methane levels are at or above the action level, both groundwater and methane measurements will continue at bi-weekly frequency.
5. If both groundwater and methane remain below the trench bottom and above the action level (respectively) for a second consecutive week, a recommendation for further action will be made to NYSDEC.

During the 2014 Solid Waste Facility issuance several references to continuing monitoring and the documents that would be covered under were made (DEC No. 2-6006-00014/00013 (2-6006-0014/00016 Permit Issuance – Solid Waste Management Facility (Tidal Wetlands), May 21, 2004, Appendix 1). The Ferry Point Park East Post Construction Custodial Care Plan is specifically called out as the governing set of protocols for this. Monthly LFG vent trench monitoring is to be performed during the duration of the permit (October 2013, Appendix 20). Additionally under Special Condition 25 there is continued monthly inspection required for the gas venting trench integrity as well as mulch cover. All repairs are required to be made within two weeks and therefore prior to the next inspection. The mulch cover is required to be replaced each spring. Trench maintenance is also described in the Supplemental Engineering Report, Volume 3, Appendix F (Appendix 20).

Landfill methane monitoring has shown from collection of data within the site to be above general action levels of 25%LEL as well as LEL from within the MSW layer. The resulting measurements between 2008 and 2009 supported the hypothesis that methane was generally present throughout the entire MSW layer rather than just from individual locations. Measurements from the shaping layer above the MSW indicated that concentrations decline rapidly once out of the fill layer. These measurements appear to present a better picture of the landfill gas presence and production because the extraction test performed in 2009 referenced a 2003 Journal of Air &Waste Management with fatal flaws for infiltration of atmospheric air into the landfill. In addition, the 2009 extraction test did not reportedly follow the EPA testing methods and would then incorrectly estimate the presence and production of methane. Testing reportedly used differential pressure at surrounding test wells. EPA specified determining radius of influence based on absolute pressures under static and active extraction conditions. EPA measures ambient air intrusion by percent volume of nitrogen and the testing identified ambient air intrusion by percent oxygen. The conclusions that were reached at that time indicated that atmospheric intrusion noted during the testing would have caused the LFG extraction rate to be significantly higher than actual LFG generation rates within the area of the pilot test. If the entire LFG generation rates were then based on pilot test results, the resulting estimate would be potentially far over the actual LFG generation. Historic data from monitoring indicated that LFG generation rates had sharply declined since the initial

2000 measurements began. The reduction was referenced largely as readings from over 100% LEL to non-detect. While there were a few exceptions, this overall reduction was credited to, among other things, the perimeter venting trench and overall LFG decline. One specific area in the vicinity of MW-0 found to continue to present elevated readings was believed to be impacted from an off-site source.

The Ferry Point Landfill Gas Report (November 2010, Appendix 20) was a summary of various testing across the landfill including flux chamber testing that was used to determine the surface emission rates from the overall landfill. The resulting emission rates were important in making the determinations for receptors and potential impacts of methane and hazardous air pollutants. During this review of testing data and as it was presented in several reports, no methane was detected in field measurements from any of the sample locations. This lack of detectable methane was attributed to rapid attenuation of methane as it passed from the MSW into the shaping material and out into the atmosphere. Hazardous air pollutants in the form of certain VOCs were detected in flux box sampling but all below the reported standards or at levels similar to those identified as background.

Testing within the Community Park was also conducted and methane was also not detected in flux box testing indicating it is not emitted at the ground surface at concentrations that are measureable. This meets NYCRR Part 360 criteria. Measurements from within the top 2 ft. of the shaping material were below 25% of the LEL which also falls within the NYCRR Part 360 requirements for on and off-site structures. Perimeter methane was below Part 360 criteria with the exception of the vicinity of MW-0 along Buttrick Avenue where methane was above 100% LEL. This particular area was beyond the site and consisted of early tidal marsh and pre-1945 MSW filling that is believed to be the contributing source of methane. All measurements from the Community Park vents were below ambient concentrations and well below NYSDEC standards indicating no impact above public exposure thresholds in the vicinity of the vents (Ferry Point Landfill Gas Management Plan, October 2011, Appendix 20).

Modelling of the emissions over several efforts conducted between 1999 to 2010 showed that methane levels were very low and in locations where methane was identified, levels were expected to continue to diminish over time. In order to provide adequate ventilation for enclosed spaces and especially where there is a source of ignition (electrical connections or machinery), mitigation methods would be implemented including Sub Slab depressurization systems (SSDS) at each building. This was further described as conservative as methane concentrations exceeded LEL within the MSW layer back during 2008/2009 in TRC testing of the subsurface. Also during this same monitoring period, methane was not present within the shaping material above the NYCRR Part 360 limit of 25% LEL in any location of proposed buildings. Passive venting of the MSW was recommended as a precautionary measure where no buildings were planned and active venting below or within building footprints.

The Golf Course portion of the Site also includes a sizable irrigation lake and water quality ponds. The purpose for these water bodies covers two positive issues. The first is to help control and limit precipitation and infiltration through the cover material and into the solid waste and the second is to help collect water for controlled release and irrigation. Golf course ponds are typically used for storage and

irrigation regardless of the overall construction. The ponds and lake were each designed to be lined in order to contain as much runoff as possible making it available for irrigation. A gas transmission layer was constructed beneath the irrigation lake. This was connected to perforated piping installed around the lake. The 2009 Part 360 Permit Modification Request included Contract drawings showing this piping as a passive venting system surrounding the lake (Appendix 20).

Water quality ponds were proposed to be lined up to the permanent water level capacity with low permeability low density polyethylene (LDPE) liners with the incorporation of a passive venting system. Ponds where MSW was encountered within the excavation would be lined for the entire volume.

The smaller ponds have also been designed and constructed with a gas transmission layer to promote passive venting. This layer consists of permeable gravel and perforated collection piping extending beneath the ponds and exiting from vent stacks that extend above the breathing zone. The drawings and specifications for the water quality pond liners and passive venting systems were included in the Supplemental Engineering Report Appendices (Appendix 20).

The Community Park portion of Ferry Point Park is located along the northeastern side of the site. This includes walking paths, open space and a single comfort station structure. The LFG components of the Community Park portion consist of 12 LFG vents and an active sub-slab depressurization system beneath the comfort station. Sampling and monitoring of the vents has shown that since at least 2011 there has been no measurable flow in the vents and detectable methane in 3 of the 12 vents. Ranges of methane were between 7.5% to 100% LEL as referenced in the 2011 Ferry Point Landfill Gas Management Plan (Appendix 20).

Twenty-five stand-alone vertical passive vents were installed across the golf course and twelve passive vents were installed in the Community Park. The total area not covered by buildings and water features is approximately 190 acres and the ratio of vents per acre is one per five acres. A greater ratio was applied to the community park which has twelve passive vents in open spaces. All landfill and community park vents operate based on changes to water level, atmospheric pressure and also production of landfill gas. Gas can move through the fill material to a point where it is able to be removed through a vent. Additional smaller gas volumes can move upward into the shaping material to be passed along the surface interface. Based on readings, these concentrations are both low and rapidly diffused indicating the overall volume is much lower.

Following the revision of the active venting proposal for the entire Site, the enclosed buildings and structures were left with the earlier requirement for active venting systems. This was required due to the explosive and accumulating nature of methane and other oxygen displacing gases that exist in landfill conditions as well as being precautionary to prevent the potential of accumulation of explosive gases in these locations. In order to protect occupants and visitors of enclosed structures from accumulation of LFG, active venting of the sub-slab area was recommended. The active sub-slab systems prevent accumulation of gas by actively removing it to the atmosphere and increase the flow of air beneath the buildings. This creates a change in pressure from beneath the slab and the inside of the building which

prevents LFG from entering the building in its more concentrated form. Once LFG leaves the confined space from beneath the landfill and mixes with ambient air, the concentrations are rapidly diminished to levels that are not detectable above background.

The three enclosed buildings (maintenance and two comfort stations) located on the Golf Course and Community Park were required to have SSDS incorporated into the slab design and foundation plan.

Two initial buildings within the golf course (maintenance and comfort station) and one in the community park (comfort station) were recommended to be outfitted with active sub slab venting systems. The maintenance building and comfort station in the golf course and comfort station in the Community Park were each proposed and were outfitted with an active SSDS. The designs were initially submitted in the 2009 DEC Part 360 Permit Modification Request (Appendix 20). Operation and maintenance of the systems (once active) is provided in the Operations, Monitoring and Maintenance Plan and in the Post Construction Custodial Care Plan. Systems will have monitoring, notification controls and remote capabilities in order to allow monitoring of conditions.

Sub slab systems for the three existing structures on site function in a similar fashion by reducing the air pressure beneath the foundation and inducing a slight negative pressure. The negative pressure prevents upward migration, accumulation and infiltration of LFG into the aboveground space. Systems can incorporate varying designs in order to accommodate structural requirements, utilities and layout of the overall building.

The maintenance building and community park systems consist of more typical sub slab systems with perforated piping placed in the backfill material above the municipal solid waste but beneath the foundation slab. Piping is connected to a vacuum blower that exhausts the sub slab gas from a high single point into the atmosphere. The comfort station within the golf course uses a similar manner of equipment with the major difference being the foundation design was modified to include the creation of isolated vaults sandwiched between the lower mat slab and upper floor. No access can be made into those vault spaces and they are filled with low density foam. Vent piping was installed into the sealed vaults and the vapor extraction system effectively creates a higher vacuum (negative pressure) in this vault space than would typically be seen below an open foundation. The piping penetrated the floor in the main portion of the building and was extended into the attic where the blower was mounted. Exhaust was vented through the top of the roof in a dedicated stack. The system was installed in March 2015 and put in operation prior to opening the golf course on April 1, 2015. The comfort system details are also described in the deviations section of this report.

The Maintenance building was constructed with a pile supported slab that covers the entire footprint of the building. The system was constructed as shown on drawings X-001.00 through X-006.00 (Contract drawings for: Construction of a Maintenance Building, A Comfort Station, and One Rain Shelter Within the Ferry Point Golf Course – Contract No. X1256-209M, November 11, 2011, Appendix 4). Prior to pouring the slab, the existing ground surface was prepared with geo-textile fabric, a minimum 12 in. layer of aggregate that is gas permeable to allow flow from all areas beneath the slab into the collection piping,

rigid insulation all covered by an impermeable barrier such as liquid boot or other equivalent. Liquid boot and all barriers used are compatible with the known and identified volatile organics identified at the site. Liquid boot was applied to provide a 60 mil thickness. A special capping material was also placed above the liquid boot to protect it from perforations when the rebar reinforcing rods were set in place. Six inch dia. PVC piping was installed beneath the center of the Maintenance Building floor and this was connected to a vertical riser that would exhaust through the roof. The blower was located as the piping exited the slab into the building and exhaust extended up through the roof. The system was combined with combustible gas meters located in each of the occupied spaces of the building that monitor the atmosphere in each area and are connected to a central alarm. Sub slab monitoring points were also installed along the length of one side of the building to allow for sampling. Each point was installed through the slab into the permeable aggregate and the penetration through the slab was sealed. This system was operational prior to the opening of the golf course as the building was being occupied prior to opening of the golf course.

The system in the comfort station at the Community Park was installed in a similar fashion with a smaller footprint building. This system was a single length piping system installed beneath the foundation using the same construction layering as the maintenance building. The blower and equipment has been completed and the system not yet initiated as that area is not currently open. The system is expected to become active in the very near future.

The comfort station within the golf course was also outfitted with an active system but the slab design for this building was modified so as not to require pile supports. This foundation design included a vapor barrier placed on the prepared subgrade. No MSW was exposed and the fill beneath the building was consistent with shaping material consisting of sand and gravel. A mat slab that was 1.5 ft. thick was poured over the vapor barrier and then 4 ft. vertical walls were formed on the slab to cover the perimeter as well as divide the slab into 4 roughly equal sections. The inner sections of the slab were then filled with solid foam up to just below the top of the walls. Six inch PVC piping similar to that used in the maintenance building sub slab was used and extended to the outer two segments. A vertical riser penetrated the floor inside of the building and was extended up into the attic space where the blower was located. The blower exhaust was directed out of the roof through a vent. The system was designed to create and maintain a lower pressure vacuum on the entire four-chamber sub slab area in order to prevent any sub slab gas from accumulating within that space. Pressure testing of the entire area showed that negative pressure was able to be generated and maintained between the mat slab and floor of the comfort station. This system was installed and began operating prior to opening of the golf course and occupation of the building.

Additional controls installed within the buildings included soil/bentonite collars around utilities servicing the buildings. Foundation penetrations were sealed with these engineering methods to prevent infiltration both into the void spaces and up through foundation slabs where utilities are installed. Additionally, soil/bentonite collars were installed in utility corridors where permeable pipe bedding was used in order to prevent LFG from migrating laterally. All conduit and utility penetrations into floor slabs

were also closed with soil/bentonite seals to prevent those corridors from acting as preferential pathways for LFG migration up into occupied spaces.

The Community Park Comfort Station was constructed in an area of MSW at shallow depths below grade and within the foundation envelope. The foundation was designed to incorporate piles for slab support. All utility trenches that were excavated to the building were installed in either shaping material or if MSW was encountered, it was over excavated and the trench backfilled with granular fill to allow all utilities to be place on bedding that did not contain MSW. During excavation, short duration and dewatering was occasionally necessary. Any water removed during dewatering was pumped a short distance away into existing trenches or other locations.

Off-Site monitoring for methane has been conducted back to the early 2000s. Probing was the primary early monitoring and assessment method. Probes were historically located on Schley, Buttrick, Balcom, Miles and Emerson Avenues. Since 2002, concentrations of methane have been lower than the LEL and this has been used to present the lack of significant source of methane at these off-site sources. In 2002, the Methane Monitoring Study (AKRF) identified the presence of buried MSW beyond the site boundaries. In addition to MSW, soils were logged and identified as fine organic deposits representative of the historic marsh deposits.

OM&M incorporates criteria from NYCRR Part 360-2.17(f) including the following:

- Concentrations of explosive gases must not exceed 25% of the LEL in on-site and off-site structures.
- Concentrations of explosive gases must not exceed LEL at the property boundary.

These requirements are being used to guide mandated additional monitoring under Special Conditions and to govern the construction of all future buildings. Several Special Conditions were included within the 2005 Part 360 Permit (Appendix 1) and are incorporated into regular OM&M and will continue moving forward until they are recommended for elimination as part of the permit.

Special Condition 26 includes the monthly monitoring and inspection of gas venting trenches to evaluate the mulch cover material. This will occur each spring following the winter months.

Special Condition 30 includes the monthly groundwater gauging in the perimeter piezometers in order to evaluate the depth to groundwater with respect to the bottom of the gas venting trench. This measurement will continue through the construction process and that period will be considered complete upon the approval of this Construction Certification Report. The monitoring specifies that id groundwater is measured below the bottom of the trench, DPR will implement Special Conditions monitoring. This is further described below in 5.2.2.

Special Conditions 31 includes specific notification and frequency monitoring if groundwater is identified below the bottom of the trench or if LEL of LFG is noted in adjacent monitoring probes.

Special Conditions 32 and 24 include the bi-weekly monitoring of specific perimeter gas wells and on-site monitoring wells. Results of the monitoring will direct more frequent sampling or monitoring and when monitoring may return to the regular schedule.

Special Condition 37 includes bi-weekly monitoring of the off-site gas monitoring network and the results of this monitoring will direct more frequent monitoring or testing.
Additional parameters were added in 2011 by NYSDEC to include hydrogen sulfide, VOCs and carbon monoxide, all were to be reported in parts per million (PPM) and temperature/pressure.

Work that will continue following construction is included in the Post Construction Custodial Care Plan (Appendix 20). That document covers the efforts beyond this report in order to effectively monitor and report on post construction conditions under the Part 360 Permit.
Monitoring during the entire construction period has been performed in accordance with the Landfill Gas Monitoring Plan and the approval of this Report will serve to conclude all construction monitoring.

The most recent and final documentation submitted under this construction effort is the Ferry Point Park Golf Course Irrigation Pond Vent Boxes Monitoring Final Report submitted in May 3, 2015 (Appendix 20). This Report summarized monitoring data and piping/vent/vale configurations around the irrigation pond at the golf course. The overall purpose for the preparation of the Report was to present information to NYSDEC prior to this Closure Certification Report in order to gain approval to close and remove one vent from the golf course area at vent box #5.

The Report describes and presents the configuration of the piping surrounding the irrigation pond and that the removal of this single vent would not have a detrimental effect on the overall LFG system. The entire lop surrounding the pond collects LFG under the conditions that have been evaluated and calculated over the landfill and that appears to be less than one cubic foot per minute. Based on measurements from specific vent box locations within the overall loop, the LEL readings concentrations indicate two possible theories; that methane may be coming from possibly one area and then slowly migrating or spreading to one or two other vent box areas or it may be concentrated in one area and is also being generated at much lower levels from one or two other areas.

In either case, the volume and rate of methane being generated is similar to much of the remainder of the landfill and while this area has actual vent pipes, the remainder of the landfill is direct vented to the atmosphere through the shaping layer. Removal of the single vent at Vent Box 5 will not impact the collection of methane within the underground passive piping but will only eliminate one outlet location. The valve placement at each box allows for multiple vents to be open or combinations of vents to be either open or closed. In addition, sections of the piping around the irrigation pond can be isolated. There is no specific plan other than to remove the single vent from the overall system and this would not impact the passive systems ability to remove methane from the subsurface.

Landfill and off-site gas monitoring was completed as required by the Permit Special Condition X during construction. The IEM accompanied American Environmental Solutions (AES) during landfill gas

monitoring activities at on-site and off-site locations during the course of construction. Monitoring results were transmitted to the NYSDEC by AES after monitoring was completed and monitoring reports were included in the bi-weekly FMRs for the corresponding periods. Landfill gas monitoring results are attached as Appendix C in each the FMRs which are included as Appendix 6. In addition, refer to Appendix 15 for the spreadsheet compilation of all LFG monitoring results to date in tabular and graphic format.

### 5.2.1 Bi-Weekly

Methane gas monitoring of the entire site was conducted on a bi-weekly basis. Results of these monitoring events were forwarded directly to the NYSDEC once they were available and summarized in each bi-weekly FMR (Appendix 6). In addition, refer to Appendix 15 for the spreadsheet compilation of all LFG monitoring results to date in tabular and graphic format.

A review of the historic field data associated with the perimeter LFG vent trench monitoring program from 2001 to present was conducted to evaluate LFG trends at the Site relative to the perimeter passive LFG control (Ferry Point Park East Post Construction Custodial Care Plan, October 2013, Appendix 20) and showed the following:

- After the installation of the vent trench in 2001, methane levels in the vicinity of the LFG vent trench tended to decrease significantly within a year in most LFG monitoring wells;

- Methane levels remained relatively low and below regulatory limits from 2002 through 2004, except for a few wells that sporadically exceeded the regulatory limit;

- In 2005, the measured methane levels tended to increase, likely due to the installation of more reliable monitoring points (new monitoring points and repaired wells); and

- Results from 2008-2011 generally indicate relatively consistent levels of methane, with certain limited sporadic increases above regulatory limits.

Methane levels increased for several on-site perimeter wells, on-site interior wells and off-site semi-permanent wells located during the construction period between 2010 and 2014, especially for the wells located in the northeast portion and south portions of Ferry Point Park; however, the levels were significantly lower than the beginning of the monitoring program, and the levels decreased to zero by 2015 with the exception of two on-site perimeter wells (MW-14 and MW-15) located in the southern portion of the golf course, three on-site interior monitoring wells (MW-0, MW-4 and MW-19), and three off-site semi-permanent wells located on Buttrick Avenue (10, 12R and 14R). The last recorded monitoring event on April 10, 2015 (Special Conditions Landfill Gas Monitoring Report, April 13, 2015, Appendix 7) reported the following methane concentrations (% by volume) exceeding the site specific action level in eight locations:

- MW-0 - 4.5%

- MW-4R - 50.2%
- MW-19 - 83.8%
- MW-15 - 6.7%
- MW-14 - 33.4%
- Well 14R (Buttrick Avenue) - 1.6%
- Well 12R (Buttrick Avenue) - 28.6%
- Well 10 (Buttrick Avenue) - 10.1%

### 5.2.2 Special Conditions

In accordance with Special Conditions #34 and #37c of the November 18, 2005, Permit Modification (Appendix 1), if any individual monitoring point has a bi-weekly reading that equaled or exceeded 100% LEL, or three consecutive bi-weekly readings that were greater than 25% LEL, methane monitoring of these points was conducted on a weekly basis. Monitoring returned to the bi-weekly monitoring schedule once three consecutive readings were each less than the 25% LEL action level. Results of these monitoring events were forwarded directly to the NYSDEC once they were available and summarized in each bi-weekly FMR. In addition, refer to Appendix 15 for the spreadsheet compilation of all LFG monitoring results to date in tabular and graphic format.

## 5.3 Piezometer Monitoring

On a monthly basis, groundwater elevation measurements were taken and recorded in all piezometer locations along the site perimeter vent trench in accordance with Special Condition 28 of the 2014 Permit. Measurements were manually taken using a portable water level meter. The IEM observed piezometer monitoring in the field and groundwater data was submitted to the NYSDEC. Results of these monitoring events were forwarded directly to the NYSDEC once they were available and summarized in each bi-weekly FMR. Piezometer monitoring results were incorporated into the landfill gas monitoring reports attached as Appendix C in each bi-weekly FMR, which are included as Appendix 6.

## 5.4 Settlement Plate Monitoring

Short term settlement was performed with plates installed throughout the landfill in order to evaluate settlement and compaction during the fill placement and grading. The majority of the short term plates were installed following the importation of significant amounts of fill material when the areas had been brought near to or at final grade. The 2014 NYSDEC Permit Modification (2-6006-00014/00013) Special Condition #6 required short term settlement monitoring to meet those requirements incorporated in the January 2005 Settlement Evaluation and Long Term Monitoring Plan. Short term monitoring was performed in accordance with the early 2005 Plan and as construction progressed and as per Special Condition #6. Short term settlement plates were either removed or monitoring discontinued when long term monitoring plates were installed in accordance with the revised Permit. Long term settlement plates were installed throughout the landfill in areas shown on the Figure titled Ferry Point Golf Course Settlement Plate Locations 4/11/2012 by KS Engineers, P.C. The locations of the long term plates were identified to be in the same specific vicinity of the short term plates.

The overall Program for monitoring settlement began in 2002 with the construction of 7 instrumented test fills and installation of 6 settlement plates that were located across the site. Test fills varied between 10 to 18 ft. in thickness and the specific locations were placed where future settlement would be most critical (e.g. future green areas and where significant thicknesses of fill were necessary). The majority of the settlement plates were located in the eastern portion of the site at a time when most of the fill had been imported in order to begin monitoring on-going settlement for areas that had been filled for a period of 9 months or longer. Initial settlement monitoring was conducted for a period of over 2 years and monitoring results were transmitted to NYSDEC on a bi-weekly frequency.

Settlement recorded following June 2003 was recorded but noted to have been significantly influenced by the importation if fill and the loading that this had on the areas adjacent to the test fills. Initial settlement was noted to have a range between 3 and 23 inches with the greatest variation in the western section. This was believed to be the result of a significant compressible clay layer near the surface. The recorded measurements were compared by Langan to the estimated values that had been calculated and they were found to be comparative. One positive aspect of this initial measurement and comparison showed the site to be in an optimal character for surcharge as a result of placement of larger fill loads for shorter periods of time in order to maximize the settlement as early as possible and minimize post construction settlement that is a critical issue for the sensitive surface of a golf course.

The resulting settlement analysis provided a recommendation for fill placement and long term predicted settlement. This information and comparison to settlement data is critical in monitoring the underground utilities for maintenance and repair. Piping settlement would result in lower carrying capacity and therefore storm lines were designed to be oversized with welded ends to prevent separation. Sanitary lines were also designed with the additional anticipated settlement incorporated into their long term maintenance. Increased slope, HDPE piping and flexible joints were recommended where piping would pass through areas of different fill thicknesses and therefore a differential in overall settlement would be expected to occur. Recommendations for flexible connections capable of withstanding rotation and extension were made for sewer lines exiting structures.

Settlement over the golf course surface was presented following the initial evaluation and recommendations for anticipated settlement were determined to be within the initially anticipated settlement and possibly sooner for areas where more substantial thicknesses of material were placed. Additional influences on long term settlement will be thickness and depth to the compressible clay layer. The variation in settlement was estimated to be between 3 to 15 inches over a 30 year period. Non-uniform settlement is also anticipated over the life of the golf course due primarily to the variable thickness of imported material and could equal up to 6 inches. Slope stability is not anticipated to be adversely impacted as a result of the long term settlement anticipated at the site.

Areas where significant amounts of fill were identified to be placed, such as the area between the irrigation pond and Hole #1 was required to be placed in a more controlled manner in order to allow the pore pressure to be evenly reduced. This method would prevent slope failures caused by buildup of pore

pressure. Placement of fill was specified to be in 2 ft. lifts per week which would allow for dissipation of pore water in the clay layer.

Special Condition #7 of the revised 2014 NYSDEC Permit specified long term settlement requirements and that they would continue to conform to those established in the earlier permit. Locations of the replacement long term settlement plates shown on the 2012 Figure were referenced and approved as part of the 2014 Permit Modification.

Long term settlement monitoring will be performed at the initially 8 recommended settlement monitoring plates located throughout the golf course for a period of 30 years following completion of construction.

The plates are located in variable subsurface conditions but in general have been placed where the greatest concentrations of fill material have been placed in connection with the thickest compressible soil layers. The locations were also chosen to be adjacent to underground utilities such as water and sewer mains and/or adjacent to green areas where differential settlement is most critical.

The date being used as the construction completion is April 1, 2015. This was described in the March 30, 2015 executed letter between NYSDEC and NYCDPR which referenced the Substantial Completion of Construction Certification allowing the golf course to open on April 1, 2015. The letter states that NYSDEC and NYCDPR agree that the April 1, 2015 opening of the golf course constitutes completion of the filling operation on the Site and construction of the earthwork portion of the Project as contemplated under the NYSDEC Permit (No. 2-6006-00014/00013 and 2-6006-00014/00016). As a result of this completion date, monitoring will continue until April 1, 2045 or until a point that NYSDEC authorizes monitoring to cease if it is prior to April 1, 2045.

Long term settlement will be documented as it is referenced in the Post Construction Custodial Care Plan (October 2013). This includes providing NYSDEC with an annual inspection report certified by a licensed NYS professional engineer. The monitoring will document the following information during the timeframes referenced:

1. Beginning within 60 days of the approval of this Engineering Certification Report and continuing for a period of 5 years, the quarterly monitoring results will be summarized and submitted on an annual basis.
2. Immediately following the initial 5 year period and continuing for an additional 5 years (10 years from the date of Engineering Certification Report approval) monitoring will continue on a reduced bi-annual basis and the results will be summarized annually.
3. Immediately following the year 10 bi-annual report summaries, monitoring will be performed and reported on a reduced annual basis. This annual monitoring and reporting will continue for the duration of the 30 year period or for 20 years.
4. Following the initial 5 year quarterly monitoring period, NYCDPR may petition NYSDEC for a decrease in the monitoring frequency or for cessation of monitoring altogether. In the event that NYSDEC approves terminating the monitoring for any monitoring plates, NYCDPR will evaluate the settlement plates for either abandonment or removal. This evaluation will be performed within

the first year following approval of monitoring cessation. The abandonment or removal documentation will be signed and certified by a NYS licensed professional engineer and provided to NYSDEC within the concurrent post closure reporting period after the completion of the work.

Special Conditions 6 and 7 of the 2014 Permit and the recommendations provided in the Settlement Evaluation and Long-Term Monitoring Plan dated January 26, 2005, prepared by Langan Engineering and Environmental Services, Inc. set forth settlement monitoring requirements related to the placement of fill material across the Site. A copy of the Settlement Evaluation and Long Term Monitoring Plan is included in Appendix 20. Settlement plate monitoring was performed on-site in accordance with the Permit. Settlement monitoring reports are attached as Appendix D in each of the FMRs, which are included as Appendix 6. Monitoring was conducted on-site as follows. Results of these monitoring events were forwarded directly to the NYSDEC once they were available and summarized in each bi-weekly FMR.

### 5.4.1 Short Term

The short-term settlement monitoring program began in December 2002 with the bi-weekly monitoring of seven test fills and six settlement plates located throughout the Site. Test fills consisted of an engineered soil fill ranging from 10 to 18 feet deep, generally located on-site in areas where significant thicknesses of fill were required. Settlement plates consisted of a subsurface plate beneath a casing and a flush-mount monitoring access port, similar to a monitoring well. Settlement plates that were part of the short-term settlement monitoring program were generally located in areas of the Site already at or close to final grade. The Settlement Evaluation and Long-Term Monitoring Plan recommended the following adjustments be made to the monitoring program during construction:

- Test fills that obstructed construction activities should be replaced with a settlement plate to be monitored near the location of the test fill.

- Settlement plates that needed to be moved for construction purposes should be relocated to the same general area and monitored until long-term monitoring points were installed.

Monitoring at short-term monitoring points was discontinued as required due to interference with ongoing construction. In an email correspondence dated May 1, 2012, included in Appendix H of the 2013 Engineering Report (Appendix 20), the NYSDEC informed NYCDPR that these short-term monitoring locations did not need to be replaced as long as construction at the Site progressed. As construction was concluded in each area of the Site, long-term monitoring plates were to be installed as described below. Short-term settlement monitoring continued to be performed bi-weekly at the Site until October 14, 2013. The design of the long term settlement monitoring points is presented in a January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc. and outlined in a May 21, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by New York State Department of Environmental Conservation. These documents outline the long term settlement plate monitoring locations, detail and required monitoring intervals. Monitoring of final settlement plates began on October 30, 2013 and continued throughout the remainder of construction. As previously stated, the monitoring and reporting schedule will be

modified as the post construction period extends into the future. This has been included in the Post Construction Custodial Care Plan (October 2013).

The following summarizes the efforts with respect to conformance to project design documents:

The approved May 21, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by NYSDEC refers to Appendix H of an October 15, 2013 *Supplemental Engineering Report* for a long term monitoring location plan. Appendix H of the permit which is included as Appendix 20 here, references and includes the April 11, 2012 *Ferry Point Golf Course Settlement Plate Locations* plan prepared by KS Engineers, P.C.

The February 20, 2014 *Ferry Point Golf Course as Built Drawing* prepared by Contractors Line & Grade South, LLC shows the as-built locations of the long term settlement monitoring plates in conformance with the above referenced April 11, 2012 KS Engineers plan. An additional monitoring point between golf course Hole 6 and Hole 7 was added and approved in the May 1, 2012 *Re: Settlement Plates Email* prepared by NYSDEC.

A January 26, 2005 Settlement Evaluation and Long-Term Monitoring Plan prepared by Langan Engineering and Environmental Services, Inc. states that:

> *"These settlement points will be utilized to determine future settlements during the golf course operation. They should be installed once filling operations are completed to within 1 foot of final grades or in other words, during placement of soil cover materials. After their installation, monitoring of the settlement points should be performed once every other month until the construction is complete. Subsequent monitoring should be performed once every 3 months during the first year of golf park operation and once every 6 months for the second year."*

The description above is a deviation from the Post Construction Custodial Care Plan where quarterly monitoring and annual summary reporting will be performed for an initial period of 5 years followed by an opportunity to evaluate and proposed changes. The frequency would without any additional recommendation be reduced to semi-annually following 5 years. This reference accepts a switch to semi-annual monitoring and annual reporting following the first year. This is the only approved change in the settlement monitoring plan outside of the approved 2013 document.

The data from the November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran indicate that settlement plate monitoring was conducted every two weeks in conformance with the minimum requirements of the above referenced monitoring plan.

Monitoring of final settlement plates began on October 30, 2013 and continued throughout the remainder of construction. Results of the monitoring are available in the November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran.

The November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran do not document any non-conformance issues regarding the construction of the long-term settlement monitoring locations. A settlement monitoring plate detail is provided in the January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc. does not identify any deviations from the location plan and all long term settlement plates installed were specifically located as replacements for short term plates installed earlier during construction

### 5.4.2 Long Term

The design of the long term settlement monitoring points is presented in a January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc. and outlined in a May 21, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by New York State Department of Environmental Conservation. These documents outline the long term settlement plate monitoring locations, detail and required monitoring intervals. Monitoring of final settlement plates began on October 30, 2013 and continued throughout the remainder of construction. As previously stated, the monitoring and reporting schedule will be modified as the post construction period extends into the future. This has been included in the Post Construction Custodial Care Plan (October 2013).

The following summarizes the efforts with respect to conformance to project design documents:

The approved h, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by NYSDEC refers to Appendix H of an October 15, 2013 *Supplemental Engineering Report* for a long term monitoring location plan. Appendix H of the permit which is included as Appendix 20 here, references and includes the April 11, 2012 *Ferry Point Golf Course Settlement Plate Locations* plan prepared by KS Engineers, P.C

The February 20, 2014 *Ferry Point Golf Course as Built Drawing* prepared by Contractors Line & Grade South, LLC shows the as-built locations of the long term settlement monitoring plates in conformance with the above referenced April 11, 2012 KS Engineers plan. An additional monitoring point between golf course Hole 6 and Hole 7 was added and approved in the May 1, 2012 *Re: Settlement Plates Email* prepared by NYSDEC.

A January 26, 2005 Settlement Evaluation and Long-Term Monitoring Plan prepared by Langan Engineering and Environmental Services, Inc. states that:

> *"These settlement points will be utilized to determine future settlements during the golf course operation. They should be installed once filling operations are completed to within 1 foot of final grades or in other words, during placement of soil cover materials. After their installation, monitoring of the settlement points should be performed once every other month until the construction is complete. Subsequent monitoring should be performed once every 3 months during the first year of golf park operation and once every 6 months for the second year."*

The description above is a deviation from the Post Construction Custodial Care Plan where quarterly monitoring and annual summary reporting will be performed for an initial period of 5 years followed by an opportunity to evaluate and proposed changes. The frequency would without any additional recommendation be reduced to semi-annually following 5 years. This reference accepts a switch to semi-annual monitoring and annual reporting following the first year. This is the only approved change in the settlement monitoring plan outside of the approved 2013 document.

The data from the November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran indicate that settlement plate monitoring was conducted every two weeks in conformance with the minimum requirements of the above referenced monitoring plan.

Monitoring of final settlement plates began on October 30, 2013 and continued throughout the remainder of construction. Results of the monitoring are available in the November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran.

The November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran do not document any non-conformance issues regarding the construction of the long-term settlement monitoring locations. A settlement monitoring plate detail is provided in the January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc. does not identify any deviations from the location plan and all long term settlement plates installed were specifically located as replacements for short term plates installed earlier during construction

The long term settlement monitoring was performed at the locations shown on the revised Settlement Plate Location Plan and a sketch that includes an additional monitoring point between golf course Hole 6 and Hole 7 included in Appendix H of the Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, NY dated May 31, 2012 (Revised August 31, 2012, October 15, 2013) as described in Appendix I of that report. These locations were approved by NYSDEC in an email dated May 1, 2012. The long-term settlement monitoring points were installed as construction was completed in each area of the Site. Upon installation, the long-term settlement plates were monitored in accordance with the criteria set forth in Special Condition 7 of the Permit.

As a component of this Report section the following list of documents were used:

- A January 26, 2005 *Settlement Evaluation and Long-Term Monitoring Plan* prepared by Langan Engineering and Environmental Services, Inc.;
- A May 21, 2014 *DEC Permit (DEC No. 2-6006-00014-00013 (SW) & DEC No. 2-6006-00014-00016 (TW))* prepared by New York State Department of Environmental Conservation;
- A April 11, 2012 *Ferry Point Golf Course Settlement Plate Locations* plan prepared by KS Engineers, P.C.;
- A November 12, 2010 through October 31, 2014 *Fill Management Report No. 242 through No. 346* prepared by Woodard & Curran;
- A undated *additional settlement plate sketch;*
- A February 20, 2014 *Ferry Point Golf Course as Built Drawing* prepared by Contractors Line & Grade

South, LLC; and,
- A May 1, 2012 *Re: Settlement Plates Email* prepared by NYSDEC.

The long term settlement monitoring was performed at the locations shown on the revised Settlement Plate Location Plan and a sketch that includes an additional monitoring point between golf course Hole 6 and Hole 7 included in Appendix H of the 2013 Engineering Report and as described in Appendix I of that report. These locations were approved by NYSDEC in an email dated May 1, 2012, which is included in Appendix H of the 2013 Engineering Report (Appendix 20). The long-term settlement monitoring points were installed as construction was completed in each area of the Site. Upon installation, the long-term settlement plates were monitored in accordance with the criteria set forth in Special Condition 7 of the 2014 Permit.

## 5.5 Groundwater Monitoring

The overall setting of the Ferry Point Park Site with respect to the groundwater regime can be described as an area covering approximately 220 acres bounded along the waters of the East River to the south, Saint Raymond's Cemetery to the north, Balcom and Emerson Avenues to the east and the Bronx-Whitestone Bridge and ramp to the west. The entire site was a former operating municipal solid waste landfill that ended accepting fill material in the 1960's. The overall landfill footprint extended beyond the boundary of the Ferry point Park Site. The period of operation predated the existence of current Solid Waste Facility design and construction requirements and therefore, no groundwater assessment or survey was performed for the construction or during operations of the landfill.

A review of aerial photography was conducted at the time this report was being prepared. The photographs are available on the New York City public website and include those showing the overall site and surrounding area from a period beginning in 1924 and up until 2012. The earliest photo of 1924 shows nearly the entire footprint of the Ferry point Park Site was formerly open water, existing as a large bay of the East River. A review of the 1951 aerial photograph of the same scale shows the northwest portion of the landfill site was filled with what appears to be very light colored fill material. The photo shows filling operations to be expanding from the northwest corner outward and based upon the extreme contrast in color of existing land and fill material to be sand material possibly sourced from in-water dredge operations. This practice was performed in many other areas of the City at this time when harbor deepening and widening took place from 1940 onward. There were no photos between 1951 and 1996 and so there was no further photographic record in this collection to show the progression of landfilling. This period of filling (pre-1951) predated the DSNY recordkeeping and existence and there would not be any expected record of the placement of this fill in Sanitation Department documents. The existence of these photos is important to present the hydrogeologic origin of site groundwater for comparison to that of other groundwater. This history places the entire Site at the base of a larger drainage basin and in direct connection with the East River system of salt and brackish waters. Using this as the basis for the hydrogeologic model, shallow groundwater at the Site would now be considered to be part of the upland groundwater table as a result of the filling and extension of the shoreline into the river. Groundwater

within the fill material could be expected to be tidally influenced but the inland limit of this influence would be dictated by the fill material, its composition and compaction.

As part of the Volume #1 Application for Modification to the Solid Waste Management Facility Permit for Construction of the Ferry Point Park Recreation Facility Engineering Report (June 30, 2005; Appendix 20), a specific groundwater impact assessment was presented. This was based on a qualitative assemblage of data and information from other related studies but not specifically from a focused groundwater evaluation.
A May 31, 2005 letter on the Influence of Fill Placement on Groundwater prepared by Langan Engineering assessed the impact of fill material on the groundwater (found in Appendix VII of Volume #1 Application for Modification to the Solid Waste Management for Construction of Ferry Point Park Recreation Facility Engineering Report, June 30, 2005, Appendix 20). This was based upon information and conditions gathered during geotechnical evaluations and site history knowledge. The findings presented at that time indicated the development of the Ferry Point Park Site as a golf course would not further impact or change groundwater flow patterns or conditions and would therefore not further impact the East River beyond the existing conditions.

Much of the description presented in the Langan assessment focused on the site development and the addition of engineering controls that would become part of the site. These included: paved path and parking areas, significant stormwater collection systems, site grading to control flow, control devices and systems as well as importation and capping of the entire site with a varied but significant layer of clean cover materials that would all have a positive impact and reduce the amount of surface water filtering through the landfill and into the groundwater. The overall completed site development in the 2005 Engineering Report included a total of 26 acres of impervious area and collection of stormwater in detention facilities (Appendix 20).

A total of 26 piezometers were installed to monitor shallow groundwater along and immediately adjacent to the Landfill Gas passive trench. These piezometers, while used for depth to groundwater measurements are not incorporated into the groundwater evaluation as they were specifically used to assist in the design and monitoring of the LFG vent trench. The principal purpose for the piezometers and their association with the LFG trench was to monitor the level of groundwater to determine if groundwater levels went below the LFG passive recovery trench. Groundwater elevation measurements collected from the piezometer locations along the site perimeter vent trench (Special Condition 28) are addressed in section 5.3 (Piezometer Monitoring) of this report. Section 5.5 addresses the baseline groundwater monitoring requirements established in 2010.

The NYSDEC Permit issued on November 18, 2005 for the construction of the 222 acre golf course did not include a specific requirement for a groundwater monitoring plan outside of the singular focus of monitoring groundwater elevation for landfill gas control in the trenches (Appendix 1). In 2010, NYSDEC requested additional information regarding groundwater conditions and if any new, relevant information was available to verify the conclusions of the geotechnical portion of the 2005 Engineering Report (June

30, 2005, Appendix 20). As no information was available, recommendations were made in 2011 by NYSDEC for the installation of a monitoring well network.

A Technical Memorandum was prepared by Ecology & Environment Engineering, P.C. (E&E) outlining the field procedures for establishing reference point groundwater characterization methods including the installation, development, sampling, well gauging and slug testing of 11 new monitoring wells at the Site (Technical Memorandum re: Field Sampling Procedures for Ferry Point Site – Reference Groundwater Characterization, September 19, 2011, Appendix 20). At the time of monitoring well installation (February 2012), construction activities were well underway and estimated to be 80% complete. The baseline characterization was expected to capture the potential measurable impacts to groundwater. Future monitoring is expected to capture the impacts representing a more complete construction condition

The well installation program included consistent and standard well installation and construction methods, well development, baseline sampling, water level survey and aquifer testing. A figure showing the well construction details and installation elevations and locations is presented as S-H21 dated 11/8/2011. Well construction methods included the installation of shallow 2 inch diameter PVC wells with 10 ft. of slotted screen penetrating into the upper surface of the water table and standard construction finishing. All of the wells were developed and monitored using consistent criteria (turbidity, pH, conductivity and temperature), Table 1 and 2, respectively, Fieldwork Summary Report (as part of Groundwater Characterization) (May 31, 2012; Appendix 20). Each of the newly installed wells was then sampled to establish the initial baseline conditions and each was surveyed to determine groundwater level and flow direction conditions. Basic site hydrogeological information was also characterized during this effort, including direction of flow, groundwater elevation gradients, and flow velocity. Based on the initial measurements, flow direction was found to be relatively consistent in that groundwater flow was in the south-southeasterly direction toward the East River (Figure 1, Fieldwork Summary Report, May 31, 2012, Appendix 20). There was one important item noted from the initial conditions assessment and this was the lack of measureable tidal influence on any of the monitoring wells.

One soil sample was collected from each borehole from the shaping material zone with an additional quality assurance sample collected from MW-02. The soils were sampled for synthetic precipitate leaching procedure (SPLP) semi-volatile organic compounds (SVOCs), PCB/pesticides, metals, and cyanide. Seven metals and one SVOC (phenol) were detected in the 13 samples sent to the laboratory
SPLP analysis. For comparison purposes, these results are shown along with the NYSDEC Technical and Operational Guidance Standard 1.1.1, for Class GA groundwater. Four metals, and one SVOC (phenol) were detected with concentrations higher than the comparison standard (Table 6, Fieldwork Summary Report, May 31, 2012, Appendix 20).

Slug testing was performed on each of the wells to evaluate hydraulic conductivity and while this is not a critical measurement for wells installed within landfill material, it is useful in evaluating the consistency of all wells in the system. The results of the slug testing presented a fairly uniform range of hydraulic conductivities within the landfill material.

The results of the baseline groundwater analysis showed that with the exception of metals, the analytical results were in line with a landfill of this type and age. All metal detections were higher than the NYSDEC Class GA groundwater standard, which was used for comparison purposes. It is noted that these samples had high turbidities (e.g., greater than 1000 NTU) and this likely impacted the metals test results. Phenolics and ammonia leachate parameters were also detected higher than the comparison standard (Table 7, Fieldwork Summary Report, May 31, 2012, Appendix 20). As a result, NYSDEC requested that both filtered and unfiltered samples be collected. If the results were consistent, subsequent events would be completed using filtered samples only for the inorganic parameters (May 8, 2012 Ferry Point Groundwater Characterization Conference Call, May 9, 2012, Appendix 20). Filtered and unfiltered groundwater samples were collected during subsequent events.

NYSDEC also provided DPR with requirements for future groundwater monitoring (e.g., Post Construction Monitoring) in their FPP Groundwater Characterization Monitoring Objective on May 8, 2012 (Appendix 20). The objective included the following requirements: reference point/background characterization in three quarterly rounds of sampling for all parameters listed in 6 NYCRR Subpart 360-2.11 baseline parameters. Following completion of the characterization sampling, baseline sampling would continue on a biannual basis after the initial three quarterly rounds until the FPP landfill end use (golf course) is operational. Table 5-X below summarizes the reference point/background characterization events.

Table 5-1. Summary of Reference Point/Background Characterization Events

| Sampling Frequency | Wells Sampled | Status |
|---|---|---|
| Quarterly 1 | GMW-1 – GWM-11 | Completed February 2012 |
| Quarterly 2 | GMW-1 – GWM-11 | Completed May 2012 |
| Quarterly 3 | GMW-1 – GWM-11 | Completed August 2012 |
| Bi-Annual | GMW-1 -GMW-11 | Completed March 2013 |
| Bi-Annual | GMW-1, GMW-2, GMW-3, GMW-4, GMW-5, GMW-6, GMW-7, GMW-8, and GMW-10 | Completed March 2014 |
| Bi-Annual | GMW-2, GMW-3, GMW-4, GMW-5, GMW-6, GMW-7 and GMW-8 | June 20, 2014 |
| | GMW-1, GMW-7, GMW-10, and GMW-11 | July 31, 2014 |

The three quarterly sample events were completed without modification. The Bi-Annual events were modified following the March 2013 event due to construction of the golf course which limited access to the Site. The modifications include the following:

- No September 2013 Bi-Annual sample event.
- No sample was collected from GMW-9 (well was dry) and GMW-11 (access) during the March 2014 sample event.
- The second biannual sample event for 2014 was split into two events completed in June and July. GMW-9 was not sampled. Groundwater samples were collected from the site on July 22, 2014; however the samples were not analyzed due to compliance issues with the Standard Operating Procedures.

Table 5-1 presents the overall groundwater and analysis date for monitoring wells GMW-1 through GMW-11 covering the period between February 2012 through July 2014 and are consistent with the baseline sample events: metals, phenolics and ammonia compounds, isolated and sporadic VOCs (except for chlorobenzene detected in well GMW-01 and GMW-06 during multiple events) and SVOCs (primarily PAHs) were detected above the NYSDEC Technical and Operational Guidance Class GA Groundwater Criteria. The Class GA Groundwater Criteria were used for screening purposes as groundwater is not used for potable resources. The results of the filtered (dissolved) metals samples are significantly lower than the non-filtered metals samples and in most cases exceedances of non-filtered samples are non-detect or below the Class GA Groundwater Criteria in the filtered samples.

In accordance with the Post Construction Custodial Care Plan (Appendix 20), groundwater monitoring will be performed at all 11 permanent monitoring wells throughout the golf course. Approval of this Closure Certification Report signifies the commencement of operations at the golf course beginning the period of post construction monitoring. Sampling will be performed on an annual basis with collection and analysis of groundwater for those constituents listed in 6 NYCRR Part 360-2.11 routine parameters. This sampling information and data will be summarized and included with the overall annual facility monitoring and inspection report. Monitoring and reporting will begin 60 days following the approval of this closure report and will continue for a period of three years.

Following the completion of the initial 3 year post-operations monitoring, DPR may submit documentation to NYSDEC to request a reduction in sampling or complete cessation of sampling. The initial 3 year period will form the data set to be used in the event a reduction or change in monitoring is requested. The goal of the monitoring will be to provide data showing if the park adversely impacts water quality with respect to leachate quality or quantity and to compare the 2013 permit performance criteria to existing and current conditions.

Should a request for modification or cessation be approved, monitoring wells will be assessed for abandonment or removal within a 1 year period following the ending point of monitoring. Closure documentation will be provided by a New York Professional Engineer during the same annual reporting period.

Upon commencement of operation of the golf course, the frequency of groundwater monitoring changes to annual with samples being analyzed for all constituents listed in 6 NYCRR Subpart Part 360-

2.11 routine parameters and parameters of concern identified during the reference point characterization period. The golf course began operation in April 2015 and post construction monitoring will be initiated in September 2015. Post construction groundwater monitoring is discussed in detail in Section 5.7.4.

Design documents for the groundwater monitoring wells are included in Appendix G.2 of the 2013 Engineering Report (Appendix 20). An initial sampling event was completed in February 2012 and included the testing activities described below.

Groundwater monitoring results are attached in Appendix 15.

## 5.6 Deed Restriction

Special Condition 32 of the 2014 Permit requires that the Permittee executes and files a NYSDEC approved deed restriction, which shall run with the land in perpetuity, and shall recite and require compliance with the Part 360 Permit's provisions as regards to the custodial care requirements described in Appendix I of the 2013 Engineering Report (Appendix 20).

NYCDPR is in the process of reviewing the language in Attachment A transmitted with the 2014 Permit, and will use this language as the model for the deed restriction. NYCDPR will contact the NYSDEC in the event NYCDPR has any proposed additions, deletions, and/or revisions to the general text of Attachment A.

## 5.7 Post Construction Monitoring

Post construction monitoring of the Golf Course, Community Park, and Waterfront Park is the responsibility of NYCDPR and will be completed as required by the Permit. Post closure monitoring will be completed in accordance with the plans set forth in Ferry Point Park East Post Construction Custodial Care Plan dated October 2013 included as Appendix I of the 2013 Engineering Report (Appendix 20).

The following table includes each monitoring component, the frequency, and the duration of monitoring dependent upon the cessation of activity:

| Component | Frequency | Duration |
|---|---|---|
| Final Cover System | Quarterly | 5 years |
| LFG System | Quarterly | 5 years |
| Infrastructure | Bi-Annually<br>Annually | 10 years<br>15 years |
| Groundwater Monitoring | Annually | 3 years* |
| Long Term Settlement Plates | Quarterly | 5 years* |
| Parking Lot Asphalt Cover (April & October) | Bi-Annually<br>Annually | 5 years*<br>20 years* |

*Denotes Dependent on Cessation of Activity

NYCDPR will not be performing post-construction monitoring for the Waterfront Park portion of the Site until construction is complete and approved, and will restrict public access until such time.

NYCDPR is in the process of engaging a full service environmental firm to conduct the post construction monitoring requirements and will complete the post construction monitoring required to comply with the Permit in accordance with the Post Construction Custodial Care Plan and as follows.

### 5.7.1 Golf Course Operations

The Site will be operated as part of the New York City Department of Parks and Recreation system. The Community Park and the Waterfront Park will be operated and maintained by the NYCDPR Borough of the Bronx Operations and Maintenance division or an appointed representative. NYCDPR has entered into a contract with a golf course concessionaire, Trump Ferry Point LLC to implement post construction care necessary to maintain the Golf Course for operational purposes. Golf Course maintenance and operations exclude those requirements specific to post construction monitoring and maintenance of existing environmental conditions and infrastructure as installed by NYCDPR and specifically defined in this report as being landfill gas systems, groundwater monitoring, and long-term settlement plates.

### 5.7.2 Landfill Gas Monitoring

NYCDPR will implement post construction monitoring necessary to fulfill the requirements of the Post Construction Custodial Care Plan for landfill gas monitoring. The landfill gas monitoring program includes monitoring for on-site and off-site landfill gas wells, piezometers, passive vent trench, passive vents, sub-slab depressurization systems, and Irrigation Lake venting system. Any necessary repairs or maintenance required as a result of inspection and monitoring activities will be the responsibility of NYCDPR or an appointed representative.

The Site's landfill gas management system will be inspected and monitored in accordance with the Operations, Monitoring, & Maintenance ("OM&M") actions presented in Section 6 of the Landfill Gas Management Plan ("LFGMP") located in Appendix F.1 of the 2013 Engineering Report (Appendix 20).

Monitoring and inspection will commence concurrently within 60 days of the approval of this construction certification report unless otherwise noted within the OM&M plan. Adjustments to monitoring frequencies will be requested of NYSDEC upon meeting the performance criteria thresholds identified in Section 6.3.4.2 of the LFGMP. NYCDPR will submit a request with supporting documentation to NYSDEC 30 days prior to the desired date of the proposed change in monitoring. NYCDPR will not change monitoring frequencies until the request has been approved.

### 5.7.3 Long Term Settlement Monitoring

NYCDPR will implement post construction monitoring necessary to fulfill the requirements of the Post Construction Custodial Care Plan for nine settlement monitoring plates on the Golf Course.

Monitoring will commence concurrently within 60 days of the approval of this construction certification report for a period of three years. Based on the results of the initial five years of monitoring, NYCDPR may

petition for decreased monitoring or a cessation in monitoring frequencies. NYCDPR will not change monitoring frequencies until the request has been approved.

### 5.7.4 Groundwater Characterization Monitoring

NYCDPR will implement post construction monitoring to fulfill the requirements of the Ferry Point Park East Post Construction Custodial Care Plan (October 2013). Groundwater monitoring will be performed at the eleven well locations located within the golf course.

Upon commencement of operation of the golf course (April 2015), groundwater sampling will take place annually with samples being analyzed for constituents listed in 6 NYCRR Subpart Part 360-2.11 routine parameters. The results of the groundwater sampling will be presented in a groundwater monitoring report and a summary will be submitted to NYSDEC as a part of the annual monitoring and inspection report. Monitoring and inspection will commence concurrently within 60 days of the approval of the construction certification report for a period of three years with the goal of demonstrating whether operation of the park adversely impacts on water quality with respect to leachate quality or quantity, and whether operation of the park meets the performance criteria established in the Permit.

Post Closure monitoring is anticipated to be conducted on the following schedule:

| Sampling Frequency | Requirement | Wells Sampled | Status |
|---|---|---|---|
| Annual - Year 1 | Post-Construction Monitoring | GMW-1 – GWM-11 | Anticipated September 2015 |
| Annual - Year 2 | Post-Construction Monitoring | GMW-1 – GWM-11 | Anticipated September 2016 |
| Annual Year 3 | Post-Construction Monitoring | GMW-1 – GWM-11 | Anticipated September 2017 |

Upon completion of 3 years of post-operation annual routine groundwater sampling, DPR may submit documentation to NYSDEC in furtherance of a request to reduce or cease groundwater sampling at the Ferry Point Park golf course (Ferry Point Park East Post Construction Custodial Care Plan, October 2013). The Groundwater monitoring and sampling program will cease either at the three year completion or ten years from the date of the initial groundwater sampling event. When the request for cessation is accepted, the groundwater monitoring wells will be evaluated for either abandonment or removal within the first year of the cessation of monitoring. The abandonment or removal documentation, signed and

certified by a licensed NYS Engineer will be provided to DEC within the concurrent post closure reporting period after the completion of the work.

Monitoring and inspection will commence concurrently within 60 days of the approval of this construction certification report for a period of three years. Upon completion of three years of post-operation annual routine groundwater sampling NYCDPR may submit documentation to the NYSDEC in furtherance of a request to reduce or cease groundwater sampling at the golf course. NYCDPR agrees to perform operational groundwater sampling, data analysis and reporting for a minimum of three years after construction, with the goal of demonstrating whether operation of the park adversely impacts water quality with respect to leachate quality or quantity, and whether operation of the park meets the performance criteria established in the Permit. NYCDPR will not change monitoring frequencies until the request has been approved.

### 5.7.5 Final Cover System

The integrity of the final cover system will be inspected routinely by NYCDPR, or their duly appointed representative, to fulfill the requirements of the Post Construction Custodial Care Plan. Inspections and maintenance will be completed in association with the Maintenance Guidelines for Trump Golf Links at Ferry Point Park included in Appendix I of the 2013 Engineering Report (Appendix 20).

Monitoring and inspection will commence within 60 days of the submittal of this construction certification report and then undertaken annually within 30 days of the submittal of the initial report. NYCDPR agrees to a rolling five-year plan, whereby NYCDPR may petition to modify or terminate the final cover inspection requirements by demonstrating that the integrity of the final cover system has been maintained in accordance with performance criteria established in the Permit.

### 5.7.6 Parking Lot Asphalt Cover (Consent Order)

During 2010, fill material from a JFK Airport source site was brought on-site and placed in seven different stockpiles. The material was believed to be in conformance with permit conditions. However, the material was found to be in violation of 2005 Permit Special Conditions 1, 9, and 16, during NYSDEC and IEM inspections. On January 10, 2011, NYCDPR signed an Administrative Order on Consent (Consent Order), Case No. R2-20100521-172, related to this fill material, which was used to construct the base of the clubhouse and maintenance facility parking lots.

Specific requirements within the Consent Order as they pertain to post construction operations are as follows:

From Consent Order No R2-20100521-172: “Attachment “A” Proposed Handling of Ferry Point Park Soil Stockpile, Item 6, Once the asphalt top course is installed, the asphalt surfaces of the clubhouse and maintenance facility parking lots will be inspected during April and October every year by a licensed professional engineer (“engineer”) who is registered to practice in New York State. Within thirty days (30) days of such inspections, the engineer will submit to the Department a stamped and certified written detail report, including photo documentation, regarding the condition of the asphalt surfaces and their

adequacy, including photo documentation, regarding the condition of the asphalt surfaces and their adequacy to effectively function as covers. A description of any needed repairs will be included in the engineer's report.

Item 7, any repairs deemed necessary by the engineer must be completed by New York City Department of Parks and Recreation ("NYC Parks") within fifteen (15) days of the notification by the Department to NYCDPR to begin such repairs. A certification, including supporting written and photo documentation must be submitted by NYC Parks within fifteen (15) days after completion of repairs."

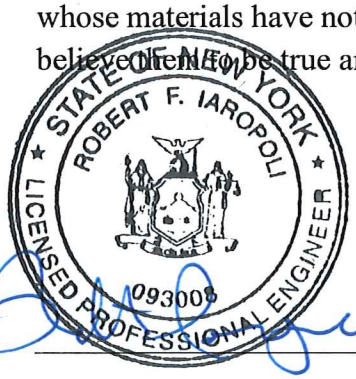
# 6 Summary

Construction activity at the Site began in July 2000 and concluded in July 2014 with physical completion of the Golf Course. Although the Golf Course construction is complete, some incidental work continues to occur at the Site associated with specific improvements necessary for golf course operations by the golf course concessionaire. Construction activity included clearing and grubbing, excavation, grading, importation of fill material, construction of the Community Park and Golf Course and associated appurtenances, installation of site utilities and infrastructure, installation of plantings, and installation of asphalt parking lot. A representative of the NYCDPR was present during all construction activities. To the best of our knowledge, a representative of the IEM was present during all earth moving and soil importation activities. For this project, fill importation followed the Permit requirements and resulted in a large scale earthwork fill conducted in general accordance with NYSDEC requirements as documented in the daily, bi-weekly, and quarterly reports and as summarized herein.

# 7 Certification

Certification Statement

I, Robert Iaropoli, PE, LS, an employee of the New York City Department of Parks and Recreation, exercising independent judgment and discretion do hereby certify that this Final Construction Certification Report was prepared under my direction and supervision. This Final Construction Certification Report was prepared in accordance with the NYSDEC requirements in 6 NYCRR Part 360, the current Part 360 Permit and approved Part 360 Permit Modification documents. The information contained herein is based upon: 1) Work which I have personally inspected both during and after construction from November 2012 to date; 2) Information provided to me by those directly employed by or under contract with the New York City Parks and Recreation and the New York City Department of Design and Construction as construction project managers;3) Design Consultants; 4) Contractors responsible for construction pursuant to their contracts except as indicated; and 5) third parties, such as manufactures, suppliers, etc., whose materials have not been personally verified by me for accuracy and/or adequacy but believe them to be true and accurate[4].




Robert Iaropoli, PE, LS

Oct. 19th 2015

Date

New York City Department of Parks and Recreation

[4] Certification means a statement of professional opinion based upon investigation, analysis, knowledge and belief that is stated to be true and accurate. 6 NYCRR Part 360-1.2(b) 24.

# 8 Delineation Page

## Delineation Page

Construction Certification Report
Ferry Point Park Golf Course and Community Park

The drawings, analysis and certification of the fill operation performed by the Independent Environmental Monitor, Woodard & Curran, 709 Westchester Avenue - Suite L2, White Plains, NY 10604 incorporated in this Construction Certification Report have not been verified.

# E-10

Bally's Bronx
Final Construction Certification Report:
Subslab Depressurization System and Gas Line Installation
*Prepared by: Maser Consulting P.A.*

LANGAN

Engineers Planners Surveyors Landscape Architects Environmental Scientists

MASER CONSULTING P. A.

# Final Construction Certification Report
# Subslab Depressurization System & Gas Line Installation
# NYSDEC Permit #2-6006-00014 / 00013 (Solid Waste)

Trump Ferry Point Golf Links Permanent Clubhouse
500 Hutchinson River Parkway
Block 5622, Lot 1
Bronx, New York

November 26, 2019

*Prepared For*

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## EXECUTIVE SUMMARY

Maser Consulting P.A. (Maser Consulting), on behalf of The Trump Organization, has prepared this Certification Report for the construction of the permanent Clubhouse at the Trump Ferry Point Golf Links located at 500 Hutchinson River Parkway, Bronx, New York. This report has been prepared pursuant to 6 NYCRR Part 360 of the New York State Solid Waste Management Program and the 2013 Ferry Point Park East Post Construction Custodial Care Plan. This report also includes a summary of a supplemental project to install a new gas main as part of the Clubhouse Construction project.

Acting as the Independent Environmental Monitor (IEM), Maser Consulting witnessed, recorded and confirmed construction of the new Trump Links Clubhouse, including the installation of support pilings, importation of suitable materials used for cover; the application, installation and testing of the Liquid Boot® Vapor Barrier System and the associated Sub-slab Depressurization System (SSDS); and the installation, calibration and testing of the interior Methane Detection System. For each construction and testing component, Maser Consulting confirms compliance with the Permits, plans and specifications of the project. Minor deviations to the plans and specifications are noted in this report and in the As-Built documents contained herein. Minor deviations to the specifications were the result of two main issues: the need to relocate system components to avoid conflicts and interferences with utilities and appurtenances; and the substitution of the materials of construction that were equivalent or superior to the original specifications.

The IEM also monitored, tested and confirmed that soil materials imported for the new Clubhouse construction were derived from pre-approved sources. The IEM conducted periodic surveillance of trucks being loaded at the approved facilities and transported to the Construction Site. For material imports, the IEM visually evaluated loads and scanned loads with direct reading instruments for signs of contamination. Only those loads meeting project permit and specifications standards were permitted to be unloaded at the site.

At times when imported soil materials had to be stockpiled on-site, the IEM took steps to ensure that a controlled staging area was secured. The staging area was established in the parking lot to the west of the new Clubhouse site. The IEM also took steps to ensure that the stockpile was properly covered to prevent erosion by wind and water, and that catch basins in the parking lot were properly protected to ensure that sediments would not enter the storm water system. Weekly erosion control inspections were conducted by the IEM in accordance with NYSDEC's Construction Site Management Program. The IEM immediately communicated deficiencies in the erosion control features to the General Contractor (JCS) such that immediate mitigative action could be taken.

Maser Consulting also acted as the IEM for a supplemental project associated with the new Clubhouse construction. The supplemental project consisted of the installation of an approximately 5,500-foot long, 6-inch diameter gas pipeline installation. The new gas supply line was deemed necessary to provide heating, ventilation, air conditioning and other utility service to the new Clubhouse. The gas pipeline was connected to a Consolidated Edison main located north of the clubhouse along Schley Avenue. The pipeline route generally traverses the western property line before turning east toward the new clubhouse in the vicinity of the Clubhouse parking lot. As IEM for this supplemental project, Maser Consulting witnessed, recorded and confirmed that the gas pipeline installation was conducted in accordance and incompliance with the project permits, plans and specifications.

Similar to the Clubhouse construction project, cover material importation was required for the gas main installation project. The IEM took appropriate measures to ensure that the source material was inspected and tested. Soil quality analytical results have been included within this report. Analyzed permit parameters were found to be acceptable. The IEM also visually assessed and field screened each load to ensure that the quality of the material met project permit requirements and project plans and specifications.

**FINAL CONSTRUCTION CERTIFICATION REPORT**
**TRUMP FERRY POINT GOLF LINKS PERMANENT CLUBHOUSE**
**SUBSLAB DEPRESSURIZATION SYSTEM & GAS LINE INSTALLATION**

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Appendix P – CETCO/Minerals Technologies Letter to EAI Inc. re: "Liquid Boot Spraying Temp" dated November 9, 2017 & EAI Inc. letter to Maser Consulting P.A. re: "Vapor Remediation System Installation, Ferry Point Clubhouse, Ferry Point Park, Bronx, NY" dated October 18, 2019
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# I. INTRODUCTION

## A. Purpose

This Final Construction Certification Report for the Trump Ferry Point Golf Links clubhouse is submitted to the New York State Department of Environmental Conservation (NYSDEC) and the New York City Department of Parks & Recreation (NYCDPR) upon completion of the construction of a new clubhouse at Ferry Point Park East. Built on top of a former municipal landfill, the major elements of the Clubhouse construction project consisted of the installation of over 200 steel support pilings driven through the former landfill material and into competent rock at an average depth of 75 below grade. During the support piling installation, Maser Consulting (acting as the IEM) measured the ambient air quality for signs of methane gas release from the subsurface. When detected on rare occasions, immediate measures were taken to mitigate methane from the work and breathing zones with the use of engineering controls including physical barriers and the use of industrial explosion-proof fans to ventilate the work zones.

Following the installation of the support pilings, Maser Consulting observed the installation of two added protective elements – a Liquid Boot® Vapor Barrier System and a corresponding SSDS. Both systems were designed to mitigate the intrusion of methane and other landfill gases into the new Clubhouse.

As a means to assess the effectiveness of the Vapor Barrier and the SSDS, a Methane Detection System was installed inside the new Clubhouse. The methane detection system consists of a network of in-floor methane sampling ports as well as a series of methane detectors located throughout the main banquet and reception areas as well as in the smaller offices, the kitchen and other employee and publicly-accessible areas.

This report certifies that the construction of the Liquid Boot® vapor barrier system and the SSDS for the new clubhouse have been completed in accordance with the 6 NYCRR Part 360 Solid Waste Management Permit for Ferry Point Park (copy provided as **Appendix A**). This report further certifies that Methane Detection system was also installed, tested and calibrated in compliance with the project permits, plans and specifications.

## B. Report Organization

This report has been generated to provide a written post-construction certification report to comply with the requirements of the above-referenced Part 360 Permit. The narrative and supporting information provided in this report have been organized such that any individual, especially those not familiar with the new clubhouse construction, can gain a concise understanding of the history of improvements at the Site (a former solid waste management facility, i.e. landfill).

The report has been organized into the following sections:

- Section I which briefly describes the purpose and scope of the project, provides details pertaining to the Site background including a Site description, key agencies involved, and permitting history

- Section II describes the Part 360 Permits and modifications, Permit reference documents, nonconformance issues, operational upsets, emergencies, and unusual circumstances, and reporting completed associated with the new clubhouse

- Section III details the fill importation Quality Assurance / Quality Control (QA/QC) program, specifically source site reviews for cover layer material, on-site fill importation inspection, trucking manifests, rejected trucks and materials, fill tracking, and total carcinogenic semi-volatile organic compound (SVOC) tracking

- Section IV provides details related to construction activities on-site including construction of the new clubhouse, environmental controls such as landfill gas monitoring, municipal solid waste handling, earthwork and fill placement, demarcation layer, construction progress meetings, and deviations from the approved design plans and/or Permit requirements with as-built surveys

- Section V details the environmental monitoring completed during the Project including Stormwater Pollution Prevention Plan (SWPPP) erosion control inspections.

- Section VI provides a summary of the report

- Section VII provides report certification

## C. Background Information

### a. Project Scope

Ferry Point Park in the Bronx (the "Site") is a former landfill covering 222 acres that is bounded by the Bronx-Whitestone Bridge and Hutchinson River Parkway to the west; Balcom, Miles, and Emerson Avenues to the east; Schley Avenue and St. Raymond's Cemetery to the north; and the East River to the south. The project was originally managed under Ferry Point Partners, LLC and was taken over solely by the City of New York Department of Parks and Recreation in October 2007.

The original project scope included the construction of three main elements including a golf course, a community park, and a waterfront park over the 222-acre Site as follows:

- An 18-hole golf course with practice facility, driving range, clubhouse, maintenance facility, irrigation lake, stormwater retention ponds, and a parking lot (192.5 acres);
- A passive recreation waterfront park with walkways and a comfort station (19.5 acres); and
- A community park with baseball fields, basketball court, walkways, comfort station, and landscaped stormwater retention area (10 acres)

A new element of the project was initiated in 2017 with the construction of a permanent clubhouse in the southern corner of the Site. The project began in July 2017 and was completed in August 2018.

A supplemental component of the Clubhouse project was deemed necessary when the existing 2-inch gas service line to the facility was determined to not be capable of providing the volume of gas necessary to support the heating, ventilation and air conditioning units as well as other facility utilities such as the kitchen and other amenities. Construction of the Gas Main Installation began in late August 2018 and was substantially completed by November 2018.

## b. Project Site[1]

The origins of the site date back to the early 1900s. At that time, an available 1900 map of the Bronx showed the western edge of the site which now contains the expressway and Whitestone Bridge was a long narrow peninsula extending out to the same area that the northern landing of the Whitestone Bridge now extends. Immediately east of this peninsula was a large open bay which is the area that the Ferry Point Golf Course is now located. Northeast of the bay and well inland was the Baxter Creek that drained into the bay. The eastern landfall of this embayment area is a larger peninsula that contains roadways and a residential development. The road patterns do not resemble the roadways that currently exist in that area and appear to have been changed.

A 1938 aerial photo showing the construction of the Whitestone Bridge shows the Bay, mooring, residential area and land to the west to be virtually the same as shown in the 1900 map. The significant change is in the widening of the western peninsula where the expressway was being constructed leading to the bridge ramps. The widening was not significant at this time but a rectangular area in the extreme northwest corner of what is now the site appears to be filled and graded – possibly to support construction staging area for the bridge/expressway. Areas of filling can be readily identified in the photograph by the contrasting lighter color typically indicative of sandy dredge sand placement. Other areas along the shoreline can be seen as containing a lighter-colored band of fill material and this includes much of the new Ferry Point Park located west of the Whitestone Bridge. Much of the park area was filled and graded by 1938. Bulkheads were constructed with linear components to present a smooth shoreline but one that does not appear to contain a beach where water diminishes in depth to 0. Photos of the eastern area of the bay where mooring and docks can be seen showing large vessels moored against the shore. This would indicate the water had significant depth all of the way to the center of the bay.

Aerial photographs from the 1950s show a drastic change in the area currently referred to as the site. Large expansion of the filling that was evident in 1938-39 up in the northeast corner can be clearly seen. The filling extends well into the bay and it appears that a connective bridge

[1] *Reference: "Ferry Point Park Golf Course & Community Park, Bronx New York, Final Construction Certification Report, NYSDEC Permit #2-6006-00014 / 00013 (SW)" prepared by the City of New York Department of Parks and Recreation dated October 19, 2015 – a.k.a. the 2015 Final Construction Certification Report*

was constructed from the eastern shore to the fill area. It is difficult to discern if this is a usable structure for crossing or if it had some other purpose. The filling operation appears from the photo to consist of the same light-colored material that was placed in the Ferry Point Park and from photos showing a large number of barges in the water filled with material of the same light color. There is specific documentation that presents the specific origin and consistency of the material. but from the prior aerials showing filling and this large expansion, it appears to be of a similar origin which would be dredge sand. In the 1951 aerial, no specific municipal solid waste dumping and disposal can be seen; however, records indicate the landfill operated during this approximate time period. It is therefore assumed that municipal solid waste was disposed shortly after the photo was taken. The landfilling shown in the aerial may have been the initial construction of the upper portion of the landfill with the tidal gate or bridge closing in the upper bay area. Additional aerials of the landfilling were not identified and more recent aerials document the completion of filling as well as the more recent golf course construction.

What can be discerned from this compilation of photos is that the landfill could be located in an area that may have been open water as well as some area that was previously reclaimed land with dredge material.

The Site operated as a landfill from before 1951 to the 1960s. The landfill reportedly accepted municipal solid waste during its operating period and was closed and covered in the mid-1960s, with additional closure operations conducted more recently in the 1980s. Prior Site use was determined from historic aerial photographs from 1938 thru 1991. The aerial photographs span the entire operational period of the prior landfill, from its initial operations to the present, and provides substantial information about the Site's development.

### c. Key Agencies

The following were the key agencies associated with the project providing oversight, administration, design, construction, and monitoring services. The following is not intended to be an exhaustive list of involved entities related to the Project:

Primary Regulatory Agency:
New York State Department of Environmental Conservation Region 2 ("NYSDEC")

Project Permittee:
City of New York Department of Parks & Recreation ("NYCDPR")

Primary Design, Engineering, Construction, and Monitoring Consultants:
Hart Howerton Planning, Architecture and Landscape Architecture, P.C. ("Hart Howerton")
French & Parrello Associates ("FPA")

Independent Environmental Monitor ("IEM"):
Maser Consulting P.A. ("Maser Consulting")
Woodard & Curran ("W&C")

General Contractor:
Golf Course Clubhouse: JCS Construction Group, Inc. ("JCS")

Subcontractor for the SSDS and Liquid Boot® Vapor Barrier Installation:
EAI, Inc. ("EAI")

Golf Course Concessionaire/Operator:
The Trump Organization ("Trump")

See **Appendix B** for a list of project participants.

### d. Independent Environmental Monitor

The requirement for an IEM on this project was associated with an increased level of monitoring exceeding normal review and oversight practices of the NYSDEC in order to protect public health and the environment. The increased level of review and oversight for this Project was mainly associated with the effort required for evaluation of fill material sources, source site testing and inspection, importation of the fill material, environmental monitoring required at the clubhouse construction site, and later along the gas main installation route. IEM services were also necessary during the installation of over 200 support piles through the former waste pile located beneath the new Clubhouse.

In accordance with Special Condition 24 of the 2014 Permit (**Appendix A**), NYCDPR was responsible to retain an IEM, accountable to NYSDEC, to provide environmental oversight of activities authorized under the Permit including but not limited to the quantification, importation and placement of fill, and the monitoring of the clubhouse construction site. Particular activities performed by the IEM for this Project included the following:

- Report deviations from or non-compliance with permitted activities to NYSDEC;
- Evaluate and inspect fill sources;
- Evaluate, monitor and mitigate methane intrusions during the installation of steel support pilings for the new clubhouse foundation;
- Witness source site investigation, sampling, and compare lab test results to Permit requirements;
- Visual and Photoionization Detector (PID) inspection of imported fill materials to the Site;
- Monitor offloading of trucks and reject unacceptable materials from being dumped on the Site and used for construction;
- Monitor environmental sampling on the Site (i.e. landfill gas);
- Monitor fill operations on the Site, particularly the installation of minimum thickness of shaping layer and cover layer materials as well as demarcation layer installation;
- Complete and submit Daily Observation Reports to NYCDPR;
- Complete weekly Erosion Control Reports; and
- Attend weekly Construction Progress Report meetings

The selection, continued retention, discharge, or replacement of the IEM was subject to the approval of NYSDEC at its sole discretion.

### e. Project and Part 360 Permitting History

The following represents an overview of project and permitting history outlining key events:

On May 21, 2014 NYSDEC issued Permit No. 2-6006-00014 / 000013 for a Solid Waste Management Facility for the Ferry Point Park Golf Course; this permit establishes an IEM. A copy of this permit is provided in **Appendix A**.

On June 12, 2017 the Ferry Point Park SSDS Plan prepared by FPA for the proposed permanent clubhouse was submitted to NYSDEC. A copy of this submittal is provided in **Appendix C**.

On June 22, 2017 NYSDEC issued a letter to The Trump Organization approving the Ferry Point Park SSDS Plan. A copy of this letter is provided in **Appendix D**.

On June 7, 2018 Maser Consulting (through The Trump Organization) submitted a Construction Certification for the SSDS to NYSDEC to allow for the temporary, one-day opening of the new clubhouse on June 11, 2018. A copy of this submittal is provided in **Appendix E**.

On July 2, 2018 NYSDEC issued a review letter with comments on the June 7, 2018 Maser Consulting Construction Certification for the SSDS. A copy of this letter is provided in **Appendix F**.

On July 11, 2018 Maser Consulting provided a letter response to NYSDEC's July 2, 2018 review letter. A copy of this letter response is provided in **Appendix G**.

### f. Construction Drawings

Construction drawings for the SSDS are included in **Appendix C**.

## II. PART 360 PERMIT

### A. Part 360 Permits and Modifications

The following permit was issued for this Project:

NYSDEC Permit No. 2-6006-00014 / 000013 (Solid Waste Management Facility – Ferry Point Park Golf Course, Bronx NY) issued on May 21, 2014 (copy provided in **Appendix A**).

### B. Reference Documents

Refer to the 2015 Final Construction Certification Report for a list of Permit reference documents. These documents support the original Permit and/or provide basis for subsequent permits renewals and modifications.

### C. Non-Conformance Issues

In accordance with Special Condition 24 of the 2014 Permit, the IEM reported on Permit-related non-conformance issues during the duration of construction of the permanent clubhouse and on the gas main installation project. Non-conforming issues identified during the construction of the new facility were immediately addressed and remedied so that activities were in conformance with applicable plans, specifications and permits.

### D. Operational Upsets, Emergencies, and Unusual Circumstances

No evidence of security breaches, unauthorized entries, injuries, fires, theft, vandalism etc. were observed during construction of the permanent clubhouse. The only post-construction upset was related to damage caused to the outdoor lighting system from wildlife borrowing and chewing. Corrective measures were undertaken with normal and routine maintenance actions by The Trump Organization maintenance staff.

### E. Reporting

The IEM was responsible for daily and weekly reporting to the NYCDPR regarding the status of the work. The IEM participated in weekly on-site construction meetings and submitted weekly Erosion Control Reports during the construction period. Daily Observation Reports ("DOR") were also submitted to the NYCDPR for review and comment.

The IEM reported to the NYCDPR on a generally daily basis on the following information: weather conditions, fill materials imported to the site, detailed notes of construction activities, and non-conformance issues related to the Permit conditions. Non-conformance issues were immediately addressed by the contractors under the supervision of the IEM. The IEM also reported weekly to the NYCDPR on the construction status and pertinent observations regarding the erosion control measures around the construction site and at the imported soil stockpile area.

DORs are provided in **Appendix I** beginning on July 19, 2017 through February 5, 2019.

### F. Authorized Fill Volumes

Imported fill material was derived from two pre-approved sources, one for cover material associated with the new Clubhouse and one for cover material used in the installation of the new 6-inch gas main.

New York Recycling located at 475 Exterior Road, Bronx, NY was the source of the material used for the new Clubhouse. A table in **Appendix K** indicates the volumes of material imported from this facility. This material met the soil quality standards set forth in the Permit requirements. During the course of the importation process, the material was re-sampled in order to reconfirm its quality. Analytical testing data can be reviewed in **Appendix J**. A total of 1,062 cubic yards of material was imported from this source site between November 2017 and March 2018.

Ranco Sand and Gravel located at 151 South Street, Manorville, New York was the source site for materials imported for the gas main installation project. A site source inspection was conducted in advance of the imports and analytical testing was performed to establish that imported material would meet all Permit conditions and requirements. A table in **Appendix L** provides a summary of the imports from Ranco Sand & Gravel. A of total 690 cubic yards of material was imported between September and October 2018.

# III. FILL IMPORTATION QA/QC PROGRAM

## A. Background

Fill material importation for construction of the permanent clubhouse commenced on November 27, 2017 and the last day for fill import was March 12, 2018. The fill importation QA/QC program implemented for the Project based on the Permit and associated reference documents was adhered to. The fill importation consisted of two main components: source site reviews and on-site inspections. A source site review was conducted by the IEM prior to fill material being imported to the Site and additional visual and PID inspections were completed by the IEM upon the material entering the Site at the IEM inspection area and again once the material was dumped at the work or stockpile location on the Site.

## B. Source Site Reviews

Prior to cover layer material being imported to the Site, each potential source was thoroughly evaluated by the IEM. An environmental review was performed for proposed source sites in accordance with Special Condition 24 of the 2014 Permit. The source site review process criteria were specified in the Report on Fill Management, Operations and Maintenance, prepared by TRC on May 16, 2000, and revised June 30, 2005 (Volume #2 of the 2005 Engineering Report). The source site review process was modified over time as compared to the original process outlined in the various engineering reports and permit modification requests. The process generally consisted of the following main components:

- NYCDPR would notify the IEM of a new potential source site. NYCDPR would provide the IEM with the site name and location as well as any available historical site information and soil environmental analytical results that existed for the potential source site.

- Once NYCDPR confirmed that their desire to move forward with pursuing the potential source site, NYCDPR authorized the IEM to retrieve available site information. NYCDPR then completed an initial review of the existing site information, generated a sampling plan, and provided the results of the initial review and sampling plan to the IEM. NYCDPR then authorized the IEM to conduct a desktop review of the existing site information, available soil environmental analytical results, and NYCDPR's sampling plan. The IEM provided NYCDPR with comments related to their review and their sampling plan in consultation with NYSDEC. Once a final sampling plan was agreed upon, the source site investigation was initiated and executed per the NYCDPR sampling plan with IEM oversight. For source sites with in-situ material, test pits

were typically completed with additional soil samples inspected, collected, and analyzed in accordance with the Permit requirements. Once the sampling was completed, the IEM reviewed sample results and the IEM generated a memorandum summarizing the review process and provided recommendations and requirements necessary for NYCDPR to address in order to continue pursuing the potential source site. The recommendations typically included conditions associated with overseeing the excavation, loading, and importing of the source site material to the Site in accordance with the Permit. The IEM submitted the memo of recommendations to NYSDEC for review and comment prior to issuing the final memorandum to NYCDPR. NYSDEC would provide final comments and approval of the source site with any additional required conditions.

- If NYCDPR determined that the potential source site was worth pursuing considering site-specific conditions, schedules, etc., they coordinated with the source site operator and IEM on importation schedule and requirements. The IEM provided oversight to confirm that the loading, hauling, and overall import of the approved material was completed in accordance with the memorandum of recommendations, NYSDEC conditions, and the Permit.

- The IEM provided oversight during export from the approved source sites on an as needed basis and provided oversight at each source site during additional sampling activities if the source site was exporting more than the minimum sampling frequency outlined in the Permit (i.e. 10,000 cubic yards for shaping layer material and 2,000 cubic yards for cover layer material).

If at any time during the review process there were reasons for concern identified by the IEM resulting in the potential source site being classified as a "complex" source site, NYSDEC became the primary reviewer and made final recommendations related to additional site investigation requirements or approval/rejection of the potential source site with support from the IEM. A complex source site was defined by the presence of an abundance of or particular Recognized Environmental Concerns ("RECs") and NYSDEC made decisions related to approval and/or associated conditions for further evaluation or import of the fill material.

For both source sites used in this Construction Project, no complex source site determinations were made.

Details of source site review and site testing activities are included in the report text and specific DORs. Source site review supporting information and testing data is included in the 2015 Final Construction Certification Report.

### C. Cover Layer Material

Materials accepted for use as cover layer on the Site were sampled prior to acceptance and after each additional 2,000 cubic yards. As per the 2005 Permit modification, the parameters for cover layer material included the complete analyte list of TAGM 4046 for total VOCs, total SVOCs, total pesticides and herbicides, total PCBs, total metals, sulfur, and asbestos.

Based on source site reviews and site testing activities, the cover layer material imported to the Site met the following chemical limits:

| Analyte | Shaping Layer |
|---|---|
| **RCRA Metals (mg/kg = ppm)** | |
| Arsenic | 28 |
| Barium | 2,000 |
| Cadmium | 20 |
| Chromium | 1,000 |
| Copper | 1,000 |
| Lead | 400 |
| Mercury | 0.57 |
| Selenium | 11 |
| Silver | 100 |
| **TCLP Metals (mg/l)** | |
| Arsenic | 5.0 |
| Barium | 100.0 |
| Cadmium | 1.0 |
| Chromium | 5.0 |
| Lead | 5.0 |
| Mercury | 0.2 |
| Selenium | 1.0 |
| Silver | 5.0 |
| **Volitile Organic Compounds (mg/kg)** | |
| Acetone | 0.2 |
| Benzene | 0.06 |
| Benzoic Acid | 2.7 |
| 2-Butanone (i.e. MEK) | 0.3 |
| Carbon Disulfide | 2.7 |
| Carbon Tetrachloride | 0.6 |
| Chlorobenzene | 1.7 |
| Chloroethane | 1.9 |
| Chloroform | 0.3 |
| Dibromochloromethane | N/A |
| 1,2-Dichlorobenzene | 7.9 |
| 1,3-Dichlorobenzene | 1.6 |
| 1,4-Dichlorobenzene | 8.5 |
| 1,1-Dichloroethane | 0.2 |
| 1,2-Dichloroethane | 0.1 |
| 1,1-Dichloroethene | 0.4 |
| 1,2-Dichloroethene (trans) | 0.3 |
| 1-3 dichloropropane | 0.3 |
| Ethylbenzene | 5.5 |
| 113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane) | 6 |
| Methylene chloride | 0.1 |
| 4-Methyl-2-Pentanone (i.e. MIBK) | 1 |
| Tetrachloroethene | 1.4 |
| 1,1,1-Trichloroethane | 0.8 |
| 1,1,2,2-Tetrachloroethane | 0.6 |
| 1,2,3-trichloropropane | 0.4 |
| 1,2,4-trichlorobenzene | 3.4 |
| Toluene | 1.5 |
| Trichloroethene | 0.7 |
| Vinyl chloride | 0.2 |
| Xylenes | 1.2 |
| **TCLP Volitile Organic Compounds (mg/l)** | |
| Benzene | 0.5 |
| Carbon Tetrachloride | 0.5 |
| Chlorobenzene | 100 |
| Chloroform | 6 |
| 1,4-Dichlorobenzene | 7.5 |
| 1,2-Dichloroethylene | 0.5 |
| 1,1-Dichloroethylene | 0.7 |
| Methyl ethyl ketone | 200 |
| Tetrachloroethylene | 0.7 |
| Trichloroethene | 0.5 |
| Vinyl chloride | 0.2 |

| Semi-Volatile Organic Compounds * (mg/kg) | |
|---|---|
| Acenaphthene | N/A |
| Acenaphthylene | N/A |
| Aniline | N/A |
| Anthracene | N/A |
| Benzo(g,h,i)perylene | N/A |
| bis(2-ethylhexyl)phthalate | N/A |
| Butylbenzylphthlate | N/A |
| 4-Chloroaniline | N/A |
| 4-Chloro-3-methylphenol | N/A |
| 2-Chlorophenol | N/A |
| Dibenzofuran | N/A |
| 3,3'-Dichlorobenzidine | N/A |
| 2,4-Dichlorophenol | N/A |
| 2,4-Dinitrophenol | N/A |
| 2,6 Dinitrotoluene | N/A |
| Diethylphthlate | N/A |
| Dimethylphthlate | N/A |
| Di-n-butyl phthalate | N/A |
| Di-n-octyl phthlate | N/A |
| Fluoranthene | N/A |
| Fluorene | N/A |
| Hexachlorobenzene | N/A |
| Isophorone | N/A |
| 2-methylnaphthalene | N/A |
| 2-Methylphenol | N/A |
| 4-Methylphenol | N/A |
| Naphthalene | N/A |
| Nitrobenzene | N/A |
| 2-Nitroaniline | N/A |
| 2-Nitrophenol | N/A |
| 4-Nitrophenol | N/A |
| 3-Nitroaniline | N/A |
| Pentachlorophenol | N/A |
| Phenanthrene | N/A |
| Phenol | N/A |
| Pyrene | N/A |
| 2,4,5-Trichlorophenol | N/A |
| Dibenzo(a,h)anthracene | 10 |
| Benzo(a)pyrene | 10 |
| Benzo(a)anthracene | 10 |
| Benzo(b)fluoranthene | 10 |
| Ideno(1,2,3-cd)pyrene | 10 |
| Benzo(k)fluoranthene | 10 |
| Chrysene | 10 |
| Total SVOCs | 500 |
| Total cVOCs | 10 |
| **Organic Pesticides/Herbicides and PCBs (mg/kg)** | |
| Aldrin | N/A |
| alpha-BHC | N/A |
| beta-BHC | N/A |
| delta-BHC | N/A |
| Chlordane | N/A |
| 2,4-D | N/A |
| 4,4'-DDD | N/A |
| 4,4'-DDE | N/A |
| 4,4'-DDT | N/A |
| Dibenzo-P-dioxins (PCDD) 2,3,7,8 TCDD | N/A |
| Dieldrin | N/A |
| Endosulfan I | N/A |
| Endosulfan II | N/A |
| Endosulfan Sulfate | N/A |
| Endrin | N/A |
| Endrin keytone | N/A |
| gamma-BHC (Lindane) | N/A |
| gamma-chlordane (trans chlordane) | N/A |
| Heptachlor | N/A |
| Heptachlor epoxide | N/A |
| Methoxychlor | N/A |
| Mitotane (2,4' DDD) | N/A |
| Parathion | N/A |
| PCBs | N/A |
| Polychlorinated dibenzo-furans (PCDF) | N/A |
| Silvex | N/A |
| 2,4,5-T | N/A |
| Total PCBs | 10 |
| Total Pesticides | 10 |
| **Other** | |
| Asbestos | 0.50% |
| Total Sulfur | 0.50% |

N/A = Not Available
SB = Site Background
* = Total SVOCs must be less that 500ppm. Total carcinogenic SVOCs must be less than 3 ppm if any one of the cSVOCs** exceeds TAGM.
** = cSVOC list includes: Benzo(a)pyrene, Dibenzo(a,h)anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, and Chrysene.
*** = Some forms of Cyanide are complex and very stable while other forms are pH dependent and hence are very unstable. Site-specific form(s) of Cyanide should be taken into consideration when establishing soil cleanup objective
**** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.
MDL = Method Detection Limit

### a. New York Recycling

Details of the New York Recycling (475 Exterior Street, Bronx NY) source site review and site testing for this cover layer material source site are included in the DORs. Analytical sampling and testing was completed at the site in September 2017. A site inspection was performed concurrently with the sampling event.

Approximately 1,062 cubic yards of cover layer material were imported to the Site from this source site for construction of the permanent clubhouse between November 2017 and March 2018. The majority of the material was used to raise the grade elevation in the immediate vicinity of the Clubhouse foundation and the landscape beds surrounding same.

### b. Ranco Sand & Stone

The source site review for Ranco Sand & Stone (151 South Street, Manorville NY) consisted of an August 25, 2018 site visit to collect samples of this cover layer material for laboratory analysis; results are included in **Appendix N**. Results indicated that analyzed parameters met the permit standards.

Approximately 690 cubic yards of cover layer material were imported to the Site from this source site for cover material related to the gas main installation project.

## D. On-Site Fill Importation Inspections

### c. Process

As required under Special Condition 24 of the 2014 Permit, fill importation was inspected at the Site by the IEM. Fill material volume (truck volume) was measured and recorded for each delivery of fill material as it arrived on-site by NYCDPR's appointed representative. The fill material was then inspected by the IEM at the entrance to the Site. At this time, the fill material was visually inspected and field screened for signs of contamination. The visual inspection included observations of the material, disturbing the material with a shovel, and close-up observations of the material retrieved by shovel while still in the truck or trailer. Field screening of the fill material was executed using a PID. If the fill material failed to meet the Permit requirements for reasons such as a PID reading above ambient air, the presence of asphalt, concrete or brick components, or some other unauthorized debris, the load was rejected immediately prior to dumping. If the material was rejected, the truck was not allowed to dump on-site and was directed to exit the site immediately.

During the material imports for the Clubhouse and the gas main installation project, the IEM found no reason to reject the imported loads. Loads met the visual and field screening tests and were subsequently accepted.

If the fill material passed the initial inspection at the IEM observation area, either it was allowed to dump directly at a work location for immediate use as cover layer material or it was transported to, and dumped at, a stockpile location. At the dump location, the IEM screened the fill material visually and with a PID for a second time prior to spreading if dumped at an active work location. If the fill material did not meet the permit requirements at the dump location, it was immediately rejected, loaded back onto the same truck, and transported off-site. During the material imports for the Clubhouse and the gas main installation project, the IEM found no reason to reject the imported loads. Loads met the visual and field screening tests and were subsequently accepted.

#### d. Trucking Manifests

Trucking manifests were utilized for imported cover layer materials. A three-part manifest form was completed to track each load of material from origination at the source site to destination at the Site. The manifest contained information including but not limited to a manifest number, the source site name and address, the truck driver's name, truck and trailer license plate numbers, volume of material, as well as the time of departure from the source site and arrival time at the Site. Copies of fill import manifests are provided in **Appendix K**.

#### e. Rejected Trucks & Materials

Materials imported to the Site met the IEM's importation inspections, and none were rejected.

### E. Fill Tracking

Testing per 2,000 cubic yards for cover layer material is included in Special Condition 14 of the 2014 Permit).

Cover layer material volumes were tracked based upon the calculated volumes within each truck. This provided for the most accurate and consistent approach to monitoring the volume of imported fill materials. Prior to receipt of the calculated volumes, the IEM tracked estimated volumes as trucks dumped on the Site.

The total volume of cover layer material imported to the Site for construction of the permanent clubhouse was 1,530 cubic yards (truck volume) or 0.39 percent of the authorized amount under the Permit.

### F. Total Carcinogenic Semi-Volatile Organic Compound Tracking

As identified in Special Condition 14 of the 2014 Permit, the NYSDEC Acting Regional Director letter dated October 25, 2006 authorized the import of shaping material with a total carcinogenic SVOC (tcSVOC) level of up to 10 parts per million (ppm), which would not otherwise be acceptable, provided the tcSVOC weighted average of all imported material is equal to or less than 3 ppm at the end of each quarter. The tcSVOC weighted average is defined as the sum of the products of the material volume and the material tcSVOC, for each material source, divided by the total volume of the material imported. The weighted average was calculated over the course of construction and the final weighted average for shaping layer and cover layer materials imported to the Site was 0.70 ppm, less than the 3 ppm maximum. The total carcinogenic SVOC weighted average table and computations are included in the 2015 Final Construction Certification Report for materials imported to the Site after November 18, 2005.

SVOCs were sampled for New York Recycling on September 28, 2017. The tcSVOC level did not exceed 10 ppm. A copy of the laboratory report is provided in **Appendix J**.

SVOCs were sampled for Ranco Sand & Stone on August 25, 2018. The tcSVOC level did not exceed 10 ppm. A copy of the laboratory report is provided in **Appendix N**.

# IV. PERMANENT CLUBHOUSE CONSTRUCTION

## A. General

From July 2017-September 2018, Trump Golf Links at Ferry Point constructed a permanent clubhouse facility. The 14,100 square foot one-story building is located in the far southern section of the Site (immediately west of the 18th fairway) and includes locker rooms, showers, a bar room, a kitchen and associated facilities, ballrooms, administrative offices and a golf pro shop. The Trump Organization contracted with JCS Construction, Inc. to build this facility on piles, as it was formerly a landfill.

## B. Environmental Controls / Construction

### a. Landfill Gas Monitoring

Steel beams were driven to intermediate depths of approximately 40 feet, welded to another steel beam of the same length, driven to completion depths of approximately 75 feet, then cut to grade. Prior to welding/cutting, the piles were checked at the inlet (i.e. ground surface elevation) with a four-gas MiniRAE Meter. The meter alarm was triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) were above OSHA exposure limits; the alarm was not triggered for the vast majority of field activities, and on the few occasions when triggered, soil was placed over the inlet until the meter alarm was not triggered prior to welding/cutting activities. As an added measure of protection, when the meter alarm activated, explosion-proof industrial ventilation fans were activated to vent the work area and disperse gases emanating from the subsurface.

### b. Imported Soils Monitoring

Fifty-nine (59) loads of soil (approximately 1,062 cubic yards) were imported from New York Recycling, a donor source located at 475 Exterior Street in the Bronx; and 27 loads of soil (approximately 690 cubic yards) were imported from Ranco Sand & Stone, a donor source located at 151 South Street in Manorville NY. Air monitoring performed during the course of the workday revealed no detections above background on the PID. Visual observation and PID monitoring of each load of soil from New York Recycling and from Ranco Sand & Stone showed no evidence of VOCs or visual signs of debris within the material.

### C. Municipal Solid Waste

A Royal Carting commercial municipal solid waste (MSW) six-yard container was available on Site during the duration of clubhouse construction activities. MSW was not encountered or generated during digging, earth-moving or excavation activities associated with the new clubhouse or the gas main installation activities.

### D. Earthwork / Fill Placement

Earthwork and fill placement for this Project were performed in accordance with the Permit.

#### a. Cover Layer Material

Cover layer material was installed at the Site in accordance with the 2014 Permit (**Appendix A**).

Imported soil from New York Recycling and from Ranco Sand & Stone was backfilled and graded around the perimeter of the concrete sub-structure. The soil from New York Recycling was characterized as brown fine-coarse sand with occasional crushed stone roughly 1-1.5 inches in diameter. Materials imported from Ranco Sand & Gravel was characterized as clean, well-rounded white to gray medium sands.

#### b. Topsoil

Topsoil was used on the Site (in lieu of sand) specifically in tree planting pits and other landscape areas. Topsoil was imported from commercially available sources (i.e. Home Depot) and used on the Site as approved. This material met the cover layer material Permit requirements including the specification included in the 2014 Permit.

### E. Meetings

On a weekly basis during construction of the permanent clubhouse, progress meetings were held in the JCS field office trailer or in the temporary clubhouse on site. Various representatives from NYCDPR, the Trump Organization, JCS and the IEM (Maser Consulting) attended the meetings to discuss construction progress, current issues and scheduling.

Available meeting minutes from construction progress meetings are provided in **Appendix M**.

### F. SSDS / Liquid Boot® Installation

From November 2-7, 2017 the SSDS was installed. Lateral collection piping was laid, and the SSDS pits were excavated and connected to the lateral collection piping. The IEM provided oversight, including taking measurements of the as-built SSDS component installed locations for use in this report.

Stone cover was then poured over the SSDS prior to Liquid Boot® installation.

From November 8-15, 2017 the stone cover was lined (base fabric), sprayed with Liquid Boot®, and allowed to cure. Smoke testing was then performed, with leaks identified and resprayed. Coupon samples were measured to ensure that the cured thickness met the design requirement. Once smoke testing, coupon measurements and leak repairs were complete, a cover fabric was placed over the floor footprint prior to pouring the slab.

On two separate occasions after the initial spraying, curing and smoke testing of the vapor barrier, repairs had to be made to the barrier layer. IEM observations of damage to the cover fabric provided the impetus for additional spraying and testing. The first event took place in January/February of 2018 when weather conditions and mild temperatures prevailed. A final smoke test and barrier layer repair took place before the concrete floor was poured and once the Clubhouse was being enclosed. During both re-spray events, defects were located, repaired and re-tested for integrity. Like the previous smoke tests, the final smoke test indicated no signs of vapor barrier leaks, tears or defects.

On one occasion, Liquid Boot® was sprayed at temperatures below the recommended 45 degrees F. However, it was determined by experienced applicators and inspectors—based on site specific conditions—that the curing of the spray was acceptable. See documentation from CETCO/Minerals Technologies (the Liquid Boot® manufacturer) dated November 9, 2017 (**Appendix P**).

A letter of completion provided by EAI is provided in **Appendix P**.

### G. Six-Inch Gas Main Construction

In July 2018, the existing 2-inch gas service line was determined by FPA engineers to be insufficient to support the demands of the new Clubhouse facility. A new 6-inch gas main was required to meet the demand. Installed between August and October 2018, the new main provides sufficient volumes of natural gas to support the new Clubhouse facility and its amenities.

The new gas line was connected to a Con Ed main located on Schley Drive, north of the golf course. The new pipeline runs along the western perimeter of the site along fairways #6, #7 and #8. The line doglegs to the west side of the maintenance area and generally follows the service cart path along the west side of the property. The line turns to the east toward the new Clubhouse in the general vicinity of the parking lot.

The service connection to the Clubhouse is located in a vault approximately 50 feet west of the Clubhouse, near the driveway entrance.

Architect drawings for this gas main are provided in **Appendix Q**. DORs are provided in **Appendix R** beginning on August 24, 2018 through October 22, 2018.

### H. Record Drawings & Deviations from Approved Design Plans

The permanent clubhouse project consisted of the following features and was designed by Hart Howerton and FPA:

- Golf pro shop
- Women's and men's locker rooms
- Dining room
- Bar/grill
- Kitchen
- Terraces
- Offices
- Vestibule and porch
- SSDS/Vapor Barrier

Deviations to the permanent clubhouse construction project were as follows:

- Drawing No. FO-500.00 "Vapor Remediation Underslab Plan" – lateral piping to SSDS pits DP-2B & DP-2C built approximately 2 feet offset from design due to piping conflicts
- Drawing No. FO-501.00 "Vapor Remediation Floor Plan" – riser piping for fan units SF-1 & SF built within walls to conceal system and prevent unauthorized access; gas sensors in Hall 124, Vestibule 101 & Electrical 113 ceilings built approximately 3-5 feet from design due to piping conflicts; monitoring point MP-1 built approximately 9 feet from design due to piping conflicts; monitoring point MP-8 built approximately 50 feet from design due to piping conflicts; monitoring point MP-9 built approximately 14 feet from design due to piping conflicts; monitoring point MP-10 built approximately 14 feet from design due to piping conflicts; monitoring point MP-2 was installed at the location shown in the Plan, however, it appears to have been tiled-over and is no longer accessible as a sampling point
- Drawing No. FO-502.00 "Vapor Remediation Attic & Mezzanine Plan" – fan unit SF-1 built approximately 10 feet to the left of design due to piping conflicts
- Drawing No. FO-504.00 "Vapor Remediation Details" – detail 1B built using hollow (instead of solid) concrete blocks; 'Methane Gas Sensor Detail (option 1)' & 'Methane Gas Sensor Detail (option 2)' added for sensor plenum boxes
- Drawing No. SD201 "Methane Monitoring System Ceiling Plan (As Built)" – methane gas sensor S16 built approximately 5 feet from design due to piping conflicts; methane gas sensor S19 built approximately 4.5 feet from design due to piping conflicts; methane gas sensor S28 built approximately 5 feet from design due to piping conflicts

Copies of the drawings issued for construction are provided in **Appendix C**. Copies of the drawings showing deviations from design are provided in **Appendices E and O**.

## V. ENVIRONMENTAL MONITORING

### A. Stormwater Pollution Prevention Plan (SWPPP)

The IEM performed weekly erosion control inspections to ensure compliance with Permit requirements. Erosion control inspections were carried out through the duration of permanent clubhouse construction. The SPDES permit remained effective until completion of ongoing construction including the permanent clubhouse. Copies of erosion control inspection reports are provided in **Appendix H**.

### B. Landfill Gas Monitoring

NYCDPR will implement post-construction monitoring necessary to fulfill the requirements of the Post-Construction Custodial Care Plan for landfill gas monitoring per the 2015 Final Construction Certification Report.

## VI. SUMMARY

Construction of a permanent clubhouse in the southern corner of the Site began in July 2017 and was substantially completed in October 2018. Activities included clearing and grubbing, excavation, installation of support pilings, grading, importation of fill material, construction of the permanent clubhouse with a protective vapor barrier system and associated SSDS and associated appurtenances, installation, testing and calibration of an interior methane detection system, installation of utilities and infrastructure, installation of plantings, and installation of a new gas main. A representative of the IEM was present during construction activities. For this project, fill importation and SSDS/Vapor Barrier construction followed the Permit and NYSDEC requirements as documented in the DORs as summarized herein.

## VII. CERTIFICATION

Certification Statement

I, Donald Bowman, an employee of Maser Consulting P.A. and a Registered Professional Engineer licensed by the State of New York, exercising independent judgment and discretion do hereby certify that this Subslab Depressurization System (SSDS) for the Trump Golf Links at Ferry Point Clubhouse was constructed under my direction and supervision. The information contained herein is based upon: (1) work which I have personally inspected both during and after construction from July 2017 to date; (2) information provided to me by those directly employed by Maser Consulting P.A.; (3) Design Consultants; and (4) contractors responsible for construction pursuant to their contracts except as indicated[2].

I certify that, from July 2017 to date, Maser Consulting representatives observed the installation of the critical elements of the SSDS for the Trump Golf Links at Ferry Point Clubhouse, with the following deviations from design:

- Drawing No. FO-500.00 "Vapor Remediation Underslab Plan" – lateral piping to SSDS pits DP-2B & DP-2C built approximately 2 feet offset from design due to piping conflicts
- Drawing No. FO-501.00 "Vapor Remediation Floor Plan" – riser piping for fan units SF-1 & SF built within walls to conceal system and prevent unauthorized access; gas sensors in Hall 124, Vestibule 101 & Electrical 113 ceilings built approximately 3-5 feet from design due to piping conflicts; monitoring point MP-1 built approximately 9 feet from design due to piping conflicts; monitoring point MP-8 built approximately 50 feet from design due to piping conflicts; monitoring point MP-9 built approximately 14 feet from design due to piping conflicts; monitoring point MP-10 built approximately 14 feet from design due to piping conflicts; monitoring point MP-2 was installed at the location shown in the Plan, however it appears to have been tiled-over and is no longer accessible as a sampling point
- Drawing No. FO-502.00 "Vapor Remediation Attic & Mezzanine Plan" – fan unit SF-1 built approximately 10 feet to the left of design due to piping conflicts
- Drawing No. FO-504.00 "Vapor Remediation Details" – detail 1B built using hollow (instead of solid) concrete blocks; 'Methane Gas Sensor Detail (option 1)' & 'Methane Gas Sensor Detail (option 2)' added for sensor plenum boxes

[2] Certification means a statement of professional opinion based upon investigation, analysis, knowledge and belief that is stated to be true and accurate. 6 NYCRR Part 360-1.2(b)24.

- Drawing No. SD201 "Methane Monitoring System Ceiling Plan (As Built)" – methane gas sensor S16 built approximately 5 feet from design due to piping conflicts; methane gas sensor S19 built approximately 4.5 feet from design due to piping conflicts; methane gas sensor S28 built approximately 5 feet from design due to piping conflicts




Donald Bowman, P.E.
Maser Consulting P.A.

11/26/2019
Date

\\njcad\Projects\17002426A\Reports\Construction As-Built Report - Aug 2018\191126 Trump Ferry Point Clubhouse As-Built Report.docx

# APPENDIX A

## 6 NYCRR Part 360 Permit for Ferry Point Park (NYSDEC Permit No. 2-6006-00014 / 00013 with an Effective Date May 21, 2014 and Expiration Date May 20, 2024)

**New York State Department of Environmental Conservation**
**Division of Environmental Permits, Region 2 Office**
**47-40 21ST Street, Long Island City, NY 11101-5407**
**Phone:** (718) 482-4997 • **Fax:** (718) 482-4975

Joe Martens
Commissioner

May 21, 2014

Kay Zias
Capital Projects
City of New York Parks and Recreation
Olmstead Center
Flushing Meadows-Corona Park
Flushing, N.Y. 11368

Re: DEC No. 2-6006-00014/000013 (2-6006-00014/00016)
Permit Issuance - Solid Waste Management Facility (Tidal Wetlands)
Ferry Point Park Golf Course, Bronx, NY

Dear Ms Zias:

Enclosed are permits for the referenced facility. Please read all conditions carefully. Please provide a copy of the permit and all attachments to the document repository established for this project.

Special Conditions 28, 29, 32, 37, 38 and 39, among others, specify post permit submittals, please make a note of the submission deadlines. To assist the development of a deed restriction for the project site, Attachment A, to this notice contains draft language of the conditions to be specified in the restrictive covenant.

If you have questions on the specific solid waste management conditions, please contact Sam Arakhan at 718-482- 4894. If you have questions regarding marine resources issues and the development of the waterfront park contact Susan Maresca at 718-482-6464. If you have any other questions regarding the administration of this permit, please contact Michelle Moore at 718-4982-4967.

Sincerely,

John F. Cryan
Regional Permit Administrator

Enclosures

S. Arakhan, DMM, R2
K. Brezner, DMM, R2
D. Menasha, DAR, R2
S. Maresca, DMR, R2
J. Nehila, Esq., DLA, R2
S. Zacharias, DOW, R2
M. Moore, DEP, R2
File

# ATTACHMENT A

## DECLARATION OF COVENANTS AND RESTRICTIONS

**THIS COVENANT** made this __ day of _____, 2014, by the City of New York ("City"), a municipal corporation organized and existing under the laws of the State of New York, acting by and through the New York City Department of Parks and Recreation ("DPR") and having an office for the transaction of business 830 Fifth Avenue, New York, New York, 10021, and the New York City Department of Citywide Administrative Services ("DCAS"), having an office for the transaction of business at 1 Centre Street, New York, New York, 10007, in favor of the New York State Department of Environmental Conservation ("Department"), an agency of the State of New York, with offices at 625 Broadway, Albany, New York, 12233;

**WHEREAS,** DPR has jurisdiction pursuant to the New York City Charter over certain municipal parkland in the Borough and County of the Bronx, New York, known as "Ferry Point Park", which was the site of a former municipal landfill;

**WHEREAS**, pursuant to the New York State Environmental Conservation Law, Article 27, Title 7 and regulations promulgated pursuant thereto at 6 NYCRR Part 360, the Department has issued DPR a Solid Waste Management Permit (DEC Permit No. 2-6006-00014/00013-0)(the "Permit"), annexed hereto as Attachment A, to construct a Golf Course, Community Park and Waterfront Park (hereinafter "the Project") on the eastern portion of Ferry Point Park, a 222 acre parcel bounded by Bronx-Whitestone Bridge to the West, Balcom, Miles and Emerson Avenues to the East, Schley Avenue and St. Raymond's Cemetery to the North and the East River to the South (the "Site"), said parcel comprising Block 5583, Lot 100 and a portion Block 6522, Lot 1, as shown on the Bronx County Tax Map and more particularly depicted on the map attached hereto as Attachment B;

**WHEREAS,** the Permittee is authorized to import a total of 2,514,000 cubic yards of in-place fill material to the Site, which fill material shall consist of approximately 2,120,000 cubic yards of select exempt construction and demolition (C&D) debris for the shaping layer, and approximately 394,000 cubic yards of cover material, to be used in constructing the Project;

**WHEREAS,** Special Condition 17 requires the Permittee to implement a Groundwater Monitoring Program as described in section 4.5 of the Supplemental Engineering Report, Volume 1, dated October 15, 2013 (hereinafter the "Supplemental Engineering Report");

**WHEREAS,** Special Condition 26 requires the Permittee to perform monthly monitoring of the Landfill Gas Passive Venting Trenches for the duration of the Permit, and, thereafter, to monitor the Landfill Gas Passive Venting Trenches as described in the Supplemental Engineering Report, Volume 3, Appendix F;

**WHEREAS,** Special Condition 28 requires the Permittee, during the duration of the Permit, to inspect the Landfill Gas Passive Venting Trenches monthly to verify the integrity of the venting trenches and their mulch cover, and, thereafter, to maintain the Landfill Gas Passive Venting Trenches after the completion of construction of the Project, in the manner described in the Supplemental Engineering Report, Volume 3, Appendix F;

**WHEREAS,** Special Condition 29 requires the Permittee, until the completion of the Project, to conduct monthly monitoring of the depth of ground water in each piezometer installed at the gas venting trenches, and, thereafter, such piezometer monitoring shall be performed in accordance with the Supplemental Engineering Report, Volume 3, Appendix F, Section 6;

**WHEREAS,** Special Condition 32 requires the Permittee to execute and file a Department approved deed restriction, which shall run with the land in perpetuity, and shall recite and require compliance with the Permit's provisions as regards to the custodial care requirements described in the Supplemental Engineering Report, Volume 3, Appendix I;

**WHEREAS,** Special Condition 33 requires the Permittee to conduct bi-weekly monitoring of the On and Off-site Gas Monitoring Networks;

**WHEREAS,** Special Condition 34 requires the Permittee to maintain, and upgrade if required, the On and Off-site Gas Monitoring Networks during facility construction and after completion of the Project;

**WHEREAS,** Special Condition 35 requires the Permittee, upon Department approval of the Permittee's written post-construction certification report, to implement the custodial care plan described in the Supplemental Engineering Report, Volume 3, Appendix I;

**WHEREAS,** Special Condition 36 requires Permittee, should the Project be abandoned, to close, monitor and maintain after closure the entire 222 acre Site, in accordance with 6 NYCRR Sect. 360-2.15 as a landfill in operation since 2000;

**WHEREAS,** Special Conditions 17, 26, 28, 29, 33 and 34, require the installation, maintenance and operation of the Groundwater Monitoring Program, the Landfill Gas Passive Venting Trenches, the piezometers, and the On and Off-site Gas Monitoring Networks, on the perimeter of the site and off-site, for the purposes of monitoring groundwater and Landfill Gas and/or preventing Landfill Gas from migrating from the Site (hereinafter "Engineering Controls") said Engineering Controls being more particularly depicted on the map attached hereto as Attachment C.

**WHEREAS,** Special Condition 32 of the Permit requires the City of New York to execute and file a deed restriction for the real property beneath the site to run with the land in perpetuity, and that the deed restriction recites and requires compliance with the Permit's provisions as regards to Groundwater monitoring, the maintenance of Landfill Gas venting trenches, the piezometers, the On-site Landfill Gas Monitoring Network, including perimeter monitoring wells, the Off-site Landfill Gas Monitoring Network, and the criteria for abandonment of the site as specified in Special Condition 36 of the Permit;

**NOW THEREFORE**, pursuant to its terms, this covenant runs with the land and:

(1) requires the maintenance and operation of the Engineering Controls as set forth in Special Conditions 17, 26, 28, 29, 33 and 34 of the Permit;

(2) prevents modification or alteration of the Engineering Controls except as otherwise set forth in Special Conditions 17, 26, 28, 29, 33 and 34 of the Permit or in any subsequent written authorization by the Department or its successor agency;

(3) unless prior written approval by the Department or its successor agency is first obtained, there shall be no construction, use or occupancy of the Site that results in the disturbance or excavation of the Site which threatens the integrity of the Engineering Controls, or which results in unacceptable human exposure to contaminated soils;

(4) the owner of the Site shall not disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of Engineering Controls required by the Permit and the Supplemental Engineering Report, unless in each instance the owner first obtains a written waiver of such prohibition from the Department or its successor agency;

(5) the owner of the Site shall prohibit the Site from ever being used for purposes other than for the Project described in the Permit, without the express written waiver of such prohibition by the Department or its successor agency;

(6) the owner of the Site shall provide a periodic certification, prepared and submitted by a professional engineer or other environmental professional acceptable to the Department or its successor agency, which will certify that the Engineering Controls put in place are unchanged from the previous certification, comply with the Permit and the Supplemental Engineering Report, and have not been impaired;

(7) this Declaration is and shall be a covenant that shall run with the land and shall be binding upon all future owners of the Site, and shall provide that the owner and its successors and assigns consent to enforcement by the Department or its successor agency of the prohibitions and restrictions that the Permit requires be recorded, and hereby covenant not to contest the authority of the Department or its successor agency to seek enforcement;

(8) any deed of conveyance of the Site, or any portion thereof, shall recite, unless the Department or its successor agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions;

(9) in the event that the Project is abandoned, requires closure, monitoring and maintenance of the Site as a landfill in operation since 2000, in accordance with 6 NYCRR Part 360-2.15 and Special Condition 36 of the Permit; and

(10) may be modified by mutual agreement of the City or its successors and the Department or its successor agency.

**IN WITNESS WHEREOF**, the undersigned have executed this instrument on the day(s) written below.

_____
New York City Department of Parks and Recreation

Sworn to before me
this ____ day of _____, 201__

_____
Notary Public

Approved as to form
this ____ day of _____, 201__

_____
Assistant Corporation Counsel

_____
Department of Citywide Administrative Services

Sworn to before me
this ____ day of _____, 201__

_____
Notary Public

Approved as to form
this ____ day of _____, 201__

_____
Assistant Corporation Counsel

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

| DEC PERMIT NUMBER: | | EFFECTIVE DATE: |
|---|---|---|
| 2-6006-00014/00013 (SW)<br>2-6006-00014/00016 (TW) | PERMIT<br>Under the Environmental Conservation Law (ECL) | May 21, 2014 |
| **FACILITY:** | | **EXPIRATION DATE:** |
| Ferry Point Park Golf Course | | May 20, 2024 |

TYPE OF PERMIT: ☐ New ☒ Renewal ☒ Modification ☐ Permit to Construct ☐ Permit to Operate

☒ Article 27, Title 7; 6 NYCRR 360: Solid Waste Management

☐ 6 NYCRR 608: Water Quality Certification

☐ Article 15, Title 15: Long Island Wells

☐ Article 17, Titles 7, 8: SPDES

☒ Article 25: Tidal Wetlands

☐ Article 15, Title 5: Protection of Waters

| **PERMIT ISSUED TO:** | **TELEPHONE :** |
|---|---|
| Owner and Operator: NYC Department of Parks and Recreation | 212-360-8111(NYCDPR) |
| **ADDRESS OF PERMITTEE:** NYCDPR, 830 5th Avenue, New York, NY 10021-7001 | |
| **CONTACT PERSON FOR PERMITTED WORK:** Kay Zias | **TELEPHONE :** 718-760-6748 |

**PROJECT/FACILITY NAME:** Ferry Point Park Golf Course Construction

**PROJECT/FACILITY ADDRESS:** Eastern portion of Ferry Point Park, bounded by the Bronx Whitestone Bridge, Balcom, Miles and Emerson Avenues, Schley Avenue and the East River, Bronx County. Block 5583, Lot 100, Block 5622, Lot 1

**DESCRIPTION OF AUTHORIZED ACTIVITY:**

Construction of a Golf Course, Community Park and Waterfront Park on 222 acres of Ferry Point Park, requiring a total of approximately 2,514,000 cubic yards of material in-place volume. This material will be imported to the Site by truck and consist exclusively of: 1) recognizable and uncontaminated concrete or concrete products (including steel or fiberglass reinforcing rods that are embedded in the concrete), brick, soil, sand, gravel, and rock (hereafter referred to in this permit as select exempt construction and demolition debris) totaling approximately 2,120,000 in-place cubic yards for the shaping layer, and 2) approximately 394,000 in-place cubic yards of cover material. The imported material will be used to attain the final approved grades and contours.

All work associated with the authorized activity described above shall comply with all of the applicable provisions of 6 NYCRR Part 360 (Solid Waste Management Regulations), effective 29 September 1997. By acceptance of this permit, the Permittee agrees that this permit is contingent upon strict compliance with the ECL, all applicable regulations, and the General Conditions and Special Conditions included herein.

| **REGIONAL PERMIT ADMINISTRATOR:** John F. Cryan | **ADDRESS:** NYS Department of Environmental Conservation<br>47-40 21st Street, Long Island City, NY 11101 | |
|---|---|---|
| **AUTHORIZED SIGNATURE:** John F. Cryan | **DATE** May 21, 2014 | Page 1 of 17 |

**NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS**

**Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification**

The Permittee has accepted expressly, by the execution of its application for the subject work, the full legal responsibility for all damages and costs, direct or indirect, of whatever nature and by whomever suffered, for liability it incurs resulting from activity conducted pursuant to this permit or in noncompliance with this permit and has agreed to indemnify and save harmless the State from suits, actions, damages, and costs of every name and description resulting from such activity.

**Item B: No Right to Trespass or Interfere with Riparian Rights**

This permit does not convey to the Permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the subject work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

**GENERAL CONDITIONS**

**General Condition 1: Facility Inspection by the Department**

The subject facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the Permittee is complying with this permit and the ECL. Such representative may order the subject work suspended pursuant to ECL 71-0301 and SAPA 401(3).

The Permittee must provide a person to accompany the Department's representative during an inspection of the subject facility when the Department provides written or verbal notification to the Permittee at least 24 hours prior to such inspection.

A copy of this permit, including all general and special conditions therein, all amendments thereto, and all documents referenced therein must be available for inspection by the Department at the project site at all times that activity associated with the subject work is occurring. Failure to produce a copy of such permit, conditions, amendments, or documents upon request by a Department representative is a violation of this permit.

Any sign provided by the Department with this permit must be protected from the weather and posted in a conspicuous location at the subject work site throughout the period during which any of the subject work occurs.

**General Condition 2: Relationship of this Permit to Other Department Orders and Determinations**

Unless expressly provided for by the Department, this permit does not modify, supersede, or rescind any order or determination previously issued by the Department or any of the terms, conditions, or requirements contained in such order or determination.

**General Condition 3: Applications for Permit Renewals or Modifications**

The Permittee must submit a separate written application to the Department for renewal, modification, or transfer of this permit, including but not limited to a change in facility operator. Such application must include any forms or supplemental information the Department requires. Any renewal, modification, or transfer granted by the Department must be in writing. The Permittee must submit a renewal application at least:

a) 180 days before expiration of permits for State Pollutant Discharge Elimination System (SPDES), Hazardous Waste Management Facilities, major Air Pollution Control (APC) and Solid Waste Management Facilities; and
b) 30 days before the expiration of all other permit types.

Submission of applications for permit renewal, modification, or transfer are to be submitted to:
NYSDEC Regional Permit Administrator, Region 2, 47-40 21 Street, Long Island City, NY 11101 (tel. 718/482-4997).

**General Condition 4: Permit Modifications, Suspensions, and Revocations by the Department**

The Department reserves the right to modify, suspend, or revoke this permit when:

a) the scope of the permitted activity is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations is found;
b) the permit was obtained by misrepresentation or failure to disclose relevant facts;
c) new material information is discovered; or
d) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the permit was issued.

**General Condition 5: Compliance with Other Regulatory Requirements**

The Permittee is responsible for obtaining any other permits, approvals, lands, easements, and rights-of-way that may be required for the subject work. The Permittee and its independent contractors, employees, agents, and assigns must comply with all applicable local, State, and federal regulatory requirements.

**General Condition 6: Permittee to Ensure that its Contractors to Comply with Permit**

The Permittee must ensure that its independent contractors, employees, agents, and assigns read, understand, and comply with this permit, including all General and Special Conditions herein, in general, and General Condition No. 5, above, in particular. Such persons must be subject to the same sanctions for violations of this permit as those prescribed for the Permittee.

**ADDITIONAL GENERAL CONDITIONS FOR ARTICLE 27 and 6 NYCRR Part 360 (Solid Waste Management Facilities)**

7. That if future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized must not be completed, the owners, must, without expense to the State, and to such extent and in such time and manner as the Department may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.
8. The State of New York must in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.
9. All necessary precautions must be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate, or any other environmentally deleterious materials associated with the project. Any creosote-treated lumber must be weathered for at least six months before it is brought to the subject work site.
10. Any material dredged in association with the work herein permitted must be removed evenly, without leaving large refuse piles, ridges across the bed of a waterway or flood plain, or deep holes that may have a tendency to cause damage to navigable channels, the banks of a waterway, water quality, sediment quality, or benthic habitat.
11. There must be no unreasonable interference with navigation by the work herein authorized.
12. If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the Permittee must, without expense to the State, and to such extent and in such time and manner as the Department may require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.
13. If granted under Article 36, this permit does not signify in any way that the project will be free from flooding.
14. If granted under 6 NYCRR Part 608, the Department hereby certifies that the subject project will not contravene effluent limitations or other limitations or standards under Sections 301, 302, 303, 306, and 307 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.
15. In accordance with Title 19, Part 600.4 (c) of the New York Code of Rules and Regulations, the Department hereby certifies that the action described and approved in this permit, if located within the Coastal Zone, is consistent to the maximum extent practicable with the policies and purposes of the New York City Waterfront Revitalization Program.

## SPECIAL CONDITIONS

### Site Work

1. All activities authorized by this permit shall conform to all documents supporting the original permit, DEC No. 2-6006-00014/00011, dated July 17, 2000 ,and modified October 18, 2002 , November 18, 2005 and December 27, 2005 as modified by the following:

- Technical Environmental Assessment for the Ferry Point Park Recreation Facility prepared by Allee, King, Rosen and Fleming dated February 11, 2002 and amended September 29, 2004;
- Geotechnical Engineering Study prepared by Langan Engineering and Environmental Services, Inc. dated July 2, 2002;
- Response to Request for Additional Information prepared by TRC Raymond Keyes Associates dated July 2, 2002;
- Fill Procurement Protocol shall be as per the Department letters dated May 21, 2001 and May 23, 2001 from John Nehila to Steve Kass;
- Ferry Point Park: Offsite Methane Monitoring-Bronx, New York prepared by AKRF, Inc., October 12, 2001;
- Landfill Gas (LFG) Passive Vent Trench Along Miles And Emerson Avenues Plan and Detail, V-1, Sheet 1 of 4 prepared by TRC with checked date 02/04/02 ;
- Landfill Gas (LFG) Passive Vent Trench Along Balcom, Miles And Schley Avenues Plan and Detail, V-2, Sheet 2 of 4 prepared by TRC with checked date 02/04/02 ;
- Landfill Gas (LFG) Passive Vent Trench Along Northern Property Boundary Plan and Detail, V-3, Sheet 3 of 4 prepared by TRC with checked date 02/04/02;

**SPECIAL CONDITIONS**
**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities)**

- LFG Vent Trench and Piezometer Network Profile, V-4, Sheet 4 of 4 prepared by TRC with checked date 02/04/02;
- Landfill Gas (LFG) Passive Vent Trench Along Balcom, And Schley Avenues Plan and Detail, C-2, Sheet 1 of 1 prepared by TRC with checked date 07/20/01;
- Landfill Gas (LFG) Passive Vent Trench Along Balcom between Sampson & Dewey Avenues Plan and Detail, C-1, Sheet 1 of 1 prepared by TRC with checked date 03/09/01;
- Volume#1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associates, dated June 30, 2005. (revised)
- Volume #2, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associates, dated June 30, 2005.
- Settlement Evaluation and Long Term Monitoring Plan, Ferry Point Golf Course, Ferry Point Park, Bronx, NY, prepared by Langan Engineering and Environmental Services, Inc., dated January 26, 2005.
- Response to Department Comments prepared by TRC Raymond Keyes Associates, dated August 2, 2005 and by Langan Engineering and Environmental Services, Inc., dated June 30, 2005.
- Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, "Second Supplement to Engineering Report," prepared by TRC Raymond Keyes Associates, dated August 23, 2004.
- Site plans labeled "Ferry Point Park Public Recreational Facility Bulk Earthwork, Ferry Point Park Public Recreation Facility, Ferry Point Park, Bronx, New York" prepared by TRC Raymond Keyes Associates, dated April 22, 2005 (revised) consisting of drawings:

    - GC-2, G1 and G-2 dated 7/01/05 (last revised);
    - G-3, and G-4 dated 1/21/05 (last revised);
    - D-1 dated 7/1/04 (last revised);
    - D-2 dated 7/1/05 (last revised);
    - V-1, V-2, V-3 and V-4 dated 02/04/04 (last revised);
    - C-1 dated 3/09/01 (last revised);
    - C-2 dated 7/20/01;
    - SW-1.00 dated 4/13/04;
    - SW 1A.01 dated 2/18/04;
    - SW 1B.01 and SW 1b.02 dated 4/13/04;
    - Irrigation Design Phase 1 Ferry Point Park Approval Set, labeled "Ferry Point Park 0514-AS-R04-060704, Phase 1 Approval Set" dated 06/07/04 (last revised), sheets numbered 1, 2, 3 and 4 dated 5/22/03 and sheets numbered I, II and III dated 5/22/03

- Supplemental Engineering Report for the Solid Waste Management Facility Permit Application for Ferry Point Park East Bronx, NY, Vol. 1 - 3 dated May 31, 2012 and last revised October 15, 2013.

**SPECIAL CONDITIONS**
**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )**

2. Activities authorized by this permit include development of a golf course and parks, as well as the construction of associated structures, utility lines, gas venting and control systems. All aspects of the project must be constructed in accordance with the Department approved design plans, specifications and documents noted in Special Condition # 1. All physical aspects of the project including project location referenced in this permit shall be referred to as the "Site." All construction aspects of the permitted activities referenced in this permit shall be referred to as the "Project."

3. In accordance with "Item A" of the Notification of Other Permittee Obligations" found on page 2 of this permit, the Department in general accepts no liability for the structural integrity and/or the adequacy of the buildings and/or foundation designs of the proposed buildings or other structures associated with the development of the golf course. In addition, the Department specifically does not guarantee nor accept liability in regards to the measures proposed to prevent the subsidence of any buildings, foundations and other structures built on or adjacent to the Site, or to prevent the migration of explosive gas.

4. All operations at the Site shall occur Monday through Saturday during daylight hours, between sunrise and sunset, unless otherwise authorized by the Department.

5. All truck traffic entering and leaving the Site shall use only authorized truck traffic routes, and conform to the construction traffic management plans noted in Exhibit K of Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, New York, Engineering Report, prepared by TRC Raymond Keyes Associates, dated June 30, 2005 (revised).

a) All truckers shall receive written instruction on the truck access routes to and from the Site.

b) All trucks entering the site shall be tarped or sufficiently covered to comply with local and state highway regulations. The Site access and exit routes shall be maintained so that they are free from dust, dirt and debris resulting from the truck traffic.

6. Short-term settlement monitoring must strictly conform to the recommendations listed in the Settlement Evaluation and Long Term Monitoring Plan, Ferry Point Golf Course Ferry Point Park, Bronx, NY, prepared by Langan Engineering and Environmental Services, Inc., dated January 26, 2005. As construction progresses and long term plates are installed, short term plates do not need to be re-installed.

7. The long-term settlement monitoring must strictly conform to the recommendations listed in the Settlement Evaluation and Long Term Monitoring Plan, Ferry Point Golf Course Ferry Point Park, Bronx, NY, prepared by Langan Engineering and Environmental Services, Inc., dated January 26, 2005.

a) The long-term monitoring shall be performed for locations shown in Appendix H of the October 15, 2013 supplemental engineering report as described in Appendix I of the October 15, 2013 supplemental engineering report.

b) All monitoring points must be maintained in proper working condition. If any points are unable to be sampled for any reason, they must be repaired within two weeks of such detection and re-tested.

## Fill Importation

8. The Permittees are authorized to import a total of 2,514,000 cubic yards of in-place fill material to the Site. The fill material shall consist of approximately 2,120,000 cubic yards of select exempt construction and demolition (C&D) debris for the shaping layer, and approximately 394,000 cubic yards of cover material. The imported material shall be used on Site to attain the final approved grades and contours approved by the Department, and referenced on plans made a part of this permit.

a) The use of asphalt as fill material on the Site is prohibited.

b) The use of dredge spoils as fill material on the Site is prohibited.

c) There shall be no mechanical separation of steel and fiberglass reinforcing rods from concrete and concrete products at the Site.

d) No size reduction or material processing may occur on Site, except with earth moving equipment in the course of placement. However, the breakdown and removal of stumps and wood previously left on Site by the New York City Department of Sanitation (DOS) is permitted.

e) All solid waste material excavated from the Site shall be properly secured immediately, and then removed from the Site and legally disposed of within seven (7) days.

f) All unauthorized solid waste or fill material found on the Site shall be properly secured immediately, and then removed and legally disposed of within five (5) days of its discovery by Permittees.

g) All select exempt construction and demolition (C&D) debris for the shaping layer and the cover layer material must be free of all non-exempt C&D recognizable debris.

9. The quantification of all imported fill material shall be continuously tracked by both truck volume, and periodic topographic survey of the imported in-place fill volume. Since compacted in-place fill volumes will not equal truck volumes of fill, a 41.7 percent (41.7%) correction factor shall be applied for shaping layer material and a correction factor of 18 percent (18%) shall be applied for cover material. The correction factor for converting truck volume into in-place volume may be modified by the Department.

10. The Permittees must cease the importation of fill material if:

a) The final approved grades are attained prior to the permitted amount of fill material being imported;

b) 2,120,000 cubic yards of select exempt construction and demolition debris for the shaping layer, as measured by in-place fill volume determined through topographic survey, are accepted. All material imported to the Site is considered shaping layer material, unless testing determines otherwise; or

c) 394,000 cubic yards of cover layer material, as measured by in-place volume, are accepted.

**SPECIAL CONDITIONS**

**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )**

11. Use of fill material from DEC registered construction and demolition debris processing facilities (DEC registered C&D facilities or registration facilities) requires written Departmental approval. Such requests must be submitted to the Department for approval not less than ten (10) business days prior to any proposed date for importation from the new locations. No fill material may be received from unapproved facilities or locations. DEC registered construction and demolition debris processing facilities (DEC registered C&D facilities or registration facilities) may be used to obtain select exempt construction and demolition debris for fill material to the Department for its approval prior to use. The subsequent transportation and use of fill material from other additional registration facilities requires written Departmental approval. Such requests must be submitted to the Department for approval not less than ten (10) business days prior to any proposed date for importation from the new locations. No fill material may be received from unapproved facilities or locations.

12. Select exempt construction and demolition debris to be used as fill material at the Site may be accepted from DEC registered C&D facilities as approved pursuant to Special Condition #11, provided that the facilities segregate and clearly mark each stockpile with a specific identification number, the date each stockpile was started and the date when it was sampled by the Permittees. The Department shall be notified by Permittees at least 24 hours before any sampling event at a DEC registered C&D facility. All sampling reports shall be transmitted to the Department or the IEM directly from the certified testing laboratory.

13. The Permittee shall be responsible for ensuring that cover layer material is procured from a DEC approved source, and it meets all permit specifications.

a) If cover layer material is manufactured, the soil used in its manufacture must not originate from any industrial sites, brownfield site, historical fill site or DEC registered C&D facilities.

14. The Permittee shall be responsible for ensuring that the shaping and cover layer materials meet sections 4.2.1 and section 4.3 of the October 15, 2013 Supplemental Engineering Report, Volume 1, as well as the following:

a) In order for select exempt construction and demolition debris material to be used on Site, it must be sampled both prior to acceptance and after the importation of each additional 10,000 cubic yards (in truck volumes). Each soil sample is to be analyzed for Toxicity Characteristic Leachate Procedure (TCLP), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals (including Resource Conservation and Recovery Act (RCRA) metals).

b) Cover layer material must be sampled prior to acceptance and after the importation of each additional 2,000 cubic yards (in truck volumes). Each soil sample is to be analyzed for the entire analyte list in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046, total volatile organic compounds (VOCs), total semi- volatile organic compounds (SVOCs), pesticides and herbicides, polychlorinated biphenyls (PCBs), and metals (including Resource Conservation and Recovery Act (RCRA) metals).

c) The shaping layer must meet the following chemical limits:

i. Total carcinogenic SVOC levels (weighted average as calculated by formula provided in 10/25/06 letter from NYSDEC) must be less than 3 ppm by completion of construction; maximum carcinogenic SVOCs level from individual source must be 10 ppm or less. The following are the list of carcinogenic SVOCs that are subject to this 3 ppm limit: Benzo(a)pyrene, Dibenzo(a,h)anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, and Chrysene.

ii. Total SVOCs must be less than 500 ppm

iii. Metals:

- Arsenic less than 28 ppm;
- Barium less than 2,000 ppm;
- Cadmium less than 20 ppm;
- Chromium less than 1,000 ppm;
- Copper less than 1000 ppm;
- Lead less than 400 ppm;
- Mercury less than 0.57 ppm
- Selenium less than 11 ppm
- Silver less than 100 ppm

iv. Asbestos for all layers must be 0.5% or less

v. Total sulfur for all layers must be 0.5% or less

vi. Total PCBs less than 10 ppm

vii. Total Pesticides less than 10 ppm

viii. VOCs (all individual analytes less than TAGM 4046)

d) The final placement of shaping and cover layer materials is subject to installation of a demarcation layer at locations where combined shaping and cover layers thickness are less than five (5) feet.

e) All shaping and cover layer material placed after the final placement of shaping and cover layer must meet the 6NYCRR Part 375 protection of public health restricted residential Part 375-6.8(b) SCOs.

15. The major components (greens, contours, heights and top soil) of the cover layer shall meet the Nicklaus Design Technical Specification, as noted in Exhibit C of the June 30, 2005 Engineering Report, and as follows:

- Greens - Greens mix imported to the site shall be tested as per material testing requirements. Fertilizer and soil amendments may be applied on the greens mix after spreading to construction specifications and finally grassed, as per the specifications provided by the agronomist.
- Topsoil - Topsoil imported shall be consistent with native topsoil, and shall be free of rock and debris greater than three quarters of an inch, as per Exhibit C of the Engineering Report. Soil amendments, fertilizer applications and seed may be applied to tee, fairway and rough areas, as per Exhibit C of the June 30, 2005 Engineering Report.

16. The Department may conduct joint sampling or take split samples as necessary for verification purposes.

**Groundwater**

17. The Permittee shall implement a groundwater monitoring program as described in section 4.5 of the Supplemental Engineering Report, Volume 1, dated October 15, 2013.

**Fill Progression Monitoring**

18. The Permittee shall place grade stakes indicating elevations for proposed final grades of fill and cover material.

19. The Permittee shall place benchmarks throughout the Site, in a manner acceptable to the Department, for the purpose of periodically measuring and surveying fill elevations. Benchmarks are to be maintained at all times. If it becomes necessary, they shall be repaired promptly.

**Project Completion Schedule**

20. The project shall progress according to the Construction Schedule provided in Volume #1, Application for Modification to the Solid Waste Management Facility Permit for Construction of Ferry Point Park Recreation Facility, Bronx, NY, Engineering Report, prepared by TRC Raymond Keyes Associates, dated June 30, 2005 (as revised), Exhibit A, and as updated in section 3.1 of the Supplemental Engineering Report dated October 15, 2013. The effective date for implementation of the construction schedule is the effective date of this permit.

21. In accordance with the approved plan in Special Condition #1, placement of fill material in each section of the Site shall not exceed the designed and approved final contours for each section.

22. Only cover material may be stockpiled in a section upon completion of the placement of fill material for the shaping layer in that section as per design calculations. In addition, cover material may be stockpiled in a section where the completion of fill placement has not occurred, if such stockpile is segregated and secured from construction and demolition debris used for the shaping layer.

23. Upon completion of filling operations to approved grades in a section, the Permittees shall commence the rough shaping and placement of cover material, and the installation of drainage, irrigation and utilities, as per Construction Schedule noted in Special Condition # 20. Prior to placement of this cover material, Permittee must comply with the requirements of Special Condition # 15(d).

**Independent Environmental Monitor**

24. An Independent Environmental Monitor (IEM), accountable to the Department, shall be retained by the Permittee to provide environmental oversight of all activities authorized by this permit for the duration of its permitted term, including, but not limited to, the quantification, importation and placement of fill, and the monitoring of the Site.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

a) It shall be the IEM"s responsibility to provide notice of any deviation from the activities authorized by this permit and any deviation from New York State Environmental Regulations (6NYCRR Part 360) to the Department immediately, but in no event later than 24 hours after such deviation is detected. This notification must include the date and time of the potential non-compliance, the nature of the non-compliance, any corrective action, and any additional measures the IEM will be undertaking to track the issue until corrected. Should the IEM be uncertain as to whether such a deviation has occurred, the matter shall be promptly reported to the Department for a determination. For the purposes of this permit, a deviation(s) shall mean any of the following:

   i. An apparent violation of any condition of this permit;

   ii. An apparent violation of Federal, State or Local Law;

   iii. A material difference between construction or monitoring data obtained by the Permittees or their consultants, and that obtained by the IEM;

   iv. Any receipt of fill that does not meet the specifications authorized in this permit;

   v. Any receipt of fill from a site not authorized under the permit or by the Department.

   vi. Any condition, activity or occurrence that may endanger or pose a threat to public health, safety or the environment.

b) Notwithstanding any other reporting this permit requires, the IEM shall submit a detailed written report to the Department no less frequently than every three months detailing the IEM"s activities at the Site, the estimated total volume of fill material (including cover material) received during the reporting period based on truck volume, the total volume of fill in place at the Site, the percentage of filling to final grades, and the number(s) of trucks prohibited from entering the Site. The report also shall summarize any site meetings amongst the Permittee, its consultants or others, verify that all samples taken and monitoring done at the Site by the Permittee or consultants conform to this permit, detail any substantive change in the condition of the Site or project, fully explain any deviations occurring during the reporting period and their disposition, and describe any other occurrence, circumstance or condition that may have a bearing upon the safe and environmentally sound operation of the Project or Site.

c) The IEM must be approved by the Department prior to the finalization of any contractual agreement with the Permittee, and the initial receipt of any fill material at the Site.

d) The continued retention, discharge, or replacement of the IEM shall be at the sole discretion of the Department. The Permittee waive any right to seek judicial review of the Department's exercise of that discretion. The Permittees must fully pay all invoices and bills from the IEM within sixty days of submission. The IEM or its Department approved representative shall be present on Site whenever it is open. Under no circumstances shall Project activities, including the receipt or management of fill, take place while the IEM or its designated representative is absent from the Site.

**SPECIAL CONDITIONS**
**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )**

e) The Department shall have access to any information obtained by the IEM at any time. The IEM shall keep all information including, but not limited to, fill records, inspection reports, field notes, monitoring data, graphics, databases, financial records, minutes of meetings and other information in a form approved by the Department

f) The IEM, if an individual, shall possess a New York State Professional Engineer license. If an engineering firm serves as the IEM, the firm must provide an employee of that firm who is a New York State licensed professional engineer to perform all functions and certifications noted in Section 1.1 of the Engineering Report referenced in Special Condition No. 1 above. In addition, the IEM shall:

i. monitor all aspects of the Permittees" fill operations at the Ferry Point Park ("FPP") facility;

ii. have unrestricted access to all personnel employed by the Permittee at the FPP facility, and to all files and records maintained by the Permittees at the FPP facility pursuant to this permit;

iii. inspect the proposed sources of fill, review the documentation about the sources of the material, including without limitation, any off-site sampling, and certify as to the acceptability of the material for use at the Site, in accordance with the criteria specified in the Engineering Report, Section 2. The IEM shall notify the Department at least 24 hours before any on-site sampling;

iv. visually inspect each truckload of imported fill material at the Site, and undertake reasonable verification activities including directing, where appropriate, verification sampling, analysis and certification by the IEM on a Project specific tracking form that it meets criteria for acceptable fill at the Site;

v. inspect each truckload of material upon its dumping on Site with a Photo-Ionization Detector (PID).

vi. prohibit any truck from leaving the dumping area before the load has been inspected, and the manifest signed by the IEM. If any load is rejected, the rejected fill material shall be reloaded onto the same truck immediately and legally transported off-site. However, if the rejected fill material is a DEC regulated solid waste or hazardous waste, it must be segregated immediately and secured on-site, until it is removed by a DEC permitted hauler for appropriate disposal. Such regulated or hazardous waste must be removed from the Site within 3 days of its discovery;

vii. monitor the off loading of all material at the unloading station. No truck shall be allowed to off load unless the IEM is present. Such truck shall only be allowed to leave the station after the load is tested and found acceptable.

viii. certify that the sampling of material at the project Site conforms to the permit requirements, and review the results of all laboratory tests;

ix. notify the Department daily about the receipt of unacceptable material or any violations of conditions set forth in this permit;

x. maintain files on Site of fill sampling data, site histories, and internal manifest (tracking) forms;

xi. report and certify to the Department that the on-site gas well monitoring has been conducted as required by this permit. Notify the Department immediately if levels exceed 25% of the lower explosive limit (LEL) in any gas monitoring well;

xii. certify that: (a) all grades of the shaping layer of a section are correct prior to the placement of cover material on that section; (b) a minimum of two feet of fill material covers the existing municipal solid waste layer; and (c) the final cover layer meets the appropriate specifications of the Engineering Report noted in Special Condition #1;

xiii. during fill delivery and earthwork, submit bi-weekly reports to the Department summarizing all Site activities set forth by this permit. Each report shall provide details of all rejected fill material, quantify the amount of material imported onto the Site using truck volumes, and the results of all on-site gas monitoring for that period;

xiv. review the final post-construction report and provide comments to the Department on whether the fill operation was performed in accordance with the permit documents and including any deviations thereof. These comments must be submitted by the IEM to the Department within sixty (60) calendar days of the receipt of the final post construction report, certify that the fill operation was performed in accordance with the permit documents. The certified post-construction report must be submitted by the IEM to the Department within sixty (60) calendar days after the completion of the earthwork portion of the Project;

xv. report all operational upsets, emergencies, unusual circumstances (including, but not limited to, unauthorized entries, security breaches, equipment breakdowns, fires, thefts, acts of vandalism, and on-site accidents) to the Regional Solid Waste Engineer by telephone (at 718/482-4996) within 24 hours of the occurrence, and in writing within 3 business days advising the engineer of the nature of the event, and providing a description of how the event was handled.

**Gas Venting Trench**

25. During the duration of this permit, the Permittee shall inspect the gas venting trench monthly to verify the integrity of the venting trench and its mulch cover. The Permittee shall maintain the gas venting trench at all times, and promptly repair any soil washouts of the mulch cover, as necessary. If any portion of the venting trench or mulch cover is found in need of repair, this fact must be reported to the IEM immediately and all necessary repairs must be made within two weeks of discovery.

**SPECIAL CONDITIONS**

**ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )**

(SC 25 continued) In addition, the mulch cover shall be replaced, at a minimum, every spring to maintain the effectiveness of the gas venting trench. The Permittee shall maintain the gas venting trench after the completion of construction of the golf course in the manner described in the Supplemental Engineering Report, Volume 3, Appendix F.

26. Monthly monitoring of the gas venting trench shall continue for the duration of the permit.

27. **As required by the Custodial Care Plan**: Gas venting trench inspection reports shall include the inspection date, the name of inspector, and a description of repairs, monitoring results and maintenance performed. A log of these self-inspections must be maintained including the dates, times and results of the inspections.

**Piezometers**

28. The Permittee shall conduct monthly monitoring of the depth of ground water in each piezometer installed at the gas venting trench, until the completion of the construction of the golf course. All readings shall be submitted to the Department in a monthly report.

a) **As required by the Custodial Care Plan**: Post-construction piezometers monitoring shall be performed in accordance with the Supplemental Engineering Report dated October 15, 2013, Volume 3, Appendix F, Section 6.

29. Within sixty (60) days of receipt of this permit, the Permittee shall submit a Response Action Plan to the Department. This Plan shall set forth the measures to be implemented by the Permittee, if the piezometer readings indicate that the groundwater table has dropped below the depth of the gas venting trench during the post construction monitoring period.

30. The Permittee shall sample the perimeter gas monitoring wells #0, #1A, #1 to #3, #5 to #12, and #14 to #18, and the on-site monitoring wells #13 and #19 on a bi-weekly basis to detect any explosive gas migration. Copies of the bi-weekly monitoring field notes shall be electronically mailed to the Department within 24 hours after the sampling event and a copy of this report shall be submitted to the Department within 3 business days and reported to the IEM immediately and all necessary repairs must be made within two weeks of discovery.

31. All perimeter gas monitoring wells should be tested at least on a bi-weekly basis. However, if any individual monitoring point has a bi-weekly reading that equals or exceeds 100% LEL or three consecutive bi-weekly reading are greater than 25% LEL, a modified methane gas action plan shall be implemented by the Permittee. Such plan shall require, at minimum, weekly testing of the individual monitoring point(s) with the elevated readings. The Department also may require any additional measures it deems necessary. Any individual point under the modified methane gas action plan may return to the regular bi-weekly monitoring schedule, when three (3) consecutive weekly readings are all less than the 25% LEL action level.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

**Deed Restriction**

32. Within thirty (30) days of the date of the issuance of this permit, the Permittee shall submit a draft Deed Restriction to the Regional Permit Administrator. The deed restriction, which shall run with the land in perpetuity, shall recite and require compliance with this permit's provisions as regards to the custodial care requirements described in the Supplemental Engineering Report dated October 15, 2013, Volume 3, Appendix I. The deed restriction must be filed within six (6) months of the issuance date of this permit.

**Off-site Gas Monitoring Network**

33. The Permittee shall conduct bi-weekly monitoring of the Off-site Gas Monitoring Network. A copy of the bi-weekly monitoring field notes shall be electronically mailed to the Department within 24 hours, and a copy of the monitoring report shall be submitted to the Department within 3 days of the completion of each round of monitoring.

a) **As required by the Custodial Care Plan**. Each bi-weekly monitoring report shall include the geoprobe monitoring point(s) installed on or near Buttrick, Schley, Balcom, Miles and Emerson Avenues, as described in the methane monitoring reports referenced in Special Condition #1 of this permit.

34. The Permittee shall maintain, and upgrade if required, the Off-site Gas Monitoring Network during facility construction and after completion of the golf course.

a) The Permittees may request Departmental approval to substitute for all, or part of, the Off-site Gas Monitoring Network by installing geoprobe soil gas monitoring points of a placement and design suitable to the Department. Such points must be at linear intervals no greater than 50 feet (on 50-foot centers) along either segments of the perimeter boundary of the gas venting trench or the drainage ditch.

b) If any point used for off-site gas monitoring is found to require repairs, this fact must be reported to the IEM immediately and all necessary repairs must be made within two weeks of discovery. A copy of the off-site gas monitoring well results also must be sent to the New York City Housing Authority.

c) All off-site gas monitoring points shall be tested on a bi-weekly basis. If any individual monitoring point has a bi-weekly reading that equals or exceeds 100% LEL, or three consecutive bi-weekly readings that are greater than 25% LEL, sampling of that point shall be done weekly. Any individual point under the later modified methane gas action plan may return to the regular bi-weekly monitoring schedule, if there are three (3) consecutive weekly readings all less than the 25% LEL action level.

d) None of the requirements specified in Special Conditions Nos. 26 through 34, 36 (a) through (c) may be terminated without written approval from the Department.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

**Ferry Point Park East Post Construction Custodial Care Plan ( Custodial Care Plan)**

35. Upon Department approval of the Permittee's written post construction certification report, Permittee shall implement the Custodial Care Plan described in Supplemental Engineering Report dated October 15, 2013, Volume 3, Appendix I, as referenced in Special Condition No. 1.

**Project Abandonment and Environmentally Sound Closure**

36. Should the Project be abandoned, the entire 222 acre Site must be closed, monitored and maintained after closure in accordance with 6 NYCRR Sect. 360-2.15 as a landfill in operation since 2000.

a) Within one hundred and twenty (120) days after notice from the Department that the Site has been deemed abandoned, the Permittee shall implement the custodial care plan contained in the Supplemental Engineering Report dated October 15, 2013, Volume 3, Appendix I, as referenced in Special Condition No. 1.
b) For the purpose of this permit, abandonment shall mean any of the following:
    i. Filling operations authorized under this permit cease for a period of 12 consecutive months, as provided in 6NYCRR sect 360-1.11(f);
    ii. Failure to complete the Project within 12 months of the issuance of this permit, as determined by the Department, by the expiration date of this permit; or
    iii. Termination of this Project as a result of enforcement action by the Department or another government agency for non compliance with this permit, or with applicable Federal, State or Local Law.
c) The terms of this Special Provision shall govern, if in conflict with the terms of General Condition No. 12.

**Waterfront Park**

37. Within one hundred and eighty (180) days of the effective date of this permit, provide three hard copies and one copy on CD of revised design plans for the Waterfront Park, to the Regional Permit Administrator. Include in this submission details on the extent of adjacent area and tidal wetlands encroachment, water balance, proposed mitigation (including mitigation for the pool barge), implementation plans and staging.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

## Submittals

38. Within sixty (60) days of completion of the filling operation on the Site and construction of the earthwork portion of the Project, the Permittees shall provide:

a) as-built drawings of the Project, signed by a professional engineer licensed in New York State for DEC's approval. The post construction as built drawings shall, at a minimum, include detailed cross-sections illustrating the depth of fill placed and location of all utilities and associated structures, road ways, demarcation layer and storm water drainage control structures for the Project. The as-built plans also shall include the location of all monitoring and control systems and devices (including gas control and monitoring, water quality and elevation monitoring and settlement monitoring).

b) a written post-construction certification report for review and approval by the Department and certification by the Independent Environmental Monitor. This report shall include approved "as-built" drawings demonstrating that the earthwork and filling operation was accomplished in accordance with the Department approved plans and this permit. If as-built drawings are not approved by DEC within 120 days of the completion of the filling operation, the Site is deemed abandoned, as per Special Condition No. 36. This report and the as-built drawings cannot be done or submitted by the IEM.

39. Within ninety (90) days of approval of the post construction certification report, the Permittee shall submit an amended subsurface operations plan which includes relevant post construction storm water pollution prevention maintenance documentation as per the State Pollution Discharge Elimination System (SPDES) general permit for storm water discharges from construction activity.

40. Within sixty (60) days of the effective date of the permit, the Permittee shall submit a full size (24 inches by 36 inches) scaled, signed and sealed drawing showing construction of the irrigation lake passive venting system.

41. Thirty (30) days after approval of the construction certification report, the Permittee must provide to the Regional Solid Waste Engineer, a revised Table 6-1 (noted in the engineering report referenced in Special Condition #1 above).

42. Prior to the installation of any sub slab depressurization systems for onsite buildings, the Permittee must secure written approval of these systems from the NYS Department of Environmental Conservation and the NYS Department of Health.

43. All reports and written submissions shall be sent in duplicate to the regional office of the DEC, with an additional copy to DEC Central Office, and another copy to the document repository as noted below. Each submission shall have a transmittal page, which references the DEC permit number and the relevant Special Condition number.

SPECIAL CONDITIONS

ADDITIONAL SPECIAL CONDITIONS FOR ARTICLES 27 and 6 NYCRR Part 360 ( Solid Waste Management Facilities )

Samsudeen Arakhan
Regional Materials Management Engineer
NYS DEC, Region 2
47-40 21st Street
Long Island City, NY 11101

John Cryan
Regional Permit Administrator
NYSDEC, Region 2
47-40 21st Street
Long Island City, N.Y. 11101

David Vitale, Bureau Chief
Bureau of Solid Waste, Reduction, and Recycling
NYS DEC
625 Broadway
Albany, NY 12233-7253

FPP Golf Course Document Repository
New York City Department of Parks and Recreation
1 Bronx River Parkway
Bronx, NY 10462-2869

44. All notifications to the Department, as referenced in Special Conditions of this permit, shall be made to the Regional Materials Management Engineer, NYS DEC, 47-40 21st Street, Long Island City, NY 11101. All immediate, 24-hour, verbal or expedited notifications shall be made by telephone and electronic mail to the attention of Samsudeen Arakhan, Regional Solid Materials Engineer at: 718-482-4996 (phone) / skarakha@gw.dec.state.ny.us (email), or other numbers subsequently provided by the Department.

45. Copies of reports generated or reviewed by the Independent Environmental Monitor shall be maintained at the document repository referenced in Special Condition No. 43 above.

**End of Special Conditions**

# APPENDIX B

# List of Project Participants

City of New York Parks & Recreation
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City of New York
Parks & Recreation
Kay Zlas, Director of Environmental Remediation
NYC ParksCapital Projects
Olmsted Center
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Steven Lauria, PE • Project Manager / Principal
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**Philip E. Gauffreau, P.E.**
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Geographic Discipline Leader

**Maser Consulting P.A.**
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**John Gruber**
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TRUMP
THE TRUMP ORGANIZATION

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jroediger@trumpgolflinks.com | www.trumpferrypoint.com
TRUMP
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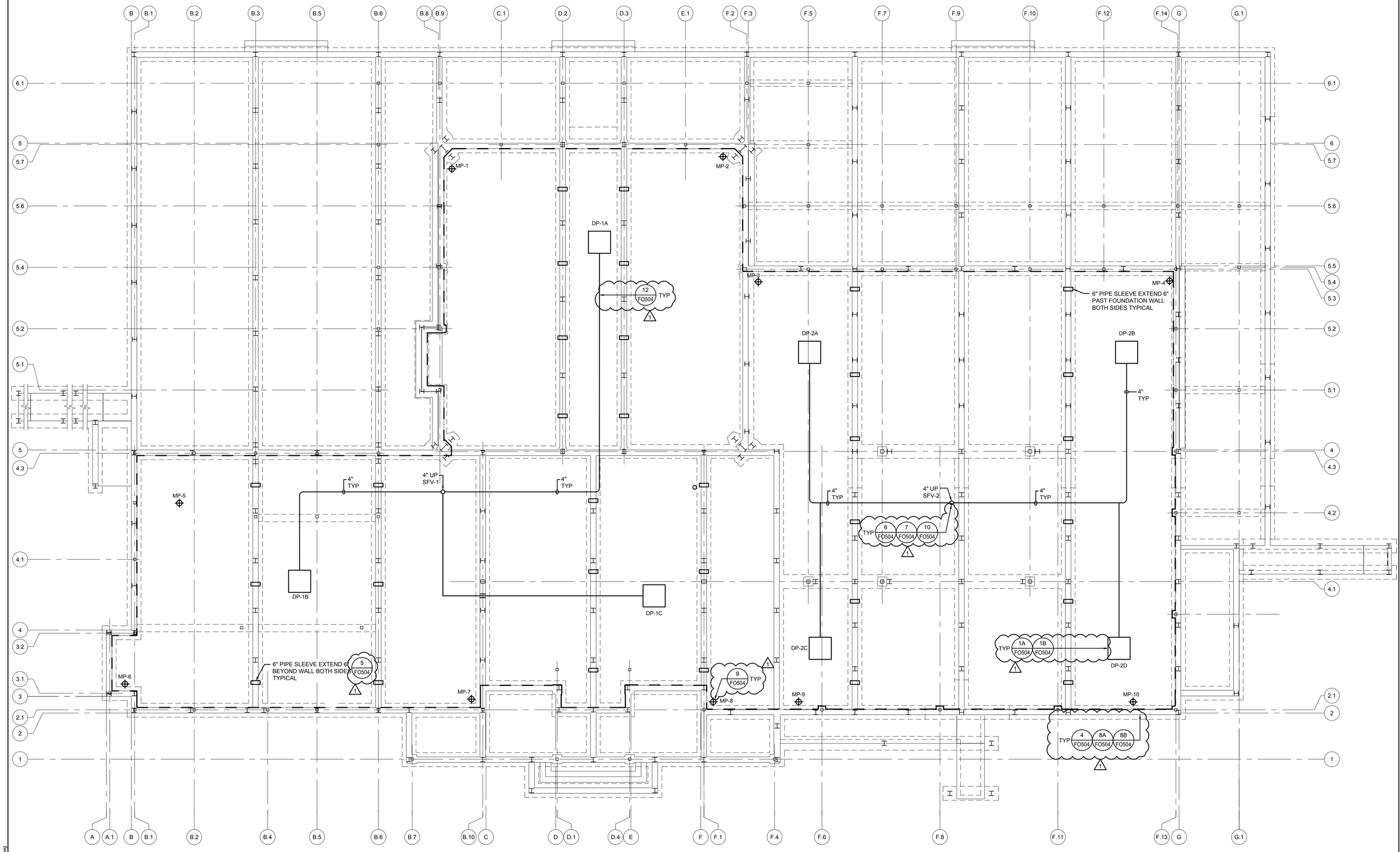
# APPENDIX C

## SSDS Construction Drawings Submitted by FPA to NYSDEC dated June 12, 2017




## UNDERSLAB PLAN

SCALE: 1/8" = 1'-0"

NOTES :

1. DRAWINGS NOT TO BE USED FOR STRUCTURAL, ARCHITECTURAL OR OTHER REFERENCE EXCEPT FOR SUB-SLAB DEPRESSURIZATION SYSTEM.
2. THE EXTENTS OF BUILDING CONSTRUCTION BENEATH THE FLOOR SLABS SHALL BE LINED WITH GAS VAPOR BARRIER. AS PART OF BUILDING CONSTRUCTION. THE GAS VAPOR BARRIER SHALL ALSO BE APPLIED VERTICALLY TO BELOW GRADE WALLS AND WALLS OF PITS AND SUMPS AS SHOWN AND SPECIFIED.
3. SLOPE HORIZONTAL PIPE UNIFORMLY A MINIMUM OF 1% TOWARD SUB-SLAB DEPRESSION SYSTEM PITS OR TO CONDENSATE DRAINS WHEN PIPING CANNOT BE SLOPED TO PIT.
4. SECURE VERTICAL RISER TO WALL IN ACCORDANCE WITH ARCHITECTURAL AND PLUMBING REQUIREMENTS.
5. ELECTRICAL WIRING AND EQUIPMENT NOT SHOWN. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR REFERENCES.
6. SEAL ALL JOINTS IN SLAB ON GRADE, INCLUDING BUT NOT LIMITED TO, CONTROL JOINTS, EXPANSION JOINTS, CRACKS, WALL JOINTS, PENETRATIONS ETC. WITH NON-CRACKING CAULK. POLYURETHANE TYPE PREFERRED.
7. COORDINATE GAS VENTING SYSTEM WITH ALL TRADES, INCLUDE VENTING SYSTEM PIPING ON COORDINATION DRAWINGS.
8. ALL GAS VENTS SHALL BE CONTINUOUS FROM UNDERSLAB STONE BASE TO 36" ABOVE ROOF LINE OR PARAPET (WHICHEVER IS HIGHER). ALL VENTS SHALL BE 10'-0" MIN FROM LOT LINES, OUTSIDE AIR INTAKES, WINDOWS, ETC.
9. DRAWING ILLUSTRATES WALLS AND ALL SLAB ON GRADE FLOOR AREAS. COORDINATE THIS WORK WITH ARCHITECTURAL, MECHANICAL, AND STRUCTURAL PLANS.
10. ALL GAS VENT PIPING SHALL BE PVC PIPING. WHERE PIPING IS LOCATED IN RETURN AIR PLENUMS CHANGE MATERIAL TO NO-HUB CAST IRON PIPE.
11. LABEL GAS PIPING AT INTERVALS OF NOT MORE THAN 25 FT IN CONCEALED LOCATIONS AND NOT MORE THAN 50 FT ON EXPOSED AND NOT LESS THAN ONCE IN ANY ROOM OR SPACE.
12. GAS VAPOR BARRIER TO BE INSTALLED IMMEDIATELY BELOW FLOOR SLAB AS INDICATED ON THE STRUCTURAL DRAWINGS. PROVIDE 12" MINIMUM CLEAN #57 STONE SUB-BASE FOR GAS MITIGATION SYSTEM.
13. SLOPE HORIZONTAL PIPE A MINIMUM OF 1% UNIFORMLY TOWARD SUCTION PITS.
14. REFER TO SPECIFICATION FOR ADDITIONAL SUB-SLAB DEPRESSURIZATION SYSTEM AND ACCESSORIES REQUIREMENTS.

## LEGEND

- EXTENT OF GAS PERMEABLE AGGREGATE LAYER BENEATH FLOOR SLAB
- 4" SCHEDULE 80 PVC PIPE
- SFV-1 — SUCTION FAN VERTICAL 4" RISER AND IDENTIFICATION NUMBER. EXTEND THRU ATTIC TO SUCTION FAN
- MP-1 — SUB-SLAB MONITORING POINT AND IDENTIFICATION NUMBER
- DP-1A — SUB-SLAB DEPRESURAIZATION PIT AND IDENTIFICATION NUMBER

FOR CONSTRUCTION

PROVIDE LIQUID BOOT GAS VAPOR BARRIER SYSTEM UNDER SLAB AS MANUFACTURED BY CETCO CONSISTING OF ULTRASHIELD G-1000, 60 DRY MILS LIQUID BOOT AND LIQUID BOOT BASE FABRIC. SYSTEM SHALL INSTALLED BY AUTHORIZED INSTALLER. REFER TO DETAILS FOR ADDITIONAL INFORMATION. REFER TO CONTRACT DOCUMENTS FOR LOCATIONS OF PENETRATIONS THROUGH THE SLAB.

OFFSET VENT ABOVE CEILING AT ROOF AND EXTEND THROUGH ROOF APPROXIMATELY 3' FROM PARAPET WALLS AND TERMINATE 24" ABOVE FINISHED ROOF.

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TRUMP
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| | 03-30-17 | DEC REVIEW |
| | 04-07-17 | RE-BID/ REMOVE BSMT |
| 4 | 05-05-17 | COMMENTS |

DRAWING TITLE:
VAPOR REMEDIATION UNDERSLAB PLAN

PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM

DRAWING NO:
FO-500.00

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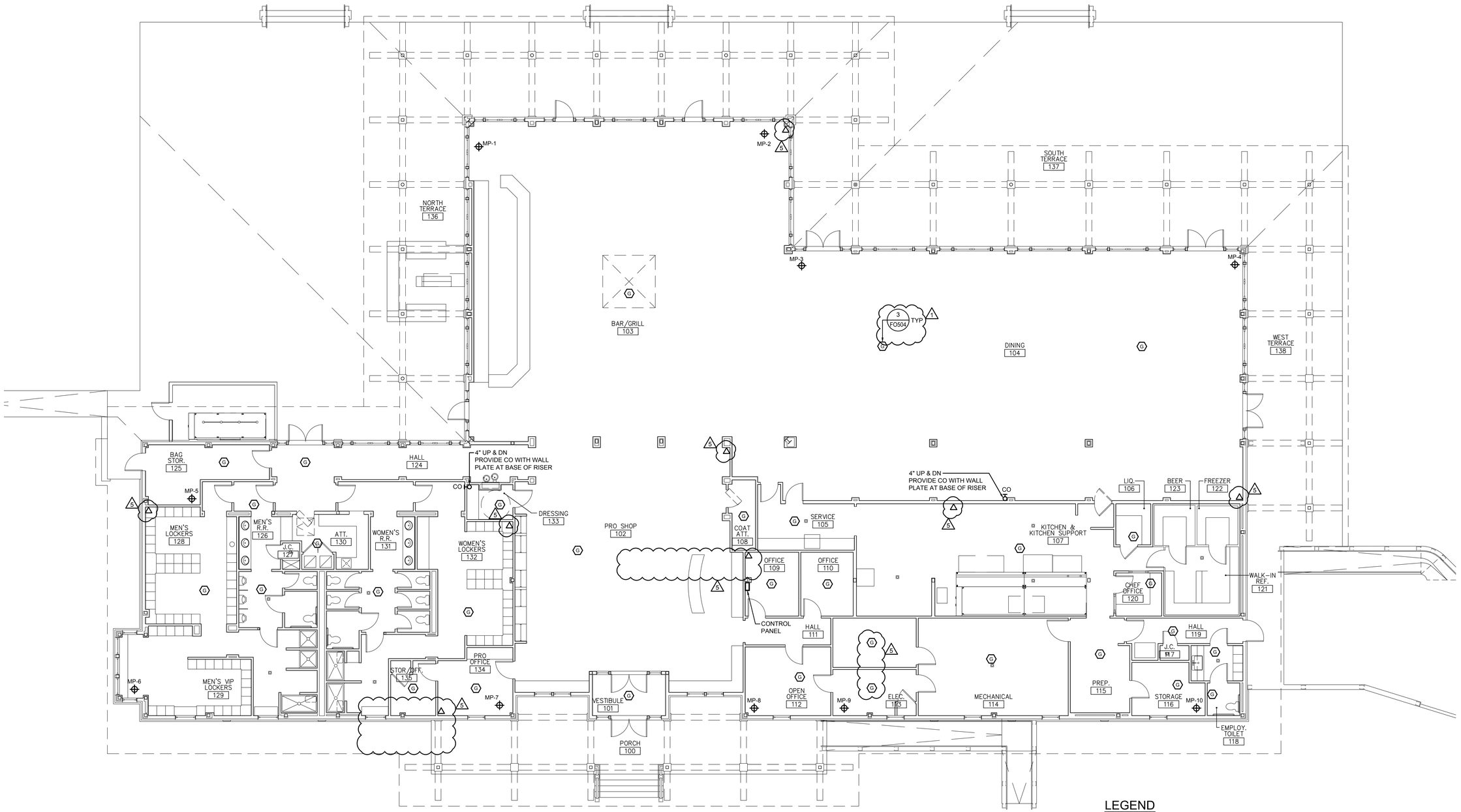


## FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

## LEGEND

| | |
|---|---|
| SFV-1 | SUCTION FAN VERTICAL 4" RISER AND IDENTIFICATION NUMBER. EXTEND THRU ATTIC TO SUCTION FAN |
| MP-1 | SUB-SLAB MONITORING POINT AND IDENTIFICATION NUMBER |
| G | GAS SENSOR |
| | METHANE GAS SENSOR CONTROL PANEL |
| | METHANE GAS LIGHT TOWER ALARM - HANG FROM CEILING |

FOR CONSTRUCTION

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THE TRUMP ORGANIZATION

# TRUMP GOLF LINKS FERRY POINT

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| 4 | 05-05-17 | COMMENTS |
| 5 | 06-06-17 | DEC COMMENTS |

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# VAPOR REMEDIATION FLOOR PLAN

PROJECT #: 14-534
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CHECKED BY: FRM

DRAWING NO:
# FO-501.00


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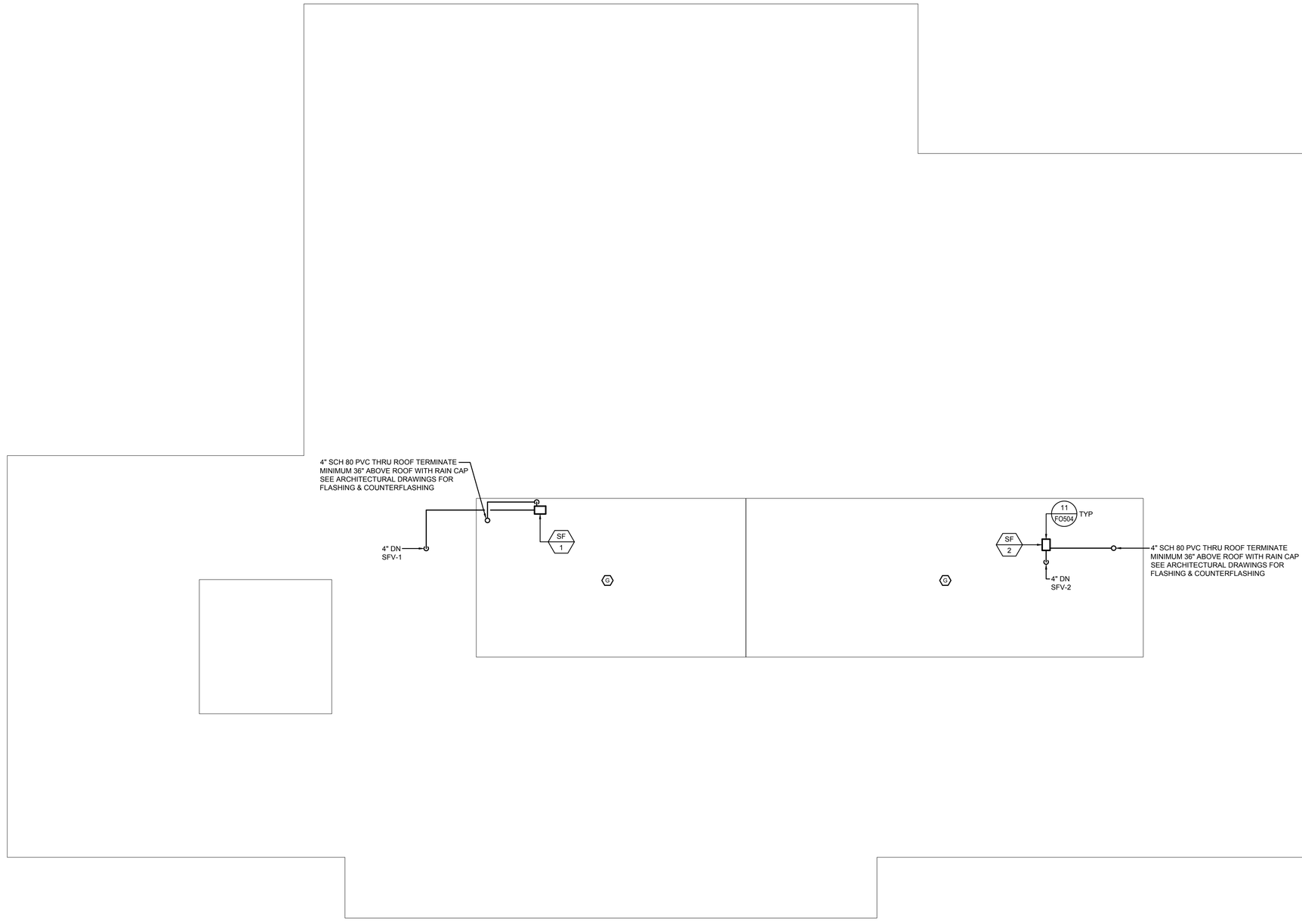


ATTIC/MEZZANINE PLAN

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| 5 | 09-06-17 | VE |

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PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM

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FO-502.00

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# VAPOR REMEDIATION GENERAL NOTES

A. SCOPE

1. ALL CONSTRUCTION SHALL COMPLY WITH THE NYSDEC APPROVED POST CONSTRUCTION CUSTODIAL CARE PLAN DATED OCTOBER 2013, PREPARED BY NYC DPR, INCLUDING THE APPROPRIATE HANDLING OF COVER, SOIL, SHAPING LAYER MATERIAL, DEMARCATION LAYER MATERIALS, AND MSW, AND INSPECTION AND CONSTRUCTION CERTIFICATION REQUIREMENTS.
2. THE GAS MITIGATION SYSTEM IS TO BE INSTALLED BY A LICENSED GAS MITIGATION CONTRACTOR IN THE STATE OF NEW YORK. CONTRACTOR TO SUBMIT DESIGN SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.
3. THE REQUIREMENTS ADDRESSED IN THE GAS MITIGATION SYSTEM (GMS) INCLUDE THE FOLLOWING CATEGORIES OF CONTRACTOR ACTIVITY: GENERAL PRACTICES, WORKER HEALTH AND SAFETY, SYSTEMS INSTALLATION, MATERIALS, MONITORS AND LABELING, POST-MITIGATION TESTING, AND CONTRACTS AND DOCUMENTATION.

B. IMPLEMENTATION

1. THE GMS INCLUDES REQUIREMENTS FOR INSTALLATION OF GAS REMEDIATION SYSTEMS AND PROVIDES A BASIS FOR EVALUATING THE QUALITY OF THOSE INSTALLATIONS. IT MAY BE ADOPTED BY STATE REGULATORY AGENCIES FOR STATE OR LOCAL GAS MITIGATION CONTRACTOR LICENSURE PROGRAMS. IT MAY ALSO BE USED AS A REFERENCE DURING INSPECTION OF IN-PROGRESS OR COMPLETED GAS MITIGATION WORK.
2. CONTRACTORS SHALL PERSONALLY CONDUCT FOLLOW-UP INSPECTION OF ANY GAS MITIGATION SYSTEMS INSTALLED BY THEIR FIRM OR BY SUBCONTRACTORS TO INSURE CONFORMANCE WITH THE REQUIREMENTS OF THE GMS. THIS REQUIREMENT SHALL INCLUDE THE POST-MITIGATION TESTING PRESCRIBED IN THIS SPECIFICATION.
3. THOSE PROVISIONS OF THE GMS THAT ARE CONSIDERED TO BE MANDATORY ARE PREFACED BY THE TERM "SHALL." PROVISIONS THAT ARE CONSIDERED GOOD PRACTICE BUT WHICH ARE NOT MANDATORY ARE PREFACED BY THE TEGMS "SHOULD" OR "RECOMMENDED."

C. LIMITATIONS

1. ALTHOUGH THE PROVISIONS OF THE GMS HAVE BEEN CAREFULLY REVIEWED FOR POTENTIAL CONFLICTS WITH OTHER REGULATORY REQUIREMENTS, ADHERENCE TO THE GMS DOES NOT GUARANTEE COMPLIANCE WITH THE APPLICABLE CODES OR REGULATIONS OF ANY OTHER FEDERAL, STATE, OR LOCAL AGENCY HAVING JURISDICTION.
2. WHERE DISCREPANCIES EXIST BETWEEN PROVISIONS OF THE GMS AND LOCAL CODES OR REGULATIONS, LOCAL CODES SHALL TAKE PRECEDENCE. HOWEVER, WHERE COMPLIANCE WITH LOCAL CODES NECESSITATES A DEVIATION FROM THE GMS, EPA RECOMMENDS THAT RPP LISTED MITIGATION SERVICE PROVIDERS (MITIGATION CONTRACTORS) REPORT THE DEVIATION IN WRITING TO THE APPROPRIATE EPA REGIONAL OFFICE AND THE APPROPRIATE STATE REGULATORY OFFICIAL WITHIN 30 DAYS. IT SHOULD BE NOTED THAT EPA IS NOT REQUIRING THE REPORTING THAT IS RECOMMENDED IN THIS PARAGRAPH. STATES WITH GAS MITIGATION CONTRACTOR CERTIFICATION PROGRAMS MAY REQUIRE THAT CONTRACTORS GIVE PRIOR NOTIFICATION OF THEIR INTENT TO DEVIATE FROM THE GMS FOR RESEARCH OR OTHER PURPOSES.
3. THE GMS IS NOT INTENDED TO BE USED AS A DESIGN MANUAL, AND COMPLIANCE WITH ITS PROVISIONS WILL NOT GUARANTEE REDUCTION OF INDOOR GAS CONCENTRATIONS TO ANY SPECIFIC LEVEL.
4. BECAUSE OF THE WIDE VARIATION IN BUILDING DESIGN, SIZE, OPERATION AND USE, THE GMS DOES NOT INCLUDE DETAILED GUIDANCE ON HOW TO SELECT THE MOST APPROPRIATE MITIGATION STRATEGY FOR A GIVEN BUILDING. THAT GUIDANCE IS PROVIDED IN THE DOCUMENTS REFERENCED IN IN THIS SPECIFICATION.
5. CONTRACTORS WHO EXPECT TO DEVIATE FROM PROVEN GAS MITIGATION TECHNOLOGIES AND METHODS FOR PURPOSES OF RESEARCH ON INNOVATIVE MITIGATION TECHNIQUES, SHALL OBTAIN PRIOR APPROVAL FROM STATE REGULATORY OFFICES, DOCUMENT THE NON-STANDARD TECHNIQUES, AND INFORM THE CLIENT OF THE DEVIATION FROM STANDARD PROCEDURES. IN CASES WHERE GAS MITIGATION IS NOT REGULATED BY THE STATE, CONTRACTORS SHALL OBTAIN PRIOR APPROVAL FROM A REGIONAL EPA OFFICE.

D. WORKER HEALTH AND SAFETY

1. CONTRACTORS SHALL COMPLY WITH ALL OSHA, STATE AND LOCAL STANDARDS OR REGULATIONS RELATING TO WORKER SAFETY AND OCCUPATIONAL GAS EXPOSURE. APPLICABLE REFERENCES IN THE CODE OF FEDERAL REGULATIONS AND NIOSH PUBLICATIONS.
2. IN ADDITION TO THE OSHA AND NIOSH STANDARDS, THE FOLLOWING REQUIREMENTS THAT ARE SPECIFICALLY OR UNIQUELY APPLICABLE FOR THE SAFETY AND PROTECTION OF GAS MITIGATION WORKERS SHALL BE MET:
   a. THE CONTRACTOR SHALL ADVISE WORKERS OF THE HAZARDS OF EXPOSURE TO GAS AND THE NEED TO APPLY PROTECTIVE MEASURES WHEN WORKING IN AREAS OF ELEVATED GAS CONCENTRATIONS.
   b. THE CONTRACTOR SHALL HAVE A WORKER PROTECTION PLAN ON FILE THAT IS AVAILABLE TO ALL EMPLOYEES AND IS APPROVED BY ANY STATE OR LOCAL REGULATING AGENCIES THAT REQUIRE SUCH A PLAN. EXCEPTION: A WORKER PROTECTION PLAN IS NOT REQUIRED FOR A CONTRACTOR WHO IS A SOLE PROPRIETOR UNLESS REQUIRED BY STATE OR LOCAL REGULATIONS.
   c. THE CONTRACTOR SHALL ENSURE THAT APPROPRIATE SAFETY EQUIPMENT SUCH AS HARD HATS, FACE SHIELDS, EAR PLUGS, STEEL-TOE BOOTS AND PROTECTIVE GLOVES ARE AVAILABLE ON THE JOB SITE DURING CUTTING, DRILLING, GRINDING, POLISHING, DEMOLISHING OR OTHER ACTIVITY ASSOCIATED WITH GAS MITIGATION PROJECTS.
   d. ALL ELECTRICAL EQUIPMENT USED DURING GAS MITIGATION PROJECTS SHALL BE PROPERLY GROUNDED. CIRCUITS USED AS A POWER SOURCE SHOULD BE PROTECTED BY GROUND-FAULT CIRCUIT INTERRUPTERS (GFCI).
   e. WHEN WORK IS REQUIRED AT ELEVATIONS ABOVE THE GROUND OR FLOOR, THE CONTRACTOR SHALL ENSURE THAT LADDERS OR SCAFFOLDING ARE SAFELY INSTALLED AND OPERATED.
   f. WORK AREAS SHALL BE VENTILATED TO REDUCE WORKER EXPOSURE TO GAS DECAY PRODUCTS, DUST, OR OTHER AIRBORNE POLLUTANTS. IN WORK AREAS WHERE VENTILATION IS IMPRACTICAL OR WHERE VENTILATION CANNOT REDUCE GAS LEVELS TO LESS THAN 0.3 WL (BASED ON A SHORT TERM DIAGNOSTIC TEST, E.G., GRAB SAMPLE), THE CONTRACTOR SHALL ENSURE THAT RESPIRATORY PROTECTION CONFOGMS WITH THE REQUIREMENTS IN THE NIOSH GUIDE TO INDUSTRIAL RESPIRATORY PROTECTION. ( (NOTE: IF UNABLE TO MAKE WORKING LEVEL MEASUREMENTS, A GAS LEVEL OF 30 PCI/L SHALL BE USED.)
   g. WHERE COMBUSTIBLE MATERIALS EXIST IN THE SPECIFIC AREA OF THE BUILDING WHERE GAS MITIGATION WORK IS TO BE CONDUCTED AND THE CONTRACTOR IS CREATING ANY TEMPERATURES HIGH ENOUGH TO INDUCE A FLAME, THE CONTRACTOR SHALL ENSURE THAT FIRE EXTINGUISHERS SUITABLE FOR TYPE A, B, AND C FIRES ARE AVAILABLE IN THE IMMEDIATE WORK AREA.
   h. PENDING DEVELOPMENT OF AN APPROVED PERSONAL GAS EXPOSURE DEVICE AND A PROTOCOL FOR ITS USE, CONTRACTORS SHALL RECORD EMPLOYEE EXPOSURE TO GAS AT EACH WORK SITE, BASED ON:
      1) THE HIGHEST PRE-MITIGATION INDOOR GAS OR WORKING LEVEL MEASUREMENT AVAILABLE, AND
      2) THE TIME EMPLOYEES ARE EXPOSED (WITHOUT RESPIRATOR PROTECTION) AT THAT LEVEL

      (NOTE: THIS APPROACH IS NOT INTENDED TO PRECLUDE THE ALTERNATIVE USE OF ON-SITE GAS OR GAS DECAY PRODUCT MEASUREMENTS TO DETERMINE EXACT EXPOSURE.) CONSISTENT WITH OSHA PERMISSIBLE EXPOSURE LIMITS, CONTRACTORS SHALL ENSURE THAT EMPLOYEES ARE EXPOSED TO NO MORE THAN 4 WORKING LEVEL MONTHS (WLM) OVER A 12 MONTH PERIOD. (AN EQUILIBRIUM RATIO OF 50 PERCENT SHALL BE USED TO CONVERT GAS EXPOSURE TO WLM.)
   i. WHEN MITIGATION WORK REQUIRES THE USE OF SEALANTS, ADHESIVES, PAINTS, OR OTHER SUBSTANCES THAT MAY BE HAZARDOUS TO HEALTH, CONTRACTORS SHALL PROVIDE EMPLOYEES WITH THE APPLICABLE MATERIAL SAFETY DATA SHEETS (MSDS) AND EXPLAIN THE REQUIRED SAFETY PROCEDURES.

E. SYSTEMS REQUIREMENT

1. ALL GAS MITIGATION SYSTEMS SHALL BE INSTALLED AS PERMANENT, INTEGRAL ADDITIONS TO THE BUILDING, EXCEPT WHERE A TEMPORARY SYSTEM HAS BEEN INSTALLED.
2. ALL GAS MITIGATION SYSTEMS SHALL BE INSTALLED TO AVOID THE CREATION OF OTHER HEALTH, SAFETY, OR ENVIRONMENTAL HAZARDS TO BUILDING OCCUPANTS, SUCH AS BACKDRAFTING OF NATURAL DRAFT COMBUSTION APPLIANCES.
3. ALL GAS MITIGATION SYSTEMS SHALL MAXIMIZE GAS REDUCTION AND IN CONSIDERATION OF THE NEED TO MINIMIZE EXCESS ENERGY USAGE, TO AVOID COMPROMISING MOISTURE AND TEMPERATURE CONTROLS AND OTHER COMFORT FEATURES, AND TO MINIMIZE NOISE.
4. ALL GAS MITIGATION SYSTEMS AND THEIR COMPONENTS SHALL COMPLY WITH THE LAWS, ORDINANCES, CODES, AND REGULATIONS OF RELEVANT JURISDICTIONAL AUTHORITIES, INCLUDING APPLICABLE MECHANICAL, ELECTRICAL, BUILDING, PLUMBING, ENERGY, AND FIRE PREVENTION CODES.

F. SYSTEMS INSTALLATION

1. GENERAL REQUIREMENTS
   a. ALL COMPONENTS OF GAS MITIGATION SYSTEMS INSTALLED IN COMPLIANCE WITH PROVISIONS OF THE GMS SHALL ALSO BE IN COMPLIANCE WITH THE APPLICABLE MECHANICAL, ELECTRICAL, BUILDING, PLUMBING, ENERGY AND FIRE PREVENTION CODES, STANDARDS, AND REGULATIONS OF THE LOCAL JURISDICTION.
   b. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES AND PERMITS, AND DISPLAY THEM IN THE WORK AREAS AS REQUIRED BY LOCAL ORDINANCES.
   c. WHERE PORTIONS OF STRUCTURAL FRAMING MATERIAL MUST BE REMOVED TO ACCOMMODATE GAS VENT PIPES, MATERIAL REMOVED SHALL BE NO GREATER THAN THAT PERMITTED FOR PLUMBING INSTALLATIONS BY APPLICABLE BUILDING OR PLUMBING CODES.
   d. WHERE INSTALLATION OF A GAS MITIGATION SYSTEM REQUIRES PIPES OR DUCTS TO PENETRATE A FIREWALL OR OTHER FIRE RESISTANCE RATED WALL OR FLOOR, PENETRATIONS SHALL BE PROTECTED IN ACCORDANCE WITH APPLICABLE BUILDING, MECHANICAL, FIRE, AND ELECTRICAL CODES.
2. GAS VENT PIPE INSTALLATION REQUIREMENTS
   a. ALL JOINTS AND CONNECTIONS IN GAS MITIGATION SYSTEMS USING PLASTIC VENT PIPES SHALL BE PERMANENTLY SEALED WITH ADHESIVES AS SPECIFIED BY THE MANUFACTURER OF THE PIPE MATERIAL USED. JOINTS OR CONNECTIONS IN OTHER VENT PIPE MATERIALS SHALL BE MADE AIR TIGHT.
   b. ATTIC AND EXTERNAL PIPING RUNS IN AREAS SUBJECT TO SUBFREEZING CONDITIONS SHOULD BE PROTECTED TO AVOID THE RISK OF VENT PIPE FREEZE-UP.
   c. GAS VENT PIPES SHALL BE FASTENED TO THE STRUCTURE OF THE BUILDING WITH HANGERS, STRAPPING, OR OTHER SUPPORTS THAT WILL ADEQUATELY SECURE THE VENT MATERIAL. EXISTING PLUMBING PIPES, DUCTS, OR MECHANICAL EQUIPMENT SHALL NOT BE USED TO SUPPORT OR SECURE A GAS VENT PIPE.
   d. SUPPORTS FOR GAS VENT PIPES SHALL BE INSTALLED AT LEAST EVERY 6 FEET ON HORIZONTAL RUNS. VERTICAL RUNS SHALL BE SECURED EITHER ABOVE OR BELOW THE POINTS OF PENETRATION THRU FLOORS, CEILINGS, AND ROOFS, OR AT LEAST EVERY 8 FEET ON RUNS THAT DO NOT PENETRATE FLOORS, CEILINGS, OR ROOFS.
   e. TO PREVENT BLOCKAGE OF AIR FLOW INTO THE BOTTOM OF GAS VENT PIPES, THESE PIPES SHALL BE SUPPORTED OR SECURED IN A PERMANENT MANNER THAT PREVENTS THEIR DOWNWARD MOVEMENT TO THE BOTTOM OF SUCTION PITS OR SUMP PITS, OR INTO THE SOIL BENEATH AN AGGREGATE LAYER UNDER A SLAB.
   f. GAS VENT PIPES SHALL BE INSTALLED IN A CONFIGURATION THAT ENSURES THAT ANY RAIN WATER OR CONDENSATION WITHIN THE PIPES DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS RETARDER MEMBRANE.
   g. GAS VENT PIPES SHALL NOT BLOCK ACCESS TO ANY AREAS REQUIRING MAINTENANCE OR INSPECTION. GAS VENTS SHALL NOT BE INSTALLED IN FRONT OF OR INTERFERE WITH ANY LIGHT, OPENING, DOOR, WINDOW OR EQUIPMENT ACCESS AREA REQUIRED BY CODE. IF GAS VENT PIPES ARE INSTALLED IN SUMP PITS, THE SYSTEM SHALL BE DESIGNED WITH REMOVABLE OR FLEXIBLE COUPLINGS TO FACILITATE REMOVAL OF THE SUMP PIT COVER FOR SUMP PUMP MAINTENANCE.
3. GAS VENT FAN INSTALLATION REQUIREMENTS
   a. VENT FANS USED IN GAS MITIGATION SYSTEMS SHALL BE SEALED TO REDUCE THE POTENTIAL FOR LEAKAGE OF SOIL GAS FROM THE FAN HOUSING.
   b. GAS VENT FANS SHALL BE SIZED TO PROVIDE THE PRESSURE DIFFERENCE AND AIR FLOW CHARACTERISTICS NECESSARY TO ACHIEVE THE GAS REDUCTION GOALS ESTABLISHED FOR THE SPECIFIC MITIGATION PROJECT
   c. GAS VENT FANS USED IN ACTIVE SOIL DEPRESSURIZATION OR BLOCK WALL DEPRESSURIZATION SYSTEMS SHALL NOT BE INSTALLED BELOW GROUND NOR IN THE CONDITIONED (HEATED/COOLED) SPACE OF A BUILDING, NOR IN ANY BASEMENT, CRAWLSPACE, OR OTHER INTERIOR LOCATION DIRECTLY BENEATH THE CONDITIONED SPACES OF A BUILDING. ACCEPTABLE LOCATIONS FOR GAS VENT FANS INCLUDE ATTICS NOT SUITABLE FOR OCCUPANCY (INCLUDING ATTICS OVER OCCUPIED) OR ON THE EXTERIOR OF THE BUILDING.
   d. GAS VENT FANS SHALL BE INSTALLED IN A CONFIGURATION THAT AVOIDS CONDENSATION BUILDUP IN THE FAN HOUSING. WHENEVER POSSIBLE, FANS SHOULD BE INSTALLED IN VERTICAL RUNS OF THE VENT PIPE.
   e. GAS VENT FANS MOUNTED ON THE EXTERIOR OF BUILDINGS SHALL BE RATED FOR OUTDOOR USE OR INSTALLED IN A WATER TIGHT PROTECTIVE HOUSING.
   f. GAS VENT FANS SHALL BE MOUNTED AND SECURED IN A MANNER THAT MINIMIZES TRANSFER OF VIBRATION TO THE STRUCTURAL FRAMING OF THE BUILDING.
   g. TO FACILITATE MAINTENANCE AND FUTURE REPLACEMENT, GAS VENT FANS SHALL BE INSTALLED IN THE VENT PIPE USING REMOVABLE COUPLINGS OR FLEXIBLE CONNECTIONS THAT CAN BE TIGHTLY SECURED TO BOTH THE FAN AND THE VENT PIPE.
5. SEALING REQUIREMENTS
   a. SUMP PITS THAT PERMIT ENTRY OF SOIL-GAS OR THAT WOULD ALLOW CONDITIONED AIR TO BE DRAWN INTO A SUB-SLAB DEPRESSURIZATION SYSTEM SHALL BE COVERED AND SEALED. THE COVERS ON SUMPS THAT PREVIOUSLY PROVIDED PROTECTION OR RELIEF FROM SURFACE WATER COLLECTION SHALL BE FITTED WITH A WATER OR MECHANICALLY TRAPPED DRAIN. WATER TRAPS SHOULD BE FITTED WITH AN AUTOMATIC SUPPLY OF PRIMING WATER.
   b. OPENINGS AROUND GAS VENT PIPE PENETRATIONS OF THE SLAB, THE FOUNDATION WALLS, OR THE CRAWLSPACE SOIL-GAS RETARDER MEMBRANE SHALL BE CLEANED, PREPARED, AND SEALED IN A PERMANENT, AIR-TIGHT MANNER USING COMPATIBLE CAULKS OR OTHER SEALANT MATERIALS. OPENINGS AROUND OTHER UTILITY PENETRATIONS OF THE SLAB, WALLS, OR SOIL-GAS RETARDER SHALL ALSO BE SEALED.
   c. OPENINGS, PERIMETER CHANNEL DRAINS, OR CRACKS THAT EXIST WHERE THE SLAB MEETS THE FOUNDATION WALL (FLOOR-WALL JOINT), SHALL BE SEALED WITH URETHANE CAULK OR EQUIVALENT MATERIAL. WHEN THE OPENING OR CHANNEL IS GREATER THAN 1/2 INCH IN WIDTH, A FOAM BACKER ROD OR OTHER COMPARABLE FILLER MATERIAL SHALL BE INSERTED IN THE CHANNEL BEFORE APPLICATION OF THE SEALANT. THIS SEALING TECHNIQUE SHALL BE DONE IN A MANNER THAT RETAINS THE CHANNEL FEATURE AS A WATER CONTROL SYSTEM. OTHER OPENINGS OR CRACKS IN SLABS OR AT EXPANSION OR CONTROL JOINTS SHOULD ALSO BE SEALED. OPENINGS OR CRACKS THAT ARE DETERMINED TO BE INACCESSIBLE OR BEYOND THE ABILITY OF THE CONTRACTOR TO SEAL SHALL BE DISCLOSED TO THE CLIENT AND INCLUDED IN THE DOCUMENTATION.
   d. WHEN INSTALLING BASEBOARD-TYPE SUCTION SYSTEMS, ALL SEAMS AND JOINTS IN THE BASEBOARD MATERIAL SHALL BE JOINED AND SEALED USING MATERIALS RECOMMENDED BY THE MANUFACTURER OF THE BASEBOARD SYSTEM. BASEBOARDS SHALL BE SECURED TO WALLS AND FLOORS WITH ADHESIVES DESIGNED AND RECOMMENDED FOR SUCH INSTALLATIONS. IF A BASEBOARD SYSTEM IS INSTALLED ON A BLOCK WALL FOUNDATION, THE TOPS OF THE BLOCKWALL SHALL BE CLOSED AND SEALED.

G. ELECTRICAL REQUIREMENTS

1. WIRING FOR ALL ACTIVE GAS MITIGATION SYSTEMS SHALL CONFORM TO PROVISIONS OF THE NATIONAL ELECTRIC CODE AND ANY ADDITIONAL LOCAL REGULATIONS.
2. WIRING MAY NOT BE LOCATED IN OR CHASED THRU THE MITIGATION INSTALLATION DUCTING OR ANY OTHER HEATING OR COOLING DUCTWORK.
3. GAS MITIGATION FANS INSTALLED ON THE EXTERIOR OF BUILDINGS SHALL BE HARD-WIRED INTO AN ELECTRICAL CIRCUIT. PLUGGED FANS SHALL NOT BE USED OUTDOORS.
4. IF THE RATED ELECTRICITY REQUIREMENTS OF A GAS MITIGATION SYSTEM FAN EXCEEDS 50 PERCENT OF THE CIRCUIT CAPACITY INTO WHICH IT WILL BE CONNECTED, OR IF THE TOTAL CONNECTED LOAD ON THE CIRCUIT (INCLUDING THE GAS VENT FAN) EXCEEDS 80 PERCENT OF THE CIRCUIT'S RATED CAPACITY, A SEPARATE, DEDICATED CIRCUIT SHALL BE INSTALLED TO POWER THE FAN.
5. AN ELECTRICAL DISCONNECT SWITCH OR CIRCUIT BREAKER SHALL BE INSTALLED IN GAS MITIGATION SYSTEM FAN CIRCUITS TO PERMIT DEACTIVATION OF THE FAN FOR MAINTENANCE OR REPAIR BY THE BUILDING OWNER OR SERVICING CONTRACTOR (DISCONNECT SWITCHES ARE NOT REQUIRED WITH PLUGGED FANS).

H. MATERIALS

1. ALL MITIGATION SYSTEM ELECTRICAL COMPONENTS SHALL BE U.L. LISTED OR OF EQUIVALENT SPECIFICATIONS.
2. AS A MINIMUM, ALL PLASTIC VENT PIPES IN MITIGATION SYSTEMS SHALL BE MADE OF SCHEDULE 80 PVC OR EQUIVALENT PIPING MATERIAL.
3. VENT PIPE FITTINGS IN A MITIGATION SYSTEM SHALL BE OF THE SAME MATERIAL AS THE VENT PIPES.
4. CLEANING SOLVENTS AND ADHESIVES USED TO JOIN PLASTIC PIPES AND FITTINGS SHALL BE AS RECOMMENDED BY MANUFACTURERS FOR USE WITH THE TYPE OF PIPE MATERIAL USED IN THE MITIGATION SYSTEM.
5. WHEN SEALING CRACKS IN SLABS AND OTHER SMALL OPENINGS AROUND PENETRATIONS OF THE SLAB AND FOUNDATION WALLS, CAULKS AND SEALANTS DESIGNED FOR SUCH APPLICATION SHALL BE USED. URETHANE SEALANTS ARE RECOMMENDED BECAUSE OF THEIR DURABILITY.
6. WHEN SEALING HOLES FOR PLUMBING ROUGH-IN OR OTHER LARGE OPENINGS IN SLABS AND FOUNDATION WALLS THAT ARE BELOW THE GROUND SURFACE, NON-SHRINK MORTAR, GROUTS, EXPANDING FOAM, OR SIMILAR MATERIALS DESIGNED FOR SUCH APPLICATION SHALL BE USED.

I. MONITORS AND LABELING

1. ALL ACTIVE SOIL DEPRESSURIZATION AND BLOCK WALL DEPRESSURIZATION GAS MITIGATION SYSTEMS SHALL INCLUDE A MECHANISM TO MONITOR SYSTEM PERFORMANCE AND WARN OF SYSTEM FAILURE. THE MECHANISM SHALL BE SIMPLE TO READ OR INTERPRET AND BE LOCATED WHERE IT IS EASILY SEEN OR HEARD BY BUILDING OCCUPANTS AND PROTECTED FROM DAMAGE OR DESTRUCTION.
2. ELECTRICAL GAS MITIGATION SYSTEM MONITORS (WHETHER VISUAL OR AUDIBLE) SHALL BE INSTALLED ON NON-SWITCHED CIRCUITS AND BE DESIGNED TO RESET AUTOMATICALLY WHEN POWER IS RESTORED AFTER SERVICE OR POWER SUPPLY FAILURE. BATTERY OPERATED MONITORING DEVICES SHALL NOT BE USED UNLESS THEY ARE EQUIPPED WITH A LOW POWER WARNING FEATURE.
3. MECHANICAL GAS MITIGATION SYSTEM MONITORS, SUCH AS MANOMETER TYPE PRESSURE GAUGES, SHALL BE CLEARLY MARKED TO INDICATE THE RANGE OR ZONE OF PRESSURE READINGS THAT EXISTED WHEN THE SYSTEM WAS INITIALLY ACTIVATED.
4. A SYSTEM DESCRIPTION LABEL SHALL BE PLACED ON THE MITIGATION SYSTEM, THE ELECTRIC SERVICE ENTRANCE PANEL, OR OTHER PROMINENT LOCATION. THIS LABEL SHALL BE LEGIBLE FROM A DISTANCE OF AT LEAST THREE FEET AND INCLUDE THE FOLLOWING INFORMATION: "GAS REDUCTION SYSTEM," THE INSTALLER'S NAME, PHONE NUMBER, AND RCP IDENTIFICATION NUMBER, THE DATE OF INSTALLATION, AND AN ADVISORY THAT THE BUILDING SHOULD BE TESTED FOR GAS AT LEAST EVERY TWO YEARS OR AS REQUIRED OR RECOMMENDED BY STATE OR LOCAL AGENCIES. IN ADDITION, ALL EXPOSED AND VISIBLE INTERIOR GAS MITIGATION SYSTEM VENT PIPE SECTIONS SHALL BE IDENTIFIED WITH AT LEAST ONE LABEL ON EACH FLOOR LEVEL. THE LABEL SHALL READ, "GAS REDUCTION SYSTEM."
5. THE CIRCUIT BREAKERS CONTROLLING THE CIRCUITS ON WHICH THE GAS VENT FAN AND SYSTEM FAILURE WARNING DEVICES OPERATE SHALL BE LABELED "GAS SYSTEM."

J. POST-MITIGATION TESTING

1. AFTER INSTALLATION OF AN ACTIVE GAS CONTROL SYSTEM (E.G., SSD), THE CONTRACTOR SHALL RE-EXAMINE AND VERIFY THE INTEGRITY OF THE FAN MOUNTING SEALS AND ALL JOINTS IN THE INTERIOR VENT PIPING.
2. AFTER INSTALLATION OF ANY ACTIVE GAS MITIGATION SYSTEM, THE CONTRACTOR SHALL PERFORM TESTS. SEE SPECIFICATION SECTION 072727 "SUBSLAB DEPRESSURIZATION SYSTEM" FOR ADDITIONAL INFORMATION.
3. IMMEDIATELY AFTER INSTALLATION AND ACTIVATION OF ANY ACTIVE (FAN-POWERED) SUB-SLAB DEPRESSURIZATION OR BLOCK WALL DEPRESSURIZATION SYSTEM IN BUILDINGS CONTAINING NATURAL DRAFT COMBUSTION APPLIANCES, THE BUILDING SHALL BE TESTED FOR BACKDRAFTING OF THOSE APPLIANCES. ANY BACKDRAFTING CONDITION THAT RESULTS FROM INSTALLATION OF THE GAS MITIGATION SYSTEM SHALL BE CORRECTED BEFORE THE SYSTEM IS PLACED IN OPERATION.
4. UPON COMPLETION OF GAS MITIGATION WORK, A TEST OF MITIGATION SYSTEM EFFECTIVENESS SHALL BE CONDUCTED. SEE SPECIFICATION SECTION 072726 'GAS VAPOR BARRIER (FLUID APPLIED) FOR ADDITIONAL INFORMATION.
5. TO ENSURE CONTINUED EFFECTIVENESS OF THE GAS MITIGATION SYSTEM(S) INSTALLED, THE CONTRACTOR SHALL ADVISE THE CLIENT TO RETEST THE BUILDING AT LEAST EVERY TWO YEARS OR AS REQUIRED OR RECOMMENDED BY STATE OR LOCAL AUTHORITY. RETESTING IS ALSO RECOMMENDED IF THE BUILDING UNDERGOES SIGNIFICANT ALTERATION.

K. CONTRACTS AND DOCUMENTATION

1. EPA RECOMMENDS THAT CONTRACTORS PROVIDE THE FOLLOWING WRITTEN INFORMATION TO CLIENTS PRIOR TO INITIATION OF WORK:
   a. THE CONTRACTOR'S EPA RPP MITIGATION SERVICE PROVIDER IDENTIFICATION NUMBER.
   b. A STATEMENT THAT DESCRIBES THE PLANNED SCOPE OF THE WORK AND THAT INCLUDES AN ESTIMATE OF THE TIME NEEDED TO COMPLETE THE WORK.
   c. A STATEMENT DESCRIBING ANY KNOWN HAZARDS ASSOCIATED WITH CHEMICALS USED IN OR AS PART OF THE INSTALLATION.
   d. A STATEMENT INDICATING COMPLIANCE WITH AND IMPLEMENTATION OF ALL EPA STANDARDS AND THOSE OF OTHER AGENCIES HAVING JURISDICTION (E.G., CODE REQUIREMENTS).
   e. A STATEMENT DESCRIBING ANY SYSTEM MAINTENANCE THAT THE BUILDING OWNER WOULD BE REQUIRED TO PERFORM.
   f. AN ESTIMATE OF THE INSTALLATION COST AND ANNUAL OPERATING COSTS OF THE SYSTEM.
   g. THE CONDITIONS OF ANY WARRANTY OR GUARANTEE.
2. EPA RECOMMENDS THAT RPP LISTED MITIGATION CONTRACTORS KEEP RECORDS OF ALL GAS MITIGATION WORK PERFORMED AND MAINTAIN THOSE RECORDS FOR 3 YEARS OR FOR THE PERIOD OF ANY WARRANTY OR GUARANTEE, WHICHEVER IS LONGER. THESE RECORDS SHOULD INCLUDE:
3. THE BUILDING INVESTIGATION SUMMARY AND FLOOR PLAN SKETCH.
4. PRE- AND POST-MITIGATION GAS TEST DATA.
5. PRE- AND POST-MITIGATION DIAGNOSTIC TEST DATA.
6. COPIES OF CONTRACTS AND WARRANTIES.
7. A NARRATIVE OR PICTORIAL DESCRIPTION OF MITIGATION SYSTEM(S) INSTALLED.
8. APPENDIX A CONTAINS A SUGGESTED STANDARD FORMAT FOR COMPILING MITIGATION PROJECT RECORDS.
9. OTHER RECORDS OR BOOKKEEPING REQUIRED BY LOCAL, STATE, OR FEDERAL STATUTES AND REGULATIONS SHALL BE MAINTAINED FOR THE PERIOD(S) PRESCRIBED BY THOSE REQUIREMENTS.
10. EPA RECOMMENDS THAT HEALTH AND SAFETY RECORDS, INCLUDING WORKER GAS EXPOSURE LOGS, BE MAINTAINED FOR A MINIMUM OF 20 YEARS.
11. UPON COMPLETION OF THE MITIGATION PROJECT, CONTRACTORS SHALL PROVIDE CLIENTS WITH AN INFORMATION PACKAGE THAT INCLUDES:
12. ANY BUILDING PERMITS REQUIRED BY LOCAL CODES.
13. COPIES OF THE BUILDING INVESTIGATION SUMMARY AND FLOOR PLAN SKETCH.
14. PRE-AND POST-MITIGATION GAS TEST DATA.
15. COPIES OF CONTRACTS AND WARRANTIES.
16. A DESCRIPTION OF THE MITIGATION SYSTEM INSTALLED AND ITS BASIC OPERATING PRINCIPLES.
17. A DESCRIPTION OF ANY DEVIATIONS FROM THE GMS OR STATE REQUIREMENTS.
18. A DESCRIPTION OF THE PROPER OPERATING PROCEDURES OF ANY MECHANICAL OR ELECTRICAL SYSTEMS INSTALLED, INCLUDING MANUFACTURER'S OPERATION AND MAINTENANCE INSTRUCTIONS AND WARRANTIES.
19. A LIST OF APPROPRIATE ACTIONS FOR CLIENTS TO TAKE IF THE SYSTEM FAILURE WARNING DEVICE INDICATES SYSTEM DEGRADATION OR FAILURE.
20. THE NAME, TELEPHONE NUMBER, AND EPA RPP MITIGATION SERVICE PROVIDER IDENTIFICATION NUMBER OF THE CONTRACTOR, AND THE PHONE NUMBER OF THE STATE GAS OFFICE.

THE ACCEPTANCE TESTING SHALL BE AS FOLLOWS: (5)

1. THE EXPLOSIVE GAS MONITORING SYSTEM CONTRACTOR SHALL COMPLETE ACCEPTANCE TESTING TO DEMONSTRATE THAT THE ENTIRE SYSTEMS FUNCTIONS AS DESIGNED. TESTING SHALL INCLUDE:
   A. TESTING EACH FUNCTION OF THE INTEGRATED CONTROLS AT THE CONTROLLER.
   B. CONFIRMATION OF THE CALIBRATIONS OF ALL SENSORS.
   C. TESTING OF ALL COMMUNICATIONS BETWEEN SENSORS AND CONTROLLERS AND BETWEEN THE CONTROLLER AND ALARMS AND AUTO DIALER.
   D. TESTING OF ALL ALARM FUNCTIONS OF ALL SENSORS (ABILITY TO DETECT EXPLOSIVE GAS CONCENTRATIONS) AND OTHER TROUBLE ALARM/DIAGNOSTIC CONDITIONS.
   E. THE CONTRACTOR SHALL CORRECT ALL DEFICIENCIES AND REPEAT THE TESTING FOR ANY ITEMS THAT FAIL INITIAL TESTING. OWNER SHALL NOT ACCEPT THE SYSTEM UNTIL ALL COMPONENTS AND THE ENTIRE COORDINATED SYSTEM HAVE BEEN DEMONSTRATED TO BE OPERATING AS DESIGNED.

## FAN SCHEDULE

(5) SF X

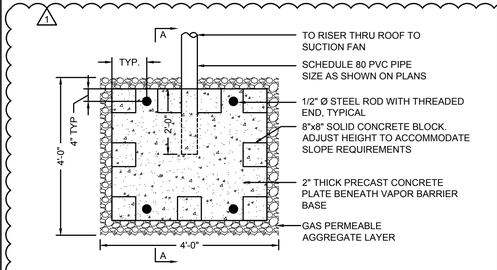
| PLAN NO | MANUFACTURER MODEL | LOCATION | AREA SERVED | FAN TYPE | FAN PERFORMANCE | | | ELECTRICAL DATA | | | | dBA | WEIGHT LBS | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | CFM | TOTAL SP | FAN RPM | HP/ WATTS | RPM | VOLTS/Ø | DRIVE | | | |
| SF-1 | FAN AM CAV-100 | MEZZ | AS SHOWN | CENT | 175 | 2.38 | 3450 | 1/2 | 3450 | 115/1 | DIRECT | 65 | 48 | SEE NOTES |
| SF-2 | FAN AM CAV-100 | MEZZ | AS SHOWN | CENT | 130 | 1.40 | 3450 | 1/2 | 3450 | 115/1 | DIRECT | 55 | 45 | SEE NOTES |
| | | | | | | | | | | | | | | |

NOTES:
1. PROVIDE ELECTRICAL DISCONNECT, VIBRATION ISOLATION WITH MOUNTING BRACKETS.
2. PROVIDE CONTROLS FROM ATC CONTRACTOR.

FOR CONSTRUCTION

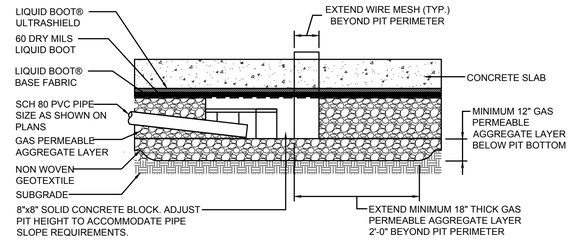
**NEW YORK ALTERATION WARNING**

IT IS A VIOLATION OF NEW YORK PROFESSIONAL ENGINEER & LAND SURVEY LAWS SECTION 7209.2 FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER AN IT



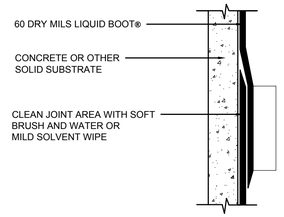

## PLAN VIEW - TYPICAL SUB-SLAB DEPRESSURIZATION PIT — 1A

NOT TO SCALE



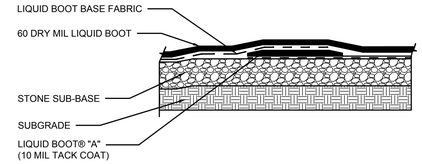

## TYPICAL SUB-SLAB DEPRESSURIZATION PIT - SECTION A-A — 1B

NOT TO SCALE




## GAS VAPOR BARRIER MEMBRANE LAP JOINTS ON SOLID SUBSTRATE — 2A

NOT TO SCALE




## GAS VAPOR BARRIER MEMBRANE LAP JOINTS ON SOLID SUBSTRATE — 2B

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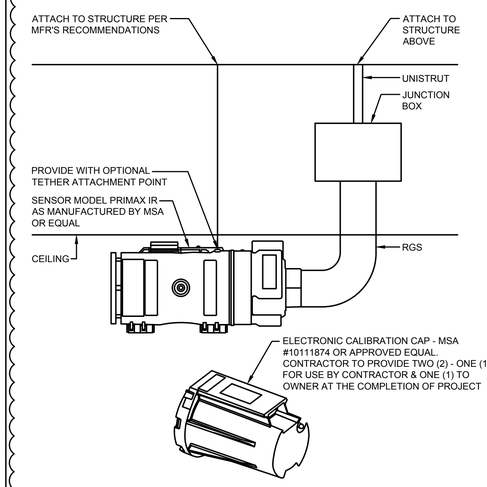
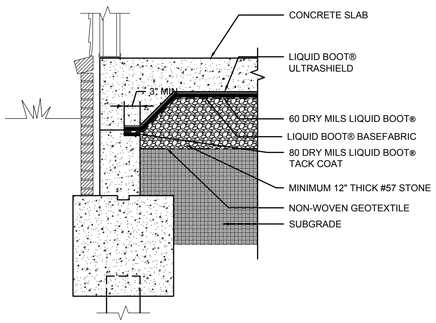


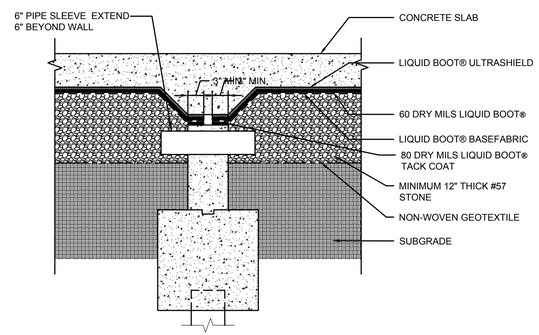

## GAS SENSOR DETAIL — 3

NOT TO SCALE



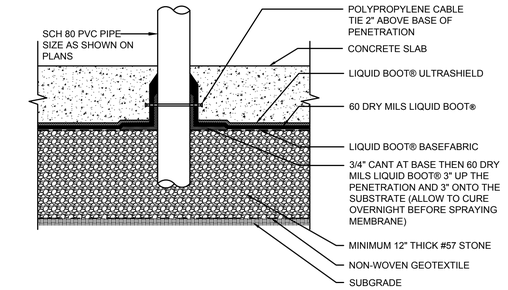

## GAS VAPOR BARRIER AT EXTERIOR WALL DETAIL — 4

NOT TO SCALE



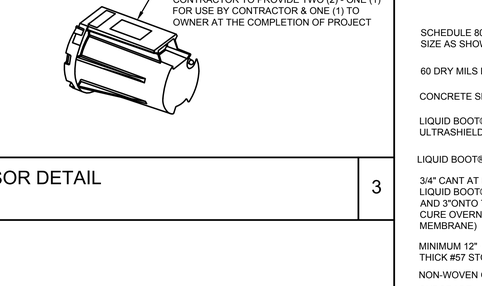

## GAS VAPOR BARRIER AT INTERIOR WALL DETAIL — 5

NOT TO SCALE



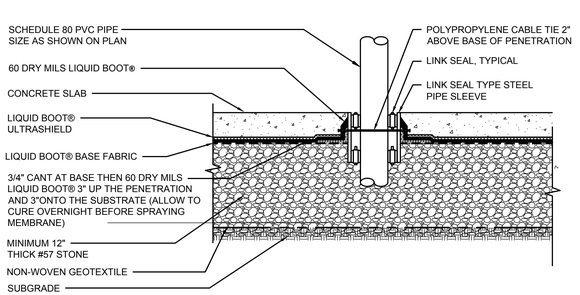

## TYPICAL GAS VAPOR BARRIER PENETRATION DETAIL WITHOUT SLEEVE — 6

NOT TO SCALE



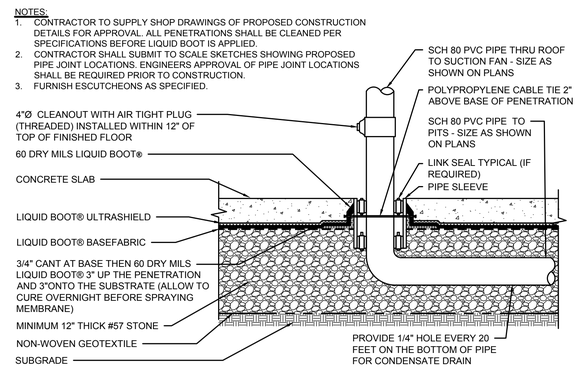

## SUB-SLAB MONITORING POINT DETAIL — 9

NOT TO SCALE



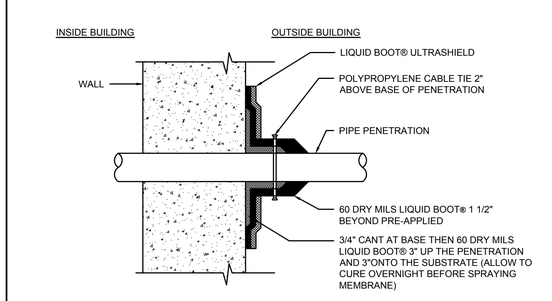

## TYPICAL GAS VAPOR BARRIER PENETRATION DETAIL — 7

NOT TO SCALE



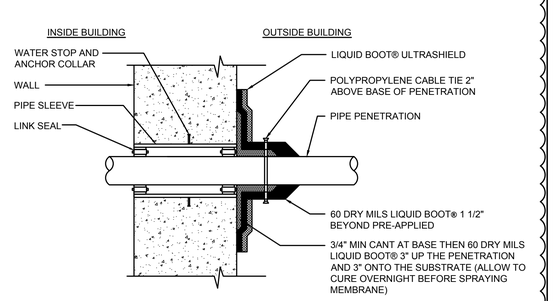

## TYPICAL SSDS RISER DETAIL AT FLOOR SLAB — 10

NOT TO SCALE



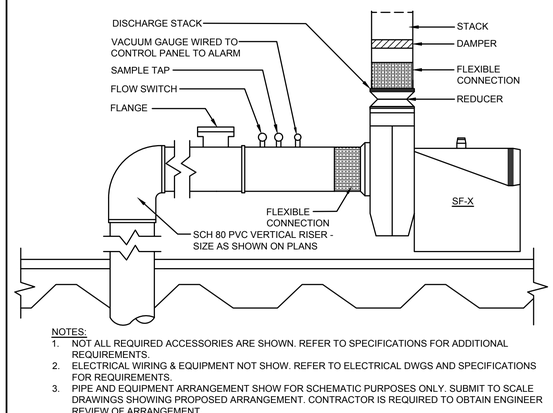

## TYPICAL GAS VAPOR BARRIER PENETRATION THRU WALL BELOW GRADE DETAIL WITHOUT SLEEVE — 8A

NOT TO SCALE



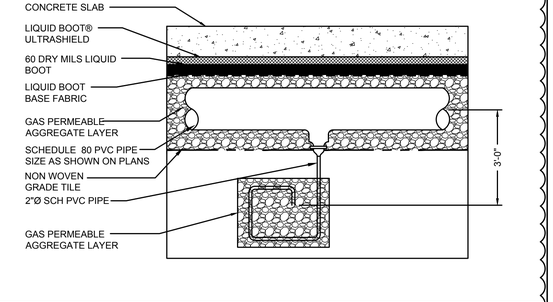

## TYPICAL GAS VAPOR BARRIER PENETRATION THRU WALL BELOW GRADE DETAIL WITH SLEEVE — 8B

NOT TO SCALE




## SUCTION FAN DETAIL — 11

NOT TO SCALE




## TYPICAL LOW POINT CONDENSATE DRAIN DETAIL — 12

NOT TO SCALE

FOR CONSTRUCTION

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FPA FRENCH & PARRELLO ASSOCIATES

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Hackettstown, NJ
New York, NY

JONATHAN V. CRAWFORD, PE
PROFESSIONAL ENGINEER, NY LIC. No. 91249



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PLANNERS ARCHITECTS
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HART/HOWERTON, PLANNING, ARCHITECTURE AND LANDSCAPE ARCHITECTURE, P.C.
10 East 40th Street New York, NY 10016
Tel: 212 683 5651 Fax: 212 481 3768
E-mail: NY@harthowerton.com


THE TRUMP ORGANIZATION

# TRUMP GOLF LINKS FERRY POINT PARK

500 Hutchinson River Parkway
Bronx, New York 10465


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| 07-27-15 | 90% CD |
| 09-15-17 | FOR CONSTRUCTION |

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| NO | DATE: | ISSUE: |
|---|---|---|
| | 02-17-17 | REMOVE BSMT |
| | 03-30-17 | DEC REVIEW |
| 3 | 04-07-17 | RE-BID/ REMOVE BSMT |
| 4 | 05-05-17 | COMMENTS |

DRAWING TITLE:
VAPOR REMEDIATION DETAILS

PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM
DRAWING NO:
FO-504.00

O:\GK\96009\634 - Ferry Point Clubhouse\CAD\DWG\9634.001 - FO-503.dwg


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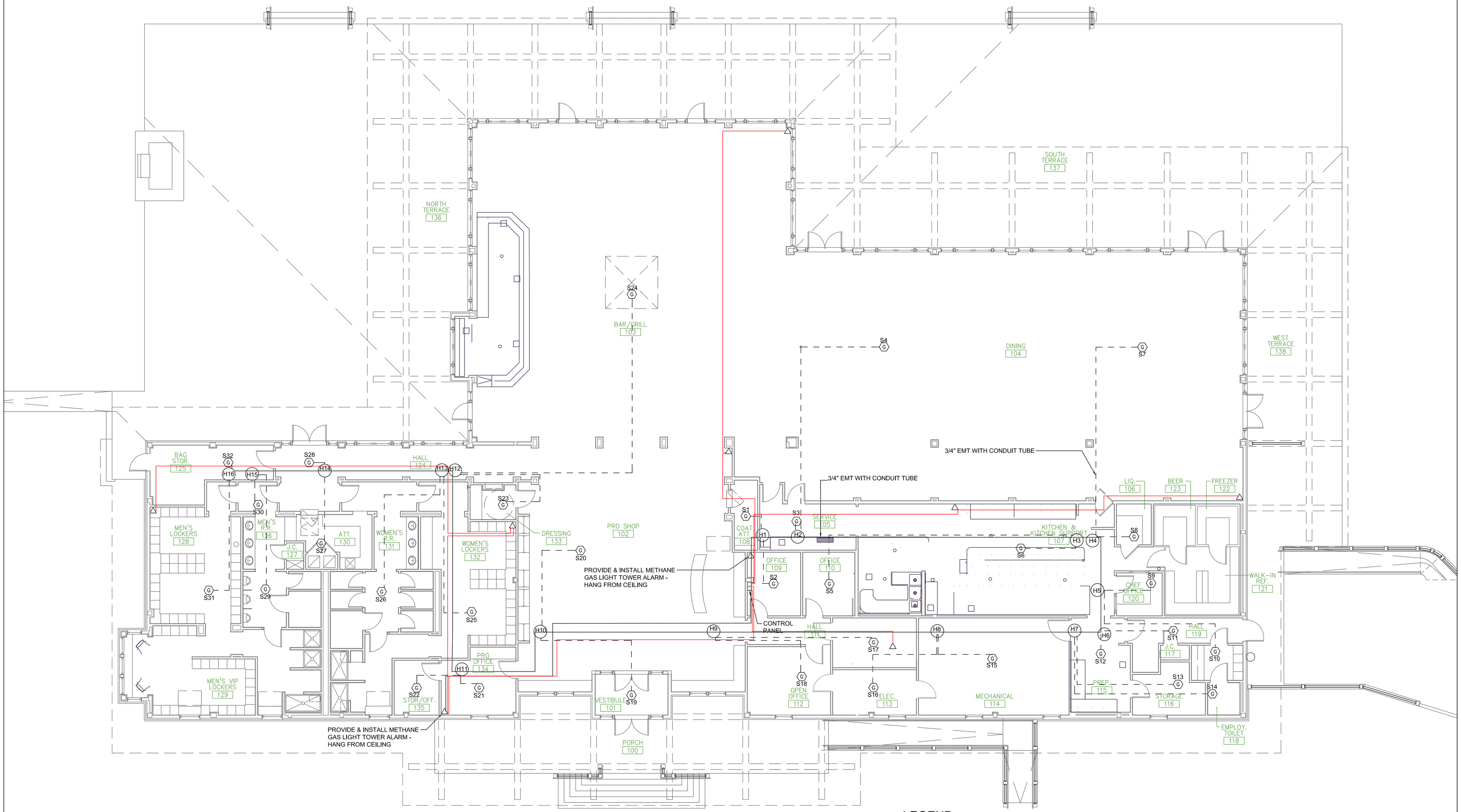


## LEGEND

- GAS SENSOR
- CP — METHANE GAS SENSOR CONTROL PANEL
- METHANE GAS LIGHT TOWER ALARM
- 3/4" EMT WITH CONDUIT TUBE
- 3/4" EMT WITH CONDUIT TUBE
- POWER SUPPLY/ TRANSMITTER WITH POWER
- RED FIREWIRE ALARM CABLE

0 4' 8' 16'


Environmental Management Services
50 Prescott Street
Jersey City, NJ 07304
Phone: 201-395-0010
Fax: 201-395-0020


| No. | Date | Revision |
|---|---|---|

| | | |
|---|---|---|
| Designer: | | |
| Drawn by: | CM | |
| Checked by: | ML | |
| Scale: 1/8" = 1' | | Date: 9/21/2017 |

Project:
FERRY POINT CLUBHOUSE

Address:
300 HUTCHINSON RIVER PARKWAY
BRONX, NEW YORK 10465

Drawing Title:
METHANE MONITORING SYSTEM
CEILING PLAN

Drawing No.:
SD201

Sheets in Drawing Set:
01 of 01

# APPENDIX D

## Letter from NYSDEC to Trump Golf Links at Ferry Point re: "Ferry Point Park SSDS Foundation Drawings – Trump Golf Links Clubhouse" dated June 22, 2017

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Materials Management, Region 2**
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4996 I F: (718) 482-6391
www.dec.ny.gov

June 22, 2017

Joe Roediger
General Manager
Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, NY 10465

Re: Ferry Point Park
SSDS/Foundation Drawings – Trump Golf Links Clubhouse

Dear Mr. Roediger,

New York State Department of Environmental Conservation (department) staff have reviewed the Ferry Point Park Sub-Slab Depressurization System plan and included attachments, prepared by French & Parrello Associates, which was provided by your letter dated June 12th, 2017.

The above-referenced plan appears to comply with the applicable regulations, and, therefore, is approved on the following conditions:

1) The alarm set point for the gas monitoring system is set to 25% LEL.

2) On the completion of the project and prior to occupancy of the building, a construction certification letter from a New York State registered professional engineer must be sent to the department for approval stating that the Ferry Point Park Sub-Slab Depressurization System and Foundation was constructed in accordance with the above-referenced plan and attachments. If there are deviations to the construction, they must be specified.

If you have any questions you may contact me at 718-482-4996.

Sincerely yours,

Kenneth B. Brezner

Kenneth B. Brezner, P.E.
Regional Material Management Engineer

ec: J. O'Connell/W. Frank, R2 DMM
K. Zias, NYC DPR

FPP_SSDSFoundation_Plan_Approval.2017-06-22.Letter.docx

# APPENDIX E

## Maser Consulting P.A. Letter of Transmittal to NYSDEC (via the Trump Organization) re: "Construction Certification – SSDS" dated June 7, 2018

MASER CONSULTING P.A.

Engineers
Planners
Surveyors
Landscape Architects
Environmental Scientists

2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
T: 856.797.0412
F: 856.722.1120
www.maserconsulting.com

# LETTER OF TRANSMITTAL

To: NYS Dept. of Environmental Conservation
Division of Materials Management, Reg. 2
47-40 21st Street
Long Island City, NY 11101

| | |
|---|---|
| Date: 06/07/2018 | Job No.: 17002426A |
| Attention: | Kenneth B. Brezner, P.E. |
| | Regional Material Management Engineer |
| RE: | Construction Certification |
| | Subslab Depressurization System (SSDS) |
| | Trump Golf Links at Ferry Point Clubhouse, Bronx NY |
| VIA | |

WE ARE SENDING YOU:

- ☐ **CD**
- ☐ **Under separate cover** _____ **the following items:**
- ☐ **Shop Drawings**
- ☐ **Samples**
- ☐ **Change order**
- ☐ **Prints**
- ☐ **Specifications**
- ☐ **Plans**
- ☐ **Copy of Letter**

| COPIES | DATE | NO. | Description |
|---|---|---|---|
| 1 | 06/22/17 | 1 | Letter from NYSDEC to Trump Golf Links at Ferry Point (Joe Roediger) re: Ferry Point Park – SSDS/Foundation Drawings – Trump Golf Links Clubhouse |
| 1 | 06/07/18 | 1 | Construction Certification Statement from Donald Bowman, P.E., New York Registration No. 095674 |
| 1 | 06/07/18 | 1 | Site Summary |
| 1 | 09/15/17 | 1 | Drawing No. FO-500.00 "Vapor Remediation Underslab Plan" issued for construction |
| 1 | 09/15/17 | 1 | Drawing No. FO-501.00 "Vapor Remediation Floor Plan" issued for construction |
| 1 | 09/15/17 | 1 | Drawing No. FO-502.00 "Vapor Remediation Attic & Mezzanine Plan" issued for construction |
| 1 | 09/15/17 | 1 | Drawing No. FO-503.00 "Vapor Remediation Notes & Schedule" issued for construction |
| 1 | 09/15/17 | 1 | Drawing No. FO-504.00 "Vapor Remediation Details" issued for construction |
| 1 | 06/07/18 | 1 | Drawing Nos. FO-500, FP-501, FO-502 & FO-504 showing deviations from design |
| 1 | 06/07/18 | 1 | CD of Construction Daily Field Reports |

THESE ARE TRANSMITTED as checked below:

- [X] **For approval**
- ☐ **For your use**
- ☐ **As Requested**
- ☐ **For review and comment**
- ☐ **FOR BIDS DUE:**
- ☐ **Approved as submitted**
- ☐ **Approved as noted**
- ☐ **Returned for corrections**
- ☐ **PRINTS RETURNED AFTER LOAN TO US**
- ☐ **Resubmit copies for approval**
- ☐ **Submit copies for distribution**
- ☐ **Returned corrected prints**

REMARKS:

**Signed: Donald Bowman, P.E.**

**Copy To**: Kay Zias, NYC Department of Parks & Recreation
Steve Lauria, P.E., Woodard & Curran
John Gruber, Construction Manager, The Trump Organization
Joe Roediger, General Manager, The Trump Organization

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Materials Management, Region 2**
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June 22, 2017

Joe Roediger
General Manager
Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, NY 10465

Re: Ferry Point Park
SSDS/Foundation Drawings – Trump Golf Links Clubhouse

Dear Mr. Roediger,

New York State Department of Environmental Conservation (department) staff have reviewed the Ferry Point Park Sub-Slab Depressurization System plan and included attachments, prepared by French & Parrello Associates, which was provided by your letter dated June 12th, 2017.

The above-referenced plan appears to comply with the applicable regulations, and, therefore, is approved on the following conditions:

1) The alarm set point for the gas monitoring system is set to 25% LEL.

2) On the completion of the project and prior to occupancy of the building, a construction certification letter from a New York State registered professional engineer must be sent to the department for approval stating that the Ferry Point Park Sub-Slab Depressurization System and Foundation was constructed in accordance with the above-referenced plan and attachments. If there are deviations to the construction, they must be specified.

If you have any questions you may contact me at 718-482-4996.

Sincerely yours,

Kenneth B. Brezner

Kenneth B. Brezner, P.E.
Regional Material Management Engineer

ec: J. O'Connell/W. Frank, R2 DMM
K. Zias, NYC DPR

FPP_SSDSFoundation_Plan_Approval.2017-06-22.Letter.docx

## Certification Statement

I, Donald Bowman, an employee of Maser Consulting P.A. and a Registered Professional Engineer licensed by the State of New York, exercising independent judgment and discretion do hereby certify that this Subslab Depressurization System (SSDS) for the Trump Golf Links at Ferry Point Clubhouse was constructed under my direction and supervision. The information contained herein is based upon: (1) work which I have personally inspected both during and after construction from July 2017 to date; (2) information provided to me by those directly employed by Maser Consulting P.A.; (3) Design Consultants; and (4) contractors responsible for construction pursuant to their contracts except as indicated[1].

I certify that, from July 2017 to date, Maser Consulting representatives observed the installation of the critical elements of the SSDS for the Trump Golf Links at Ferry Point Clubhouse, with the following deviations from design:

- Drawing No. FO-500.00 "Vapor Remediation Underslab Plan" – lateral piping to SSDS pits DP-2B & DP-2C built approximately 2 feet offset from design due to piping conflicts
- Drawing No. FO-501.00 "Vapor Remediation Floor Plan" – riser piping for fan units SF-1 & SF built within walls to conceal system and prevent unauthorized access; gas sensors in Hall 124, Vestibule 101 & Electrical 113 ceilings built approximately 3-5 feet from design due to piping conflicts
- Drawing No. FO-502.00 "Vapor Remediation Attic & Mezzanine Plan" – fan unit SF-1 built approximately 10 feet to the left of design due to piping conflicts
- Drawing No. FO-504.00 "Vapor Remediation Details" – detail 1B built using hollow (instead of solid) concrete blocks; 'Methane Gas Sensor Detail (option 1)' & 'Methane Gas Sensor Detail (option 2)' added for sensor plenum boxes




Donald Bowman

6/7/2018

Donald Bowman, P.E.
Maser Consulting P.A.

Date

[1] Certification means a statement of professional opinion based upon investigation, analysis, knowledge and belief that is stated to be true and accurate. 6 NYCRR Part 360-1.2(b)24.

Site Summary[1]

Ferry Point Park in the Bronx (the "Site") is a former landfill covering 222 acres that is bound by the Bronx-Whitestone Bridge and Hutchinson River Parkway to the west, Balcom/Miles/Emerson Avenues to the east, Schley Avenue and St. Raymond's Cemetery to the north, and the East River to the south. The project was originally managed under Ferry Point Partners, LLC and was taken over solely by the City of New York Department of Parks and Recreation in October 2007.

The origins of the site back to the early 1900s. At that time an available 1900 map of the Bronx showed the western edge of the site which now contains the expressway and Whitestone Bridge was a long narrow peninsula extending out to the same area that the northern landing of the Whitestone Bridge now extends. Immediately east of this peninsula was a large open bay which is the area that the Ferry Point Golf Course is now located. Northeast of the bay and well inlandwas the Baxter Creek that drained into the bay. The eastern landfall of this embayment area is a larger peninsula that contains roadways and a residential development. The road patterns do not resemble the roadways that currently exist in that area and appear to have been changed.

A 1938 aerial photo showing the construction of the Whitestone Bridge shows the Bay, mooring, residential area and land to the west to be virtually the same as shown in the 1900 map. The significant change is in the widening of the western peninsula where the expressway was being constructed leading to the bridge ramps. The widening was not significant at this time but a rectangular area in the extreme northwest corner of what is now the site appears to be filled and graded – possibly to support construction staging area for the bridge/expressway. Areas of filling can be readily identified in the photograph by the contrasting lighter color typically indicative of sandy dredge sand placement. Other areas along the shoreline can be seen as containing a lighter colored band of fill material and this includes much of the new Ferry Point Park located west of the Whitestone Bridge. Much of the park area was filled and graded by 1938. Bulkheads were constructed with linear components to present a smooth shoreline but one that does not appear to contain a beach where water diminishes in depth to 0. Photos of the eastern area of the bay where mooring and docks can be seen showing large vessels moored against the shore. This would indicate the water had significant depth all of the way to the center of the bay.

Aerial photographs from the 1950s show a drastic change in the area currently referred to as the site. Large expansion of the filling that was evident in 1938-39 up in the northeast corner can be clearly seen. The filling extends well into the bay and it appears that a connective bridge was constructed from the eastern shore to the fill area. It is difficult to discern if this is a usable structure for crossing or if it had some other purpose. The filling operation appears from the photo to consist of the same light-colored material that was placed in the Ferry Point Park and from photos showing a large number of barges in the water filled with material of the same light color. There is specific documentation that presents the specific origin and consistency of the

[1] Reference: "Ferry Point Park Golf Course & Community Park, Bronx New York, Final Construction Certification Report, NYSDEC Permit #2-6006-00014 / 00013 (SW)" prepared by the City of New York Department of Parks and Recreation dated October 19, 2015

material. but from the prior aerials showing filling and this large expansion, it appears to be of a similar origin which would be dredge sand. In the 1951 aerial, no specific municipal solid waste dumping and disposal can be seen; however, records indicate the landfill operated during this approximate time period. It is therefore assumed that municipal solid waste was disposed shortly after the photo was taken. The landfilling shown in the aerial may have been the initial construction of the upper portion of the landfill with the tidal gate or bridge closing in the upper bay area. Additional aerials of the landfilling were not identified and more recent aerials document the completion of filling as well as the more recent golf course construction.

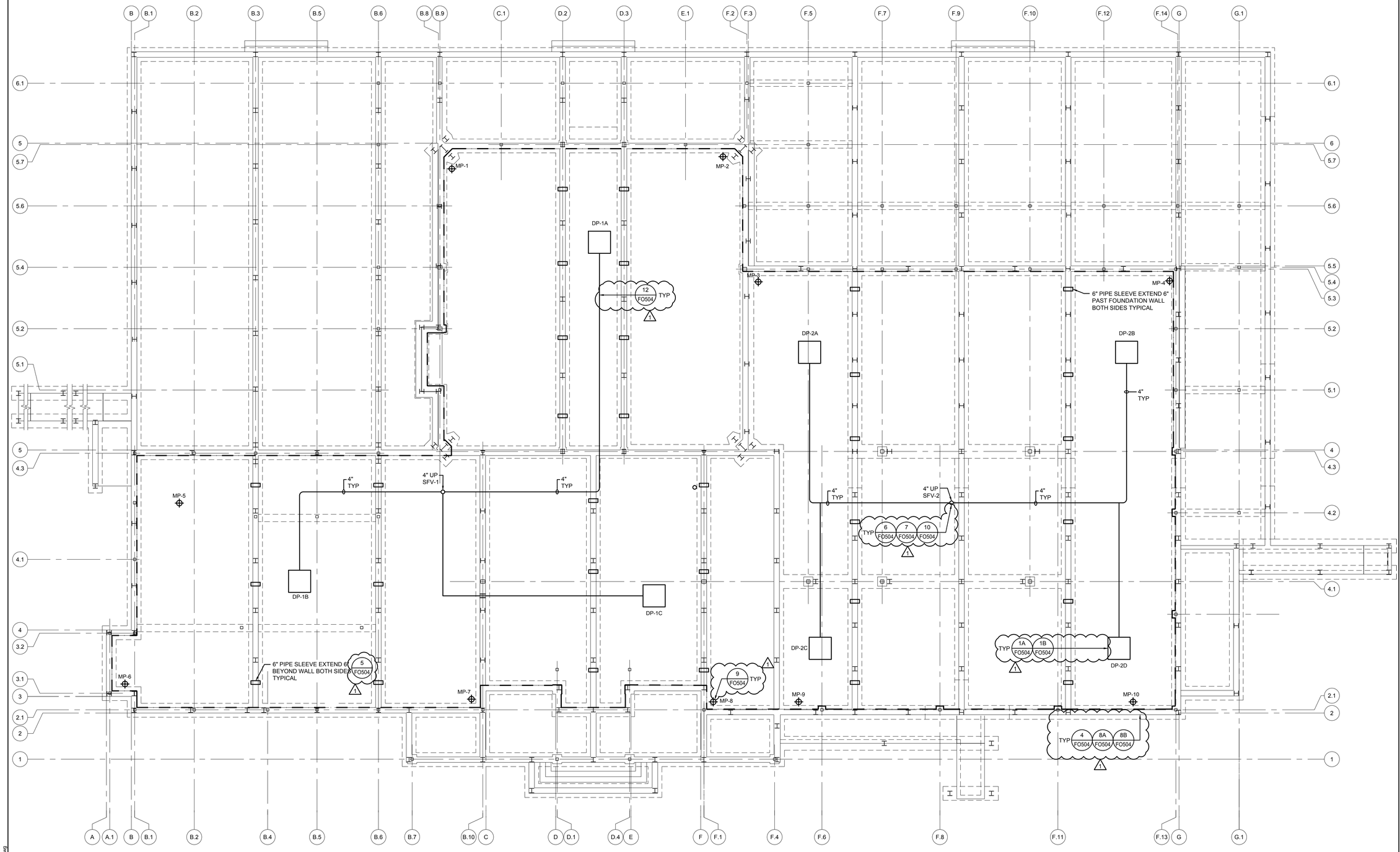
What can be discerned from this compilation of photos is that the landfill could be located in an area that may have been open water as well as some area that was previously reclaimed land with dredge material.

The Site operated as a landfill from before 1951 to the 1960s. The landfill reportedly accepted municipal solid waste during its operating period and was closed and covered in the mid-1960s, with additional closure operations conducted more recently in the 1980s. Prior Site use was determined from historic aerial photographs from 1938 thru 1991. The aerial photographs span the entire operational period of the prior landfill, from its initial operations to the present, and provides substantial information about the Site's development.

The original project scope included the construction of three main elements including a golf course, a community park, and a waterfront park over the 222-acre Site as follows:

- An 18-hole golf course with practice facility, driving range, clubhouse, maintenance facility, irrigation lake, stormwater retention ponds, and a parking lot (192.5 acres);
- A passive recreation waterfront park with walkways and a comfort station (19.5 acres); and
- A community park with baseball fields, basketball court, walkways, comfort station, and landscaped stormwater retention area (10 acres)

Construction of a permanent clubhouse in the southern corner of the site began in July 2017, with a projected completion date of June 2018.




## UNDERSLAB PLAN

SCALE: 1/8" = 1'-0"

NOTES :

1. DRAWINGS NOT TO BE USED FOR STRUCTURAL, ARCHITECTURAL OR OTHER REFERENCE EXCEPT FOR SUB-SLAB DEPRESSURIZATION SYSTEM.
2. THE EXTENTS OF BUILDING CONSTRUCTION BENEATH THE FLOOR SLABS SHALL BE LINED WITH GAS VAPOR BARRIER. AS PART OF BUILDING CONSTRUCTION. THE GAS VAPOR BARRIER SHALL ALSO BE APPLIED VERTICALLY TO BELOW GRADE WALLS AND WALLS OF PITS AND SUMPS AS SHOWN AND SPECIFIED.
3. SLOPE HORIZONTAL PIPE UNIFORMLY A MINIMUM OF 1% TOWARD SUB-SLAB DEPRESSION SYSTEM PITS OR TO CONDENSATE DRAINS WHEN PIPING CANNOT BE SLOPED TO PIT.
4. SECURE VERTICAL RISER TO WALL IN ACCORDANCE WITH ARCHITECTURAL AND PLUMBING REQUIREMENTS.
5. ELECTRICAL WIRING AND EQUIPMENT NOT SHOWN. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR REFERENCES.
6. SEAL ALL JOINTS IN SLAB ON GRADE, INCLUDING BUT NOT LIMITED TO, CONTROL JOINTS, EXPANSION JOINTS, CRACKS, WALL JOINTS, PENETRATIONS ETC. WITH NON-CRACKING CAULK. POLYURETHANE TYPE PREFERRED.
7. COORDINATE GAS VENTING SYSTEM WITH ALL TRADES, INCLUDE VENTING SYSTEM PIPING ON COORDINATION DRAWINGS.
8. ALL GAS VENTS SHALL BE CONTINUOUS FROM UNDERSLAB STONE BASE TO 36" ABOVE ROOF LINE OR PARAPET (WHICHEVER IS HIGHER). ALL VENTS SHALL BE 10'-0" MIN FROM LOT LINES, OUTSIDE AIR INTAKES, WINDOWS, ETC.
9. DRAWING ILLUSTRATES WALLS AND ALL SLAB ON GRADE FLOOR AREAS. COORDINATE THIS WORK WITH ARCHITECTURAL, MECHANICAL, AND STRUCTURAL PLANS.
10. ALL GAS VENT PIPING SHALL BE PVC PIPING. WHERE PIPING IS LOCATED IN RETURN AIR PLENUMS CHANGE MATERIAL TO NO-HUB CAST IRON PIPE.
11. LABEL GAS PIPING AT INTERVALS OF NOT MORE THAN 25 FT IN CONCEALED LOCATIONS AND NOT MORE THAN 50 FT ON EXPOSED AND NOT LESS THAN ONCE IN ANY ROOM OR SPACE.
12. GAS VAPOR BARRIER TO BE INSTALLED IMMEDIATELY BELOW FLOOR SLAB AS INDICATED ON THE STRUCTURAL DRAWINGS. PROVIDE 12" MINIMUM CLEAN #57 STONE SUB-BASE FOR GAS MITIGATION SYSTEM.
13. SLOPE HORIZONTAL PIPE A MINIMUM OF 1% UNIFORMLY TOWARD SUCTION PITS.
14. REFER TO SPECIFICATION FOR ADDITIONAL SUB-SLAB DEPRESSURIZATION SYSTEM AND ACCESSORIES REQUIREMENTS.

## LEGEND

- EXTENT OF GAS PERMEABLE AGGREGATE LAYER BENEATH FLOOR SLAB
- 4" SCHEDULE 80 PVC PIPE
- SFV-1 — SUCTION FAN VERTICAL 4" RISER AND IDENTIFICATION NUMBER. EXTEND THRU ATTIC TO SUCTION FAN
- MP-1 — SUB-SLAB MONITORING POINT AND IDENTIFICATION NUMBER
- DP-1A — SUB-SLAB DEPRESURAIZATION PIT AND IDENTIFICATION NUMBER

FOR CONSTRUCTION

PROVIDE LIQUID BOOT GAS VAPOR BARRIER SYSTEM UNDER SLAB AS MANUFACTURED BY CETCO CONSISTING OF ULTRASHIELD G-1000, 60 DRY MILS LIQUID BOOT AND LIQUID BOOT BASE FABRIC. SYSTEM SHALL INSTALLED BY AUTHORIZED INSTALLER. REFER TO DETAILS FOR ADDITIONAL INFORMATION. REFER TO CONTRACT DOCUMENTS FOR LOCATIONS OF PENETRATIONS THROUGH THE SLAB.

OFFSET VENT ABOVE CEILING AT ROOF AND EXTEND THROUGH ROOF APPROXIMATELY 3' FROM PARAPET WALLS AND TERMINATE 24" ABOVE FINISHED ROOF.

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FRENCH & PARRELLO ASSOCIATES


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Wall, NJ 07719
732 312-9600
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New York, NY


JONATHAN V. CRAWFORD, PE
PROFESSIONAL ENGINEER, NY LIC. No. 91249


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LANDSCAPE ARCHITECTS

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Tel: 212 683 5651 Fax: 212 481 3768
E-mail: NY@hartHowerton.com


TRUMP
THE TRUMP ORGANIZATION

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DRAWING TITLE:
VAPOR REMEDIATION UNDERSLAB PLAN

PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM

DRAWING NO:
FO-500.00

O:\SHG\960\09\9634 - Ferry Point Clubhouse\CAD\DWG\9634.001 - FO-500.dwg


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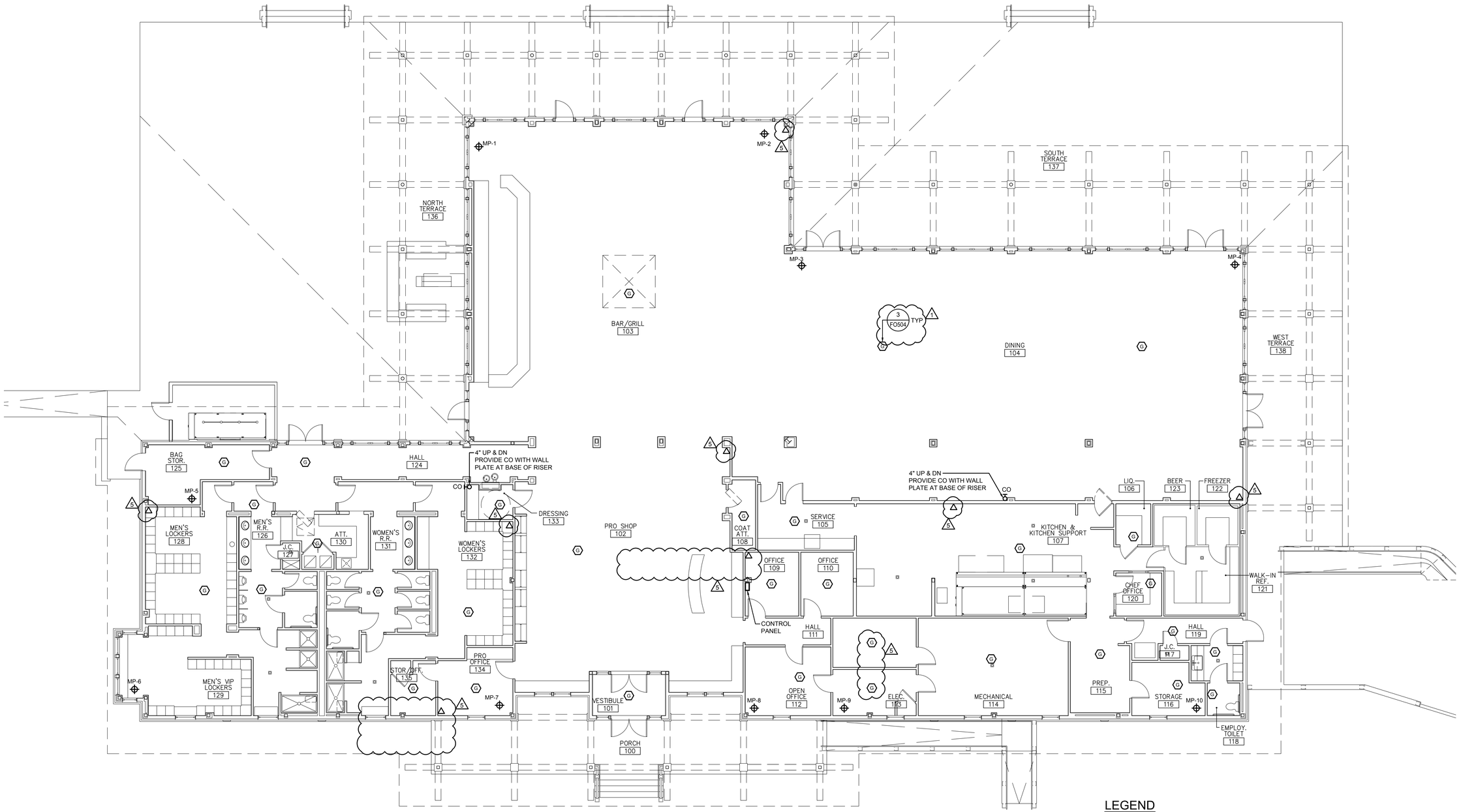


## FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

## LEGEND

| | |
|---|---|
| SFV-1 | SUCTION FAN VERTICAL 4" RISER AND IDENTIFICATION NUMBER. EXTEND THRU ATTIC TO SUCTION FAN |
| MP-1 | SUB-SLAB MONITORING POINT AND IDENTIFICATION NUMBER |
| G | GAS SENSOR |
| | METHANE GAS SENSOR CONTROL PANEL |
| | METHANE GAS LIGHT TOWER ALARM - HANG FROM CEILING |

FOR CONSTRUCTION

**NEW YORK ALTERATION WARNING**

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TRUMP

THE TRUMP ORGANIZATION

# TRUMP GOLF LINKS FERRY POINT

500 Hutchinson River Parkway
Bronx, New York 10465


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| 09-15-17 | FOR CONSTRUCTION |

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| NO | DATE | ISSUE |
|---|---|---|
| | 02-17-17 | REMOVE BSMT |
| | 03-30-17 | DEC REVIEW |
| 3 | 04-07-17 | RE-BID/ REMOVE BSMT |
| 4 | 05-05-17 | COMMENTS |
| 5 | 06-06-17 | DEC COMMENTS |

DRAWING TITLE:
# VAPOR REMEDIATION FLOOR PLAN

PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM

DRAWING NO:
# FO-501.00


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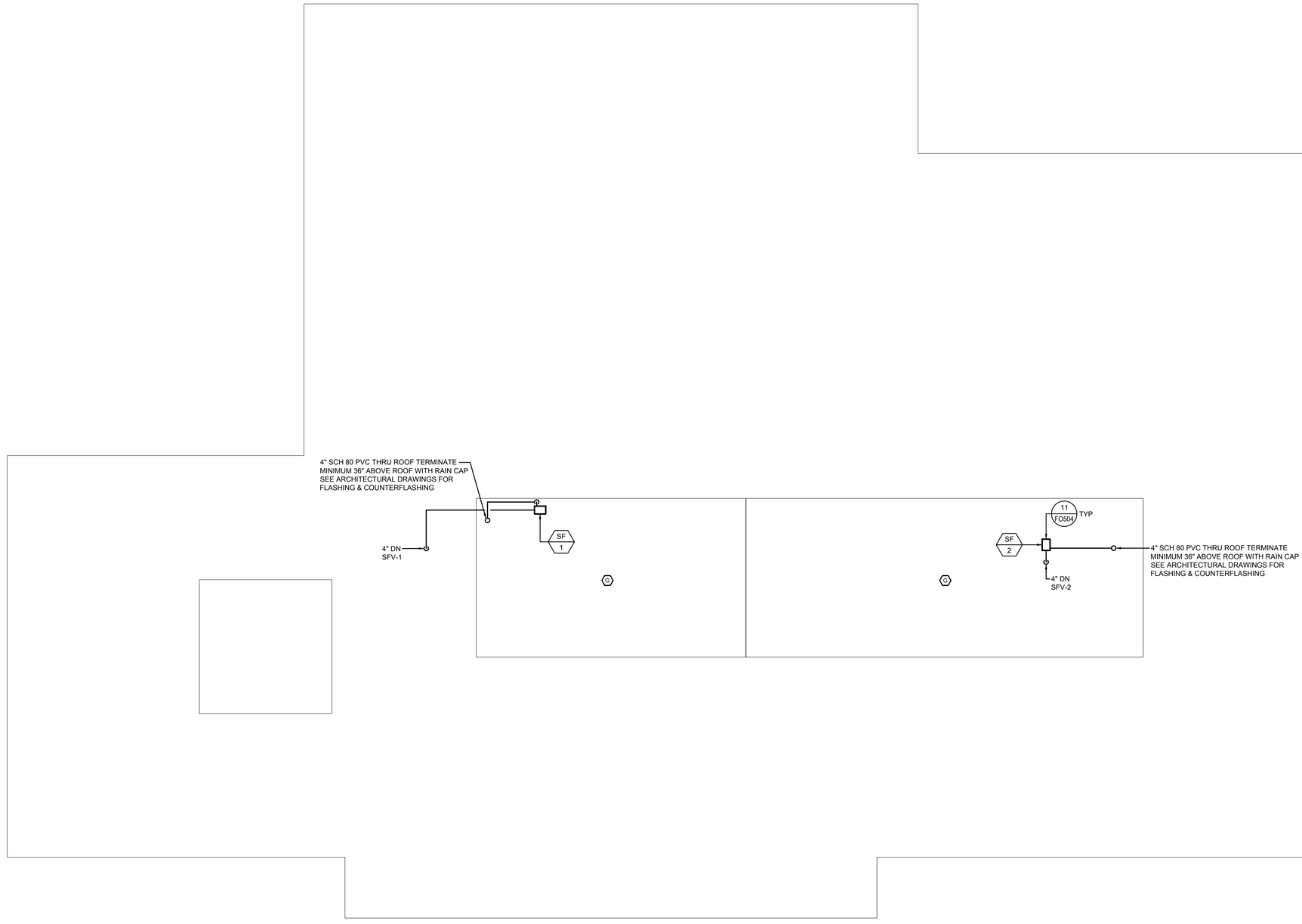


ATTIC/MEZZANINE PLAN

SCALE: 1/8" = 1'-0"

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DRAWING TITLE:
VAPOR REMEDIATION ATTIC & MEZZANINE PLAN

PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM

DRAWING NO:
FO-502.00

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# VAPOR REMEDIATION GENERAL NOTES

A. SCOPE

1. ALL CONSTRUCTION SHALL COMPLY WITH THE NYSDEC APPROVED POST CONSTRUCTION CUSTODIAL CARE PLAN DATED OCTOBER 2013, PREPARED BY NYC DPR, INCLUDING THE APPROPRIATE HANDLING OF COVER, SOIL, SHAPING LAYER MATERIAL, DEMARCATION LAYER MATERIALS, AND MSW, AND INSPECTION AND CONSTRUCTION CERTIFICATION REQUIREMENTS.
2. THE GAS MITIGATION SYSTEM IS TO BE INSTALLED BY A LICENSED GAS MITIGATION CONTRACTOR IN THE STATE OF NEW YORK. CONTRACTOR TO SUBMIT DESIGN SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.
3. THE REQUIREMENTS ADDRESSED IN THE GAS MITIGATION SYSTEM (GMS) INCLUDE THE FOLLOWING CATEGORIES OF CONTRACTOR ACTIVITY: GENERAL PRACTICES, WORKER HEALTH AND SAFETY, SYSTEMS INSTALLATION, MATERIALS, MONITORS AND LABELING, POST-MITIGATION TESTING, AND CONTRACTS AND DOCUMENTATION.

B. IMPLEMENTATION

1. THE GMS INCLUDES REQUIREMENTS FOR INSTALLATION OF GAS REMEDIATION SYSTEMS AND PROVIDES A BASIS FOR EVALUATING THE QUALITY OF THOSE INSTALLATIONS. IT MAY BE ADOPTED BY STATE REGULATORY AGENCIES FOR STATE OR LOCAL GAS MITIGATION CONTRACTOR LICENSURE PROGRAMS. IT MAY ALSO BE USED AS A REFERENCE DURING INSPECTION OF IN-PROGRESS OR COMPLETED GAS MITIGATION WORK.
2. CONTRACTORS SHALL PERSONALLY CONDUCT FOLLOW-UP INSPECTION OF ANY GAS MITIGATION SYSTEMS INSTALLED BY THEIR FIRM OR BY SUBCONTRACTORS TO INSURE CONFORMANCE WITH THE REQUIREMENTS OF THE GMS. THIS REQUIREMENT SHALL INCLUDE THE POST-MITIGATION TESTING PRESCRIBED IN THIS SPECIFICATION.
3. THOSE PROVISIONS OF THE GMS THAT ARE CONSIDERED TO BE MANDATORY ARE PREFACED BY THE TERM "SHALL." PROVISIONS THAT ARE CONSIDERED GOOD PRACTICE BUT WHICH ARE NOT MANDATORY ARE PREFACED BY THE TEGMS "SHOULD" OR "RECOMMENDED."

C. LIMITATIONS

1. ALTHOUGH THE PROVISIONS OF THE GMS HAVE BEEN CAREFULLY REVIEWED FOR POTENTIAL CONFLICTS WITH OTHER REGULATORY REQUIREMENTS, ADHERENCE TO THE GMS DOES NOT GUARANTEE COMPLIANCE WITH THE APPLICABLE CODES OR REGULATIONS OF ANY OTHER FEDERAL, STATE, OR LOCAL AGENCY HAVING JURISDICTION.
2. WHERE DISCREPANCIES EXIST BETWEEN PROVISIONS OF THE GMS AND LOCAL CODES OR REGULATIONS, LOCAL CODES SHALL TAKE PRECEDENCE. HOWEVER, WHERE COMPLIANCE WITH LOCAL CODES NECESSITATES A DEVIATION FROM THE GMS, EPA RECOMMENDS THAT RPP LISTED MITIGATION SERVICE PROVIDERS (MITIGATION CONTRACTORS) REPORT THE DEVIATION IN WRITING TO THE APPROPRIATE EPA REGIONAL OFFICE AND THE APPROPRIATE STATE REGULATORY OFFICIAL WITHIN 30 DAYS. IT SHOULD BE NOTED THAT EPA IS NOT REQUIRING THE REPORTING THAT IS RECOMMENDED IN THIS PARAGRAPH. STATES WITH GAS MITIGATION CONTRACTOR CERTIFICATION PROGRAMS MAY REQUIRE THAT CONTRACTORS GIVE PRIOR NOTIFICATION OF THEIR INTENT TO DEVIATE FROM THE GMS FOR RESEARCH OR OTHER PURPOSES.
3. THE GMS IS NOT INTENDED TO BE USED AS A DESIGN MANUAL, AND COMPLIANCE WITH ITS PROVISIONS WILL NOT GUARANTEE REDUCTION OF INDOOR GAS CONCENTRATIONS TO ANY SPECIFIC LEVEL.
4. BECAUSE OF THE WIDE VARIATION IN BUILDING DESIGN, SIZE, OPERATION AND USE, THE GMS DOES NOT INCLUDE DETAILED GUIDANCE ON HOW TO SELECT THE MOST APPROPRIATE MITIGATION STRATEGY FOR A GIVEN BUILDING. THAT GUIDANCE IS PROVIDED IN THE DOCUMENTS REFERENCED IN IN THIS SPECIFICATION.
5. CONTRACTORS WHO EXPECT TO DEVIATE FROM PROVEN GAS MITIGATION TECHNOLOGIES AND METHODS FOR PURPOSES OF RESEARCH ON INNOVATIVE MITIGATION TECHNIQUES, SHALL OBTAIN PRIOR APPROVAL FROM STATE REGULATORY OFFICES, DOCUMENT THE NON-STANDARD TECHNIQUES, AND INFORM THE CLIENT OF THE DEVIATION FROM STANDARD PROCEDURES. IN CASES WHERE GAS MITIGATION IS NOT REGULATED BY THE STATE, CONTRACTORS SHALL OBTAIN PRIOR APPROVAL FROM A REGIONAL EPA OFFICE.

D. WORKER HEALTH AND SAFETY

1. CONTRACTORS SHALL COMPLY WITH ALL OSHA, STATE AND LOCAL STANDARDS OR REGULATIONS RELATING TO WORKER SAFETY AND OCCUPATIONAL GAS EXPOSURE. APPLICABLE REFERENCES IN THE CODE OF FEDERAL REGULATIONS AND NIOSH PUBLICATIONS.
2. IN ADDITION TO THE OSHA AND NIOSH STANDARDS, THE FOLLOWING REQUIREMENTS THAT ARE SPECIFICALLY OR UNIQUELY APPLICABLE FOR THE SAFETY AND PROTECTION OF GAS MITIGATION WORKERS SHALL BE MET:
   a. THE CONTRACTOR SHALL ADVISE WORKERS OF THE HAZARDS OF EXPOSURE TO GAS AND THE NEED TO APPLY PROTECTIVE MEASURES WHEN WORKING IN AREAS OF ELEVATED GAS CONCENTRATIONS.
   b. THE CONTRACTOR SHALL HAVE A WORKER PROTECTION PLAN ON FILE THAT IS AVAILABLE TO ALL EMPLOYEES AND IS APPROVED BY ANY STATE OR LOCAL REGULATING AGENCIES THAT REQUIRE SUCH A PLAN. EXCEPTION: A WORKER PROTECTION PLAN IS NOT REQUIRED FOR A CONTRACTOR WHO IS A SOLE PROPRIETOR UNLESS REQUIRED BY STATE OR LOCAL REGULATIONS.
   c. THE CONTRACTOR SHALL ENSURE THAT APPROPRIATE SAFETY EQUIPMENT SUCH AS HARD HATS, FACE SHIELDS, EAR PLUGS, STEEL-TOE BOOTS AND PROTECTIVE GLOVES ARE AVAILABLE ON THE JOB SITE DURING CUTTING, DRILLING, GRINDING, POLISHING, DEMOLISHING OR OTHER ACTIVITY ASSOCIATED WITH GAS MITIGATION PROJECTS.
   d. ALL ELECTRICAL EQUIPMENT USED DURING GAS MITIGATION PROJECTS SHALL BE PROPERLY GROUNDED. CIRCUITS USED AS A POWER SOURCE SHOULD BE PROTECTED BY GROUND-FAULT CIRCUIT INTERRUPTERS (GFCI).
   e. WHEN WORK IS REQUIRED AT ELEVATIONS ABOVE THE GROUND OR FLOOR, THE CONTRACTOR SHALL ENSURE THAT LADDERS OR SCAFFOLDING ARE SAFELY INSTALLED AND OPERATED.
   f. WORK AREAS SHALL BE VENTILATED TO REDUCE WORKER EXPOSURE TO GAS DECAY PRODUCTS, DUST, OR OTHER AIRBORNE POLLUTANTS. IN WORK AREAS WHERE VENTILATION IS IMPRACTICAL OR WHERE VENTILATION CANNOT REDUCE GAS LEVELS TO LESS THAN 0.3 WL (BASED ON A SHORT TERM DIAGNOSTIC TEST, E.G., GRAB SAMPLE), THE CONTRACTOR SHALL ENSURE THAT RESPIRATORY PROTECTION CONFOGMS WITH THE REQUIREMENTS IN THE NIOSH GUIDE TO INDUSTRIAL RESPIRATORY PROTECTION. ( (NOTE: IF UNABLE TO MAKE WORKING LEVEL MEASUREMENTS, A GAS LEVEL OF 30 PCI/L SHALL BE USED.)
   g. WHERE COMBUSTIBLE MATERIALS EXIST IN THE SPECIFIC AREA OF THE BUILDING WHERE GAS MITIGATION WORK IS TO BE CONDUCTED AND THE CONTRACTOR IS CREATING ANY TEMPERATURES HIGH ENOUGH TO INDUCE A FLAME, THE CONTRACTOR SHALL ENSURE THAT FIRE EXTINGUISHERS SUITABLE FOR TYPE A, B, AND C FIRES ARE AVAILABLE IN THE IMMEDIATE WORK AREA.
   h. PENDING DEVELOPMENT OF AN APPROVED PERSONAL GAS EXPOSURE DEVICE AND A PROTOCOL FOR ITS USE, CONTRACTORS SHALL RECORD EMPLOYEE EXPOSURE TO GAS AT EACH WORK SITE, BASED ON:
      1) THE HIGHEST PRE-MITIGATION INDOOR GAS OR WORKING LEVEL MEASUREMENT AVAILABLE, AND
      2) THE TIME EMPLOYEES ARE EXPOSED (WITHOUT RESPIRATOR PROTECTION) AT THAT LEVEL

      (NOTE: THIS APPROACH IS NOT INTENDED TO PRECLUDE THE ALTERNATIVE USE OF ON-SITE GAS OR GAS DECAY PRODUCT MEASUREMENTS TO DETERMINE EXACT EXPOSURE.) CONSISTENT WITH OSHA PERMISSIBLE EXPOSURE LIMITS, CONTRACTORS SHALL ENSURE THAT EMPLOYEES ARE EXPOSED TO NO MORE THAN 4 WORKING LEVEL MONTHS (WLM) OVER A 12 MONTH PERIOD. (AN EQUILIBRIUM RATIO OF 50 PERCENT SHALL BE USED TO CONVERT GAS EXPOSURE TO WLM.)
   i. WHEN MITIGATION WORK REQUIRES THE USE OF SEALANTS, ADHESIVES, PAINTS, OR OTHER SUBSTANCES THAT MAY BE HAZARDOUS TO HEALTH, CONTRACTORS SHALL PROVIDE EMPLOYEES WITH THE APPLICABLE MATERIAL SAFETY DATA SHEETS (MSDS) AND EXPLAIN THE REQUIRED SAFETY PROCEDURES.

E. SYSTEMS REQUIREMENT

1. ALL GAS MITIGATION SYSTEMS SHALL BE INSTALLED AS PERMANENT, INTEGRAL ADDITIONS TO THE BUILDING, EXCEPT WHERE A TEMPORARY SYSTEM HAS BEEN INSTALLED.
2. ALL GAS MITIGATION SYSTEMS SHALL BE INSTALLED TO AVOID THE CREATION OF OTHER HEALTH, SAFETY, OR ENVIRONMENTAL HAZARDS TO BUILDING OCCUPANTS, SUCH AS BACKDRAFTING OF NATURAL DRAFT COMBUSTION APPLIANCES.
3. ALL GAS MITIGATION SYSTEMS SHALL MAXIMIZE GAS REDUCTION AND IN CONSIDERATION OF THE NEED TO MINIMIZE EXCESS ENERGY USAGE, TO AVOID COMPROMISING MOISTURE AND TEMPERATURE CONTROLS AND OTHER COMFORT FEATURES, AND TO MINIMIZE NOISE.
4. ALL GAS MITIGATION SYSTEMS AND THEIR COMPONENTS SHALL COMPLY WITH THE LAWS, ORDINANCES, CODES, AND REGULATIONS OF RELEVANT JURISDICTIONAL AUTHORITIES, INCLUDING APPLICABLE MECHANICAL, ELECTRICAL, BUILDING, PLUMBING, ENERGY, AND FIRE PREVENTION CODES.

F. SYSTEMS INSTALLATION

1. GENERAL REQUIREMENTS
   a. ALL COMPONENTS OF GAS MITIGATION SYSTEMS INSTALLED IN COMPLIANCE WITH PROVISIONS OF THE GMS SHALL ALSO BE IN COMPLIANCE WITH THE APPLICABLE MECHANICAL, ELECTRICAL, BUILDING, PLUMBING, ENERGY AND FIRE PREVENTION CODES, STANDARDS, AND REGULATIONS OF THE LOCAL JURISDICTION.
   b. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES AND PERMITS, AND DISPLAY THEM IN THE WORK AREAS AS REQUIRED BY LOCAL ORDINANCES.
   c. WHERE PORTIONS OF STRUCTURAL FRAMING MATERIAL MUST BE REMOVED TO ACCOMMODATE GAS VENT PIPES, MATERIAL REMOVED SHALL BE NO GREATER THAN THAT PERMITTED FOR PLUMBING INSTALLATIONS BY APPLICABLE BUILDING OR PLUMBING CODES.
   d. WHERE INSTALLATION OF A GAS MITIGATION SYSTEM REQUIRES PIPES OR DUCTS TO PENETRATE A FIREWALL OR OTHER FIRE RESISTANCE RATED WALL OR FLOOR, PENETRATIONS SHALL BE PROTECTED IN ACCORDANCE WITH APPLICABLE BUILDING, MECHANICAL, FIRE, AND ELECTRICAL CODES.
2. GAS VENT PIPE INSTALLATION REQUIREMENTS
   a. ALL JOINTS AND CONNECTIONS IN GAS MITIGATION SYSTEMS USING PLASTIC VENT PIPES SHALL BE PERMANENTLY SEALED WITH ADHESIVES AS SPECIFIED BY THE MANUFACTURER OF THE PIPE MATERIAL USED. JOINTS OR CONNECTIONS IN OTHER VENT PIPE MATERIALS SHALL BE MADE AIR TIGHT.
   b. ATTIC AND EXTERNAL PIPING RUNS IN AREAS SUBJECT TO SUBFREEZING CONDITIONS SHOULD BE PROTECTED TO AVOID THE RISK OF VENT PIPE FREEZE-UP.
   c. GAS VENT PIPES SHALL BE FASTENED TO THE STRUCTURE OF THE BUILDING WITH HANGERS, STRAPPING, OR OTHER SUPPORTS THAT WILL ADEQUATELY SECURE THE VENT MATERIAL. EXISTING PLUMBING PIPES, DUCTS, OR MECHANICAL EQUIPMENT SHALL NOT BE USED TO SUPPORT OR SECURE A GAS VENT PIPE.
   d. SUPPORTS FOR GAS VENT PIPES SHALL BE INSTALLED AT LEAST EVERY 6 FEET ON HORIZONTAL RUNS. VERTICAL RUNS SHALL BE SECURED EITHER ABOVE OR BELOW THE POINTS OF PENETRATION THRU FLOORS, CEILINGS, AND ROOFS, OR AT LEAST EVERY 8 FEET ON RUNS THAT DO NOT PENETRATE FLOORS, CEILINGS, OR ROOFS.
   e. TO PREVENT BLOCKAGE OF AIR FLOW INTO THE BOTTOM OF GAS VENT PIPES, THESE PIPES SHALL BE SUPPORTED OR SECURED IN A PERMANENT MANNER THAT PREVENTS THEIR DOWNWARD MOVEMENT TO THE BOTTOM OF SUCTION PITS OR SUMP PITS, OR INTO THE SOIL BENEATH AN AGGREGATE LAYER UNDER A SLAB.
   f. GAS VENT PIPES SHALL BE INSTALLED IN A CONFIGURATION THAT ENSURES THAT ANY RAIN WATER OR CONDENSATION WITHIN THE PIPES DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS RETARDER MEMBRANE.
   g. GAS VENT PIPES SHALL NOT BLOCK ACCESS TO ANY AREAS REQUIRING MAINTENANCE OR INSPECTION. GAS VENTS SHALL NOT BE INSTALLED IN FRONT OF OR INTERFERE WITH ANY LIGHT, OPENING, DOOR, WINDOW OR EQUIPMENT ACCESS AREA REQUIRED BY CODE. IF GAS VENT PIPES ARE INSTALLED IN SUMP PITS, THE SYSTEM SHALL BE DESIGNED WITH REMOVABLE OR FLEXIBLE COUPLINGS TO FACILITATE REMOVAL OF THE SUMP PIT COVER FOR SUMP PUMP MAINTENANCE.
3. GAS VENT FAN INSTALLATION REQUIREMENTS
   a. VENT FANS USED IN GAS MITIGATION SYSTEMS SHALL BE SEALED TO REDUCE THE POTENTIAL FOR LEAKAGE OF SOIL GAS FROM THE FAN HOUSING.
   b. GAS VENT FANS SHALL BE SIZED TO PROVIDE THE PRESSURE DIFFERENCE AND AIR FLOW CHARACTERISTICS NECESSARY TO ACHIEVE THE GAS REDUCTION GOALS ESTABLISHED FOR THE SPECIFIC MITIGATION PROJECT
   c. GAS VENT FANS USED IN ACTIVE SOIL DEPRESSURIZATION OR BLOCK WALL DEPRESSURIZATION SYSTEMS SHALL NOT BE INSTALLED BELOW GROUND NOR IN THE CONDITIONED (HEATED/COOLED) SPACE OF A BUILDING, NOR IN ANY BASEMENT, CRAWLSPACE, OR OTHER INTERIOR LOCATION DIRECTLY BENEATH THE CONDITIONED SPACES OF A BUILDING. ACCEPTABLE LOCATIONS FOR GAS VENT FANS INCLUDE ATTICS NOT SUITABLE FOR OCCUPANCY (INCLUDING ATTICS OVER OCCUPIED) OR ON THE EXTERIOR OF THE BUILDING.
   d. GAS VENT FANS SHALL BE INSTALLED IN A CONFIGURATION THAT AVOIDS CONDENSATION BUILDUP IN THE FAN HOUSING. WHENEVER POSSIBLE, FANS SHOULD BE INSTALLED IN VERTICAL RUNS OF THE VENT PIPE.
   e. GAS VENT FANS MOUNTED ON THE EXTERIOR OF BUILDINGS SHALL BE RATED FOR OUTDOOR USE OR INSTALLED IN A WATER TIGHT PROTECTIVE HOUSING.
   f. GAS VENT FANS SHALL BE MOUNTED AND SECURED IN A MANNER THAT MINIMIZES TRANSFER OF VIBRATION TO THE STRUCTURAL FRAMING OF THE BUILDING.
   g. TO FACILITATE MAINTENANCE AND FUTURE REPLACEMENT, GAS VENT FANS SHALL BE INSTALLED IN THE VENT PIPE USING REMOVABLE COUPLINGS OR FLEXIBLE CONNECTIONS THAT CAN BE TIGHTLY SECURED TO BOTH THE FAN AND THE VENT PIPE.
5. SEALING REQUIREMENTS
   a. SUMP PITS THAT PERMIT ENTRY OF SOIL-GAS OR THAT WOULD ALLOW CONDITIONED AIR TO BE DRAWN INTO A SUB-SLAB DEPRESSURIZATION SYSTEM SHALL BE COVERED AND SEALED. THE COVERS ON SUMPS THAT PREVIOUSLY PROVIDED PROTECTION OR RELIEF FROM SURFACE WATER COLLECTION SHALL BE FITTED WITH A WATER OR MECHANICALLY TRAPPED DRAIN. WATER TRAPS SHOULD BE FITTED WITH AN AUTOMATIC SUPPLY OF PRIMING WATER.
   b. OPENINGS AROUND GAS VENT PIPE PENETRATIONS OF THE SLAB, THE FOUNDATION WALLS, OR THE CRAWLSPACE SOIL-GAS RETARDER MEMBRANE SHALL BE CLEANED, PREPARED, AND SEALED IN A PERMANENT, AIR-TIGHT MANNER USING COMPATIBLE CAULKS OR OTHER SEALANT MATERIALS. OPENINGS AROUND OTHER UTILITY PENETRATIONS OF THE SLAB, WALLS, OR SOIL-GAS RETARDER SHALL ALSO BE SEALED.
   c. OPENINGS, PERIMETER CHANNEL DRAINS, OR CRACKS THAT EXIST WHERE THE SLAB MEETS THE FOUNDATION WALL (FLOOR-WALL JOINT), SHALL BE SEALED WITH URETHANE CAULK OR EQUIVALENT MATERIAL. WHEN THE OPENING OR CHANNEL IS GREATER THAN 1/2 INCH IN WIDTH, A FOAM BACKER ROD OR OTHER COMPARABLE FILLER MATERIAL SHALL BE INSERTED IN THE CHANNEL BEFORE APPLICATION OF THE SEALANT. THIS SEALING TECHNIQUE SHALL BE DONE IN A MANNER THAT RETAINS THE CHANNEL FEATURE AS A WATER CONTROL SYSTEM. OTHER OPENINGS OR CRACKS IN SLABS OR AT EXPANSION OR CONTROL JOINTS SHOULD ALSO BE SEALED. OPENINGS OR CRACKS THAT ARE DETERMINED TO BE INACCESSIBLE OR BEYOND THE ABILITY OF THE CONTRACTOR TO SEAL SHALL BE DISCLOSED TO THE CLIENT AND INCLUDED IN THE DOCUMENTATION.
   d. WHEN INSTALLING BASEBOARD-TYPE SUCTION SYSTEMS, ALL SEAMS AND JOINTS IN THE BASEBOARD MATERIAL SHALL BE JOINED AND SEALED USING MATERIALS RECOMMENDED BY THE MANUFACTURER OF THE BASEBOARD SYSTEM. BASEBOARDS SHALL BE SECURED TO WALLS AND FLOORS WITH ADHESIVES DESIGNED AND RECOMMENDED FOR SUCH INSTALLATIONS. IF A BASEBOARD SYSTEM IS INSTALLED ON A BLOCK WALL FOUNDATION, THE TOPS OF THE BLOCKWALL SHALL BE CLOSED AND SEALED.

G. ELECTRICAL REQUIREMENTS

1. WIRING FOR ALL ACTIVE GAS MITIGATION SYSTEMS SHALL CONFORM TO PROVISIONS OF THE NATIONAL ELECTRIC CODE AND ANY ADDITIONAL LOCAL REGULATIONS.
2. WIRING MAY NOT BE LOCATED IN OR CHASED THRU THE MITIGATION INSTALLATION DUCTING OR ANY OTHER HEATING OR COOLING DUCTWORK.
3. GAS MITIGATION FANS INSTALLED ON THE EXTERIOR OF BUILDINGS SHALL BE HARD-WIRED INTO AN ELECTRICAL CIRCUIT. PLUGGED FANS SHALL NOT BE USED OUTDOORS.
4. IF THE RATED ELECTRICITY REQUIREMENTS OF A GAS MITIGATION SYSTEM FAN EXCEEDS 50 PERCENT OF THE CIRCUIT CAPACITY INTO WHICH IT WILL BE CONNECTED, OR IF THE TOTAL CONNECTED LOAD ON THE CIRCUIT (INCLUDING THE GAS VENT FAN) EXCEEDS 80 PERCENT OF THE CIRCUIT'S RATED CAPACITY, A SEPARATE, DEDICATED CIRCUIT SHALL BE INSTALLED TO POWER THE FAN.
5. AN ELECTRICAL DISCONNECT SWITCH OR CIRCUIT BREAKER SHALL BE INSTALLED IN GAS MITIGATION SYSTEM FAN CIRCUITS TO PERMIT DEACTIVATION OF THE FAN FOR MAINTENANCE OR REPAIR BY THE BUILDING OWNER OR SERVICING CONTRACTOR (DISCONNECT SWITCHES ARE NOT REQUIRED WITH PLUGGED FANS).

H. MATERIALS

1. ALL MITIGATION SYSTEM ELECTRICAL COMPONENTS SHALL BE U.L. LISTED OR OF EQUIVALENT SPECIFICATIONS.
2. AS A MINIMUM, ALL PLASTIC VENT PIPES IN MITIGATION SYSTEMS SHALL BE MADE OF SCHEDULE 80 PVC OR EQUIVALENT PIPING MATERIAL.
3. VENT PIPE FITTINGS IN A MITIGATION SYSTEM SHALL BE OF THE SAME MATERIAL AS THE VENT PIPES.
4. CLEANING SOLVENTS AND ADHESIVES USED TO JOIN PLASTIC PIPES AND FITTINGS SHALL BE AS RECOMMENDED BY MANUFACTURERS FOR USE WITH THE TYPE OF PIPE MATERIAL USED IN THE MITIGATION SYSTEM.
5. WHEN SEALING CRACKS IN SLABS AND OTHER SMALL OPENINGS AROUND PENETRATIONS OF THE SLAB AND FOUNDATION WALLS, CAULKS AND SEALANTS DESIGNED FOR SUCH APPLICATION SHALL BE USED. URETHANE SEALANTS ARE RECOMMENDED BECAUSE OF THEIR DURABILITY.
6. WHEN SEALING HOLES FOR PLUMBING ROUGH-IN OR OTHER LARGE OPENINGS IN SLABS AND FOUNDATION WALLS THAT ARE BELOW THE GROUND SURFACE, NON-SHRINK MORTAR, GROUTS, EXPANDING FOAM, OR SIMILAR MATERIALS DESIGNED FOR SUCH APPLICATION SHALL BE USED.

I. MONITORS AND LABELING

1. ALL ACTIVE SOIL DEPRESSURIZATION AND BLOCK WALL DEPRESSURIZATION GAS MITIGATION SYSTEMS SHALL INCLUDE A MECHANISM TO MONITOR SYSTEM PERFORMANCE AND WARN OF SYSTEM FAILURE. THE MECHANISM SHALL BE SIMPLE TO READ OR INTERPRET AND BE LOCATED WHERE IT IS EASILY SEEN OR HEARD BY BUILDING OCCUPANTS AND PROTECTED FROM DAMAGE OR DESTRUCTION.
2. ELECTRICAL GAS MITIGATION SYSTEM MONITORS (WHETHER VISUAL OR AUDIBLE) SHALL BE INSTALLED ON NON-SWITCHED CIRCUITS AND BE DESIGNED TO RESET AUTOMATICALLY WHEN POWER IS RESTORED AFTER SERVICE OR POWER SUPPLY FAILURE. BATTERY OPERATED MONITORING DEVICES SHALL NOT BE USED UNLESS THEY ARE EQUIPPED WITH A LOW POWER WARNING FEATURE.
3. MECHANICAL GAS MITIGATION SYSTEM MONITORS, SUCH AS MANOMETER TYPE PRESSURE GAUGES, SHALL BE CLEARLY MARKED TO INDICATE THE RANGE OR ZONE OF PRESSURE READINGS THAT EXISTED WHEN THE SYSTEM WAS INITIALLY ACTIVATED.
4. A SYSTEM DESCRIPTION LABEL SHALL BE PLACED ON THE MITIGATION SYSTEM, THE ELECTRIC SERVICE ENTRANCE PANEL, OR OTHER PROMINENT LOCATION. THIS LABEL SHALL BE LEGIBLE FROM A DISTANCE OF AT LEAST THREE FEET AND INCLUDE THE FOLLOWING INFORMATION: "GAS REDUCTION SYSTEM," THE INSTALLER'S NAME, PHONE NUMBER, AND RCP IDENTIFICATION NUMBER, THE DATE OF INSTALLATION, AND AN ADVISORY THAT THE BUILDING SHOULD BE TESTED FOR GAS AT LEAST EVERY TWO YEARS OR AS REQUIRED OR RECOMMENDED BY STATE OR LOCAL AGENCIES. IN ADDITION, ALL EXPOSED AND VISIBLE INTERIOR GAS MITIGATION SYSTEM VENT PIPE SECTIONS SHALL BE IDENTIFIED WITH AT LEAST ONE LABEL ON EACH FLOOR LEVEL. THE LABEL SHALL READ, "GAS REDUCTION SYSTEM."
5. THE CIRCUIT BREAKERS CONTROLLING THE CIRCUITS ON WHICH THE GAS VENT FAN AND SYSTEM FAILURE WARNING DEVICES OPERATE SHALL BE LABELED "GAS SYSTEM."

J. POST-MITIGATION TESTING

1. AFTER INSTALLATION OF AN ACTIVE GAS CONTROL SYSTEM (E.G., SSD), THE CONTRACTOR SHALL RE-EXAMINE AND VERIFY THE INTEGRITY OF THE FAN MOUNTING SEALS AND ALL JOINTS IN THE INTERIOR VENT PIPING.
2. AFTER INSTALLATION OF ANY ACTIVE GAS MITIGATION SYSTEM, THE CONTRACTOR SHALL PERFORM TESTS. SEE SPECIFICATION SECTION 072727 "SUBSLAB DEPRESSURIZATION SYSTEM" FOR ADDITIONAL INFORMATION.
3. IMMEDIATELY AFTER INSTALLATION AND ACTIVATION OF ANY ACTIVE (FAN-POWERED) SUB-SLAB DEPRESSURIZATION OR BLOCK WALL DEPRESSURIZATION SYSTEM IN BUILDINGS CONTAINING NATURAL DRAFT COMBUSTION APPLIANCES, THE BUILDING SHALL BE TESTED FOR BACKDRAFTING OF THOSE APPLIANCES. ANY BACKDRAFTING CONDITION THAT RESULTS FROM INSTALLATION OF THE GAS MITIGATION SYSTEM SHALL BE CORRECTED BEFORE THE SYSTEM IS PLACED IN OPERATION.
4. UPON COMPLETION OF GAS MITIGATION WORK, A TEST OF MITIGATION SYSTEM EFFECTIVENESS SHALL BE CONDUCTED. SEE SPECIFICATION SECTION 072726 'GAS VAPOR BARRIER (FLUID APPLIED) FOR ADDITIONAL INFORMATION.
5. TO ENSURE CONTINUED EFFECTIVENESS OF THE GAS MITIGATION SYSTEM(S) INSTALLED, THE CONTRACTOR SHALL ADVISE THE CLIENT TO RETEST THE BUILDING AT LEAST EVERY TWO YEARS OR AS REQUIRED OR RECOMMENDED BY STATE OR LOCAL AUTHORITY. RETESTING IS ALSO RECOMMENDED IF THE BUILDING UNDERGOES SIGNIFICANT ALTERATION.

K. CONTRACTS AND DOCUMENTATION

1. EPA RECOMMENDS THAT CONTRACTORS PROVIDE THE FOLLOWING WRITTEN INFORMATION TO CLIENTS PRIOR TO INITIATION OF WORK:
   a. THE CONTRACTOR'S EPA RPP MITIGATION SERVICE PROVIDER IDENTIFICATION NUMBER.
   b. A STATEMENT THAT DESCRIBES THE PLANNED SCOPE OF THE WORK AND THAT INCLUDES AN ESTIMATE OF THE TIME NEEDED TO COMPLETE THE WORK.
   c. A STATEMENT DESCRIBING ANY KNOWN HAZARDS ASSOCIATED WITH CHEMICALS USED IN OR AS PART OF THE INSTALLATION.
   d. A STATEMENT INDICATING COMPLIANCE WITH AND IMPLEMENTATION OF ALL EPA STANDARDS AND THOSE OF OTHER AGENCIES HAVING JURISDICTION (E.G., CODE REQUIREMENTS).
   e. A STATEMENT DESCRIBING ANY SYSTEM MAINTENANCE THAT THE BUILDING OWNER WOULD BE REQUIRED TO PERFORM.
   f. AN ESTIMATE OF THE INSTALLATION COST AND ANNUAL OPERATING COSTS OF THE SYSTEM.
   g. THE CONDITIONS OF ANY WARRANTY OR GUARANTEE.
2. EPA RECOMMENDS THAT RPP LISTED MITIGATION CONTRACTORS KEEP RECORDS OF ALL GAS MITIGATION WORK PERFORMED AND MAINTAIN THOSE RECORDS FOR 3 YEARS OR FOR THE PERIOD OF ANY WARRANTY OR GUARANTEE, WHICHEVER IS LONGER. THESE RECORDS SHOULD INCLUDE:
3. THE BUILDING INVESTIGATION SUMMARY AND FLOOR PLAN SKETCH.
4. PRE- AND POST-MITIGATION GAS TEST DATA.
5. PRE- AND POST-MITIGATION DIAGNOSTIC TEST DATA.
6. COPIES OF CONTRACTS AND WARRANTIES.
7. A NARRATIVE OR PICTORIAL DESCRIPTION OF MITIGATION SYSTEM(S) INSTALLED.
8. APPENDIX A CONTAINS A SUGGESTED STANDARD FORMAT FOR COMPILING MITIGATION PROJECT RECORDS.
9. OTHER RECORDS OR BOOKKEEPING REQUIRED BY LOCAL, STATE, OR FEDERAL STATUTES AND REGULATIONS SHALL BE MAINTAINED FOR THE PERIOD(S) PRESCRIBED BY THOSE REQUIREMENTS.
10. EPA RECOMMENDS THAT HEALTH AND SAFETY RECORDS, INCLUDING WORKER GAS EXPOSURE LOGS, BE MAINTAINED FOR A MINIMUM OF 20 YEARS.
11. UPON COMPLETION OF THE MITIGATION PROJECT, CONTRACTORS SHALL PROVIDE CLIENTS WITH AN INFORMATION PACKAGE THAT INCLUDES:
12. ANY BUILDING PERMITS REQUIRED BY LOCAL CODES.
13. COPIES OF THE BUILDING INVESTIGATION SUMMARY AND FLOOR PLAN SKETCH.
14. PRE-AND POST-MITIGATION GAS TEST DATA.
15. COPIES OF CONTRACTS AND WARRANTIES.
16. A DESCRIPTION OF THE MITIGATION SYSTEM INSTALLED AND ITS BASIC OPERATING PRINCIPLES.
17. A DESCRIPTION OF ANY DEVIATIONS FROM THE GMS OR STATE REQUIREMENTS.
18. A DESCRIPTION OF THE PROPER OPERATING PROCEDURES OF ANY MECHANICAL OR ELECTRICAL SYSTEMS INSTALLED, INCLUDING MANUFACTURER'S OPERATION AND MAINTENANCE INSTRUCTIONS AND WARRANTIES.
19. A LIST OF APPROPRIATE ACTIONS FOR CLIENTS TO TAKE IF THE SYSTEM FAILURE WARNING DEVICE INDICATES SYSTEM DEGRADATION OR FAILURE.
20. THE NAME, TELEPHONE NUMBER, AND EPA RPP MITIGATION SERVICE PROVIDER IDENTIFICATION NUMBER OF THE CONTRACTOR, AND THE PHONE NUMBER OF THE STATE GAS OFFICE.

THE ACCEPTANCE TESTING SHALL BE AS FOLLOWS: (5)

1. THE EXPLOSIVE GAS MONITORING SYSTEM CONTRACTOR SHALL COMPLETE ACCEPTANCE TESTING TO DEMONSTRATE THAT THE ENTIRE SYSTEMS FUNCTIONS AS DESIGNED. TESTING SHALL INCLUDE:
   A. TESTING EACH FUNCTION OF THE INTEGRATED CONTROLS AT THE CONTROLLER.
   B. CONFIRMATION OF THE CALIBRATIONS OF ALL SENSORS.
   C. TESTING OF ALL COMMUNICATIONS BETWEEN SENSORS AND CONTROLLERS AND BETWEEN THE CONTROLLER AND ALARMS AND AUTO DIALER.
   D. TESTING OF ALL ALARM FUNCTIONS OF ALL SENSORS (ABILITY TO DETECT EXPLOSIVE GAS CONCENTRATIONS) AND OTHER TROUBLE ALARM/DIAGNOSTIC CONDITIONS.
   E. THE CONTRACTOR SHALL CORRECT ALL DEFICIENCIES AND REPEAT THE TESTING FOR ANY ITEMS THAT FAIL INITIAL TESTING. OWNER SHALL NOT ACCEPT THE SYSTEM UNTIL ALL COMPONENTS AND THE ENTIRE COORDINATED SYSTEM HAVE BEEN DEMONSTRATED TO BE OPERATING AS DESIGNED.

## FAN SCHEDULE

(5) SF X

| PLAN NO | MANUFACTURER MODEL | LOCATION | AREA SERVED | FAN TYPE | FAN PERFORMANCE | | | ELECTRICAL DATA | | | | dBA | WEIGHT LBS | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | CFM | TOTAL SP | FAN RPM | HP/ WATTS | RPM | VOLTS/Ø | DRIVE | | | |
| SF-1 | FAN AM CAV-100 | MEZZ | AS SHOWN | CENT | 175 | 2.38 | 3450 | 1/2 | 3450 | 115/1 | DIRECT | 65 | 48 | SEE NOTES |
| SF-2 | FAN AM CAV-100 | MEZZ | AS SHOWN | CENT | 130 | 1.40 | 3450 | 1/2 | 3450 | 115/1 | DIRECT | 55 | 45 | SEE NOTES |
| | | | | | | | | | | | | | | |

NOTES:
1. PROVIDE ELECTRICAL DISCONNECT, VIBRATION ISOLATION WITH MOUNTING BRACKETS.
2. PROVIDE CONTROLS FROM ATC CONTRACTOR.

FOR CONSTRUCTION

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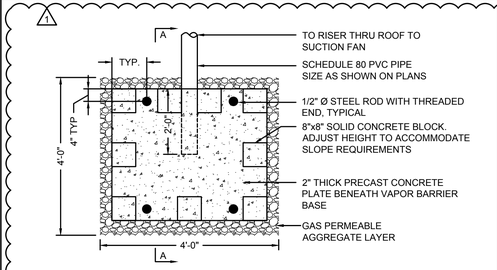
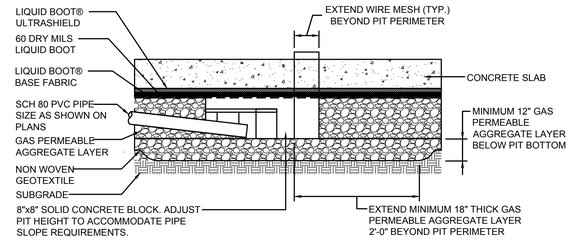


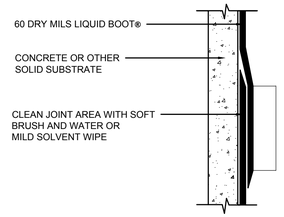

## PLAN VIEW - TYPICAL SUB-SLAB DEPRESSURIZATION PIT — 1A

NOT TO SCALE




## TYPICAL SUB-SLAB DEPRESSURIZATION PIT - SECTION A-A — 1B

NOT TO SCALE




## GAS VAPOR BARRIER MEMBRANE LAP JOINTS ON SOLID SUBSTRATE — 2A

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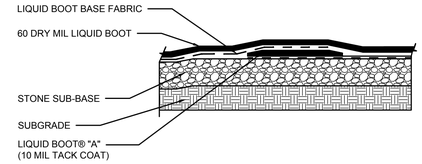


## GAS VAPOR BARRIER MEMBRANE LAP JOINTS ON SOLID SUBSTRATE — 2B

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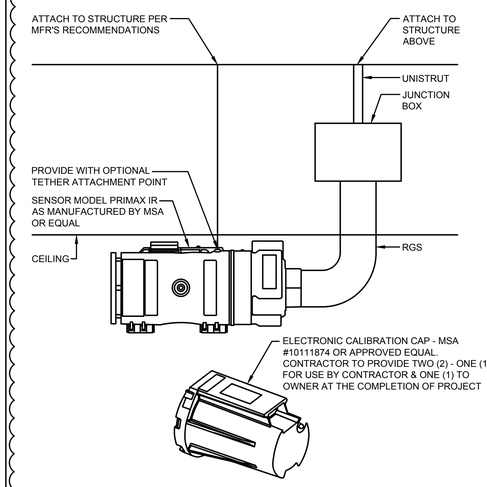
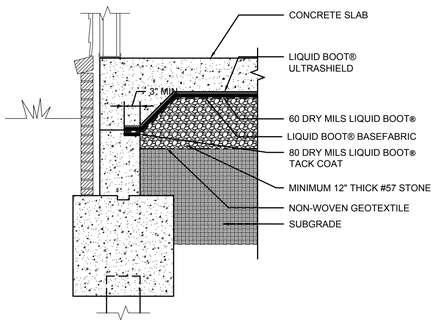


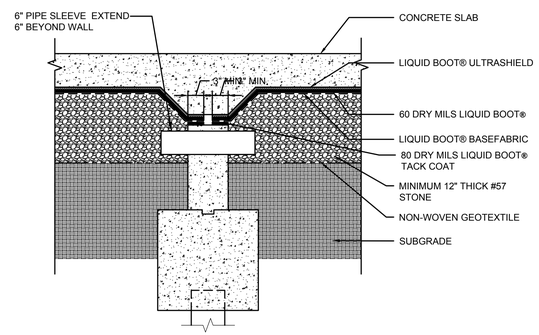

## GAS SENSOR DETAIL — 3

NOT TO SCALE



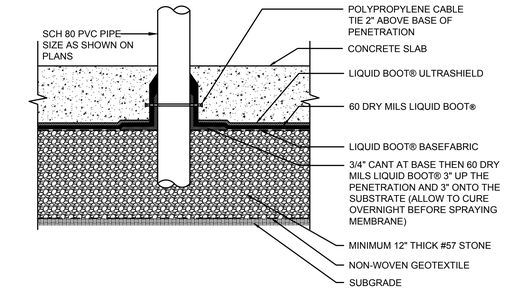

## GAS VAPOR BARRIER AT EXTERIOR WALL DETAIL — 4

NOT TO SCALE



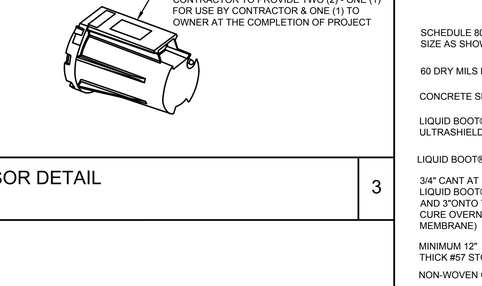

## GAS VAPOR BARRIER AT INTERIOR WALL DETAIL — 5

NOT TO SCALE




## TYPICAL GAS VAPOR BARRIER PENETRATION DETAIL WITHOUT SLEEVE — 6

NOT TO SCALE




## SUB-SLAB MONITORING POINT DETAIL — 9

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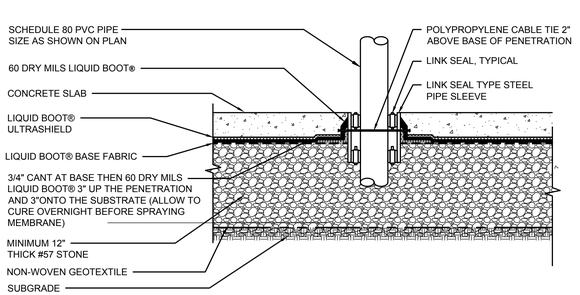


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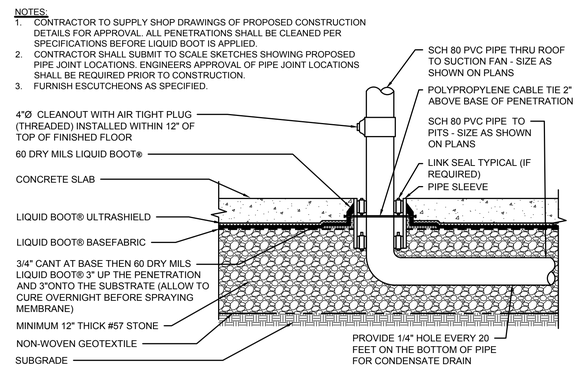
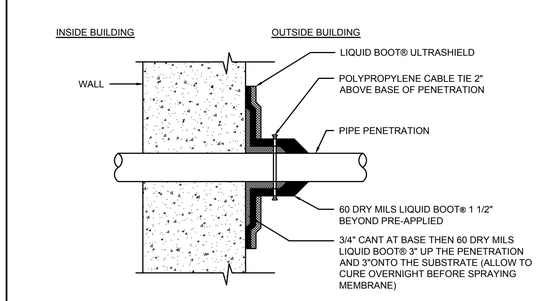
NOT TO SCALE



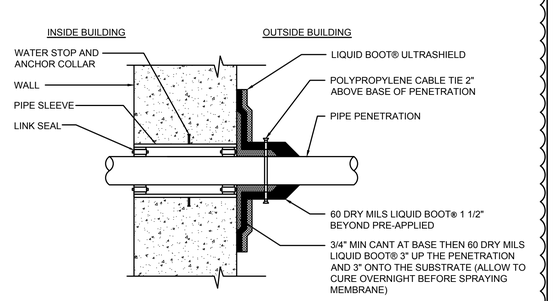

## TYPICAL SSDS RISER DETAIL AT FLOOR SLAB — 10

NOT TO SCALE



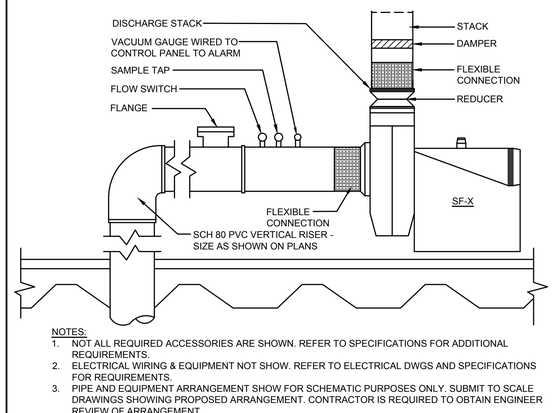

## TYPICAL GAS VAPOR BARRIER PENETRATION THRU WALL BELOW GRADE DETAIL WITHOUT SLEEVE — 8A

NOT TO SCALE



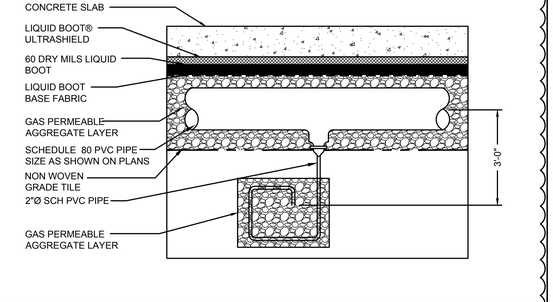

## TYPICAL GAS VAPOR BARRIER PENETRATION THRU WALL BELOW GRADE DETAIL WITH SLEEVE — 8B

NOT TO SCALE




## SUCTION FAN DETAIL — 11

NOT TO SCALE




## TYPICAL LOW POINT CONDENSATE DRAIN DETAIL — 12

NOT TO SCALE

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THE TRUMP ORGANIZATION

# TRUMP GOLF LINKS FERRY POINT PARK

500 Hutchinson River Parkway
Bronx, New York 10465


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| 3 | 04-07-17 | RE-BID/ REMOVE BSMT |
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DRAWING TITLE:
VAPOR REMEDIATION DETAILS

PROJECT #: 14-534
DRAWN BY:
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DRAWING NO:
FO-504.00

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NO. 095674
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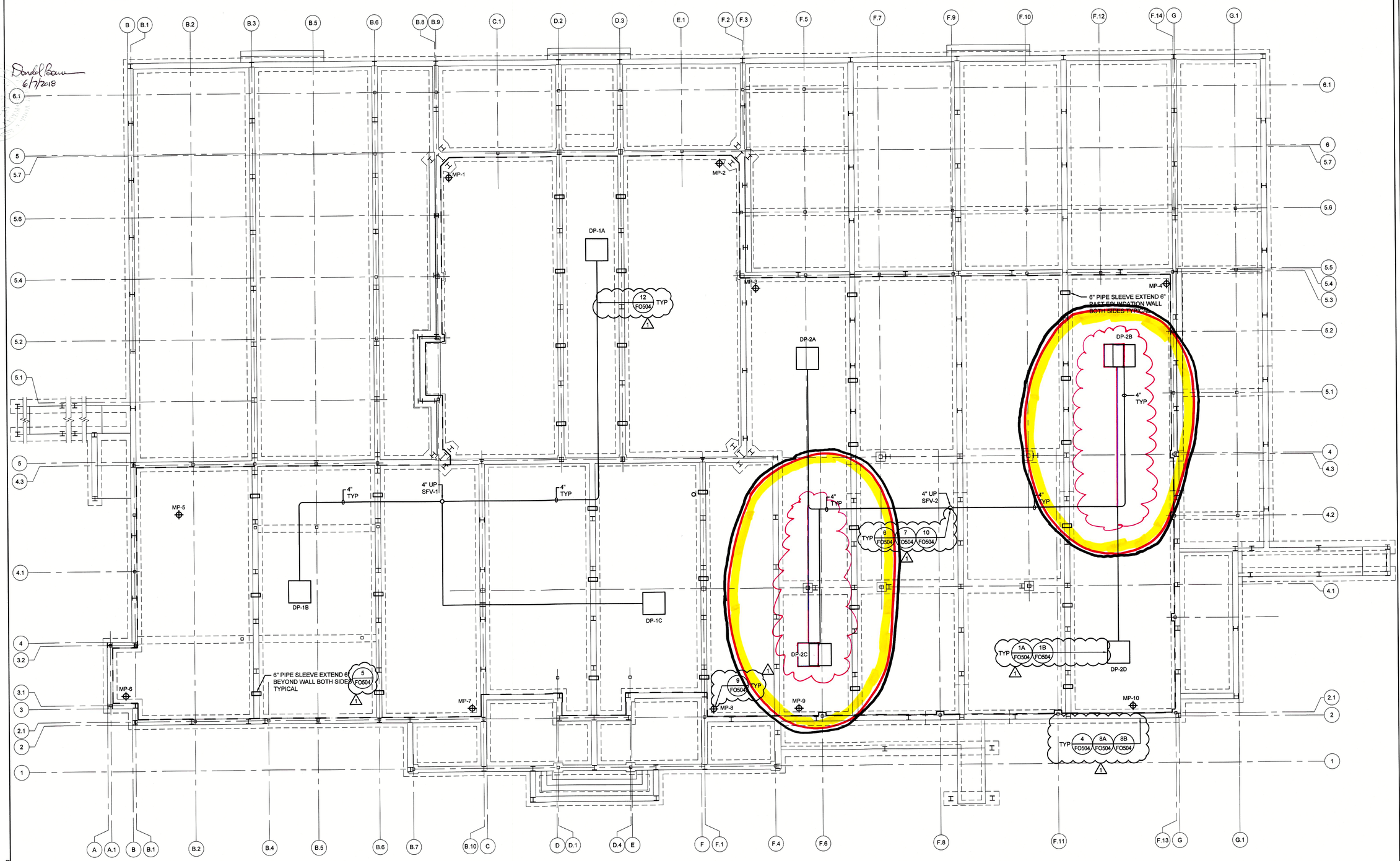
6/7/2018




## UNDERSLAB PLAN

SCALE: 1/8" = 1'-0"

NOTES :

1. DRAWINGS NOT TO BE USED FOR STRUCTURAL, ARCHITECTURAL OR OTHER REFERENCE EXCEPT FOR SUB-SLAB DEPRESSURIZATION SYSTEM.
2. THE EXTENTS OF BUILDING CONSTRUCTION BENEATH THE FLOOR SLABS SHALL BE LINED WITH GAS VAPOR BARRIER, AS PART OF BUILDING CONSTRUCTION. THE GAS VAPOR BARRIER SHALL ALSO BE APPLIED VERTICALLY TO BELOW GRADE WALLS AND WALLS OF PITS AND SUMPS AS SHOWN AND SPECIFIED.
3. SLOPE HORIZONTAL PIPE UNIFORMLY A MINIMUM OF 1% TOWARD SUB-SLAB DEPRESSION SYSTEM PITS OR TO CONDENSATE DRAINS WHEN PIPING CANNOT BE SLOPED TO PIT.
4. SECURE VERTICAL RISER TO WALL IN ACCORDANCE WITH ARCHITECTURAL AND PLUMBING REQUIREMENTS.
5. ELECTRICAL WIRING AND EQUIPMENT NOT SHOWN. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR REFERENCES.
6. SEAL ALL JOINTS IN SLAB ON GRADE, INCLUDING BUT NOT LIMITED TO, CONTROL JOINTS, EXPANSION JOINTS, CRACKS, WALL JOINTS, PENETRATIONS ETC. WITH NON-CRACKING CAULK. POLYURETHANE TYPE PREFERRED.
7. COORDINATE GAS VENTING SYSTEM WITH ALL TRADES, INCLUDE VENTING SYSTEM PIPING ON COORDINATION DRAWINGS.
8. ALL GAS VENTS SHALL BE CONTINUOUS FROM UNDERSLAB STONE BASE TO 36" ABOVE ROOF LINE OR PARAPET (WHICHEVER IS HIGHER). ALL VENTS SHALL BE 10'-0" MIN FROM LOT LINES, OUTSIDE AIR INTAKES, WINDOWS, ETC.
9. DRAWING ILLUSTRATES WALLS AND ALL SLAB ON GRADE FLOOR AREAS. COORDINATE THIS WORK WITH ARCHITECTURAL, MECHANICAL, AND STRUCTURAL PLANS.
10. ALL GAS VENT PIPING SHALL BE PVC PIPING. WHERE PIPING IS LOCATED IN RETURN AIR PLENUMS CHANGE MATERIAL TO NO-HUB CAST IRON PIPE.
11. LABEL GAS PIPING AT INTERVALS OF NOT MORE THAN 25 FT IN CONCEALED LOCATIONS AND NOT MORE THAN 50 FT ON EXPOSED AND NOT LESS THAN ONCE IN ANY ROOM OR SPACE.
12. GAS VAPOR BARRIER TO BE INSTALLED IMMEDIATELY BELOW FLOOR SLAB AS INDICATED ON THE STRUCTURAL DRAWINGS. PROVIDE 12" MINIMUM CLEAN #57 STONE SUB-BASE FOR GAS MITIGATION SYSTEM.
13. SLOPE HORIZONTAL PIPE A MINIMUM OF 1% UNIFORMLY TOWARD SUCTION PITS.
14. REFER TO SPECIFICATION FOR ADDITIONAL SUB-SLAB DEPRESSURIZATION SYSTEM AND ACCESSORIES REQUIREMENTS.

## LEGEND

- EXTENT OF GAS PERMEABLE AGGREGATE LAYER BENEATH FLOOR SLAB
- 4" SCHEDULE 80 PVC PIPE
- SFV-1 — SUCTION FAN VERTICAL 4" RISER AND IDENTIFICATION NUMBER. EXTEND THRU ATTIC TO SUCTION FAN
- MP-1 — SUB-SLAB MONITORING POINT AND IDENTIFICATION NUMBER
- DP-1A — SUB-SLAB DEPRESURAIZATION PIT AND IDENTIFICATION NUMBER

FOR CONSTRUCTION

PROVIDE LIQUID BOOT GAS VAPOR BARRIER SYSTEM UNDER SLAB AS MANUFACTURED BY CETCO CONSISTING OF ULTRASHIELD G-1000, 60 DRY MILS LIQUID BOOT AND LIQUID BOOT BASE FABRIC. SYSTEM SHALL INSTALLED BY AUTHORIZED INSTALLER. REFER TO DETAILS FOR ADDITIONAL INFORMATION. REFER TO CONTRACT DOCUMENTS FOR LOCATIONS OF PENETRATIONS THROUGH THE SLAB.

OFFSET VENT ABOVE CEILING AT ROOF AND EXTEND THROUGH ROOF APPROXIMATELY 3' FROM PARAPET WALLS AND TERMINATE 24" ABOVE FINISHED ROOF.

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TRUMP
THE TRUMP ORGANIZATION

# TRUMP GOLF LINKS FERRY POINT PARK

500 Hutchinson River Parkway
Bronx, New York 10465

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| 4 | 05-05-17 | COMMENTS |

DRAWING TITLE:
VAPOR REMEDIATION UNDERSLAB PLAN

PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM
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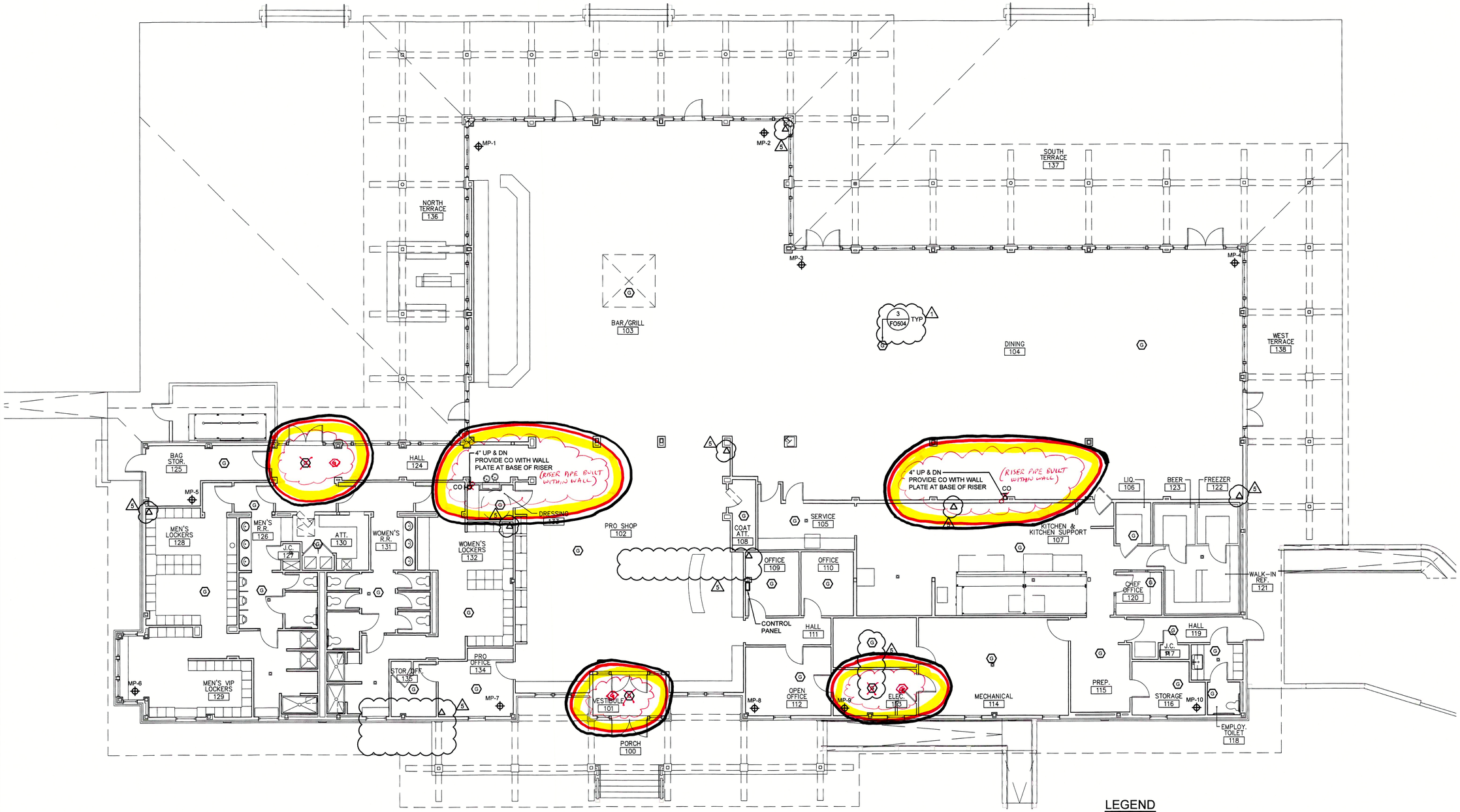


## FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

## LEGEND

| | |
|---|---|
| SFV-1 | SUCTION FAN VERTICAL 4" RISER AND IDENTIFICATION NUMBER. EXTEND THRU ATTIC TO SUCTION FAN |
| MP-1 | SUB-SLAB MONITORING POINT AND IDENTIFICATION NUMBER |
| G | GAS SENSOR |
| | METHANE GAS SENSOR CONTROL PANEL |
| | METHANE GAS LIGHT TOWER ALARM - HANG FROM CEILING |

Donald Bowman 6/7/2018

STATE OF NEW YORK DONALD F. BOWMAN 095614 LICENSED PROFESSIONAL ENGINEER

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Tel: 212 683 3631 Fax: 212 481 3768
E-mail:NY@harthowerton.com

TRUMP
THE TRUMP ORGANIZATION

TRUMP GOLF LINKS
FERRY POINT PARK
500 Hutchinson River Parkway
Bronx, New York 10465

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| 07-27-15 | 90% CD |
| 09-15-17 | FOR CONSTRUCTION |

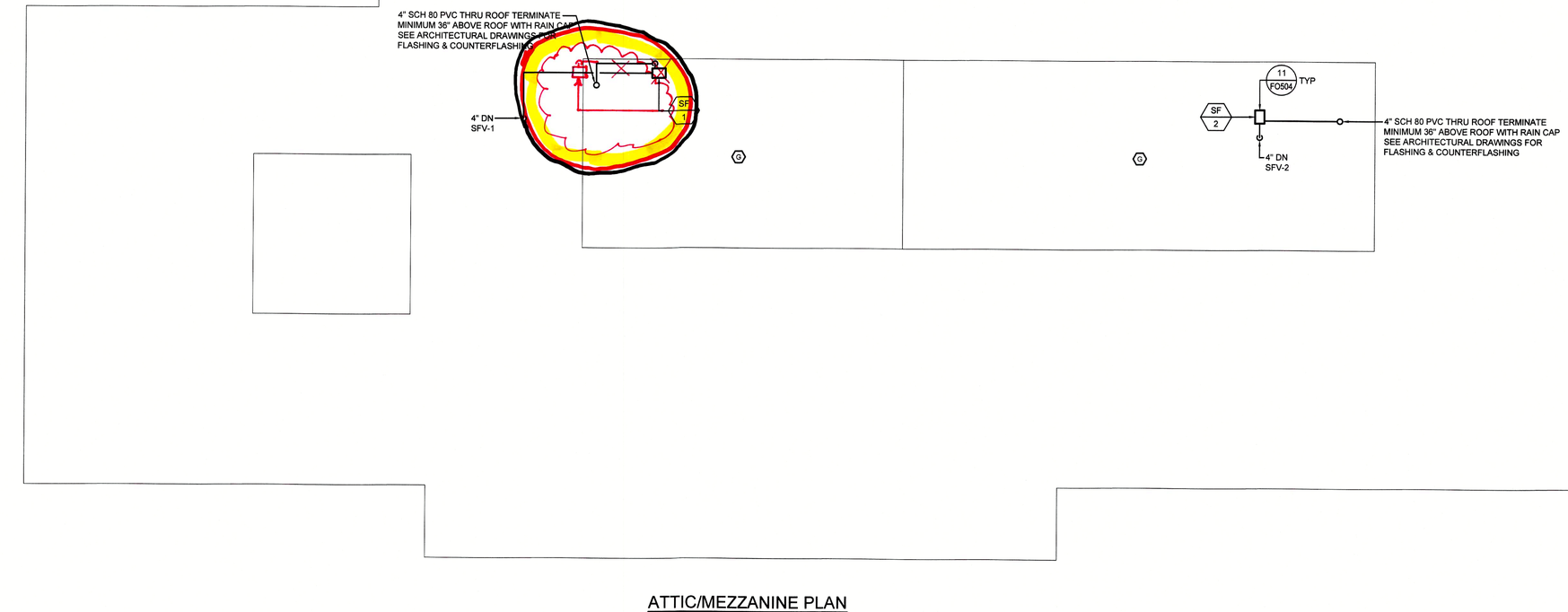
REVISIONS

| NO | DATE | ISSUE |
|---|---|---|
| | 02-17-17 | REMOVE BSMT |
| | 03-30-17 | DEC REVIEW |
| 3 | 04-07-17 | RE-BID/ REMOVE BSMT |
| 4 | 05-05-17 | COMMENTS |
| 5 | 06-06-17 | DEC COMMENTS |

DRAWING TITLE:
VAPOR REMEDIATION FLOOR PLAN

PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM

DRAWING NO:
FO-501.00




## ATTIC/MEZZANINE PLAN

SCALE: 1/8" = 1'-0"

Donald Bowman
6/7/2018

STATE OF NEW YORK
DONALD F. BOWMAN
No. 095674
LICENSED PROFESSIONAL ENGINEER

FOR CONSTRUCTION

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New York, NY

JONATHAN V. CRAWFORD, PE
PROFESSIONAL ENGINEER, NY LIC. No. 91249



HART | HOWERTON
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| 4 | 05-05-17 | COMMENTS |
| 5 | 09-06-17 | VE |

DRAWING TITLE:
VAPOR REMEDIATION ATTIC & MEZZANINE PLAN

PROJECT #: 14-534
DRAWN BY:
CHECKED BY: FRM

DRAWING NO:
FO-502.00

O:\GK\96000\96834 - Ferry Point Clubhouse\CADD\DWG\96834.001 - FO-502.dwg


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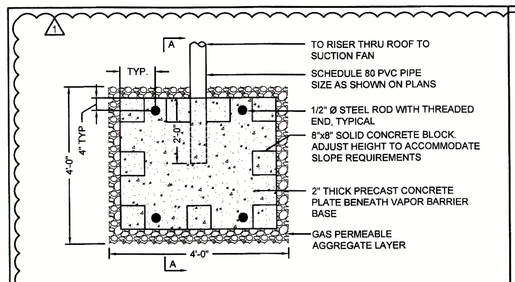
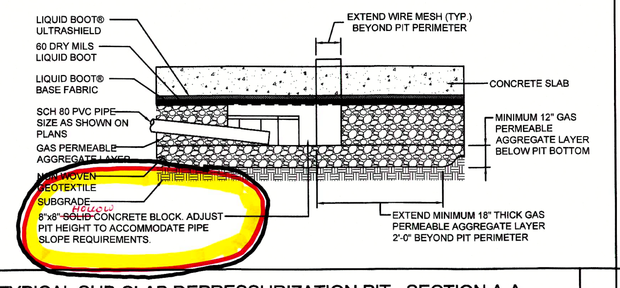
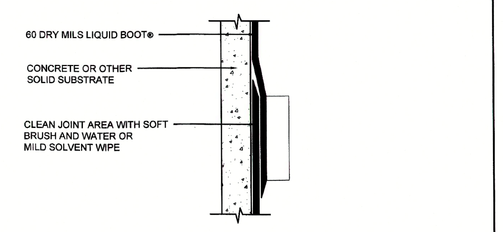


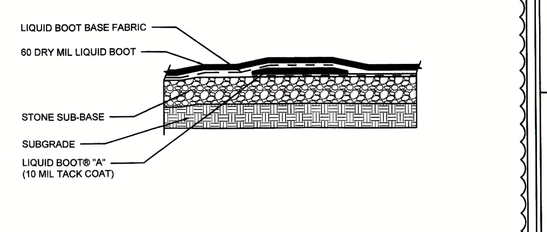

PLAN VIEW - TYPICAL SUB-SLAB DEPRESSURIZATION PIT — 1A
NOT TO SCALE




TYPICAL SUB-SLAB DEPRESSURIZATION PIT - SECTION A-A — 1B
NOT TO SCALE




GAS VAPOR BARRIER MEMBRANE LAP JOINTS ON SOLID SUBSTRATE — 2A
NOT TO SCALE

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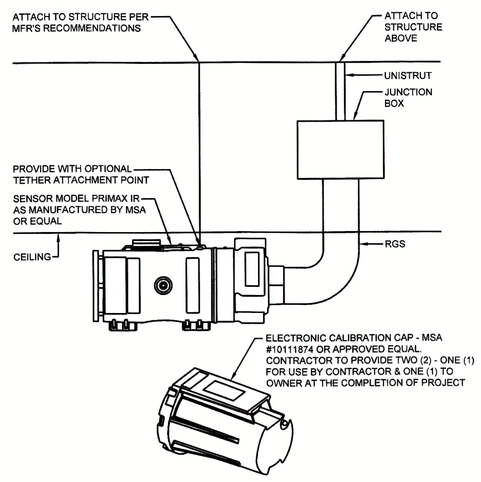
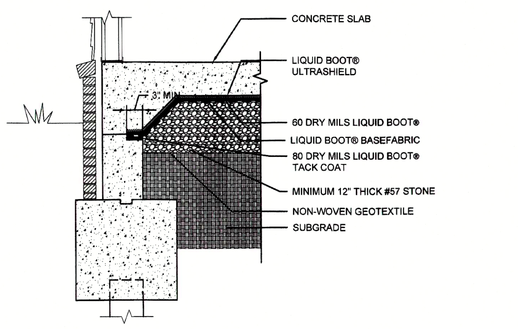
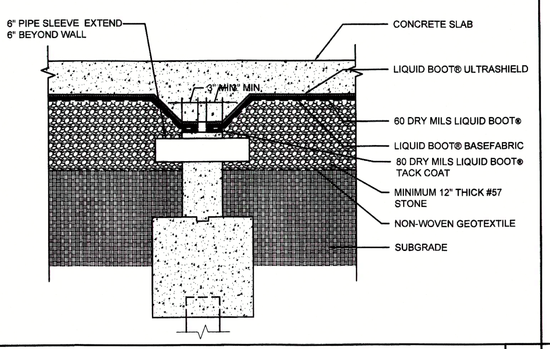


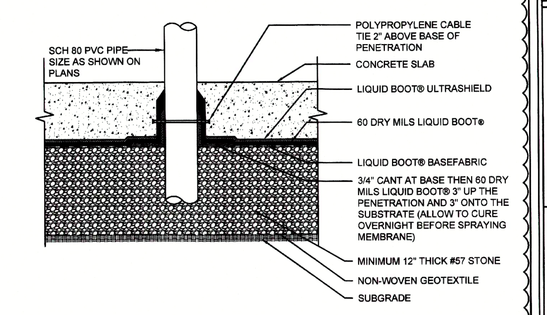

GAS SENSOR DETAIL — 3
NOT TO SCALE



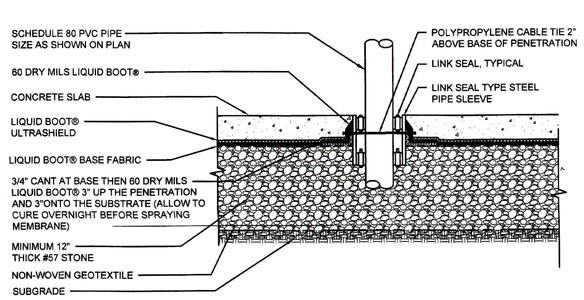

GAS VAPOR BARRIER AT EXTERIOR WALL DETAIL — 4
NOT TO SCALE




GAS VAPOR BARRIER AT INTERIOR WALL DETAIL — 5
NOT TO SCALE




TYPICAL GAS VAPOR BARRIER PENETRATION DETAIL WITHOUT SLEEVE — 6
NOT TO SCALE

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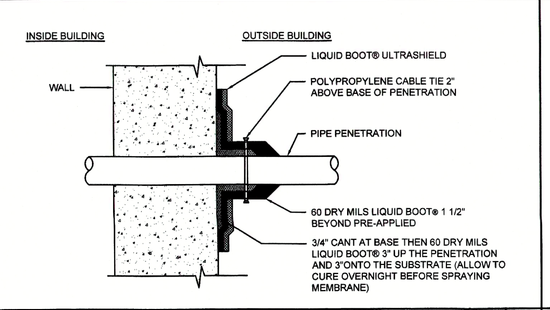
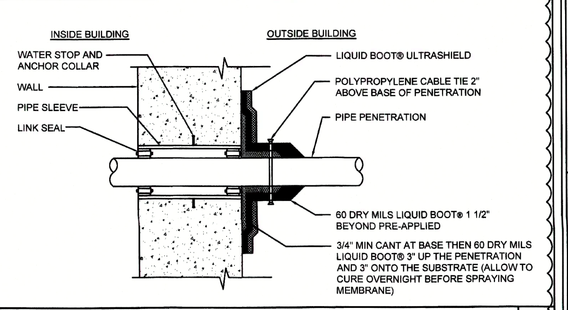
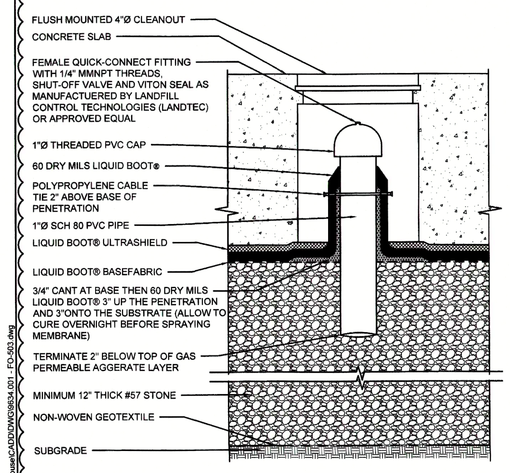



TYPICAL GAS VAPOR BARRIER PENETRATION THRU WALL BELOW GRADE DETAIL WITHOUT SLEEVE — 8A
NOT TO SCALE




TYPICAL GAS VAPOR BARRIER PENETRATION THRU WALL BELOW GRADE DETAIL WITH SLEEVE — 8B
NOT TO SCALE




SUB-SLAB MONITORING POINT DETAIL — 9
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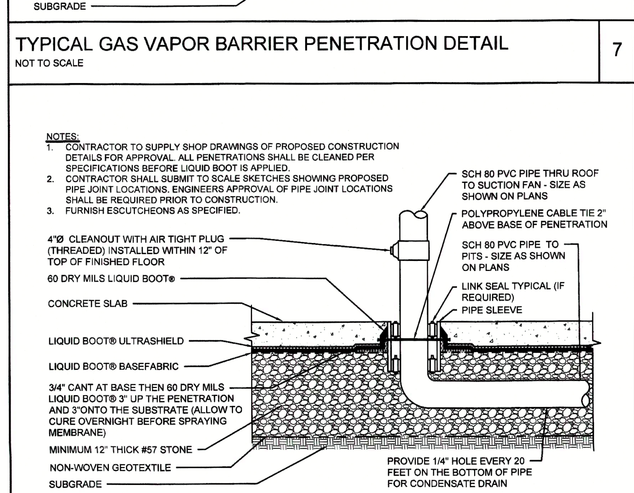
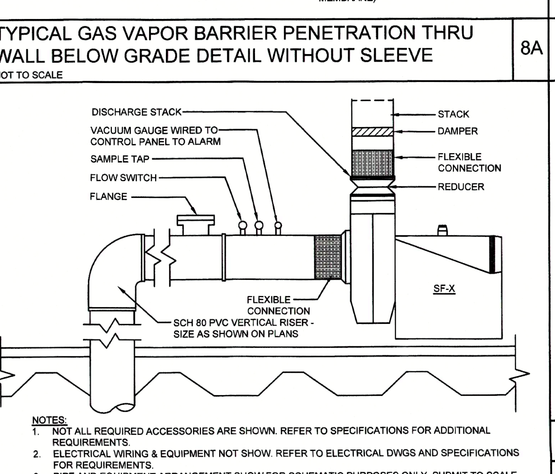



TYPICAL SSDS RISER DETAIL AT FLOOR SLAB — 10
NOT TO SCALE




SUCTION FAN DETAIL — 11
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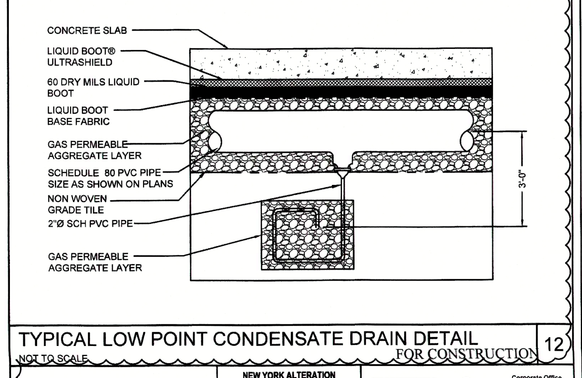


TYPICAL LOW POINT CONDENSATE DRAIN DETAIL FOR CONSTRUCTION — 12
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REVISIONS

| NO | DATE | ISSUE |
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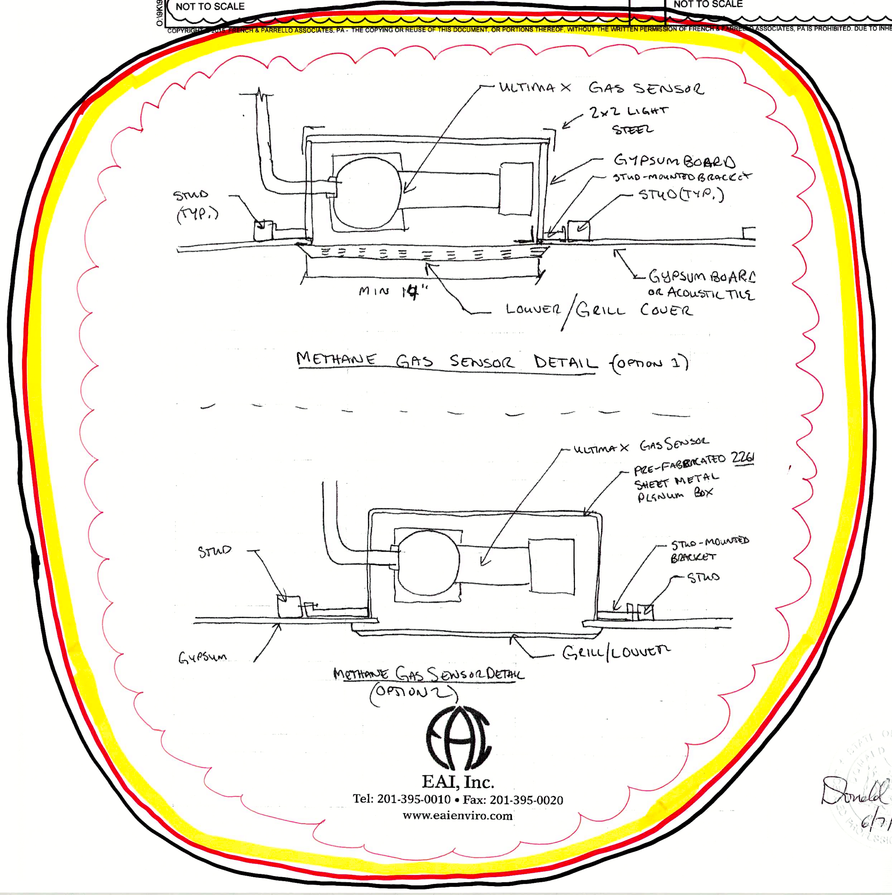
| 3 | 03-30-17 | DEC REVIEW |
| 4 | 04-07-17 | RLS-BID/ REMOVE BSMT COMMENTS |
| | 05-05-17 | |

DRAWING TITLE:
VAPOR REMEDIATION DETAILS

PROJECT #: 14-534
DRAWN BY: FRM
CHECKED BY:

DRAWING NO:
FO-504.00




EAI, Inc.
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www.eaienviro.com

Donald Bowen 6/7/2018

SEAL OF NEW YORK DONALD F. BOWEN LICENSED PROFESSIONAL ENGINEER

# APPENDIX F

## Letter from NYSDEC to NYCDPR re: "Ferry Point Park Golf Course Permanent Clubhouse Sub-Slab Depressurization System (SSDS) Construction Certification Report" dated July 2, 2018

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Materials Management, Region 2**
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4996 I F: (718) 482-6391
www.dec.ny.gov

July 2, 2018

Kay Zias
Director of Environmental Remediation
Olmstead Center
Flushing Meadows
Corona Park
Flushing, NY 11368

Re: Ferry Point Park Golf Course
Permanent Clubhouse Sub-Slab Depressurization System (SSDS)
Construction Certification Report

Dear Ms. Zias,

New York State Department of Environmental Conservation (Department) staff have reviewed the Ferry Point Park Permanent Clubhouse Sub-Slab Depressurization System (SSDS) Construction Certification Report Sub-Slab Depressurization System plan and included drawings dated June 8, 2018 and found the report to be incomplete. Please resubmit the report incorporating the following comments:

1) The Construction Certification Report (CCR) needs to be one single document rather a compilation of various documents
2) The text needs significant expansion to describe the original problem that required addressing, proposed design including reasons for that design, the construction, including any and all problems and deviations, and timeframe. Also, all tests showing the proper operation of the system should be included in the report; it should not be included as printed e-mails. As discussed during the June 6, 2018 site visit, the level of detail necessary is such that the general public will understand the entire process.
3) During our discussion on June 6, 2018, it was request that this CRR include stamped and signed As-Built Drawings and Red-Line Drawings. They were not included. Please correct.

If you have any questions you may contact me at 718-482-4996.

Sincerely,

Kenneth B. Brezner

Kenneth B. Brezner, P.E.
Regional Material Management Engineer

ec: J. O'Connell/W. Frank, R2 DMM
FPP_SSDS_CCR_Comments.2018-07-02.Letter.docx

# APPENDIX G

## Maser Consulting P.A. Letter to NYSDEC re: "Ferry Point Park Golf Course Permanent Clubhouse Sub-Slab Depressurization System (SSDS) Construction Certification Report" dated July 11, 2018

MASER CONSULTING P.A.

Engineers
Planners
Surveyors
Landscape Architects
Environmental Scientists

**Corporate Headquarters**
331 Newman Springs Road, Suite 203
Red Bank, NJ 07701
T: 732.383.1950
F: 732.383.1984
www.maserconsulting.com

July 11, 2018

**VIA E-MAIL & U.S. MAIL**

Kenneth B. Brezner, P.E.
Regional Material Management Engineer
New York State Department of Environmental Conservation (NYSDEC)
Division of Materials Management, Region 2
47-40 21st Street
Long Island City, NY 11101

Re: Ferry Point Park Golf Course
Permanent Clubhouse Sub-Slab Depressurization System (SSDS)
Construction Certification
MC Project No. 17002426A

Dear Mr. Brezner:

Maser Consulting P.A. (Maser Consulting) has reviewed your July 2, 2018 letter (copy enclosed) to the New York City Department of Parks and Recreation ("NYC Parks") regarding our June 8, 2018 SSDS Construction Certification submittal, and provides the following clarifications based on our site meeting on June 6, 2018 attended by NYSDEC, NYC Parks, Woodard & Curran, The Trump Organization, EAI and Maser Consulting:

1) Our June 8, 2018 submittal was not the Construction Certification Report, instead it was the minimum information needed for NYSDEC's consideration to issue a temporary Certificate of Occupancy for June 11, 2018; this information (Construction Certification Statement with deviations, site summary, SSDS drawings issued for construction, SSDS drawings showing deviations from design, and daily field observation reports) was specifically detailed by you during our June 6, 2018 site meeting
2) The objective of the June 8, 2018 submittal was to demonstrate that the clubhouse is built with engineering controls (i.e. Liquid Boot® and SSDS) that, when functioning properly, will adequately protect occupants
3) The June 8, 2018 submittal did satisfy NYSDEC's requirements, as a temporary Certificate of Occupancy was issued for the June 11, 2018 clubhouse opening
4) Our final Construction Certification As-Built Report will be issued within 90 days of June 11, 2018 in accordance with NYSDEC's statutory timeframe

Please contact us if you have any questions regarding this review.

Very truly yours,
MASER CONSULTING P.A.

Robert L. Zelley, P.G.
Senior Principal
Director of Environmental Services

Donald F. Bowman, P.E.
Senior Project Manager
New York License No. 095674

RLZ/DFB/dw

Enclosure

cc: Kay Zias, Director of Environmental Remediation, NYC Department of Parks & Recreation (via e-mail)
Steven Lauria, P.E., Project Manager/Principal, Woodard & Curran (via e-mail)
Joe Roediger, General Manager, Trump Golf Links Ferry Point (via e-mail)
John Gruber, Construction Manager, The Trump Organization (via e-mail)
David Keil, P.G., Maser Consulting P.A (via e-mail)

njncad\\projects\2017\17002426a\180711 rlz dfb Trump Ferry Pt Pk clubhouse SSDS.docx

**ENCLOSURE**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Materials Management, Region 2**
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4996 I F: (718) 482-6391
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July 2, 2018

Kay Zias
Director of Environmental Remediation
Olmstead Center
Flushing Meadows
Corona Park
Flushing, NY 11368

Re: Ferry Point Park Golf Course
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Construction Certification Report

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2) The text needs significant expansion to describe the original problem that required addressing, proposed design including reasons for that design, the construction, including any and all problems and deviations, and timeframe. Also, all tests showing the proper operation of the system should be included in the report; it should not be included as printed e-mails. As discussed during the June 6, 2018 site visit, the level of detail necessary is such that the general public will understand the entire process.
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If you have any questions you may contact me at 718-482-4996.

Sincerely,

Kenneth B. Brezner

Kenneth B. Brezner, P.E.
Regional Material Management Engineer

ec: J. O'Connell/W. Frank, R2 DMM
FPP_SSDS_CCR_Comments.2018-07-02.Letter.docx

# APPENDIX H

# NYSDEC Construction Duration Inspections performed by Maser Consulting P.A.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — 7/21/2017

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☐ | ☑ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☑ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☑ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☐ | ☐ | ☑ | Drainage area is 1acre or less. |
| ☐ | ☐ | ☑ | Excavated area is 900 cubic feet. |
| ☐ | ☐ | ☑ | Excavated side slopes should be 2:1. |
| ☐ | ☐ | ☑ | 2” x 4” frame is constructed and structurally sound. |
| ☐ | ☐ | ☑ | Posts 3-foot maximum spacing between posts. |
| ☐ | ☐ | ☑ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes
Cover material to approximately 1' in depth was stockpiled to a temporary location on the Clubhouse construction area and then moved onto tarp in the parking lot location. Maser Consulting observed silt fence installed around the perimeter of Clubhouse construction area and parking lot. Parking lot stockpile tarped and anchored with sandbags. Storm drain inlet protection was installed in the parking lot area. Maser Consulting and Woodard & Curran advised the Contractor to bury the silt fence approximately 6" in depth.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**



General Notes:
Clean cover material to approximately 1' in depth was stockpiled to a temporary location on the Clubhouse construction area and then moved onto tarp in the parking lot location. Maser Consulting observed silt fence installed around the perimeter of Clubhouse construction area and parking lot. Parking lot stockpile tarped and anchored with sandbags. Storm drain inlet protection was installed in the parking lot area. Maser Consulting and Woodard & Curran advised the Contractor to bury the silt fence.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — 7/28/2017

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☑ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2” x 4” frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes
Silt fencing buried 6" into soil in construction site area. Tarping placed over silt fencing in parking lot since the area surrounds pavement. Maser Consulting informed foreman that the temporary shaping layer stockpile within the construction area will require a silt fence boundary and tarping with sand bags as anchors.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**




General Notes
Silt fencing buried 6" into soil in construction site area. Tarping placed over silt fencing in parking lot since the area surrounds pavement. Maser Consulting informed foreman that the temporary shaping layer stockpile within the construction area will require a silt fence boundary and tarping with sand bags as anchors.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — 8/04/2017

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☑ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes
Silt fencing installed around base of the shaping layer stockpile and buried 6" into soil in construction site area. Maser Consulting informed foreman that the temporary shaping layer stockpile within the construction area will require tarping/hydroseeding. Silt fencing and tarping after storm event caused some sumping and uncovered stockpiles as shown. Silt fencing and tarping was readjusted to be tight immediately.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Haybales were not installed at up-slope of the parking lot area since water would not be exiting this area through the stockpiles. Temporary shaping stockpile installed onsite to contain remaining shaping layer soil for backfill.



General Notes
Silt fencing installed around base of the shaping layer stockpile and buried 6" into soil in construction site area. Maser Consulting informed foreman that the temporary shaping layer stockpile within the construction area will require tarping/hydroseeding. Silt fencing and tarping after storm event caused some sumping and uncovered stockpiles as shown. Silt fencing and tarping was readjusted to be tight immediately.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — **Inspector (print name)**

8/11/2017 — **Date of Inspection**

David Keil — **Qualified Professional (print name)**

**Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☑ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
Maser Consulting and Woodard & Curran informed the foreman that the shaping layer temporary stockpile could not exceed a height over the temporary fence. The stockpile was lowered so that the pile height was lower than the temporary fence. The foreman was also informed to hydroseed the temporary stockpile.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Haybales were not installed at up-slope of the parking lot area since water would not be exiting this area through the stockpiles. Temporary shaping stockpile installed onsite to contain remaining shaping layer soil for backfill.



General Notes:
Maser Consulting and Woodard & Curran informed the foreman that the shaping layer temporary stockpile could not exceed a height over the temporary fence. The stockpile was lowered so that the pile height was lower than the temporary fence. The foreman was also informed to hydroseed the temporary stockpile.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — **Inspector (print name)**

8/22/2017 — **Date of Inspection**

David Keil — **Qualified Professional (print name)**

**Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
Additional stormwater drain inlet protection drains were intalled in the parking lot. Co-mingled temporary stockpile soil was backfilled to small area locations.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Co-mingled construction area temporary stockpile to be tarped and anchored instead of hydroseeded,



General Notes:
Additional stormwater drain inlet protection drains were intalled in the parking lot. Co-mingled temporary stockpile soil was backfilled to small area locations for concrete base installation.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — 8/29/2017

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
The co-mingled temporary stockpile on-site was tarped and anchored. The silt fencing around it was taken down towards the center where pile driving activities were done.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Orange-brown coating coming off of parking lot stockpiles. Coating doesn`t reach drains. Additional sheeting was placed under the haybales to better retain coating. The silt fence around the co-mingled stockpile was opened as to allow pile driving activities to commence.



General Notes:
The co-mingled temporary stockpile on-site was tarped and anchored. The silt fencing around it was taken down towards the center where pile driving activities were done.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — 9/05/2017

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
Heavy wind dislogged tarping on the parking lot and temporary on-site stockpiles. The stockpiles were fixed immediately.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**



General Notes:
Heavy wind dislogged tarping on the parking lot and temporary on-site stockpiles. The stockpiles were fixed immediately. Co-mingled soil was used to backfill and hold concrete forms.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — **Inspector (print name)**

9/11/2017 — **Date of Inspection**

David Keil — **Qualified Professional (print name)**

**Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
Soil from co-mingled soil stockpile on-site was backfilled into concrete base. Stockpile uncovered as backfilled.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**



General Notes:
Soil from co-mingled soil stockpile on-site was backfilled into concrete base. Soil uncovered as soil was backfilled.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — **Inspector (print name)**

9/29/2017 — **Date of Inspection**

David Keil — **Qualified Professional (print name)**

**Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
Clean fill will be brought on the site and sampled by Maser Consulting to assure QAQC.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**



General Notes:
Clean fill will be brought on to the site and sampled by Maser Consulting to assure QAQC.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — **Inspector (print name)**

10/06/2017 — **Date of Inspection**

David Keil — **Qualified Professional (print name)**

**Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
Co-mingled soil towards the southern end of the building compacted in lifts. Clean fill will be brought on to the site and sampled by Maser Consulting to assure QAQC for remaining backfill. Site currently prepared for installation of SSDS.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**




General Notes:
Co-mingled soil towards the southern end of the building compacted in lifts. Clean fill will be brought on to the site and sampled by Maser Consulting to assure QAQC for remaining backfill. Site currently prepared for installation of SSDS.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

John Fortunato — **Inspector (print name)**

10/11/2017 — **Date of Inspection**

David Keil — **Qualified Professional (print name)**

**Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
Co-mingled soil towards the southern end of the building compacted in lifts. Clean gravel brought in and spread across compacted areas in preparation for installation of SSDS.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**




General Notes:
Co-mingled soil towards the southern end of the building compacted in lifts. Clean gravel brought in and spread across compacted areas in preparation for installation of SSDS.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 10/25/2017

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

General Notes:
Co-mingled soil stockpile is located towards the eastern side of the construction site. Clean crushed stone is stockpiled on the western side in preparation for installation of SSDS components.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 11/01/2017

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☐ | ☐ | ☑ | 2" x 4" frame is constructed and structurally sound. |
| ☐ | ☐ | ☑ | Posts 3-foot maximum spacing between posts. |
| ☐ | ☐ | ☑ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**




General Notes:
Co-mingled soil towards the southern end of the building compacted in lifts. Clean gravel brought in and spread across compacted areas in preparation for installation of SSDS.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 11/08/2017

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 5 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 11/29/2017

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 12/6/2017

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — December 13, 2017

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

High winds displaced several tarps that were used to cover the soil stockpile in the parking lot. Tarps are being replaced and secured.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 12/22/2017

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

During the week, new sheeting and tarps were placed over the soils stockpiled in the parking lot.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 12/27/2017

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — January 3, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

all stockpile soils inside the construction area have been spread to grade level(s). Soil stockpile in the parking area continues to require re-tarping and anchoring as a result of high winds. Security screening between the construction site and the golf course has-for the most part, been taken down also due to high wind conditions.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — January 10, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Weathered sections of non-essential silt fence surrounding the soil stockpile in the parking lot are scheduled for removal and replacement. Repairs are expected on or before January 17, 2018.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 01/17/2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 0 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Storm Drain Sediment filters--downslope of the soil stockpile in the parking lot--were cleaned and reinstalled over the past week.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — January 24, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 0 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

20 to 25mph winds today displaced some of the tarps used to cover the soil stockpile in the parking lot. By day's end, new tarps were spread over the soil stockpile and anchored.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — January 31, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 0 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 02/07/2018

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 5% % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Soil stockpile and hay bails to be covered (tarped) following the snow/rain event of 2/7/2018. Hay Bails are to be re-set as well.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave keil — February 14, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☑ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 0 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

New silt fence was installed around the soil stockpile in the parking area. The silt fence is staked in-place above the curb-line in the grassy islands of the northern parking lot. New tarps and tarp-anchors were set in place on this same stockpile.

~~Storm sewer sediment traps were also cleaned and replaced.~~

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 02/23/2018

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 5 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

All erosion control features were found to be in satisfactory condition

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 02/28/2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 5 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

All erosion control features were found to be in satisfactory condition

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 03/08/2018

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 5 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

All erosion control features were found to be in satisfactory condition following the March 7, 2018 Nor'easter. Only minor displacements to the tarps covering the soil stockpile in the parking lot were noted. It was recommended that the contractor adjust the tarp anchors where they may have loosed to form a more wind-resistant cover.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — March 23, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 5 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 5 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

The post-storm inspection of the soil pile in the parking lot showed that several tarps have been displaced. JCS has been directed to re-trap and re-anchor the tarps as soon as possible.

Excess soils from the electrical trench for the clock tower remain on-site. The soil will be re-used in the construction area in the near future.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

David Keil — 3/28/2018

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Cover tarps on the soil stockpile in the parking lot need to be re-adjusted. Winds have displaced them again. JCS has been advised to address this matter asap and to clean the silt traps in the storm sewer at the same time.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 4/04/2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Cover tarps on soil stockpile in parking lot have been re-secured and re-anchored.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 4-18-2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 5 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

soil stockpile in parking lot was not re-used on site this week as planned. Re-use is scheduled for next week.
Tarps need to be re-secured until re-use is in progress.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — May 4, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

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1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

soil stockpile remains in the parking lot. Re-use fo material behind the new club house is scheduled for next week.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 5-8-2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

movement of soils from parking lot into the construction site did not take place as scheduled this week.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 5-16-2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 10 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Movement of soils from parking lot stockpile to the construction site began this week. Approximately 50% of the stockpiled material was re-used.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 5-23-2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

with the soil re-use in progress, the silt fence has limited use and has been taken down in areas where the stockpile has been removed. Hay bails continue to surround the pile. Materials are being moved to areas on the construction site.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — 5-31-2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☑ | ☐ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☑ | ☐ | ☐ | Fabric buried 6 inches minimum. |
| ☑ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation 10 % of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

approximately 1/4 of the soils stockpiled in the parking lot remains. The balance has been moved to the construction site for the new club house.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — June 8, 2018

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☐ | ☑ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☐ | ☑ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☐ | ☑ | Fabric buried 6 inches minimum. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 10 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

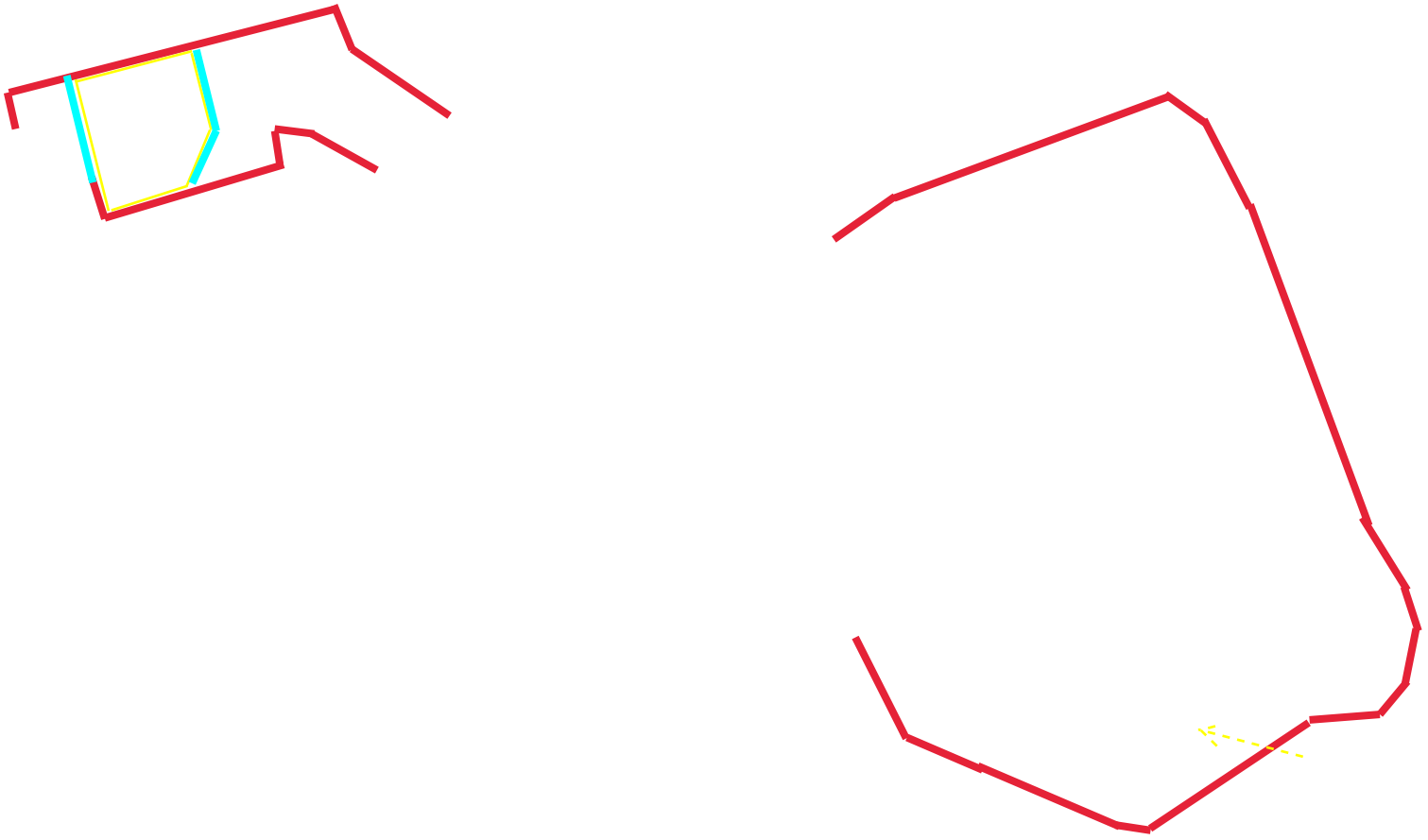
## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

most of the soil stockpile from the parking lot has been relocated to the club house construction site for regrading.



Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — June 20, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☑ | ☐ | ☐ | Stone is clean enough to effectively remove mud from vehicles. |
| ☑ | ☐ | ☐ | Installed per standards and specifications? |
| ☑ | ☐ | ☐ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☑ | ☐ | ☐ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☑ | ☐ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☑ | ☐ | Fabric buried 6 inches minimum. |
| ☐ | ☑ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 10 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

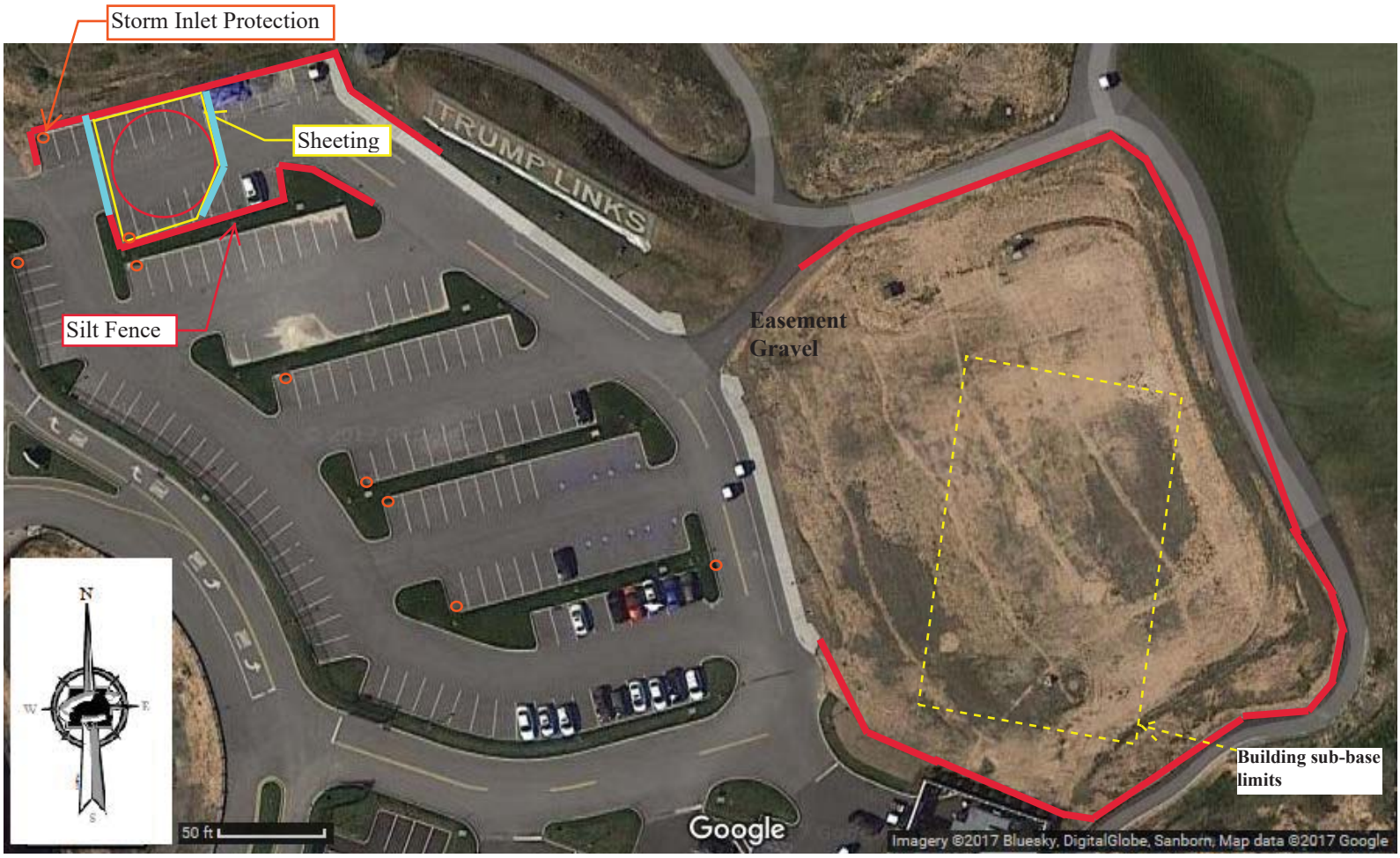
**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

minor volumes of soil remain in the parking lot (estimate 2 yards of material)

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — June 27, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☑ | ☐ | ☐ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stone is clean enough to effectively remove mud from vehicles. |
| ☐ | ☐ | ☑ | Installed per standards and specifications? |
| ☐ | ☐ | ☑ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☐ | ☐ | ☑ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☐ | ☑ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☐ | ☑ | Fabric buried 6 inches minimum. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 25 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

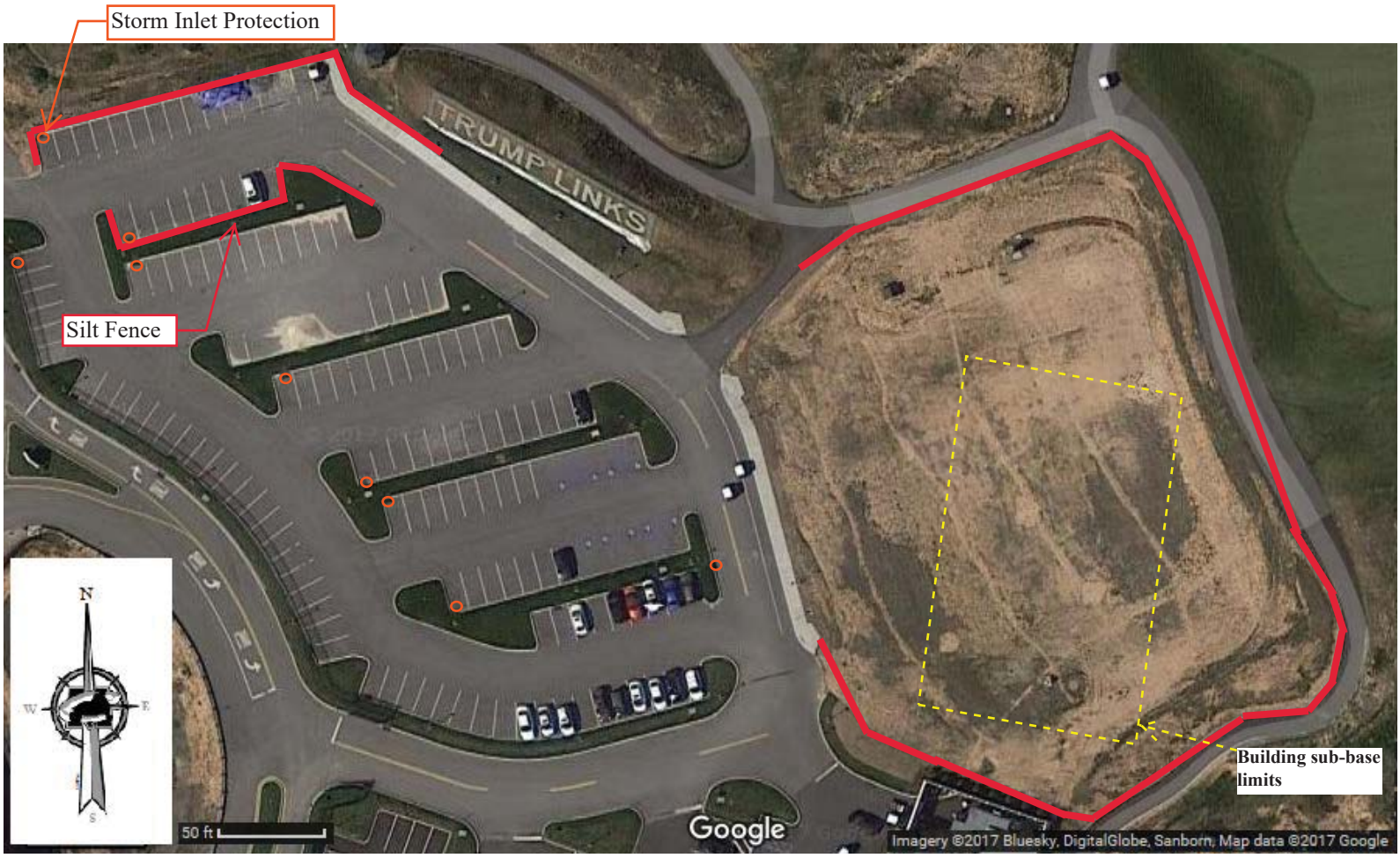
**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Sediment traps in storm sewers require cleaning & maintenance. Contractor has been advised.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — July 5, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☐ | ☐ | ☑ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stone is clean enough to effectively remove mud from vehicles. |
| ☐ | ☐ | ☑ | Installed per standards and specifications? |
| ☐ | ☐ | ☑ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☐ | ☐ | ☑ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☐ | ☑ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☐ | ☑ | Fabric buried 6 inches minimum. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 25 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

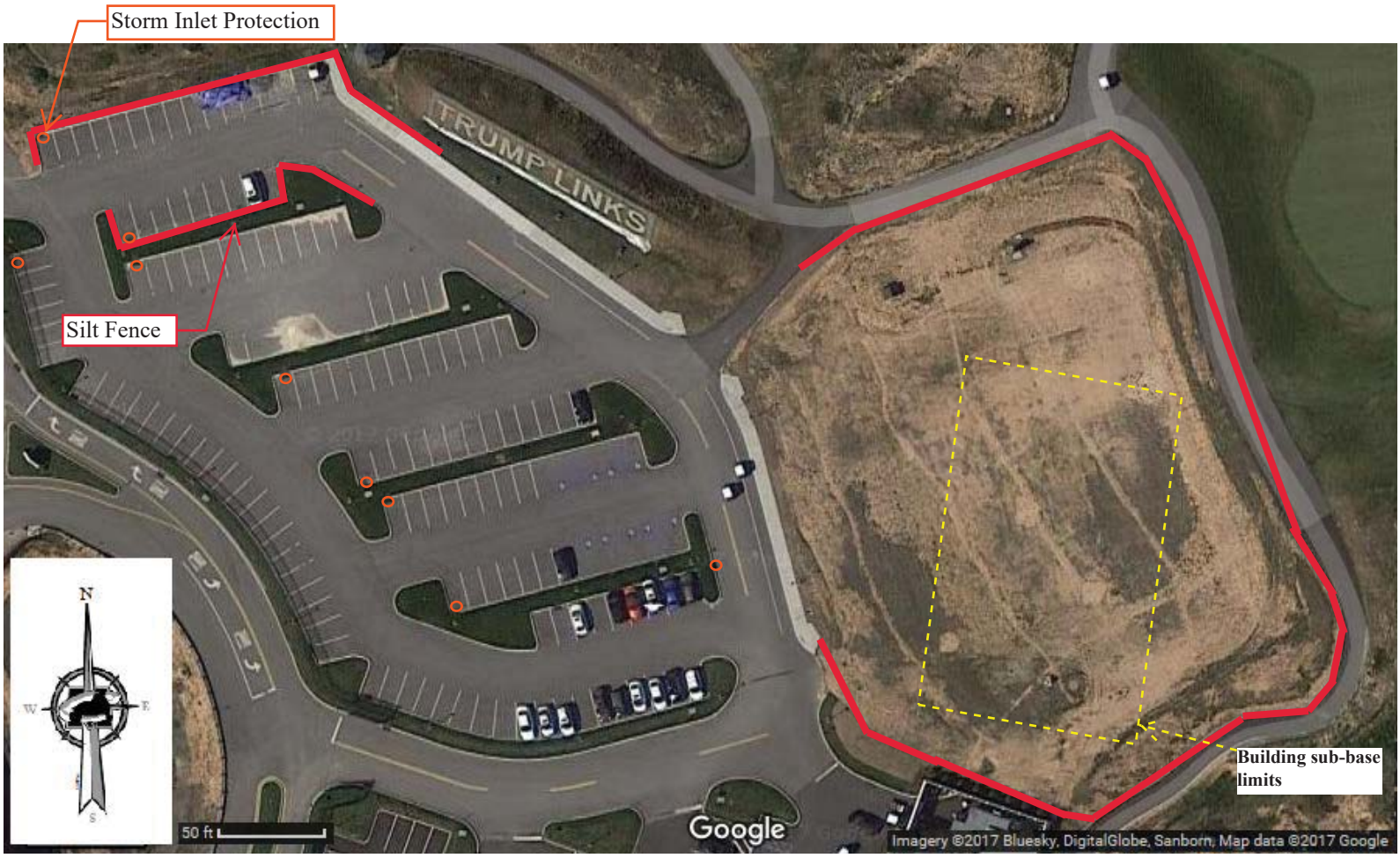
**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Sediment traps in storm sewers require cleaning & maintenance. Traps are filling with sand and grass clippings. Contractor has been advised.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — July 11, 2018

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☐ | ☐ | ☑ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stone is clean enough to effectively remove mud from vehicles. |
| ☐ | ☐ | ☑ | Installed per standards and specifications? |
| ☐ | ☐ | ☑ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☐ | ☐ | ☑ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☐ | ☑ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☐ | ☑ | Fabric buried 6 inches minimum. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 25 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

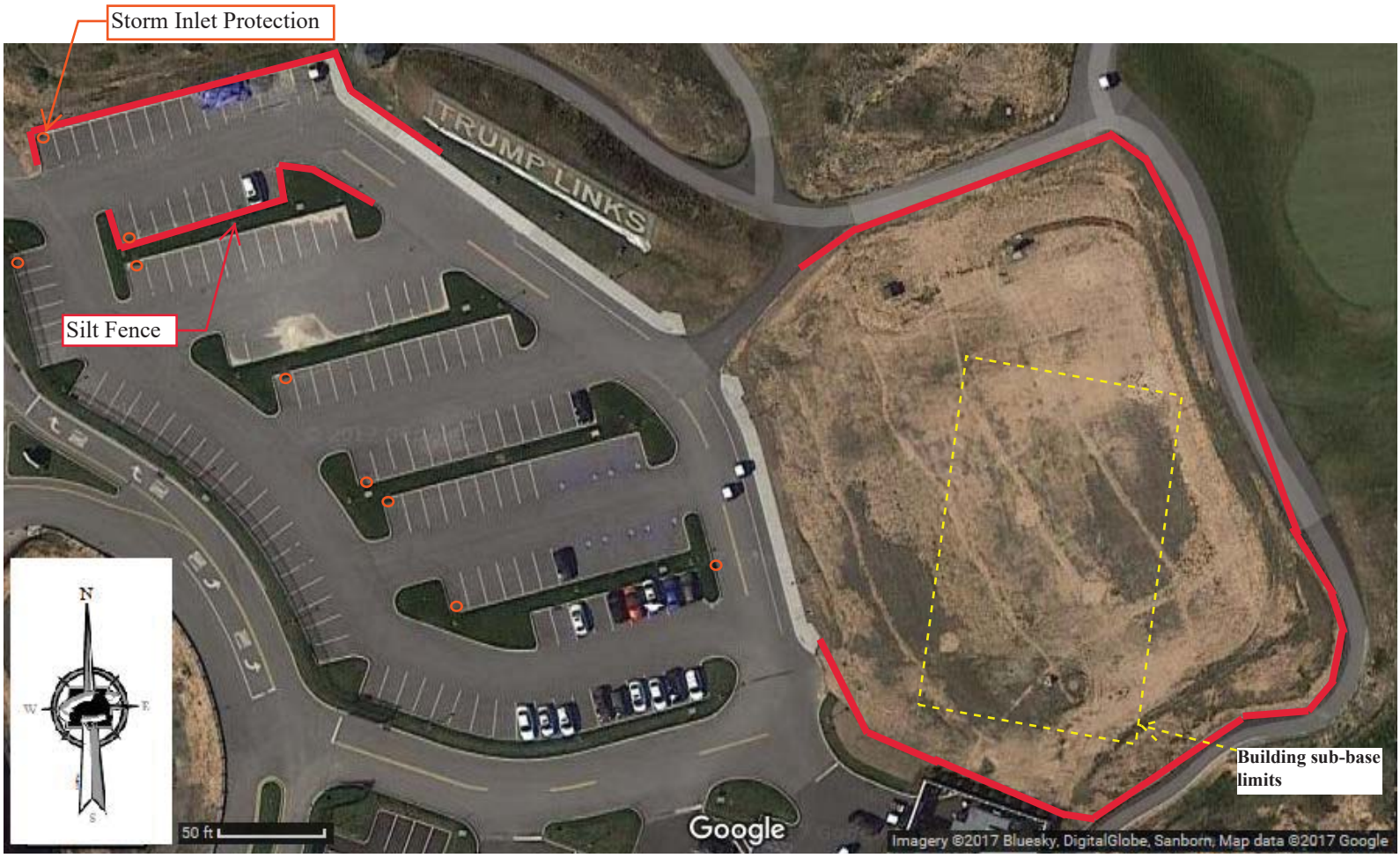
**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Sediment traps in storm sewers require cleaning & maintenance. Traps are filling with sand and grass clippings. Contractor has been advised.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — July 17, 2018

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☐ | ☐ | ☑ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stone is clean enough to effectively remove mud from vehicles. |
| ☐ | ☐ | ☑ | Installed per standards and specifications? |
| ☐ | ☐ | ☑ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☐ | ☐ | ☑ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☐ | ☑ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☐ | ☑ | Fabric buried 6 inches minimum. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☑ | ☐ | ☐ | Drainage area is 1acre or less. |
| ☑ | ☐ | ☐ | Excavated area is 900 cubic feet. |
| ☑ | ☐ | ☐ | Excavated side slopes should be 2:1. |
| ☑ | ☐ | ☐ | 2" x 4" frame is constructed and structurally sound. |
| ☑ | ☐ | ☐ | Posts 3-foot maximum spacing between posts. |
| ☑ | ☐ | ☐ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☑ | ☐ | ☐ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 25 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

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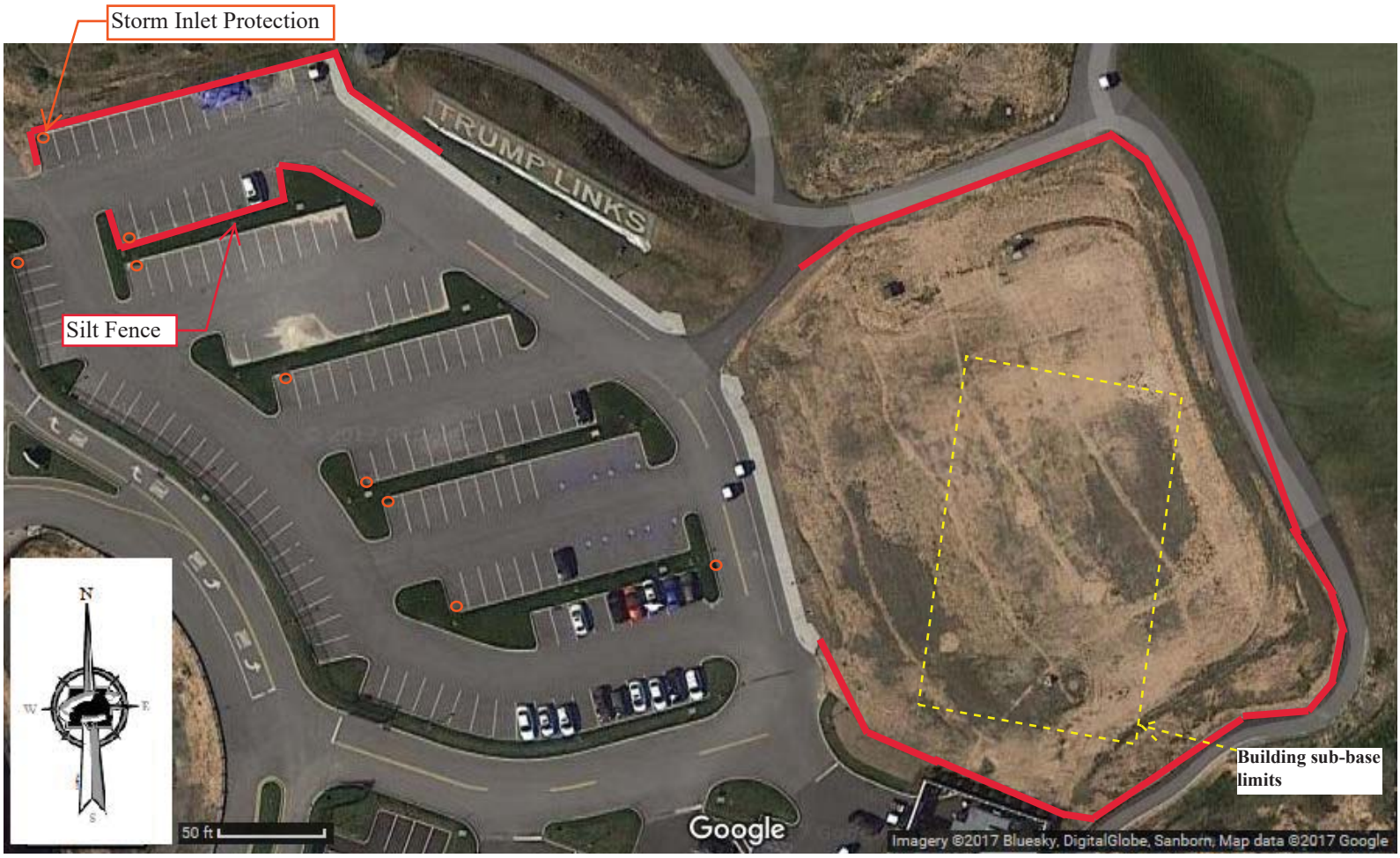
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Sediment traps in storm sewers require cleaning & maintenance. Traps are filling with sand and grass clippings. Contractor has been advised.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — July 25, 2018

**Inspector (print name)** **Date of Inspection**

David Keil

**Qualified Professional (print name)** **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☐ | ☐ | ☑ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stone is clean enough to effectively remove mud from vehicles. |
| ☐ | ☐ | ☑ | Installed per standards and specifications? |
| ☐ | ☐ | ☑ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☐ | ☐ | ☑ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☐ | ☑ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☐ | ☑ | Fabric buried 6 inches minimum. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is 0 % of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☑ | ☐ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☐ | ☐ | ☑ | Drainage area is 1acre or less. |
| ☐ | ☐ | ☑ | Excavated area is 900 cubic feet. |
| ☐ | ☐ | ☑ | Excavated side slopes should be 2:1. |
| ☐ | ☐ | ☑ | 2" x 4" frame is constructed and structurally sound. |
| ☐ | ☐ | ☑ | Posts 3-foot maximum spacing between posts. |
| ☐ | ☐ | ☑ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 25 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

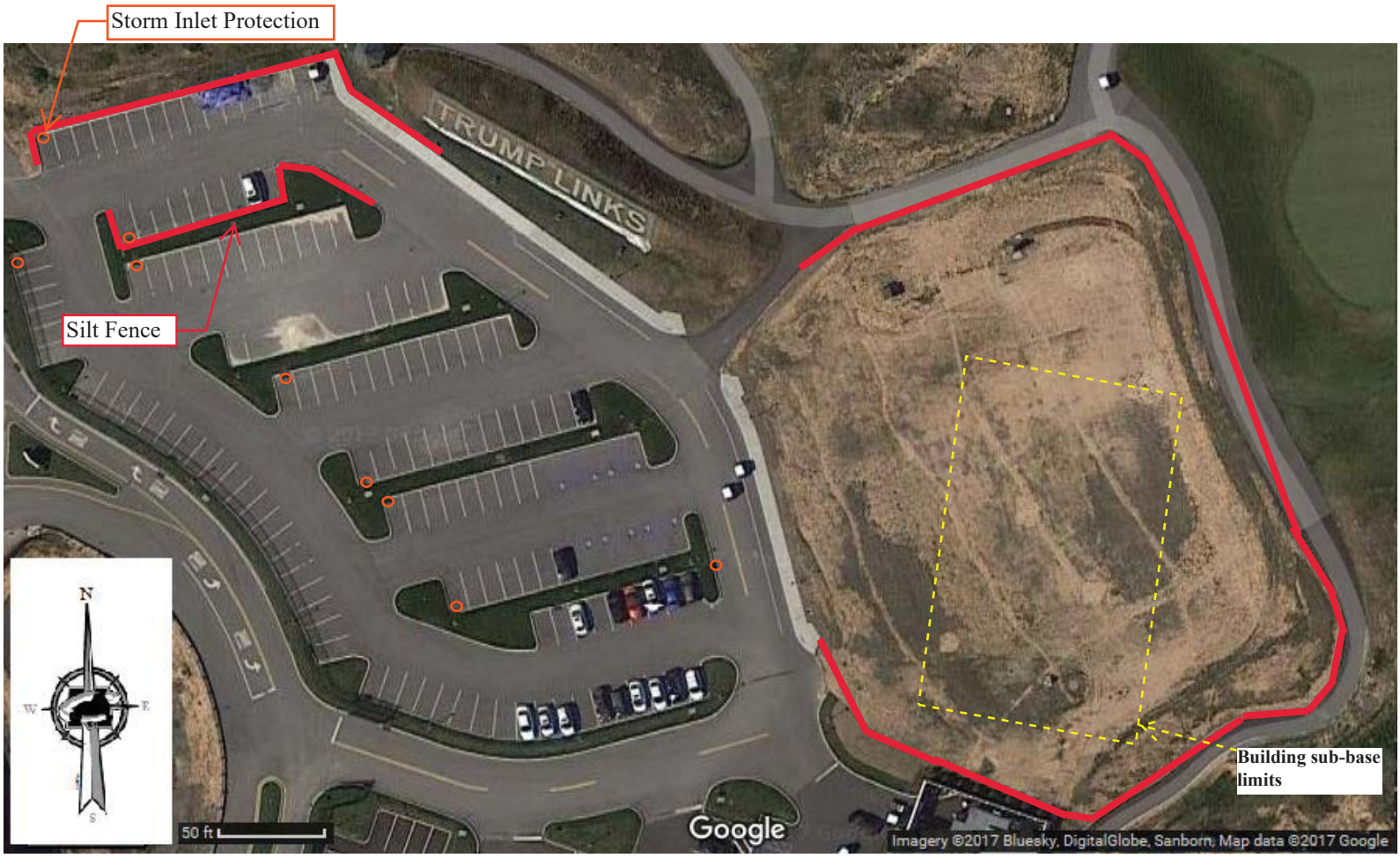
## CONSTRUCTION DURATION INSPECTIONS

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — August 1, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☐ | ☐ | ☑ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stone is clean enough to effectively remove mud from vehicles. |
| ☐ | ☐ | ☑ | Installed per standards and specifications? |
| ☐ | ☐ | ☑ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☐ | ☐ | ☑ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☐ | ☑ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☐ | ☑ | Fabric buried 6 inches minimum. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☐ | ☐ | ☑ | Drainage area is 1acre or less. |
| ☐ | ☐ | ☑ | Excavated area is 900 cubic feet. |
| ☐ | ☐ | ☑ | Excavated side slopes should be 2:1. |
| ☐ | ☐ | ☑ | 2" x 4" frame is constructed and structurally sound. |
| ☐ | ☐ | ☑ | Posts 3-foot maximum spacing between posts. |
| ☐ | ☐ | ☑ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 25 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

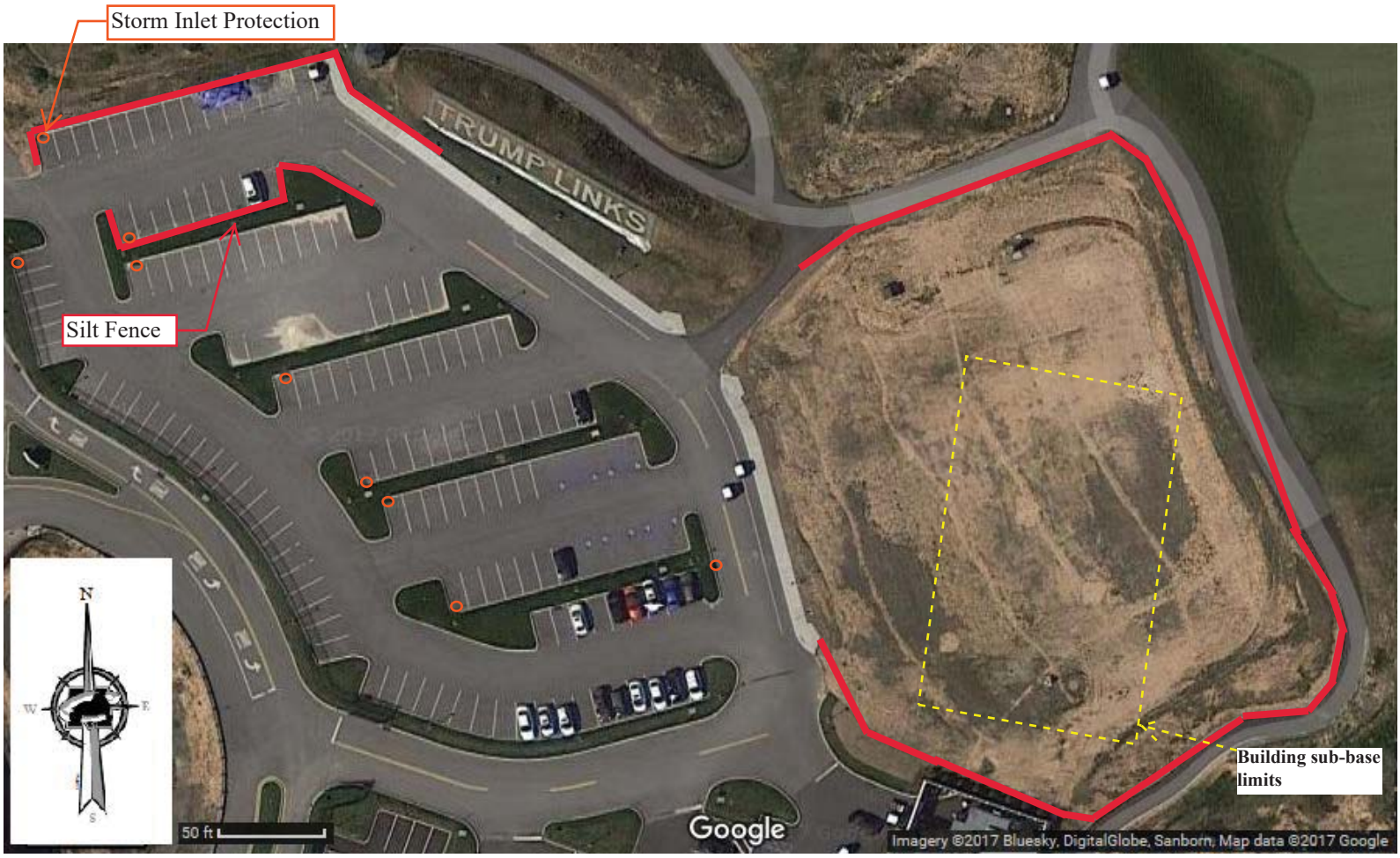
**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:
1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Sediment traps in storm sewers require cleaning & maintenance. Traps are filling with sand and grass clippings. Contractor has been advised.

Erosion and Sediment Control Inspection
Trump Golf Links at Ferry Point Park
500 Hutchinson River Parkway
Bronx, NY 10453




**SITE PLAN/SKETCH**

Dave Keil — August 8, 2018

**Inspector (print name)** — **Date of Inspection**

David Keil

**Qualified Professional (print name)** — **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**
- ☐ ☐ ☑ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☑ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☑ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☑ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

1. General Site Conditions

**Yes No NA**
- ☑ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☑ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☑ ☐ Is construction impacting the adjacent property?
- ☑ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing

**Yes No NA**
- ☐ ☐ ☑ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☑ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☑ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☑ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**Runoff Control Practices**

1. Excavation Dewatering

**Yes No NA**
- ☐ ☐ ☑ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☑ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☑ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☑ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

**Yes No NA**
- ☐ ☐ ☑ Installed per plan.
- ☐ ☐ ☑ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☑ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**
- ☐ ☐ ☑ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☑ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☑ Sediment-laden runoff directed to sediment trapping structure

**CONSTRUCTION DURATION INSPECTIONS**
**Runoff Control Practices (continued)**

4. Stone Check Dam

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Is channel stable? (flow is not eroding soil underneath or around the structure). |
| ☐ | ☐ | ☑ | Check is in good condition (rocks in place and no permanent pools behind the structure). |
| ☐ | ☐ | ☑ | Has accumulated sediment been removed?. |

5. Rock Outlet Protection

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed per plan. |
| ☐ | ☐ | ☑ | Installed concurrently with pipe installation. |

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stockpiles are stabilized with vegetation and/or mulch. |
| ☐ | ☐ | ☑ | Sediment control is installed at the toe of the slope. |

2. Revegetation

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Temporary seedings and mulch have been applied to idle areas. |
| ☐ | ☐ | ☑ | 4 inches minimum of topsoil has been applied under permanent seedings |

**Sediment Control Practices**

1. Stabilized Construction Entrance

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Stone is clean enough to effectively remove mud from vehicles. |
| ☐ | ☐ | ☑ | Installed per standards and specifications? |
| ☐ | ☐ | ☑ | Does all traffic use the stabilized entrance to enter and leave site? |
| ☐ | ☐ | ☑ | Is adequate drainage provided to prevent ponding at entrance? |

2. Silt Fence

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed on Contour, 10 feet from toe of slope (not across conveyance channels). |
| ☐ | ☐ | ☑ | Joints constructed by wrapping the two ends together for continuous support. |
| ☐ | ☐ | ☑ | Fabric buried 6 inches minimum. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation is ___% of design capacity.

**Sediment Control Practices (continued)**

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Installed concrete blocks lengthwise so open ends face outward, not upward. |
| ☐ | ☐ | ☑ | Placed wire screen between No. 3 crushed stone and concrete blocks. |
| ☐ | ☐ | ☑ | Drainage area is 1acre or less. |
| ☐ | ☐ | ☑ | Excavated area is 900 cubic feet. |
| ☐ | ☐ | ☑ | Excavated side slopes should be 2:1. |
| ☐ | ☐ | ☑ | 2" x 4" frame is constructed and structurally sound. |
| ☐ | ☐ | ☑ | Posts 3-foot maximum spacing between posts. |
| ☐ | ☐ | ☑ | Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing. |
| ☐ | ☐ | ☑ | Posts are stable, fabric is tight and without rips or frayed areas. |

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Outlet structure is constructed per the approved plan or drawing. |
| ☐ | ☐ | ☑ | Geotextile fabric has been placed beneath rock fill. |

Sediment accumulation is 25 % of design capacity.

5. Temporary Sediment Basin

| Yes | No | NA | |
|---|---|---|---|
| ☐ | ☐ | ☑ | Basin and outlet structure constructed per the approved plan. |
| ☐ | ☐ | ☑ | Basin side slopes are stabilized with seed/mulch. |
| ☐ | ☐ | ☑ | Drainage structure flushed and basin surface restored upon removal of sediment basin facility. |

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

## CONSTRUCTION DURATION INSPECTIONS

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2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

Sediment traps in storm sewers require cleaning & maintenance. Traps are filling with sand and grass clippings. Contractor has been advised.

# APPENDIX I

# DORs for New Clubhouse Construction

MASER CONSULTING P.A.

Engineers
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2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
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F: 856.722.1120

# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Cloudy/Slight Sun and wind** **Humidity**

**Date: July 19, 2017** **Time: 0700** **Temp: 80-90 °F** High (Med) Low

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Trump Construction**

**Active Site Work Areas: Sonotube installation.**

**Site Work Progress: An approximately 5' x 5' x 6' deep hole was dug for the installation of a Sonotube Security Camera towards the northeastern bounds of the Trump Golf Links golf course. Soil from the camera location (cover and shaping) was placed separately (cover material placed in one stockpile; shaping material in a separate stockpile) and on top of plywood. In addition a 2' x 60' x 2' trench was cut from the Sonotube location to a nearby "hotbox" in order to power the camera.**

**The shaping layer soil was marked by a demarcation layer prior to stockpiling. The orange snow sheeting was cut out with a box cutter and the shaping layer was dug out. To avoid hitting a fiber optic electrical line, the area was hand dug with shovels until the line was located.**

**The two separate stockpiles along the Sonotube location and trench (cover and shaping) were covered with tarps and anchored with surrounding rocks after soil disturbance was complete.**

**Remarks: Two locations are proposed to have the security cameras installed. The first location is outlined in today`s report in the north east outer limits of the golf course. The second location is proposed to be towards the north western limits of the golf course property and will be solar powered rather than powered by the "hotbox".**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Sonotube location (Cover layer to the left on plywood, shaping layer to the right on plywood).**

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**Both cover and shaping layer soil tarped after soil disturbance activities.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Cloudy/Slight Sun and wind** **Humidity**

**Date:** July 20, 2017 **Time: 0700** High Med (Low)

**Temp: 90-100** °F

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Trump Construction**

**Active Site Work Areas: Sonotube Installation.**

**Site Work Progress: Two conduit PVC 40 pipes (1" dia.) were placed in the trench from the previous day (roughly 60' long). Pipes were spread out in the trench as to reduce interference from each line.**

**The pipes were fitted with elbows into the "hotbox" and had caution tape placed over them. The pipes were then covered with surrounding shaping layer material and the demarcation boundary re-established. The trench was backfilled with surrounding cover layer material.**

**Caution tape was also placed on top of the fiber optic cable as a demarcation barrier/caution warning to future excavators.**

**Remarks: Shaping layer material was covered overnight and anchored with a tarp to eliminate disturbance.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Trench going into hotbox, demarcation layer shown.**

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**PVC piping going from the hotbox to the Sonotube location.**

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**Trench was backfilled after the electrical conduit installation was completed. Remaining shaping soil (right side on plywood) redistributed next to Sonotube location (North). Capped with 1.5 feet of cover soil.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Sun and Slight wind** **Humidity**

**Date:** Trump Golf Links **Time: 0700** **Temp: 90-100** °F High Med (Low)

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Removal and stockpile of Cover layer in proposed building location**

**Site Work Progress: Cover layer soil was excavated within the building location. Soil was stockpiled on the construction site at first until approval by DEC was met. Once approved, soil was transferred to the back parking lot on top of clear polyethylene sheeting.**

**Remarks: Soil was scanned with a PID after being transferred off site. No detection above regulatory limits was found. Careful attention by the excavator was paid as to not cross contaminate the cover with shaping. Clean fill manifests were supposedly brought in for the soil.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunaato** **Reviewed By:**
**Date: 7/21/2017**

Customer Loyalty *through* Client Satisfaction

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F (SA) SU** **Weather: Sun and Slight wind** **Humidity**

**Date:** Trump Golf Links **Time: 0700** High Med (Low)

**Temp: 85-95** °F

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Removal and stockpile of Cover layer in proposed building location**

**Site Work Progress: Additional cover layer soil was moved to stockpile site. Soil was prepared as to comply with soil and erosion control plans. Haybales and drainage prevention systems were installed and a tarp with anchors (sandbags) placed on top. Asphault over the top of the golf cart roadway was broken up and stockpiled within the construction area.**

**Remarks: No detection above regulatory limits was found in scanning the soil.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date: 7/22/2017**

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# DAILY FIELD OBSERVATION REPORT

M T W TH F SA SU
**Date:** 7/24/2017 **Time:** 0645 **Weather:** RAIN/WIND **Wind:** GUSTY **Temp:** 65-70° **Humidity** High Med Low

**Name of Project:** TRUMP LINKS **Municipality:** BRONX, NY **Job No:** 17007426A

**Site Contractors:** TSC

**Active Site Work Areas:**

EXCAVATION of ELECTRICAL CONDUITS AT THE TO-BE-CONSTRUCTED TRUMP LINKS CLUB HOUSE

**Site Work Progress:**

APPROXIMATELY 150 LINEAR FEET OF ELECTRICAL CONDUIT WAS EXPOSED ALONG THE EASTERN SIDE OF THE CONSTRUCTION AREA.

**Remarks:**

HEAVY RAINS FOR THE MORNING DELAYED WORK TO SOME DEGREE - BUT MEASURABLE PROGRESS WAS MADE BY DAY'S END.

NO DEMARCATION LAYER OR WASTE WAS ENCOUNTERED DURING THE EXCAVATING. PERIODIC AIR MEASUREMENTS DID NOT DETECT ANY LANDFILL GASES.

ALL WORK PERFORMED TODAY WAS DONE IN COMPLIANCE WITH ESTABLISHED GUIDELINES & PROTOCOLS

**Site Photographs:** YES

**Additional Action Required by Project Mgr. or Eng.:**

YES NO

**Observed By:** D. KEIL **Reviewed By:** **Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Sun and Slight wind** **Humidity**

**Date:** July 25, 2017 **Time: 0700** **Temp: 70-80** °F High (Med) Low

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Excavation of existing underground electrical conduits, Trenching of new electrical conduits, spreading of Aeration core piles into non-play areas.**

**Site Work Progress: Roughly 100 ft. of underground electrical conduit was exposed from the eastern trench to the current clubhouse/office building in the construction site. A similar trench was excavated along the outer limits of the current conduit trench, with the exception of the eastern side which expanded over the former asphalt golf cart roadway. Two parallel PVC pipes (4" dia.) for the electrical conduits were then laid in the outer trench. Silt fencing along the lower elevation limits was trenched as to have 6" of fencing in the ground, preventing erosion/ runoff. The upgradient area of the aeration piles was excavated and aeration soil was distributed behind Hole 18 in a non-playing area of the golf course.**

**Remarks: Water accumulated towards the center of the construction area from the previous rain event. JCS proposes to dig the soil with the water and see if there is recharge. If recharge occurs-against expectation, water will be pumped and containerized in advance of off-site disposal at an approved facility.**

**No detection from the down-wind gas monitor was seen, with the exception of % oxygen which peaked at 21.7% (up from 20.9). PID readings were found from 10:00 to 10:30 am around the perimeter of the excavation at 0.8 ppm (average) and 2.5 ppm (peak). Readings inside the trailer were found 0.0 ppm and the PID was recalibrated inside the trailer. No odor was observed on site and readings returned to 0.0 ppm after 10:30 am; humidity may have affected PID. Silt fencing was installed between the aeration core and hole 18.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
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Photo 1: Rain water accumulation towards southern and center construction area (Blue marking indicates water utility, Pink marking indicates axis line).

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Photo 2: Silt fencing lower elevation towards parking lot of construction area (Lower half trenched).

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Photo 3: New conduit trench (40 PVC 4" dia. Piping) located in northeastern side.

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Photo 4: Existing conduit (40 PVC 4" dia. Piping) located in south eastern side.

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Photo 5: Aeration core pile (facing East).

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Photo 7: Aeration core pile (facing West). Bottom of pile noted by soil color and characteristic change (right), remaining aeration pile (left).

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sun and Slight wind** **Humidity**

**Date:** July 26, 2017 **Time: 0700** **Temp: 70-80** °F High Med (Low)

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, Trump Construction**

**Active Site Work Areas: Accumulation of trenching and cover soil stockpile, Trenching of proposed electrical conduits, Aeration pile excavation and stockpiling in non-play area behind Hole 18.**

**Site Work Progress: Brown fine-course sand from the proposed conduit trench at the southern end of the construction area and soil from the cover layer stockpile was moved to the north-eastern end. PVC 40 (4" dia.) piping was installed along the eastern and southern reaches of the conduit trench. Roughly 4 – 6" of excavated soil (shaping and cover layer materials) around the trench was placed on top of the conduit piping and electrical warning label tape was placed on top. Aeration core stockpiling continued behind Hole 18. Roughly 1/4 of the pile up gradient of the aeration pile was hauled with two alternating John Deere tractors piling roughly 3' high, silt fenced at the stockpile location. Trenching for new conduit moved roughly 10' south into asphalt. Asphalt stockpile moved north roughly 25' (see Photo #3).**

**Remarks: Rain water accumulation from the previous storm event was trenched to act as a retention basin. Bulk of the water mass either percolated through soil or evaporated (no recharge). Fencing towards the southern part of the construction area was offset roughly 10' in order to follow site construction plans and allow for trenching next to office building. Silt fencing in this area was reinstalled on the outer temporary fencing side (asphalt blocking inside) and anchored with sandbags.**

**No detections from the PID or gas monitor were encountered throughout the day, with the exception of oxygen at 20.5% (down from 20.9).**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By: Dave Keil**
**Date: 7/27/2017**

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**Photo 1: Aeration core soil stockpile (located in non-playing behind Hole 18). Silt fence is trenched (6" of fence in ground).**

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**Photo 2: Red warning label tape placed on top of electrical conduit location.**

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**Photo 3: Brown fine to course sand from new conduit trenching (upper right) and cover sand from July 19-20 stockpile middle stockpiled in northeast corner of site. Asphalt stockpile moved north of previous location (left).**

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**Photo 4: New electrical conduit trench into asphalt located in southern construction area (near Office/current club building)**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sun and Slight wind** **Humidity**

**Date: July 27, 2017** **Time: 0700** **Temp: 70-80** °F (High) Med Low

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Stockpiling of soil, Trenching and installation of new electrical conduits, Pile driving preparation.**

**Site Work Progress: New electrical conduit piping in the vicinity of the existing club house building was completed. Warning label tape was placed on top of the 40 PVC (4" dia.) electrical conduit. Trench was later backfilled with original cover material. Electrical wiring was installed through the conduit piping. Shaping layer soil was stockpiled to roughly 20'. Sediment and erosion control plans are proposed to be installed for the stockpile (silt fence, tarped, etc.) once the pile is completely gathered. The "Septic box" was prepared to be relocated away from pile driving activities (disconnection of PVC piping and wiring). Pile driving locations were leveled to grade as needed and marked out. Soil from the piles was gray fine to course sand with rock fragments and moved next to shaping layer stockpile.**

**Remarks: Rain water accumulation from the previous storm event lowered about 7-9". High humidity throughout the day resulting in a "spotty" PID; readings fluctuated from 3-10 ppm on and off site. No gas detections were made throughout the day. Conduit piping openings were covered with duct tape to prevent water infiltration. PVC 40 (3" dia.) drainage lines into the septic tank were broken when attempting to locate the lines. Water accumulation from the line was drained back into the septic box. Repairs to be made.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Broken PVC 40 drainage line going into "Septic Box" to be removed.**

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**Photo 2: Conduit trenching pipe going into existing club house-- to be connected.**



**Photo 3: Pile driving location pit.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Sun and heavy fog** **Humidity**

**Date: July 28, 2017** **Time: 0700** **Temp: 70-80** °F **(High) Med Low**

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, Trump Construction**

**Active Site Work Areas: Construction site for proposed new Club House; soil stockpiling in parking area.**
**Activities included: Grading in construction area; stockpiling of shaping material in the parking area with erosion controls; stockpiling of co-mingled material with erosion controls; stockpiling of aeration cores with controls and removal of septic box.**

**Site Work Progress: Shaping layer soil was stockpiled in the back parking lot from grading activities taking place to the southeast. Sheeting and silt fencing was installed prior to soil stocking. Sheeting was placed over the concrete curb with silt fencing underneath and anchored with large rocks on top. The stock pile lies next to the cover layer material pile with no observable cross-contamination or co-mingling of materials. Stockpiles are to be covered with a tarp, anchored with sand bags, and have hay bales surrounding them once completed. Drainage and erosion controls are in place. Brown shaping soil derived from "Septic" box removal was added to the stockpile on the construction site. The stockpile will have a silt fence surrounding it and either tarping or seeding once stockpiling is complete. Roughly half of the aeration core material has been relocated to the nearby placement location. Odors are very potent in the aeration pile location and aeration stockpile area. A PID peak reading 12.7 ppm (Likely due to humidity).**

**Remarks: Very high humidity and heavy fog; PID not working properly even with hydrophobic filter. Some rain water accumulation from the previous storm event remains in the construction area. PID is calibrated every morning within the JCS construction trailer with Isobutylene (100 ppm). Trevor from Woodard and Curran recommended using a newer model such as the MiniRAE 3000, as it is less sensitive to moisture. Large boulders (4' dia.) were encountered during the grading activities. These will be segregated and stockpiled in the construction area until removed from site.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Septic-box trenching for relocation. Temporary PVC attached to broken off end. Surrounding water body assumed to be municipal discharge.**

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**Photo 2: Shaping layer soil stockpile in back of parking lot. Cover material stockpile next to it (blue tarping), shaping material will be covered with blue tarping, and anchored with sandbags.**

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**Photo 3: Grading of construction site. Shaping layer soil gathered to the right is moved to Photo 2 location.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sun, slight wind** **Humidity**

**Date: July 31, 2017** **Time: 0700** **Temp: 70-80** °F High Med (Low)

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Trump Construction, GZA Environmental, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Club House**

**Activities included: PDA Test Pile Driving, Shaping layer stockpiling in construction area; Asphalt stockpiling away from backfill materials; stockpiling of aeration cores with controls and removal of septic box.**

**Site Work Progress: Shaping layer on the eastern bounds of the construction site was stockpiled as depicted in Photo # 4. Soil in this area had trace amounts of construction material such as rebar, blasting rope/materials and scrap metal. These types of materials were previously noted in a meeting from July 17, 2017 that they may be encountered. A water tight roll off was ordered to store any municipal solid waste that may be encountered. The shaping layer stockpile was spread-out (lowered) so as not to exceed the height of the construction fence and to minimize to migration of sediments that could potentially be transported by high winds.**

**PDA test piles were installed to a depth of 70'. Steel beams were roughly 40' length wise and were welded throughout the interlocking joints. In-between welds, the breathing zone area was scanned with a PID MiniRAE 2000 showing 0.0 ppm for all piles. For additional safety, a MAXX AIR PRO portable fan was set up as an engineering control to vent any gases arising from the piles.**

**Leftover asphalt from new electrical conduit trenching activities was stockpiled from stockpiled soil. Asphalt is being temporary staged prior to off-site disposal.**

**Aeration core stockpiling continued with about half of the pile remaining. Some odors were detected but a scan on the area with the PID/gas detectors indicated no sustained readings. The PID MiniRAE 2000 showed 0.0 ppm. Test Drive Piling began with gas monitoring and engineering controls throughout the process.**

**Remarks: Low humidity; PID working properly. PID readings of about 0.7 ppm were encountered during disturbance of the shaping layer with construction debris around 13:50 to 14:00. PID readings were not detected throughout the day. A newer model such as the MiniRAE 3000 was proposed to be ordered for better PID readings. Gas monitoring indicated that oxygen sporadically increased to 23.0% (up from 20.9%).**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

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**Observed By: John Fortunato** **Reviewed By:**
**Date:**




**Photo 1: Temporary Asphalt Stockpile location (~3 yards of Asphalt).**

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**Photo 2: Electrical conduit next to Septic-Box location (4" dia. PVC 40 Piping).**

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**Photo 3: PDA Test Pile Driving setup (P-46 Pile). Fan placed next to welder for H&S.**

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**Photo 4: Co-mingled (Shaping and Cover soil) on-site stockpile location.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Sun, slight wind** **Humidity**

**Date: August 1, 2017 Time: 0700** **Temp: 70-85 °F** High (Med) Low

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Trump Construction, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Club House**

**Activities included: Pile driving and welding of steel beams. Soil and erosion control plans for co-mingled soil stockpile on site. Aeration core stock piling**

**Site Work Progress:**

**Twelve piles were driven to a depth of about 35'. Of those twelve, seven were welded and driven to about 70'. Steel beams were roughly 40' length wise and were welded between the interlocking wedge plates of each beam and across the flange. Before welding, the piles were monitored at ground surface elevation (without ventilation fan) with a 4-gas MiniRAE Meter. If no detections were found above the Lower Explosive Limit (LEL) for methane gas (determined by OSHA), welding was deemed safe and a Maxx Air Pro industrial fan was placed next to the base of the beam and turned on for additional safety. Industrial fire safety equipment (fire extinguisher) is present near driving piles.**

**A silt fence was installed around the co-mingled soil stockpile and trenched (6" of fence in the ground). Tarping/seeding is proposed to be placed on top of the pile within the week.**

**Aeration core stockpiling continued. About of 1/3 of the pile remains.**

**Remarks: PID hits were detected during marking activities (spray paint). Gas meter detections were found for carbon monoxide (32 ppm peak) during welding activities (attributed to exhaust fumes from the welder itself). Oxygen content was found to increase to 21.4% (up from 20.9%) from 12:00 to 13:00.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Air monitoring setup during pile driving.**

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**Photo 2 : Location of gas monitoring before welding (fan not turned on).**

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**Photo 3: Silt fence for co-mingled stockpile (trenched in 6").**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sun, slightly cloudy** **Humidity**

**Date: August 2, 2017 Time: 0700** **Temp: 70-85 °F** (High) Med Low

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Trump Construction, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Club House**

**Activities included: Pile driving and welding of steel beams. Aeration core stock piling.**

**Site Work Progress:**

**Twelve piles were driven to a depth of about 35'. Of those twelve, seven were welded and driven to about 70'. Steel beams were roughly 40' length wise and were welded between the interlocking wedge plates of each beam and across the flange. Before welding, the piles were monitored with the four-gas meter as per protocol. The ventilation fan was not in use during the monitoring. During welding activities that fan was utilized for an added measure of safety.The 4-gas MiniRAE Meter was mounted to a PVC pipe and placed next to the pile during all welding and driving. Industrial fire safety equipment (fire extinguisher) is present near driving piles.**

**Remarks: Grindings and cuttings from beams tended to hit the 4-gas monitor. To protect the instrument, the meter was placed in a protected position with the tubing extending into the pile hole. The gas monitor was then observed from a safe distance with a set of binoculars. Hydrogen sulfide and LEL were found in low concentrations briefly when grindings hit the monitor of 0.8 ppm and 2% (Not high enough to trigger alarm systems).**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Setup of fan, monitor, and fire extinguisher during all grinding and welding. (Note: Monitor mounted onto PVC joint. Construction tile was laid on top to protect the meter from welding sparks/cuttings).**

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**Photo 2: Gas monitor, fan, and fire extinguisher set up during pile driving. (Note; Fire extinguisher not shown in photo.)**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny, slightly cloudy** **Humidity**

**Date: August 3, 2017 Time: 0700** **Temp: 70-85 °F** (High) Med Low

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Trump Construction, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Club House, Aeration core piling behind Hole 18**

**Activities included: Pile driving and welding of steel beams. Aeration core stock piling.**

**Site Work Progress:**

**Nine piles were driven to depth a depth of roughly 40' and four piles were driven to roughly 70'. Before welding, the piles were checked at the inlet (ground surface elevation) with a 4-gas MiniRAE Meter. If no alarms were triggered by the meter, an industrial fan was turned on, pointed towards the pile location, and welding was conducted. The meter alarm is triggered if concentrations of the carbon monoxide, hydrogen sulfide, oxygen, and methane are above OSHA exposure limits. The 4-gas MiniRAE Meter was mounted to a PVC pipe and placed next to the pile during all welding and driving. A piece of construction debris was laid on top of the meter to prevent damage from welding activities. A fire extinguisher was present near driving piles.**

**Aeration core stockpile relocation was completed and grass seeding was placed over the old stockpile location. The new stockpile location (Behind Hole 18) was roughly 8' high and 100' in length.**

**Small asphalt pile still remains on-site, bulk majority was disposed of off-site when the asphalt was originally broken up.**

**Remarks: No alarms were triggered with the exception of carbon monoxide early in the day. Closer investigation of OSHA Permissible Exposure Limits (PEL) indicated that 200 ppm was the recommended PEL for carbon monoxide. Inspection of the meter determined that the PEL was actually set to the Time Weighted Average (TWA) of 35 ppm. The 4-gas meter alarm was thus changed to the correct 200 ppm alarm limit for carbon monoxide. No alarm triggers occurred after this. Hydrogen sulfide was detected at a peak 1.2 ppm during the pile driving, below all OSHA exposure limits.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Setup of fan, monitor, and fire extinguisher during all grinding and welding. Same setup for driving without**

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**industrial fan. (Note: Monitor mounted onto PVC joint. Construction debris laid on top to avoid damage to 4-gas Meter.)**



**Photo 2: Form Aeration Core location. (Note: Grass seeding applied).**

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**Photo 3: Completed aeration core stockpile behind Hole 18. (Note: Non-playing).**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Thunderstorms, Sunny & slightly cloudy** **Humidity**

**Date: August 4, 2017 Time: 0700** **Temp: 70-85 °F** (High) Med Low

**Name of Project: Trump Golf Links** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Club House**

**Activities included: Pile driving and welding of steel beams.**

**Site Work Progress:**

**Nine piles were driven to their completion depths of roughly 70'. Before welding, the piles were checked at the inlet (ground surface elevation) with a 4-gas MiniRAE Meter. The 4-gas MiniRAE Meter was mounted to a PVC pipe and placed next to the pile during welding and pile driving. The 4-gas MiniRAE Meter was calibrated in the field successfully. A piece of construction debris was placed on top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activities. The meter alarm is triggered if concentrations of the carbon monoxide, hydrogen sulfide, oxygen, and methane are above OSHA exposure limits; the alarm was not triggered for these four gases during today's activities. Since no alarms were triggered by the meter, an explosion-proof? industrial fan was turned on, pointed toward the pile location, and welding was conducted.**

**Approximately xx tons (truckloads?) of cover material was excavated and transported to its dedicated stockpile area. Approximately yy tons (truckloads?) of shaping material was excavated and transported to its dedicated stockpile area.**

**Remarks: Thunderstorms occurred early in the morning in the morning from 7:00 to 9:30, no piles were driven during this time. After the thunderstorms passed, conditions were sunny with some clouds. Large pools of water (from the storm event) remained on site. Silt fencing was inspected for the cover and shaping material stockpiles and the perimeter of the construction site with no soil visibly penetrating the haybale barriers.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Piles driven (water pools from morning storm event)**

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**Photo 2: Silt fence around on-site co-mingled stockpile (no soil escaping barrier).**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Rain, light to heavy** **Humidity**

**Date: August 7, 2017 Time: 0700** **Temp: 70 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams**

**Site Work Progress:**

**Four piles were driven to their completion depths of approximately 75 feet, three piles were driven to their intermediate depths of approximately 40 feet, and six completed pilings were cut to grade by the welder. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas MiniRAE Meter. The 4-gas MiniRAE Meter was mounted to a PVC pipe and placed next to the pile during welding and pile driving. A piece of construction debris was placed on top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activities and a fan was turned on, aimed at the active piling. The meter alarms is triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits; the alarm was not triggered for these four gases during today's activities.**

**Remarks: Rain was light to heavy for this workday, and site activities (including pile driving and cutting) concluded at 1400. Silt fencing and haybales were observed for the stockpiles and the perimeter of the construction site with no soil visibly penetrating the barriers.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Don Bowman** Donald Bowman

**Reviewed By:**
**Date:**

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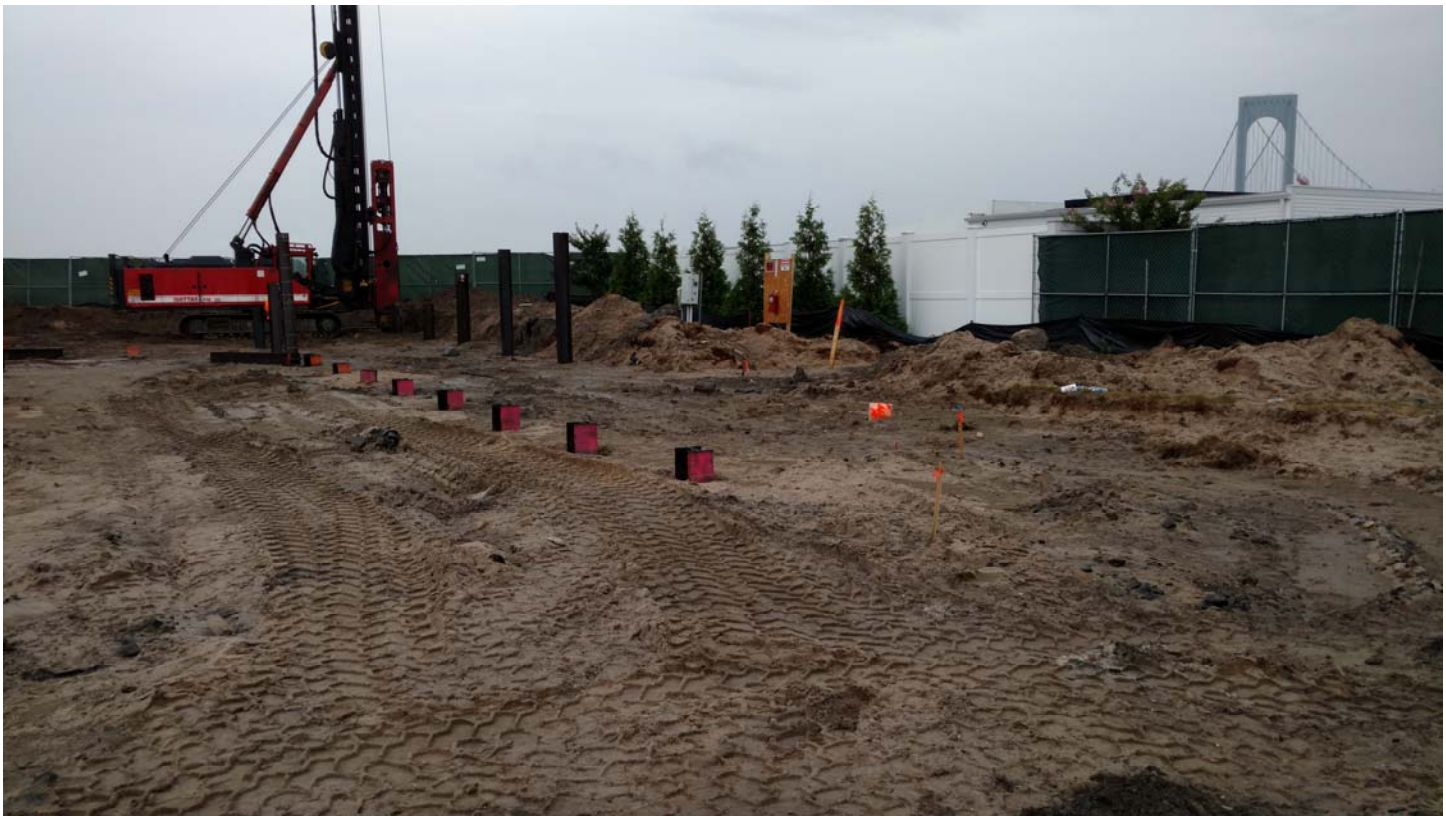

**View of site at conclusion of workday showing piles driven (background) on 08/07/2017**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Overcast, mostly cloudy** **Humidity**

**Date: August 8, 2017 Time: 0700** **Temp: 67 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams**

**Site Work Progress:**

**11 piles were driven to their completion depths of approximately 75 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas MiniRAE Meter. The 4-gas MiniRAE Meter was mounted to a PVC pipe and placed next to the pile during welding and pile driving. A piece of construction debris was placed on top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activities and a fan was turned on, aimed at the active piling. The meter alarms is triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits; the alarm was not triggered for these four gases during today's activities.**

**Remarks: Site activities (including pile driving and cutting) concluded at 1630. Silt fencing and haybales were observed for the stockpiles and the perimeter of the construction site with no soil visibly penetrating the barriers.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By: Donald Bowman**
**Date: 08/09/2017**

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**View #1 of site showing piles driven on 08/08/2017**

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**View #2 of site showing piles driven on 08/08/2017**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sunny and slightly cloudy** **Humidity**

**Date: August 9, 2017 Time: 0700** High (Med) Low

**Temp: 70 - 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams**

**Site Work Progress:**

**Seven piles were driven to their completion depths of approximately 75 feet and three completed pilings were cut to grade by the welder. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter II. The 4-gas Q RAE II Meter was mounted to a PVC pipe and placed next to the pile during welding and pile driving. A piece of construction debris was placed on top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activities and a fan was turned on, aimed at the active piling. The meter alarms is set to trigger if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits; the alarm was not triggered for these four gases or on the PID during today's activities.**

**Remarks: The Q RAE II gas meter and he MiniRAE 2000 PID were calibrated and used prior to welding and pile driving as an added measure of safety. A new Q RAE III gas meter was delivered from Pine Environmental LLC and switched with the old Q RAE II meter at 14:30. The new meter was calibrated on site and placed with the same setup as the Q RAE II (PVC joint mounted with cover for protection).**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**View of monitor setup while Q RAE II was switched with Q RAE III and calibrated (0.0 ppm on PID in PVC pipe).**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F (SA) SU** **Weather: Sunny, semi-cloudy** **Humidity**

**Date: August 11, 2017 Time: 0700 – 17:00** High Med (Low)

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams**

**Site Work Progress:**

**Ten piles were driven to their completion depths of approximately 75 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The 4-gas Q RAE III Meter was used to scan the piles prior to welding and placed next to the pile if gas concentrations didn`t trigger any alarms. A piece of construction debris was placed on top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activities and a fan was used to ventilate the area during welding/driving. The meter alarms is triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits; the alarm was not triggered for these four gases or on the PID during today's activities.**

**Remarks: The survey markings for pile P-213 couldn`t be located, measurements were estimated by Byan`s Quality Plus personnel. No utilities were hit during the driving. Piles that were cut to grade by the welder were stockpiled next to the asphalt stockpile location.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
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**View of monitor setup with Q RAE III 4-gas meter.**

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**Steel beam cuts stockpile location (next to asphalt stockpile).**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny, cloudy later in day** **Humidity**

**Date: August 14, 2017 Time: 0700 – 17:00** High Med (Low)

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete perimeter preparation**

**Site Work Progress:**

**Ten piles were driven to their completion depths of approximately 75 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. A piece of construction debris was placed on top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activities and a fan was turned on, aimed at the active piling during welding. The meter alarms are triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits. The alarm was triggered for pile P-155, with 51% LEL for methane towards the end of the work day. This pile was driven down to roughly 37' and no welding was done on it. The pile was labeled "CAUTION METHANE" and welders were informed not to work on it. The pile will be rescanned with the 4-gas meter before any further work resumes. Work will only be allowed if safe conditions are re-established.**

**Remarks: A water line leading into the temporary clubhouse building was cracked during trenching for new clubhouse concrete perimeter. Water was determined to be clean municipal water which was pumped onto a grassy area next to the temporary clubhouse on-site. The leak has been fixed.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
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**View of Pile Driving progress and concrete perimeter setup.**




**Water pipe leakage going into temporary clubhouse.**

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**Pile P-155 detected for methane and labeled with CAUTION. No welding was done, the pile will be rescanned following day.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Sunny and slightly cloudy, Rainy later in day** **Humidity (High) Med Low**

**Date: August 15, 2017 Time: 0700 – 16:45** **Temp: 70 - 80 °F**

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation**

**Site Work Progress:**

**Two piles were driven to their completion depths of approximately 75 feet, ten piles were cut to grade level, and 2 piles were driven halfway to the completion depth of approximately 37'. Before welding/cutting, the piles were monitored at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. Welding is not permitted when combustible gases are present. As an added measure of safety, any space between the pile and the surrounding soils was filled and foot-tamped to eliminate any open pathways. In addition—as an engineering control, the fan was used to ventilate the immediate area and to dissipate any potential vapors. A fire extinguisher was also present. The meter alarms are set to trigger if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are measured above OSHA exposure limits. At two pile locations, the meter was triggered for LEL methane at pile P-155 (51%) and P-154 (13%). The space between the piles were filled with surrounding co-mingled soil and the industrial fan was used to ventilate the work zone. No LEL (0%) was detected after filling and ventilation. A PID MiniRAE 2000 is being used as backup to the 4-gas meter.**

**Remarks: The JUNTAN pile driver developed minor hydraulic leaks which led to a stoppage of work until the problem was fixed. Leaking hydraulic fluid was captured in a 5-gallon bucket and stored on-site. The hydraulic leak was quickly fixed, however rain later in the day prevented welding from resuming.**

**The asphalt and construction debris stockpiles were loaded on to a disposal truck and transported off-site to a disposal facility. No leftover debris was observed on the former stockpile soil location.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**

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**Pile P-155 covered with surrounding co-mingled soil (0% LEL at inlet).**




**Maintenance setup of JUNTAN pile driver due to minor hydraulic leak.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sunny and slightly cloudy, Rainy later in day** **Humidity**

**Date: August 16, 2017 Time: 0700 – 17:00** High (Med) Low

**Temp: 70 - 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation**

**Site Work Progress:**

**11 piles were driven to their completion depths of approximately 75 feet and 2 piles were driven to halfway depth of approximately 37'. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. Although no gas detections were recorded, an industrial fan was used to ventilate the work zone. A fire extinguisher was also present near pile driving and welding activities. The meter alarms are set to trigger if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are measured above OSHA exposure limits. The meter was not triggered for any gases during the course of the work day. A PID MiniRAE 2000 is being used as backup to the 4-gas meter.**

**Remarks:**

**Boulders roughly 3-4' in diameter were encountered at pile P-95. An excavator was used to remove the boulders which were approximately four feet below grade. No municipal solid waste was encountered; trace amounts of construction debris was observed in the shaping soil. Debris is being stockpiled for proper disposal.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Pile driving environmental monitoring setup.**

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**Large boulders from P-95 pile, trace construction debris mixed.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny and slightly cloudy** **Humidity**

**Date: August 16, 2017 Time: 0700 – 17:00** High (Med) Low

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation, soil and erosion inspection**

**Site Work Progress:**

**10 piles were driven to their completion depths of approximately 70 feet and 2 piles were driven to halfway completion depth of roughly 37'. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. A piece of construction debris was placed on top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activities and a fan was turned on, aimed at the active piling during welding. The meter alarms are triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits; the meter was triggered for pile P-80 for methane LEL at 99%. The pile was at it`s completion depth of 70 feet when the gas was detected. An odor was present at the pile and surrounding co-mingled soil was filled into the inlet. The inlet was then rescanned reading 0% for methane LEL. Later in the day the pile was rescanned showing 5% LEL (below the alarm trigger) and was labeled to have the fan turned on prior to cutting. The pile was not cut today. A PID MiniRAE 2000 was on site as backup if the 4-gas meter wasn`t working properly.**

**Remarks: Boulders roughly 3-4' in diameter were hit on pile P-80. An excavator was brought in and the boulders were dug out to roughly 4' below ground surface. No municipal solid waste was encountered; trace amounts of construction debris was observed in the shaping soil.**

**The area where leakage was seen on August 15 from the JUNTAN pile driver was inspected. Some visual staining was present (roughly 5 gallons of soil). JCS agreed to have the soil placed into buckets and set aside until later disposed of.**

**JCS was notified to hydro seed the on-site co-mingled soil stockpile. Currently the Triple-G is scheduling the hydro seeder to arrive on-site as soon as possible.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
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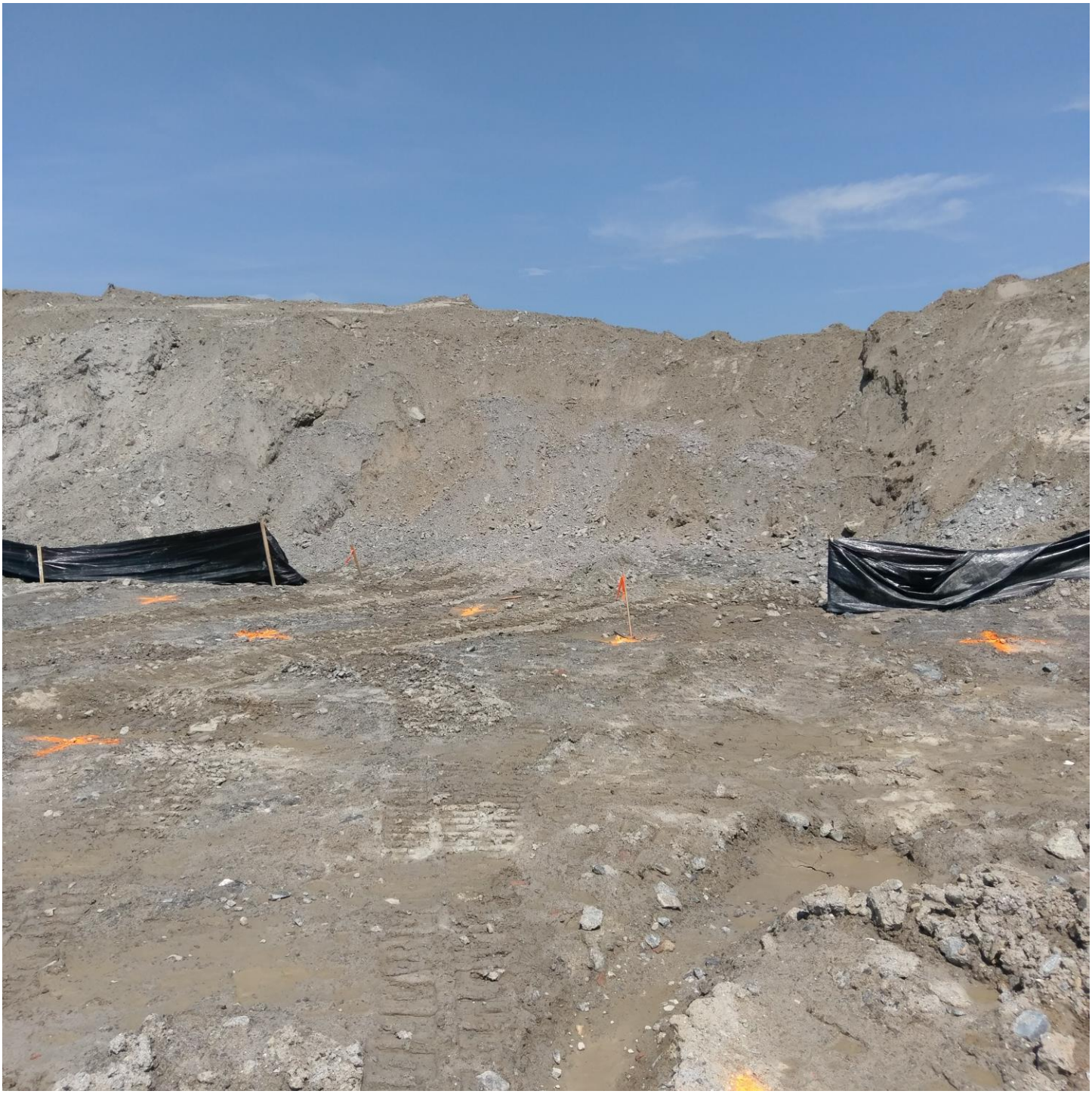

**Co-mingled stockpile soil moved for pile driving (silt fence temporary moved, stockpile will be seeded).**

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**Minor soil staining from August 15 pile driving leakage.**

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**Boulders from P-80 pile, odor and methane reading after completion depth (~70').**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather:** Cloudy with Heavy Rain **Wind:** **Humidity**

**Date:** 8/18/17 **Time: 7:00** (High) Med Low

**Temp:** **82** °F

**Name of Project: Trump Golf Links-Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002624A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for the proposed new Clubhouse**

**Activities Included: Pile driving and welding of steel beams**

**Site Work Progress:**

**8 piles were driven to their completion depths of approximately 75 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas MiniRAE meter. The 4-gas MiniRAE meter was mounted to a PVC pipe and placed next to the pile during welding and pile driving. A protective cover was placed over top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activites, and a fan was turned on, and aimed at the active piling. The meter alarms are triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen, and methane (as Lower Explosive Limit) are above OSHA exposure limits. There were no alarms during today's efforts, and no readings were above ambient air levels.**

**Remarks:**

**Efforts for the day began at 0700, and site activities were concluded at 1500.**

**Site Photographs:** (Yes) No

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**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date: 08/18/2017**



**View #1 of site showing piles driven on 08/18/2017**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny** **Wind:** **Humidity**

**Date: 8/21/17** **Time: 7:00** **Temp: 88** °F High (Med) Low

**Name of Project: Trump Golf Links-Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002624A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for the proposed new Clubhouse**

**Activities Included: Pile driving and welding of steel beams**

**Site Work Progress:**

**12 ½ piles were driven to their completion depths of approximately 75 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas MiniRAE meter. The 4-gas MiniRAE meter was mounted to a PVC pipe and placed next to the pile during welding and pile driving. A protective cover was placed over top of the meter to prevent damage from welding activities. A fire extinguisher was present near pile driving and welding activites, and a fan was turned on, and aimed at the active piling. The meter alarms are triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen, and methane (as Lower Explosive Limit) are above OSHA exposure limits. There were no alarms during today's efforts, and no readings were above ambient air levels.**

**Remarks:**

**Efforts for the day began at 0700, and site activities were concluded at 1700.**

**Site Photographs:** (Yes) No

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**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date: 08/21/2017**



**View #1 of site showing piles driven on 08/18/2017**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Sunny and Cloudy** **Wind: Medium** **Humidity**

**Date: August 22, 2017 Time: 0700 – 15:30** **Temp: 70 - 95** °F (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation, Soil and erosion inspection**

**Site Work Progress:**

**9 piles were driven to their completion depths of approximately 70 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. No alarm triggers were activated at any time and all safety measures (ventilation fan, fire extinguisher etc) were in-place during the operations.**

**Remarks: Piles P-110 and P-105 had methane's level detected of 5% and 6% (below alarm limit). The inlets of the piles were covered in surrounding co-mingled soil for safety. No readings were detected after piles were covered.**

**Areas were trenched roughly 10 ft. deeper for certain piles per specs for concrete slabs. No municipal solid waste observed.**

**Currently the co-mingled pile is now scheduled to be tarped and anchored with sandbags rather than hydro seeding. Tarping is expected to take place on August 23, 2017. Storm water inlet drains were covered with sediment erosion catch basins all around the parking lot construction area.**

**Soils previously stained with oil from the pile driver leakage was disposed of properly.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Piles to completion depth (~70').**

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**Storm water drain inlet cover.**

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**Trench for concrete base slab (No municipal solid waste observed).**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sunny and Cloudy** **Wind: Medium** **Humidity**

**Date: August 23, 2017 Time: 0700 – 16:30** **Temp: 70 - 85** °F High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation, Soil and erosion inspection**

**Site Work Progress:**

**10 piles were driven to their completion depths of approximately 70 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The meter was not triggered for any alarms over OSHA standards.**

**Remarks: Some of the tarping from the parking lot stockpiles was slightly displaced from the high winds/rain in yesterday's storm event. There was no visual evidence that any of the soils had been disturbed or had been blown or washed away. The JCS foreman was informed that the tarping needed to be re-secured. The tarps were replaced over the stockpiles and additional haybales were staged on the downslope side of the stockpile.**

**Pile P-73 had methane's level detected 3% (below alarm limit). Shortly after measuring P-73, a reading was not observed (0%). No action was needed.**

**The co-mingled pile was tarped over and anchored with sandbags rather than hydro seeded.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
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**Parking lot shaping and cover layer stockpiles (Tarping unanchored after storm event, stockpile recovered in the morning).**

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**Co-mingled on-site soil stockpile covered with tarping and anchored with sandbags.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny and Cloudy** **Wind: Medium** **Humidity**

**Date: August 24, 2017 Time: 0700 – 17:00** **Temp: 70 - 85** °F High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation, Soil and erosion inspection**

**Site Work Progress:**

**11 piles were driven to their completion depths of approximately 70 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The meter was not triggered for any alarms over OSHA standards. A PID MiniRAE 2000 was on site as backup.**

**Remarks: The silt fence on the construction side of the co-mingled stockpile was knocked over during pile driving set up. The foreman was notified and a new silt fence will be put in.**

**An obstruction (large boulders) was hit on P-59. Excavator called in to move boulders and continue driving.**

**No methane readings were detected throughout the day.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Silt fencing knocked over on construction side. New fencing to be put up tomorrow.**

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**Boulders hit on P-59 (roughly 4-5' dia.). No methane readings.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Sunny** **Wind:** **Humidity**

**Date: 8/25/17** **Time: 7:00** **Temp: 85** °F High Med (Low)

**Name of Project: Trump Golf Links-Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002624A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for the proposed new Clubhouse**

**Activities Included: Pile driving and welding of steel beams**

**Site Work Progress:**

**9 piles were driven to their completion depths of approximately 75 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas MiniRAE meter.. The meter alarms are triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen, and methane (as Lower Explosive Limit) are above OSHA exposure limits. There were no alarms during today's efforts, and no readings were above ambient air levels.**

**Remarks:**

**Efforts for the day began at 0700, and site activities were concluded at 1500.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

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**Observed By: Eric Sergent**

**Reviewed By:**
**Date: 08/25/2017**



**View #1 of site showing piles driven on 08/25/2017**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M** T W TH F SA SU **Weather: Sunny** **Wind:** **Humidity** High Med Low

**Date: 8/28/17** **Time: 7:00** **Temp: 80** °F

**Name of Project: Trump Golf Links-Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002624A**

**Site Contractors: JCS Construction, Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for the proposed new Clubhouse**

**Activities Included: Pile driving and welding of steel beams**

**Site Work Progress:**

**12 piles were driven to their completion depths of approximately 75 feet, and 2 pile bottoms were driven to a depth of approximately 40 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas MiniRAE meter. The meter alarms are triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen, and methane (as Lower Explosive Limit) are above OSHA exposure limits. There were no alarms during today's efforts, and no readings were above ambient air levels.**

**Remarks:**

**Efforts for the day began at 0700, and site activities were concluded at 1530.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

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**YES NO**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date: 08/28/2017**




**View #1 of site showing piles driven on 08/28/2017**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Cloudy and Rainy** **Wind: Medium** **Humidity**

**Date: August 29, 2017 Time: 0700 – 1445** **Temp: 70 - 80** °F (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation**

**Site Work Progress:**

**2 piles were driven to their completion depths of approximately 75 feet, 6 piles were driven halfway to the completion depth of roughly 37'. Two (2) piles were driven to roughly 82'. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The meter was not triggered for any alarms over OSHA standards. A PID MiniRAE 2000 is used as a backup if the 4-gas meter.**

**Remarks: The silt fence on the construction side of the co-mingled stockpile was taken down to make room for pile driving towards the northern bounds of the pile area. The silt fence will be re-established immediately following the pile-driving; despite rainy conditions, no sediment was observed to migrate or slump.**

**Rain towards the end of the day prevented welding, bottoms (40' depth piles) were driven instead.**

**No methane readings were detected throughout the day.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Boulders hit on P-59 (roughly 4-5' dia.). No methane readings. Silt fence to be re-established.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sunny/cloudy** **Wind: Medium** **Humidity**

**Date: August 30, 2017 Time: 0700 – 1530** High (Med) Low

**Temp: 70 - 78** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation**

**Site Work Progress:**

**9 piles were driven to their completion depths of approximately 75 feet and 1 pile was driven halfway to the completion depth of approximately 37'. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The meter was triggered for one (1) pile over OSHA Lower Explosive Limit (LEL) standards of 10%. A PID MiniRAE2000 is used as a backup.**

**Remarks: Pile P-33 was the only pile to trigger an alarm for methane (at 23%). The alarm sounded at the pile completion depth of 70'. The gap between the pile and the surrounding soil was filled with co-mingled soil material to eliminate a gas migration pathway. No readings (0%) were detected after the space was closed. The fan was moved closer to the pile to increase ventilation in the immediate vicinity of the work zone.**

**Pile P-47 hit refusal at 50 feet below grade. A sister pile (P-47S) was installed immediately to the southeast. P-47S also hit refusal at 50 feet below grade.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Sister pile P-47S (Right pile) was installed one foot southeast of P-47.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny/cloudy** **Wind: Medium** **Humidity**

**Date: August 31, 2017 Time: 0700 – 1530** **Temp: 70 - 80 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation**

**Site Work Progress:**

**7 piles were driven to their completion depths of approximately 75 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The meter was triggered for one (1) pile over OSHA Lower Explosive Limit (LEL) standards of 10%. Mitigation measures were taken to eliminate the vapor migration pathway. A PID MiniRAE2000 was used as a backup to the 4-gas meter.**

**Remarks: Pile P-38 was the only pile to trigger the alarm limits for methane at completion depth (~70'). A reading of 17% of the LEL was measured. The void space between the pile and surrounding soil was filled with co-mingled soil. No readings (0%) were detected after the gap was closed. The fan was re-oriented to maximize ventilation.**

**Additional pile driving beyond the 80 foot level--remains pending at the piles that will support the future access ramp to the clubhouse located on the north side of the building. The engineer of record will determine if further driving is necessary. When that decision is made, appropriate measures will be enacted.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Pile P-38 (Right pile) covered with soil at the inlet.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Sunny/cloudy** **Wind: Medium** **Humidity**

**Date: September 1, 2017** **Time: 0700 – 1700** High Med (Low)

**Temp: 60 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation**

**Site Work Progress:**

**8 piles were driven to their completion depths of approximately 75 feet. Two (2) piles were driven to 82'. Three (3) piles were driven to 40'. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The meter was triggered for one (1) pile over OSHA Lower Explosive Limit (LEL) standards for methane. Mitigation measures were taken before welding was allowed to continue. A PID MiniRAE2000 is used as a backup to the 4-gas meter.**

**Remarks:**

**Piles driven past 80' were located in the northern end of the clubhouse building for the proposed ramp for heavy vehicles. Cement that was poured yesterday August 31, 2017 has cured. Some soil from the co-mingled soil stockpile on-site was used to backfill the outer bounds of the cement.**

**Pile P-16 was found to have high levels of methane (91%) after being driven 40'. The industrial fan was turned on and pointed towards the pile. Soil cuttings were placed and tamped around the pile. No methane detections were recorded and work was allowed to proceed. The 4-gas meter was placed adjacent to the pile. The alarm was not triggered during welding.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Co-mingled soil from the construction area stockpile. Soil will be used as backfill around the southeastern bounds of the clubhouse.**

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**Pile driving at the proposed ramp for heavy vehicles at the clubhouse. Pile P-16 is shown loaded onto the pile driver.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F (SA) SU** **Weather: Sunny, partially cloudy** **Wind: Medium** **Humidity**

**Date: September 2, 2017** **Time: 0700 – 1700** High Med (Low)

**Temp: 60 - 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation**

**Site Work Progress:**

**8 piles were driven to their completion depths of approximately 75 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The meter was not triggered for any alarms over OSHA standards.**

**Remarks:**

**Due to deflection, Pile P-16 was abandoned. A new sister pile is proposed to be placed near the original P-16 location and driven to completion once approved. Once this pile is completed, the only pile remaining to driven will be P-25.**

**No detections were found above ambient levels throughout the day.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Pile driving progress on-site. Pile P-16 outlined in red.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Sunny** **Wind: Medium** **Humidity**

**Date: September 5, 2017** **Time: 0700 – 1430** High Med (Low)

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, Bryans Quality Plus Pile Driving**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Pile driving and welding of steel beams, concrete base preparation**

**Site Work Progress:**

**3 piles were driven to their completion depths of approximately 70 feet. Before welding/cutting, the piles were checked at the inlet (ground surface elevation) with a 4-gas Q RAE Meter III. The meter was not triggered for any alarms over OSHA standards.**

**Remarks:**

**Pile P-16 was abandoned due to deflection. Two sister piles located approximately 3' north and west of the original P-16 location were driven to completion depth. No gas detections were found above ambient levels throughout the day. Pile driving work is now complete.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**

**Date:**

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**Two sister piles located next to P-16.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny/Cloudy** **Wind: Low** **Humidity**

**Date: September 11, 2017** **Time: 0700 – 1500** High Med (Low)

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Co-mingled on-site soil backfill, concrete base preparation**

**Site Work Progress:**

**Plywood forms and reinforcing bars were placed on the northern side of the new clubhouse. The forms are to be filled with concrete. Co-mingled soil was backfilled and compacted between the plywood forms and perimeter of the forms. Approximately 150 $yd^3$ of soil was backfilled from the co-mingled on-site pile. The parking lot stockpiles remain covered and untouched, however soils from the stockpile may be used on the clubhouse construction site if additional material is required.**

**Remarks:**

**A new 4-gas meter was ordered from Pine Environmental to replace the original meter whose sensors were beginning to wear. The new QRAE II delivered on-site had sensors that worked properly except for LEL. A new 4-gas meter will be delivered tomorrow.**

**Soil was periodically scanned throughout the day with a PID. The perimeter of the construction site was also scanned with PID throughout the day. No detections were found above ambient levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**

**Date:**

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**Co-mingled soil stockpile backfill location.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Sunny and Cloudy** **Wind: Low** **Humidity**

**Date: September 12, 2017** **Time: 0700 – 1500** High Med (Low)

**Temp: 70 - 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Co-mingled on-site soil backfill, concrete base preparation**

**Site Work Progress:**

**Plywood forms and reinforcing bars continue to be placed on the northern side of the clubhouse. Forms will be filled with concrete. Co-mingled soil was backfilled and compacted between the plywood forms and perimeter of the forms. Approximately 128 $yd^3$ of soil was backfilled from the co-mingled on-site pile. The parking lot stockpiles remains covered.**

**Remarks:**

**A new 4-gas meter was delivered to the site. The sensors on the new VRAE all worked properly.**

**Soil was periodically scanned throughout the day with the new 4 gas meter and the PID. The perimeter of the construction site was also scanned throughout the day. No detections were found above ambient levels throughout the day from either the PID nor 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Soil moved from co-mingled location to the side of building.**

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**View of the Co-mingled stockpile at end of day.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sunny and Cloudy** **Wind: Low** **Humidity**

**Date: September 13, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G, American Pumping Inc.**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Concrete base fill, environmental air monitoring**

**Site Work Progress:**

**Concrete was poured into wooden forms with reinforcing bars. Air was continuously monitored during all concrete pouring and soil movement activities. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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**Concrete subbase after pouring.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 14, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Footing concrete form removal, environmental air monitoring**

**Site Work Progress:**

**The contractor spent the day removing the concrete forms for the footings. Air was continuously monitored during all soil movement activities. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Sunny and Cloudy** **Wind: Low** **Humidity**

**Date: September 15, 2017** **Time: 0700 – 1430** **Temp: 70 - 85** °F (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Concrete form removal, Co-mingled soil backfill, environmental air monitoring**

**Site Work Progress:**

**Wooden forms were removed from the concrete base and soil from the co-mingled stockpile area was used to backfill. Air was continuously monitored during all soil disturbance and movement activities. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day. Roughly 130 $yd^3$ of co-mingled soil was backfilled.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Co-mingled soil backfill.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 18, 2017** **Time: 0700 – 1530** High (Med) Low

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Footing concrete form removal, environmental air monitoring**

**Site Work Progress:**

**The contractor spent the day backfilling the areas between footings. Air was continuously monitored during all soil movement. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID nor 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
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**Picture 1: Area between footings being backfilled and compacted using a Jumping Jack.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 19, 2017** **Time: 0700 – 1530** High (Med) Low

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Footing concrete form removal, environmental air monitoring**

**Site Work Progress:**

**The contractor spent the day backfilling the areas between footings. Air was continuously monitored during all soil movement. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID nor 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date:**

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**Picture 1: Area between footings being backfilled and compacted using a Jumping Jack.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sunny and Cloudy** **Wind: breezy** **Humidity**

**Date: September 20, 2017** **Time: 0645 – 1530** High (Med) Low

**Temp: 67 - 81** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Co-mingled soil backfill and compact, environmental air monitoring**

**Site Work Progress:**

**Co-mingled soil from the construction zone stockpile was placed around the concrete forms to raise the grade level. Compaction was performed via backhoe bucket, 'jumping-jack' compactors and with sled compactors.**

**Air monitoring was performed around the entire work zone multiple times during the course of the day.**

**Remarks:**

**No air monitoring detections were identified throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Co-mingled soils being compacted with 'jumping jack' and sled compaction equipment.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 21, 2017** **Time: 0700 – 1530** High (Med) Low

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Footing concrete form removal, environmental air monitoring**

**Site Work Progress:**

**The contractor spent the day backfilling the areas between footings. Air was continuously monitored during all soil movement. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID nor 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
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**Picture 1: Area between footings being backfilled and compacted.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 22, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 70 - 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Backfill around footings, set forms for foundation walls, environmental air monitoring**

**Site Work Progress:**

**The contractor spent the day backfilling the areas between footings, and set concrete forms for foundation walls. Air was monitored during all soil movement activities. A 4-gas meter was placed near the temporary clubhouse and monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID nor 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 25, 2017** **Time: 0700 – 1530** High (Med) Low

**Temp: 70 -88** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Footing concrete form removal, soil compaction, environmental air monitoring**

**Site Work Progress:**

**There was minimum backfilling taking place in 2 small areas between the footings, contractor spent most of the day setting concrete forms for foundation walls on top of footings.**

**Inspected an excavation on the east side of the pond (behind maintenance building)/. The excavation had been opened by Trump Maintenance personnel to install an isolation a valve in the irrigation system. Shaping and cover material had been properly segregated into two piles- above lying sand and the below lying stone material.**

**Air was continuously monitored during all soil movement. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
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**Picture 1: Area between footings being backfilled and compacted using a Jumping Jack**

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**Picture 1: Area between footings being backfilled and later compacted using a Jumping Jack.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 26, 2017** **Time: 0700 – 1530** High (Med) Low

**Temp: 72-88** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Footing concrete form removal, environmental air monitoring**

**Site Work Progress:**

**There was no backfilling taking place during the day, excess soil from around the perimeter of the building footprint was compiled into one area in the north corner of the site (east of job trailer), contractor spent most of the day setting concrete forms for foundation walls on top of footings. Air was continuously monitored during all soil movement activities. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID nor 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**

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**Picture 1: Excess soil pile.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 27, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 68 - 88** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, Trimble Surveying, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Soil Stockpile Staging Area in Parking Lot**

**Activities included: Cutting & bending of re-enforcing bar, survey, movement of soils from parking lot staging area to the construction site, environmental air monitoring.**

**The excavation located behind the 7th green-which had been opened to install an isolation valve for the irrigation system-was properly backfilled. (No valve was installed as the location was determined to be infeasible).**

**Offsite: soil samples were collected at New York Recycling located at 475 Exterior Road Bronx, NY. Sample results will help determine whether the material is suitable of importation to the Ferry Point construction site.**

**Site Work Progress:**

**The contractor spent the day preparing re-enforcement bars in advance of an upcoming concrete pour.**

**Approximately 110 cubic yards of soil was taken from the soil stockpile in the parking lot and moved to three locations on the construction site. The material will be utilized to raise grade level on the construction site at some point in the near future.**

**Air monitoring was performed during the soil movement activities.**

**Remarks:**

**Air monitoring identified no detections above background levels throughout the day from either the PID nor 4-gas meter. Soil samples collected at New York Recycling were delivered to Hampton Clarke/Veritech labs.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: Moving Soil from Parking Lot Stockpile to the Construction site**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 27, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 68 - 88** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Offsite Work Area: Irrigation pipeline behind the 7th Green**

**Trump Links Maintenance personnel had opened an excavation behind the 7th Green during the week of September 20. The purpose of the excavation was to install a new isolation valve in the irrigation line so that sections of the golf course could be isolated in the event of and irrigation line leak. Total size of the excavation was approximately 8 feet long, 8 feet wide and 6 feet deep. Based on discussions with a contractor, no isolation valve was installed. The location was deemed to be infeasible. The excavated soils were segregated; cover material on the north side of the excavation; shaping material on the south side. No demarcation barrier or waste was observed. Excavation was covered with plywood sheets supported by 2inch x 10 inch planks.**

**Site Work Progress:**

**After determining that the location was not suitable for the installation of an isolation valve, Trump Maintenance personnel, backfilled the excavation. Material that had been segregated was placed back into the hole in the same stratigraphic sequence. Materials were compacted in lifts of approximately 1 foot each using a small backhoe. All excavated material was successfully replaced into the hole—leaving no excess material for disposal. The vegetative layer at the surface was restored to the extent practical. Maintenance personnel are expected to seed the area.**

**Remarks:**

**Air monitoring data collected from the open excavation and during the backfilling activities, recorded no detections above background.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: Backfilling of small excavation area behind the 7th Green.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 27, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 68 - 88** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Offsite Work Area: Offsite Shaping Layer Material Sampling and Investigation: New York Recycling, 475 Exterior Street, Bronx, NY**

**It is noted that this site was previously reviewed and approved (desktop level) by Woodard Curran and NYSDEC during the pre-closure phase of the project.**

**New York Recycling NYSDEC Permit # 03W87**

**Site Work Progress:**

**Soil sampling was conducted at New York Recycling located at 475 Exterior Street. Facility Manager Roger Freitas sectioned-off an approximately 2,500 cubic yard area from which the composite sample was collected. It is noted that the sample for VOC's was a discrete grab sample. Soils were screened with a PID with no indications of contamination. The soil pile was also inspected for signs of asphalt, slag, brick, concrete and other debris. No unauthorized debris was observed in the soil pile. A shovel was used to dig into the pile approximately 1 to 2 feet. Thereafter a dedicated trowel was used to collect representative point samples from approximately 12 locations. Samples were composited in a stainless steel bowl and troweled into the laboratory-supplied sample jars. Samples were placed on ice under chain of custody control.**

**Remarks:**

**Samples were delivered to Hampton Clarke Labs in Fairfield, NJ. Analyses to include all the parameters noted in "Table 1 Chemical Permit Limits Ferry Point" as provided by Woodard Curran.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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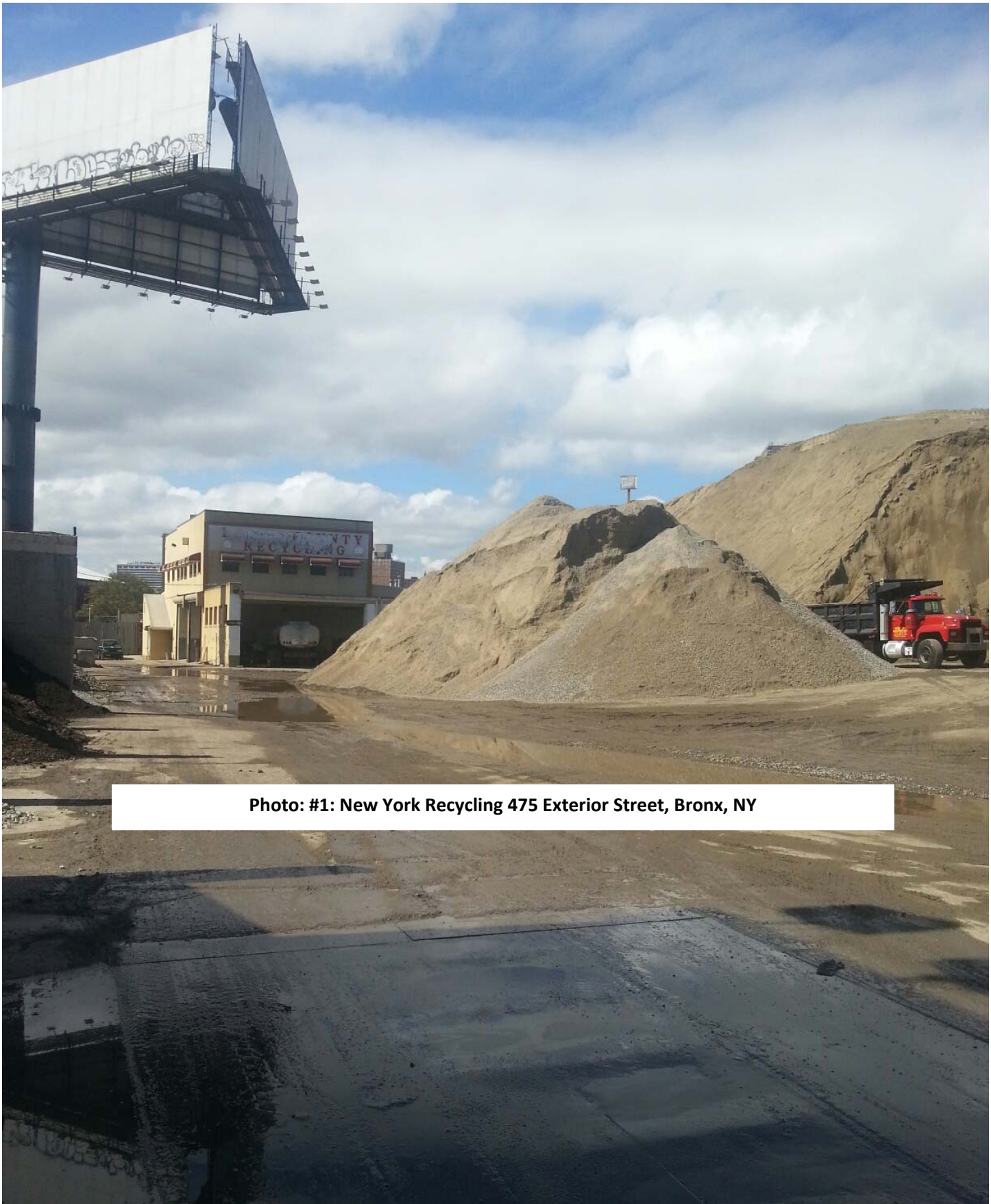

**Photo: #1: New York Recycling 475 Exterior Street, Bronx, NY**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: September 27, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 68 - 88** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Offsite Work Area: Offsite Shaping Layer Material Sampling and Investigation: New York Recycling, 475 Exterior Street, Bronx, NY**

**It is noted that this site was previously reviewed and approved (desktop level) by Woodard Curran and NYSDEC during the pre-closure phase of the project.**

**New York Recycling NYSDEC Permit # 03W87**

**Site Work Progress:**

**Soil sampling was conducted at New York Recycling located at 475 Exterior Street. Facility Manager Roger Freitas sectioned-off an approximately 2,500 cubic yard area from which the composite sample was collected. It is noted that the sample for VOC's was a discrete grab sample. Soils were screened with a PID with no indications of contamination. The soil pile was also inspected for signs of asphalt, slag, brick, concrete and other debris. No unauthorized debris was observed in the soil pile. A shovel was used to dig into the pile approximately 1 to 2 feet. Thereafter a dedicated trowel was used to collect representative point samples from approximately 12 locations. Samples were composited in a stainless steel bowl and troweled into the laboratory-supplied sample jars. Samples were placed on ice under chain of custody control.**

**Remarks:**

**Samples were delivered to Hampton Clarke Labs in Fairfield, NJ. Analyses to include all the parameters noted in "Table 1 Chemical Permit Limits Ferry Point" as provided by Woodard Curran.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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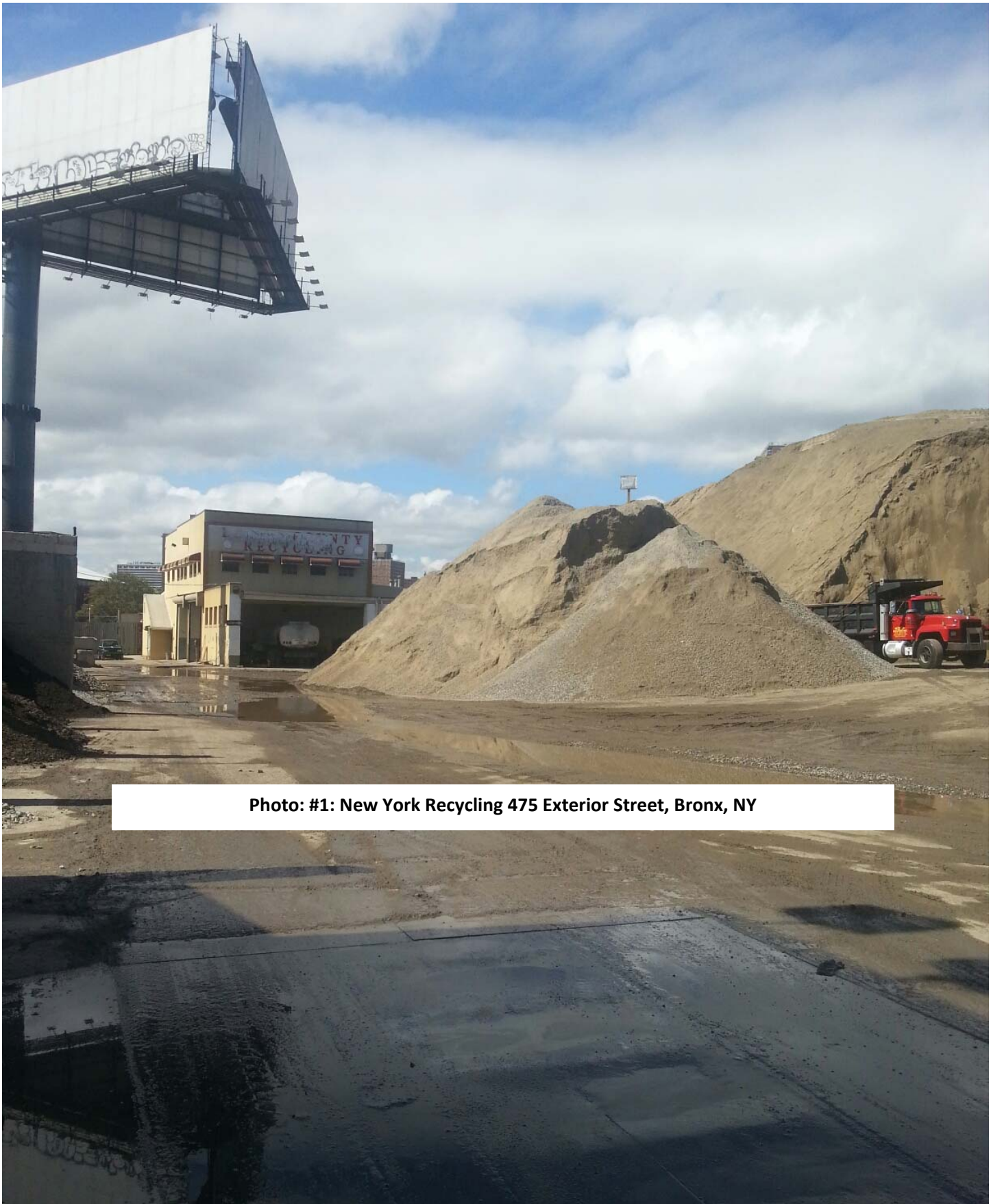

**Photo: #1: New York Recycling 475 Exterior Street, Bronx, NY**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Sunny** **Wind: Low** **Humidity**

**Date: September 29, 2017** **Time: 0700 – 1500** High Med (Low)

**Temp: 60 - 75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Soil Stockpile Staging Area in Parking Lot**

**Activities included: Movement of soils from on-site co-mingled stockpile in parking lot to the construction site, backfill, compaction of co-mingled soil backfill, environmental air monitoring.**

**Site Work Progress:**

**The contractor spent the day preparing re-enforcement bars in advance of an upcoming concrete pour.**

**Approximately 100 cubic yards of soil was taken from the soil stockpile in the parking lot and moved to three locations on the construction site. The material will be utilized to raise grade level on the construction site at some point in the near future.**

**Air monitoring was performed during the soil movement activities.**

**Remarks:**

**Air monitoring identified no detections above background levels throughout the day from either the PID nor 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**

**Date:**

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**Photo #1: Remaining co-mingled stockpile on- site.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny** **Wind: Low** **Humidity**

**Date: October 2, 2017** **Time: 0700 – 1530** High (Med) Low

**Temp: 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Footing concrete form removal, environmental air monitoring**

**Site Work Progress:**

**Contractor spent the day removing concrete forms and backfilling between open areas between foundation walls after forms were removed. Air was continuously monitored during all soil movement. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date:**

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**Photo1: concrete from removal and compaction of material.**



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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Sunny** **Wind: Low** **Humidity**

**Date: October 3, 2017** **Time: 0700 – 1530** High Med (Low)

**Temp: 82** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Footing concrete form removal, environmental air monitoring**

**Site Work Progress:**

**Contractor spent the day removing concrete forms and backfilling between open areas between foundation walls after forms were removed.. Air was continuously monitored during all soil movement. A 4-gas meter was placed near the temporary clubhouse and continuously monitored. The perimeter of the construction site was also scanned with a PID throughout the day.**

**Remarks:**

**No detections were found above ambient levels throughout the day from either the PID nor 4-gas meter.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sunny** **Wind: Low** **Humidity**

**Date: October 4, 2017 Time: 0700 – 1530** High Med (Low)

**Temp: 60 - 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Soil Stockpile Staging Area in Parking Lot**

**Activities included: Backfill of soils from co-mingled stockpile remaining on-site. Compaction of co-mingled soil backfill and environmental air monitoring.**

**Site Work Progress:**

**Approximately 50 cubic yards of soil was taken from the co-mingled soil stockpile on-site and moved towards the southern end of the construction site. The material will be utilized to raise grade level on the construction site at some point in the future. The soil was sprinkled with water before compaction to improve dust control and increase compaction.**

**Air monitoring was performed during the soil movement activities.**

**Remarks:**

**Air monitoring identified no detections above background levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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**Photo #1: Co-mingled soil after compaction.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny/Cloudy** **Wind: Low** **Humidity**

**Date: October 5, 2017 Time: 0700 – 1530** High Med (Low)

**Temp: 60 - 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Soil Stockpile Staging Area in Parking Lot**

**Activities included: Movement of soils from on-site co-mingled stockpile and shaping layer soil. Compaction of co-mingled soil backfill and environmental air monitoring.**

**Site Work Progress:**

**Soil backfilled between the concrete sub-structure was screened to remove any large rocks/boulders and compacted. The soil was sprinkled with water before compaction to improve dust control and increase compaction.**

**Air monitoring was performed during the soil movement activities with a 4-gas meter and PID.**

**Remarks:**

**Air monitoring identified no detections above background levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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**Photo #1: Co-mingled soil after compaction.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Sunny/Cloudy** **Wind: Low** **Humidity**

**Date: October 6, 2017 Time: 0700 – 1530** **Temp: 60 - 85** °F (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Soil Stockpile Staging Area in Parking Lot**

**Activities included: Movement of soils from on-site co-mingled stockpile and shaping layer soil. Compaction of co-mingled soil backfill and environmental air monitoring.**

**Site Work Progress:**

**Soil backfilled between the concrete sub-structure was screened to remove any large rocks/boulders and compacted. The soil was sprinkled with water before compaction to improve dust control and increase compaction. Soil was compacted in lifts approximately 8" of soil per a lift to meet specifications.**

**Air monitoring was performed during the soil movement activities with a 4-gas meter and PID. The 4-gas meter was stationed near the intersection between the construction site and temporary clubhouse. The perimeter of the site was monitored with a PID throughout the day.**

**Remarks:**

**Air monitoring identified no detections above background levels throughout the day from either the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
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**Photo 1: Compacted co-mingled soil. Area continuously scanned with PID during compaction.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Cloudy** **Wind: Light** **Humidity**

**Date: October 11, 2017** **Time: 0900 – 1230** High Med (Low)

**Temp: 68 - 76** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Importation of crushed stone to raise grade elevations under the footprint of the new club house. Installation of sub-grade plumbing and electrical conduits.**

**Site Work Progress:**

**Crushed stone was imported to the site and stockpiled. This material will be used later in the week to raise the grade elevations under the footprint of the new club house building.**

**Air monitoring was performed along the perimeter of the site with the PID and the 4-gas meter.**

**Remarks:**

**Air monitoring was conducted throughout the day. No detections above background were recorded on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: importation of crushed stone to the club house construction area.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny/Cloudy** **Wind: Breezy** **Humidity**

**Date: October 12, 2017** **Time: 1400 – 1600** High Med (Low)

**Temp: 68-70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: spreading of crushed stone to raise grade under the footprint of the club house, continued installation of sub-grade plumbing and electrical conduits.**

**Site Work Progress:**

**Crushed stone was place inside the club house footprint and spread to raise elevations 1 foot as per specifications.**
**Air monitoring was performed around the perimeter of the construction area and at select locations of work activities.**

**Remarks:**

**Air monitoring was conducted throughout the day. No detections above background were recorded on the PID or the 4-gas**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo #1: Crushed stone being laid to raise base elevations 1 foot as per specifications.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Overcast Skies** **Wind:Windy** **Humidity**

**Date: October 13, 2017** **Time: 1300 – 1500** High Med (Low)

**Temp: 60-68** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: spreading of crushed stone to raise grade under the footprint of the club house, continued installation of sub-grade plumbing and electrical conduits.**

**Site Work Progress:**

**Crushed stone was place inside the club house footprint and spread to raise elevations 1 foot as per specifications.**
**Air monitoring was performed around the perimeter of the construction area and at select locations of work activities.**

**Remarks:**

**Air monitoring was conducted throughout the day. No detections above background were recorded on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo #1: Crushed stone stockpile. Stone was being laid to raise base elevations 1 foot as per specifications.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Clear Skies** **Wind:Windy** **Humidity**

**Date: October 19, 2017** **Time: 0900 – 1300** High Med (Low)

**Temp: 66 - 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: continued installation of sub-grade plumbing and electrical conduits; inspection of anchor bolts; weekly construction meeting.**

**Site Work Progress:**

**Sub-grade electrical and plumbing work contined. Air monitoring was performed around the perimeter of the construction area and at select locations including the 'honeycombs'.**

**Remarks:**

**Air monitoring was conducted. No detections above background were recorded on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo #1: Crushed stone stockpile to be used to raise sub-grade and later for SSDS installation.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: partly cloudy** **Wind: breezy** **Humidity**

**Date: October 25, 2017** **Time: 0800 – 1200** High Med (Low)

**Temp: 64 - 68** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: continued installation of sub-grade plumbing and electrical conduits; inspection and repair of anchor bolts; weekly construction meeting.**

**Site Work Progress:**

**Sub-grade electrical and plumbing work continued. Air monitoring was performed around the perimeter of the construction area and at select locations.**

**Remarks:**

**Air monitoring identified no detections above background on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: Crushed stone used to raise sub-grade in advance of SSDS installation.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: partly cloudy** **Wind: light and variable**
**Humidity**

**Date: November 1, 2017** **Time: 0800 – 1200** High Med (Low)
**Temp: 56 - 60** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: continued installation of sub-grade plumbing and electrical conduits; staging of crushed stone for use in SSDS; weekly construction meeting.**

**Site Work Progress:**

**Staging of Liquid Boot materials including spray-on solutions, fabric and protective layers. Material is being temporarily stored on pallets. It is expected that the materials will be used to create a vapor barrier during the week of November 6. Sub-grade electrical and plumbing work continued. Completion of re-inforcing bar installation in proposed outdoor patio area; Air monitoring was performed around the perimeter of the construction area and at select locations.**

**Remarks:**

**Air monitoring identified no detections above background on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo #1: Staging of Liquid Boot Materials for use in the SSDS .**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny** **Wind: Medium-Low** **Humidity**

**Date: November 2 , 2017** **Time: 0700 – 1500** **Temp: 50°F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, EAI Environmental**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Backfilling the stone sub base, and install sections of the SSDS pipping.**

**Site Work Progress:**

**EAI Environmental was onsite laying down the SSDS piping for the section with 3 vent pits. EAI installed all of the piping for that section and also prepared the 3 pits to the point that only the concrete cap needed to be set into place. (See photos below)**

**Tomorrow's planned activities is to start laying down the green plastic barrier to prep for applying the Liquid Boot compound within the building footprint**

**Remarks:**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent** **Reviewed By:**
**Date:**

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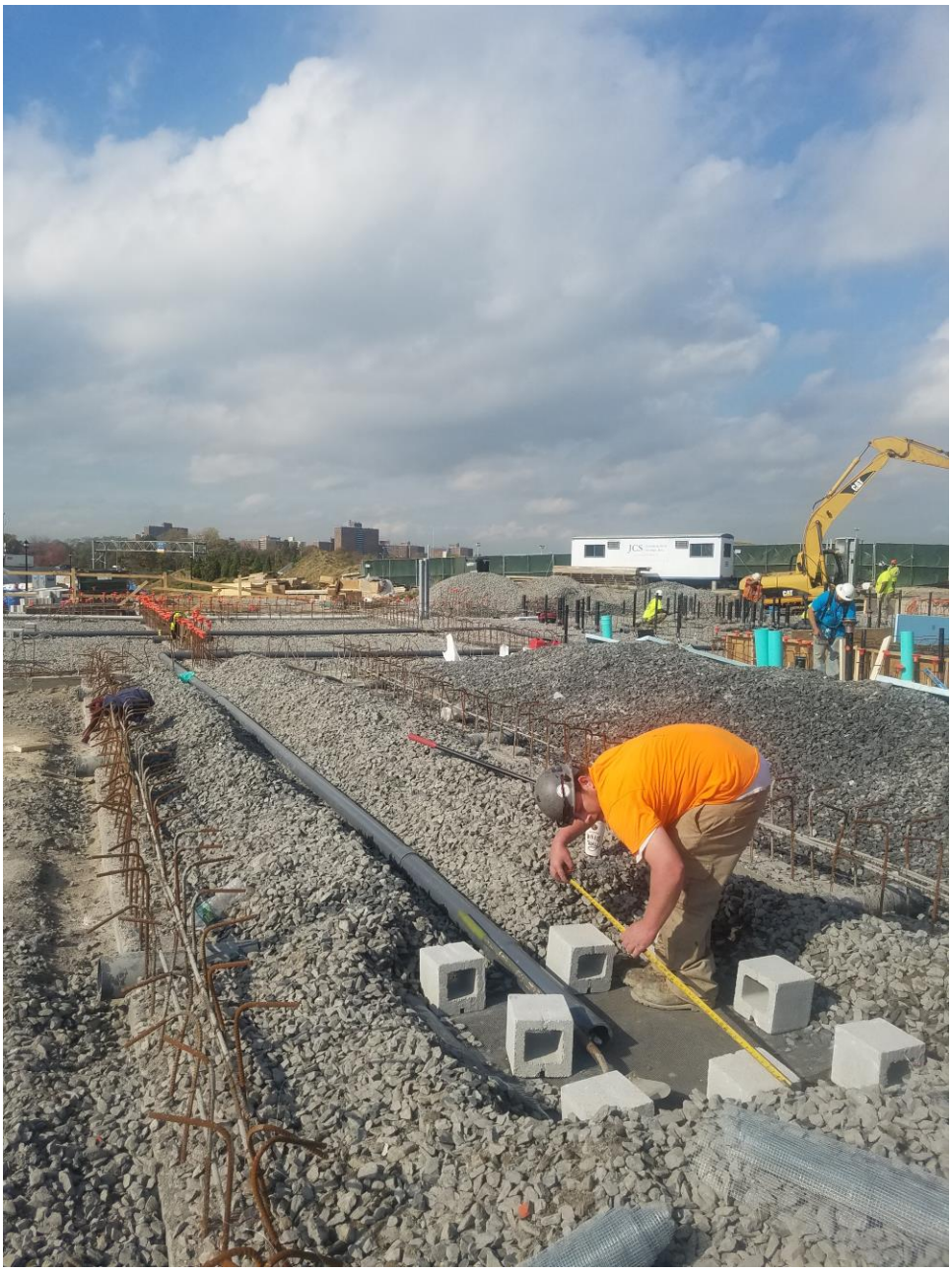

**Photo 1: EAI employee measuring the dimensions of the SSDS Air Pit**

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**Photo 2: Partially completed air pit for the SSDS system.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Sunny and Cloudy** **Wind: Light-midium** **Humidity**

**Date: November 3, 2017** **Time: 0700 – 1300** **Temp: 56 - 60** °F (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Continued installation of sub-grade plumbing and electrical conduits; SSDS installation of crushed stone, PVC piping, and concrete cage pits**

**Site Work Progress:**

**The second installation of the SSDS piping was advanced by EAI and inspected by Maser Consulting. The configuration consisted of header 4" dia. Schedule 80 PVC piping connecting to four (4) sub-slab depressurization pits and one (1) riser 4" dia. Schedule 80 PVC pipe.**

**Deviations to the original EAI site plan denoted as Drawing No. SD004 were made to account for as-built utilities. The pit locations did not change, however the PVC piping was altered slightly. Minor changes includeded PVC piping entering from a different pit side and removal of unnecessary elbows. All pits were constructed based on EAI's approved spec, which slightly differs from the SD004 spec in regard to the concrete block configuration and steel rods. DP-2B was the only pit left unconstructed at the end of the day however, Triple G will be installing the final pit prior to liquid boot installation.**

**As-built dimensions were measured for both first and second SSDS piping advancements.**

**A 4-gas meter was kept on-hand and checked periodically throughout the day.**

**Remarks:**

**Air monitoring identified no detections above background on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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**Photo #1: DP-2A Sub-slab depressurization pit. PVC piping heading toward T couple and SD2-C pit.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F (SA) SU** **Weather: Sunny-Partly Cloudy** **Wind: Light-medium** **Humidity**

**Date: November 4, 2017** **Time: 0700 – 1330** High (Med) Low

**Temp: 60 - 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Continued installation of reinforcement bar cages around patio area.**

**Site Work Progress:**

**Re-inforcement bar around the patio area of the clubhouse was reworked by Triple G to meet inspection standards. Extra gravel below the rebar cages was removed and placed within the SSDS sub-slab area.**

**A 4-gas meter was mounted near the clubhouse area and checked periodically throughout the day.**

**Remarks:**

**Air monitoring identified no detections above background on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
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**Photo #1: Photo of the DP-2B SSDS pit area**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: 100% cloudy; misty in the morning, some showers in the afternoon**

**Humidity** (High) Med Low

**Date: November 6, 2017** **Time: 8:00am**

**Temp: 64** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, EAI (Newark, NJ)**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: SSDS installation**

**Site Work Progress:**

**The 7th and final SSDS pit (DP-2B) was excavated and connected to the lateral SSDS collection piping. EAI stated that low point drains were installed in the lateral collection piping at intervals of no more than 20 feet. Measurements of the SSDS system component installed locations were taken for use in the P.E.'s as-built report. The vent risers were found to be uncovered, and temporary duct tape covers were placed over these two open pipes; the standing water needs to be removed from these pipes, and more permanent covers need to cap these pipes until construction of the remaining piping to the roof begins.**

**A fire extinguisher was present near work activities. The VRAE meter alarms is triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits; the alarm was not triggered for these four gases during morning and afternoon walkarounds of today's activities.**

**A walkdown of the soil stockpiles for erosion and sediment control was conducted, with the haybales and tarps found to be satisfactory.**

**Tomorrow's planned activities include pouring stone cover over the lateral SSDS collection piping, with Liquid Boot® installation planned for Wednesday/Thursday of this week.**

**Remarks:**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Donald Bowman, P.E.** Donald Bowman **Reviewed By:**

**Date:**

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**View of eastern section of SSDS, showing lateral collection piping (dark gray), pit DP-1B with white concrete slab cover (far background, in front of backhoe bucket), and vent riser SFV-1 (far right side) (11/06/2017)**

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**View of western section of SSDS, showing lateral collection piping (dark gray), pit DP-2A (far left side), pit DP-2B being constructed in the southwest corner of building footprint (far background), and vent riser SFV-2 (far right side) (11/06/2017)**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Mostly sunny, then turned 100% cloudy** **Humidity**

**Date: November 7, 2017** **Time: 6:45am** High (Med) Low

**Temp: 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: SSDS installation**

**Site Work Progress:**

**Stone was poured to an approximate depth of 12 inches per design over the eastern third of the lateral SSDS collection piping.**

**A fire extinguisher was present near work activities. The VRAE meter alarms is triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits; the alarm was not triggered for these four gases during morning and afternoon walkarounds of today's activities.**

**A walkdown of the soil stockpiles for erosion and sediment control was conducted, with the haybales and tarps found to be satisfactory.**

**Tomorrow's planned activities include pouring stone cover over the balance of the lateral SSDS collection piping, with (weather permitting) Liquid Boot® installation in parallel over the eastern third (i.e. area that was covered with stone today).**

**Remarks:**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

Donald Bowman

**Observed By: Donald Bowman, P.E.**

**Reviewed By:**
**Date:**

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**View of eastern section of SSDS, showing lateral collection piping (dark gray) and vent riser SFV-1 (far right side): at the conclusion of 11/06/2017 (above) & at the conclusion of 11/07/2017 (below)**



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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: overcast** **Wind: easterly wind** **Humidity**

**Date: November 8, 2017** **Time: 0700 – 1400** High (Med) Low

**Temp: 40 - 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction, EAI (Liquid Boot Application)**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: spreading of crushed stone for use in SSDS; weekly construction meeting; application of base layer and liquid boot application in the northwestern section of new clubhouse.**

**Site Work Progress:**

**20ML thick vapor barrier base layer was placed over completed floor sections in the northwest corner of the clubhouse. Application of Liquid Boot was delayed until ambient temperatures reached and climbed above 45 degrees. Two floor sections were completed before a pump malfunction forced an early shutdown. Liquid Boot will cure overnight. Smoke and swatch thickness testing will be performed tomorrow. Air monitoring was performed around the perimeter of the construction area and at select locations.**

**Remarks:**

**Base layer was measured at a thickness of 20.5 ML. Vapor barrier base layers were overlapped a minimum of 6 inches as per the specification. Liquid Boot spray was also applied as per specifications and only when ambient temperatures climbed above 45 degrees.**

**Air monitoring identified no detections above background on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: Liquid Boot application in the northwest floor section of the new clubhouse building.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny/Partialy Cloudy** **Wind: Low Wind** **Humidity**

**Date: November 9, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 40 - 55** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction, EAI (Liquid Boot Application)**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Spreading of crushed stone for use in SSDS; application of base layer geomembrane and liquid boot in the northwestern section of new clubhouse.**

**Site Work Progress:**

**The floor sections where liquid boot was applied on November 8th were smoke tested today. A total of five (5) coupon samples (1 per concrete section) were taken from the area designated as Area A. The coupon sampling frequency complies with the specifications. Four (4) smoke tests were performed in Area A. Representatives Ethan and Jen from Woodard & Curran were present during the smoke test. A protective geotextile fabric was placed on top of the liquid boot section following successful smoke testing and coupon thickness testing.**

**A 20 mil thick geomembrane base layer (VI-20) and liquid boot was placed over the completed floor sections in Area B. This area is south of Area A. After 6 hours of curing time, Area B was smoke tested. A total of three (3) coupon samples and (4) smoke tests were performed in Area B. Portions of the area where smoke was visibly escaping the barrier were re-sprayed with liquid boot. A protective geotextile fabric was placed over the barrier following successful testing.**
**Smoke testing was also performed on the SSDS piping network to confirm no blockages. During the test, visible smoke was observed from pits DP-1A and DP-1C.**

**Air monitoring was performed around the perimeter of the construction area and at select locations.**

**Remarks:**

**Coupon samples were measured with digital calipers. Coupon thicknesses met or exceeded the 60 ml specification with most coupons measuring thicknesses of 70-90 mils. Vapor barrier base layers were overlapped a minimum of 6 inches as per the specification. Liquid Boot spray was also applied as per specifications and only when ambient temperatures climbed above 45 degrees. Air monitoring identified no detections above background on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**

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**Date:**



**Photo #1: Liquid Boot application in the northwest floor section of the new clubhouse building (Area A and B).**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Heavy Rain** **Wind: High** **Humidity**

**Date: November 13 , 2017** **Time: 0700 – 1500** **Temp: 37°F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, EAI Environmental**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Backfilling the stone sub base, and install sections of the SSDS pipping.**

**Site Work Progress:**

**EAI Environmental was onsite however it was determined that it was raining too hard to begin applying the Liquid Boot Compound, so they left for the day. Triple G contractor was on site for the day setting up the concrete forms for the floor slab of the remaining areas within the building footprint**

**Tomorrow's planned activities is to complete spraying the remaining areas with Liquid Boot compound followed by steam testing and cutting out coupons to confirm the thickness of the Liquid Boot.**

**Remarks:**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Overcast** **Wind: High** **Humidity**

**Date: November 14 , 2017** **Time: 0700 – 1500** **Temp: 46°F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, EAI Environmental**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Backfilling the stone sub base, and install sections of the SSDS pipping.**

**Site Work Progress:**

**EAI Environmental was onsite spraying the areas within the building footprint with the Liquid Boot compound.**

**Tomorrow's planned activities is the complete spraying the remaining areas with Liquid Boot compound followed by steam testing and cutting out coupons to confirm the thickness of the Liquid Boot.**

**Remarks:**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent** **Reviewed By:**
**Date:**

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**Photo 1: Liquid Boot spraying**

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**Photo 2: Spraying Liquid Boot Compound and laying down the Green GeoLayer barrier.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny** **Wind: light and variable**
**Humidity**

**Date: November 15, 2017** **Time: 0800 – 1200** High Med (Low)
**Temp: 45 - 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction, EAI (Liquid Boot)**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: spraying of Liquid Boot over remaining floor sections, smoke testing, liner thickness testing; air monitoring**

**Site Work Progress:**

**The remaining floor sections of the new clubhouse interior were lined, sprayed and smoke tested today. All coupons were measured for thickness and all were found to exceed the minimum thickness requirements. Smoke testing was performed to identify areas that were not vapor tight. Multiple areas were found to emit smoke, however all leaks were appropriately sealed before the protective fabric layer was placed over the remaining floor sections. This phase of the Liquid Boot application is now complete.**

**Remarks:**

**Air monitoring performed during the course of the day revealed no detections above background on the PID or the 4-gas meter.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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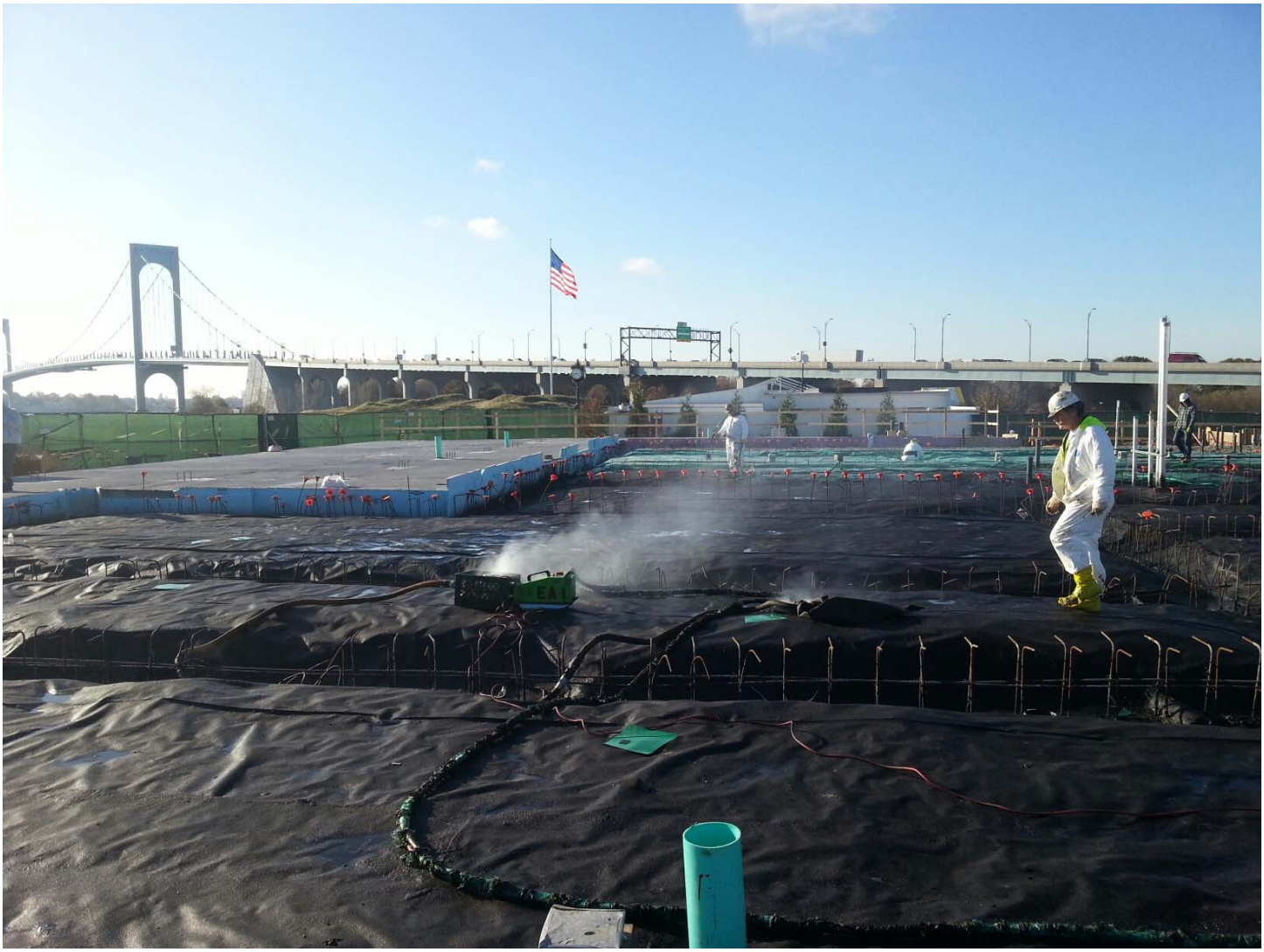

**Photo #1: Base layer installation (green fabric), Liquid Boot Spraying and smoke testing in progress.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: light rain ending** **Wind: light and variable** **Humidity** High Med Low

**Date: November 22, 2017** **Time: 0800 – 1200** **Temp: 55 - 60** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors and JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: steel work by subcontractors; air monitoring and inspection of liquid boot for any damages caused during steel work.**

**Site Work Progress:**

**Due to early morning rains limited work is being performed on site. To the extent practical, Maser inspections liquid boot layer for any signs of damage from the steel work that has taken place during the past week. A second round of smoke testing is planned following the completion of steel and re-bar work to verify liquid boot integrity.**

**Air monitoring performed during the course of the day revealed no detections above background on the 4-gas meter.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo #1: Installation of steel frame work for new clubhouse.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny, Partially cloudy** **Wind: Medium** **Humidity**

**Date: November 27, 2017** **Time: 0700 – 1530** High Med (Low)

**Temp: 40 - 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Clean Soil Fill \Imported to Site, Steel beam frame construction continued.**

**Activities included: Visual and PID inspection of clean fill imports from New York Recycling 475 Exterior Street.**

**Site Work Progress:**

**Soil was filled around the eastern perimeter of the concrete sub-structure (future patio). Prior to filling the soil was visually inspected for any solid debris. The soil was characterized as brown fine-course sand with gravel/rock fragments roughly 1-1.5" in diameter. Once dumped, the fill was visually inspected again and scanned with a PID. All loads were found to be acceptable. Clean fill was imported by DJCI Trucking LLC and IEV Trucking Corp. Two trucks were loaded and unloaded continuously throughout the day. Soil Manifests were completed for all loads.**

**Remarks:**

**There were no PID readings recorded on the imported materials. All loads passed visual and PID screenings**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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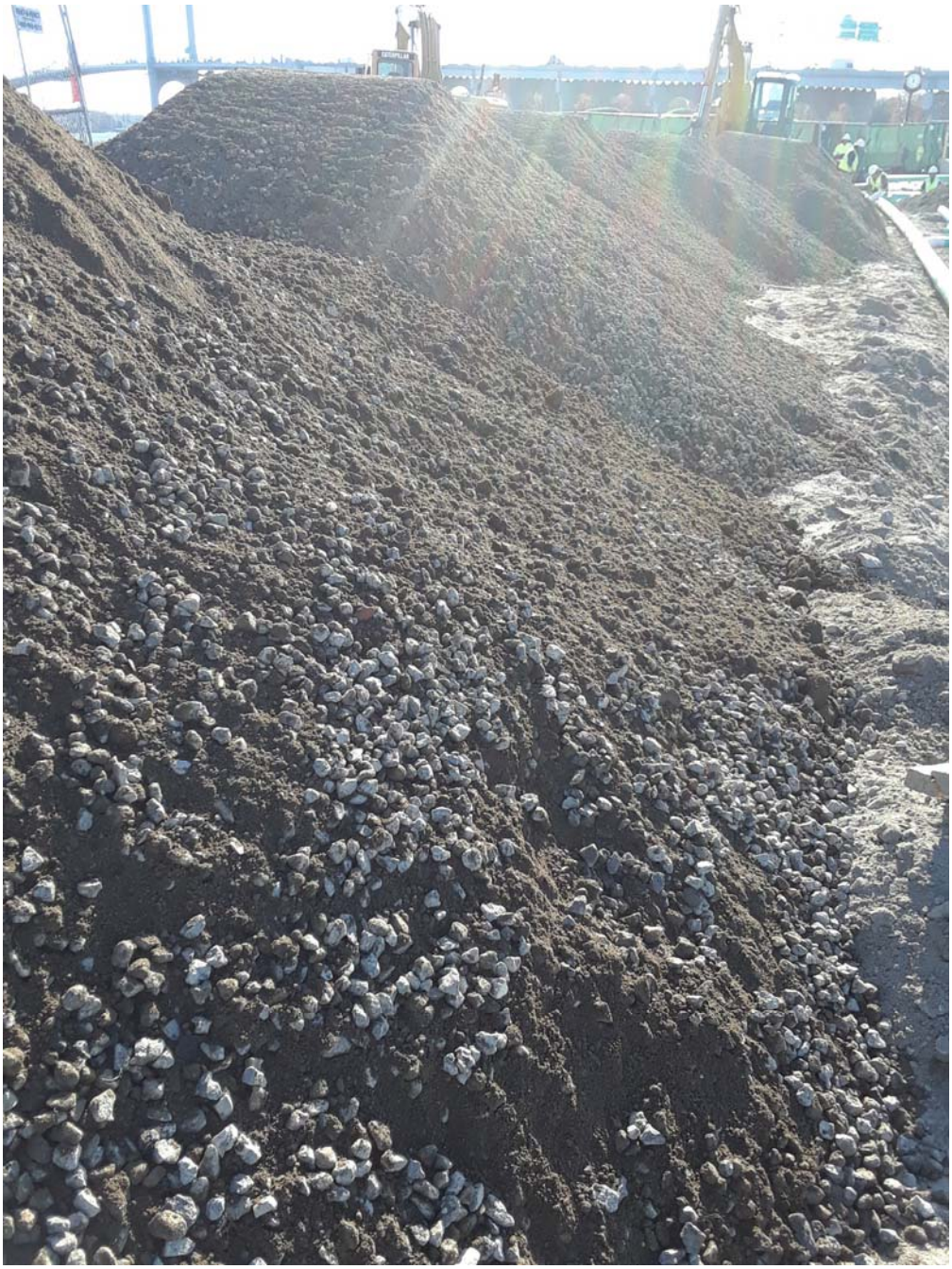

**Photo 1: Clean fill imported to the site.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: clear sunny** **Wind: light and variable** **Humidity**

**Date: November 29, 2017** **Time: 0800 – 1200** High Med Low

**Temp: 55 - 60** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors and JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: steel work by subcontractors; air monitoring and inspection of liquid boot for any damages caused during steel work; importation of two loads of soil from 475 Exterior Street. Weekly Construction Meeting.**

**Site Work Progress:**

**Steel work continued. To the extent practical, Maser inspected the liquid boot layer for any signs of damage from the steel work that has taken place during the past week. A second round of smoke testing is planned following the completion of steel work to verify liquid boot integrity.**

**Air monitoring performed during the course of the day revealed no detections above background on the PID. Visual and PID inspection of two loads for soil from New York Reclycling showed no evidence of VOC's or any visual signs of debris within the material.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: Installation of steel frame work for new clubhouse.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Cloudy** **Wind: Low** **Humidity**

**Date: November 30, 2017** **Time: 0700 – 1430** High Med (Low)

**Temp: 40 - 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Clean Soil Fill, Steel beam frame construction**

**Activities included: Inspection of clean fill.**

**Site Work Progress:**

**Approximately 180 $yd^3$ of clean fill was imported to the site today (10 loads; 18 $yd^3$ each). Soil was backfilled around the eastern, northern, and western perimeters of the concrete sub-structure. Prior to filling the soil was visually inspected for any solid debris. The soil was characterized as brown fine-course sand with occasional crushed stone roughly 1-1.5" thick in diameter. Once dumped the fill was visually inspected a second time and scanned with a PID. Clean fill was imported by DJCI Trucking LLC and IEV Trucking Corp. Two trucks were loaded and unloaded continuously throughout the day.**

**Remarks:**

**Two loads were brought onto the site yesterday November 29, 2017—and segregated for inspection. The loads were visually inspected and scanned with a PID. Manifests for the loads were collected from the truck drivers.**

**No readings were detected on the PID. No staining or solid waste was observed in any of the imported materials.**

**Total loads of fill imported: 11/27/2017 (14 Loads), 11/29/2017 (2 Loads), 11/30/2017 (10 Loads)**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Clean fill imported to the eastern perimeter being spread and leveled.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny** **Wind: Light** **Humidity**

**Date: December 4, 2017** **Time: 0700 – 1500** High Med (Low)

**Temp: 40 - 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Clean Soil Fill, Steel beam frame construction**

**Activities included: Inspection of clean fill.**

**Site Work Progress:**

**Approximately 126 $yd^3$ of clean fill was imported to the site today (7 loads; 18 $yd^3$ each). Soil was backfilled around the north-northwestern perimeter of the building. Prior to filling the soil was visually inspected for any debris. The soil was characterized as brown fine-course sand with recycled crushed concrete stone 1-1.5" thick in diameter. Once dumped the backfill material was scanned with a PID. Clean fill was imported by DJCI Trucking LLC. There was only one truck running throughout the entire day.**

**Remarks:**

**No readings were detected on the PID. No staining or solid waste was observed in any of the imported materials.**

**All material imported for the day passed visual and PID inspections.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date:**

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**Photo 1: Clean fill pile once off-loaded from truck.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: Mostly Cloudy** **Wind: Moderate** **Humidity**

**Date: December 5, 2017** **Time: 0700 – 1500** High (Med) Low

**Temp: 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Clean Soil Fill, Steel beam frame construction**

**Activities included: Inspection of clean fill imports.**

**Site Work Progress:**

**Approximately 108 $yd^3$ of clean fill was imported to the site today (6 loads; 18 $yd^3$ each). Soil was backfilled around the north-northwestern corner of the building. Prior to filling the soil was visually inspected for any large debris within the material. The soil was characterized as brown fine-course sand with recycled crushed concrete stone 1-1.5" thick in diameter. Once dumped the backfill material was scanned with a PID. Clean fill was imported by DJCI Trucking LLC. There was only one truck running throughout the entire day.**

**Remarks:**

**No readings were detected on the PID. No staining or solid waste was observed in any of the imported materials.**

**All material imported for the day passed visual and PID inspections.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Eric Sergent**

**Reviewed By:**
**Date:**

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**Photo 1: Clean fill pile staged along the northern perimeter of the construction site.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: clear sunny** **Wind: steady wind** **Humidity**

**Date: December 6, 2017** **Time: 0800 – 1200** High Med Low

**Temp: 40-45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors and JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: steel work by subcontractors; air monitoring and inspection of liquid boot for any damages caused during steel work; Weekly Construction Meeting.**

**Site Work Progress:**

**Steel work continued. To the extent practical, Maser inspected the liquid boot layer for any signs of damage from the steel work that has taken place during the past week. Several areas were identified where the liquid boot barrier had been compromised/cut to facilitate steel work. A second round of smoke testing is planned following the completion of steel work to verify liquid boot integrity. Smoke testing is tentatively scheduled for December 8.**

**Air monitoring performed during the course of the day revealed no detections above background on the PID. Visual and PID re-inspection of previously-delivered soils from New York Reclycling showed no evidence of VOC's or any visual signs of debris.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: depicts liquid boot barrier having been cut to facilitate steel work. Repairs required.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Mostly sunny** **Humidity**

**Date: December 7, 2017** **Time: 6 : 10 am** High (Med) Low

**Temp: 37-45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G; DJCI (soils transporter)**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: Soils Importing**

**Site Work Progress:**

**Importation of 7 loads of soil (~ 126 cubic yards) from New York Recycling, a donor source located at 475 Exterior Street in the Bronx. Air monitoring performed during the course of the workday revealed no detections above background on the photoionization detector (PID). Visual observation and PID monitoring of each load of soil from New York Recycling showed no evidence of VOCs or visual signs of debris within the material.**

**Imported soil was backfilled and graded around the northern and eastern perimeters of the concrete sub-structure. The soil was characterized as brown fine-course sand with occasional crushed stone roughly 1-1.5 inches thick in diameter. Fill was imported by DJCI Trucking LLC, with a single truck loaded and unloaded throughout the day.**

**A fire extinguisher was present near work activities. A Royal Carting 4-cubic yard municipal solid waste (MSW) commercial container was present near the work area, should MSW be generated from construction activities. A walkdown of the soil stockpiles for erosion and sediment control was conducted, with the haybales and tarps found to be satisfactory.**

**Tomorrow's planned activities include continuation of soils importing from New York Recycling, and EAI resuming smoke testing and repairs of the vapor barrier.**

**Remarks:**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Donald Bowman, P.E.**

**Reviewed By:**
**Date:**

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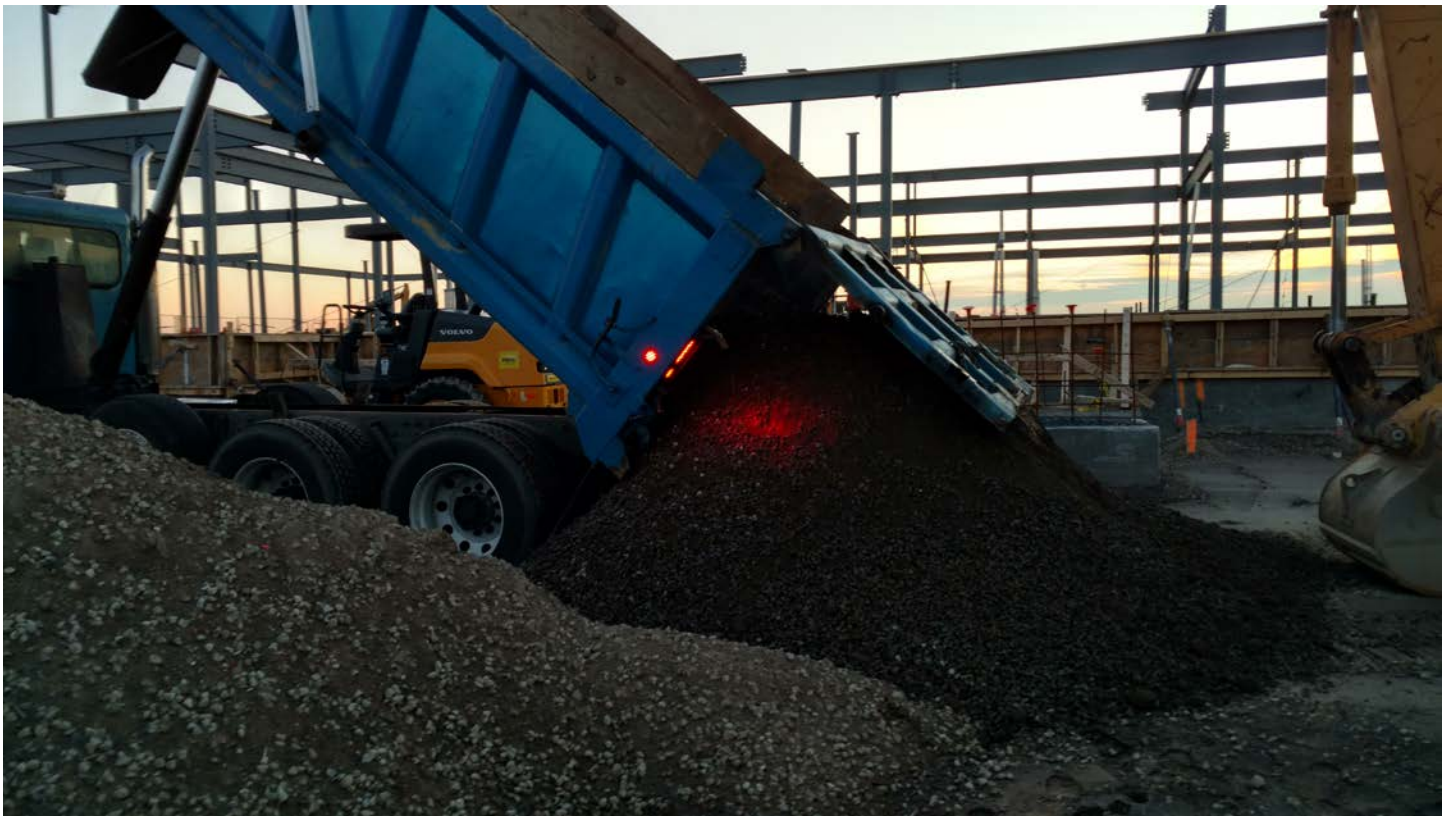

**View of first load of soil imported from New York Recycling being tipped by DJCI (12/07/2017)**

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**View of afternoon loads of soils imported from New York Recycling after being tipped by DJCI, with area graded by morning loads of soil on the right (12/07/2017)**

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**View of clubhouse eastern footprint, showing Liquid Boot® and its cover fabric (12/07/2017)**

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**View of clubhouse western footprint, showing Liquid Boot® and its cover fabric (12/07/2017)**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Mostly Cloudy** **Wind: Moderate** **Humidity**

**Date: December 8, 2017** **Time: 0600 – 1500** **Temp: 30-40 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction, DJCI Trucking (Soil Transpiration), EAI Environmental**

**Active Site Work Areas: Construction site for proposed new Clubhouse, Clean Soil Fill, Steel beam frame construction**

**Activities included: Inspection of clean fill.**

**Site Work Progress:**

**One DJCI truck was running throughout the day hauling in approximately 108 $yd^3$ of clean fill to the site today (6 loads; 18 $yd^3$ each). Visual observation and PID monitoring of each load of soil from New York Recycling showed no evidence of VOC's or signs of large debris within the soil.**
**The soil was characterized as brown fine-course sand with recycled crushed concrete stone 1-1.5" thick in diameter.**
**Imported soil was dumped and stock piled on the south-southwest side of the building. Some of the imported soil was used for backfilling around the steps leading to the patio bar and grill area on the eastern side of the clubhouse. Backfilling was completed using 1ft lifts and compacted using a jumping jack compactor.**
**EAI was onsite today to perform spot treatment of all locations where the LiquidBoot barrier was damaged causing holes to be put in the LiquidBoot. Smoke testing was performed a second time to help in locating all damaged areas of the Liquid Boot.**
**EAI said no coupon thickness testing was required because everything already passed the thickness test during the first smoke test.**
**The plan for Monday December 11th 2017, is for the steel structure of the building to continue being put up as well as the rebar for the floor slab to begin being installed.**

**Remarks:**

**No readings were detected on the PID. No staining or solid waste was observed in any of the imported materials.**

**All material imported for the day passed visual and PID inspections.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

YES (NO)

**Observed By: Eric Sergent**

**Reviewed By:**
**Date:**

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**Photo 1: Truck #1 dumping imported clean fill.**

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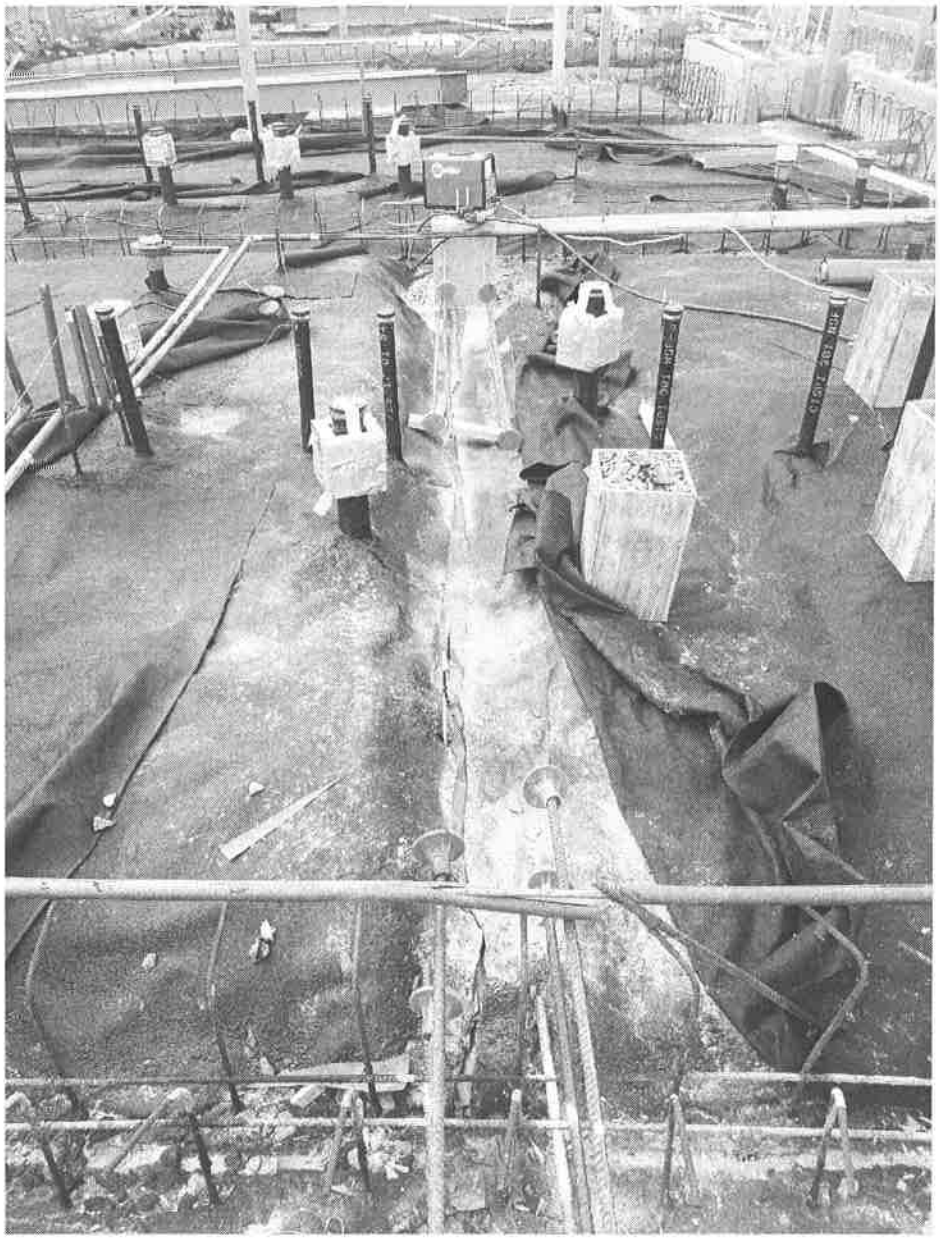

**Photo 2: Area for Liquid Boot to be resprayed.**

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**Photo 3: Resprayed area from Photo #2.**

Location Trump Golf Links Date 12/8/17

Project / Client Ferry Point

MC# 1700242GA Pg. 1 of 2

6:00 - Eric Sergent arrives onsite.

6:25 - DJCT truck #1 arrives on-site Plate#: C9405ME Truck ID#: 24

7:00 - Load #1 of imported fill dumped, 0.0 on PID, no debris observed, 18 cy - Ticket # 134317

830 - Load #2 imported fill dumped, 0.0 PID reading, no debris observed, 18 cy - Ticket #134327

950 - Load #3 imported fill dumped, 0.0 PID reading, no debris observed, 18 cy, Ticket #134342

* EAI arrived on site around 800AM. Current temp is 36°F w/ a HIGH - 40°F. Liquid Boot compound was stored outside for the night w/ Heat cords, Heating Blankets & Tarps.

* 900 - EAI Begin Smoke Test

* EAI said No coupon testing b/c Everything already smoke test

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42 Location _____ Date 12/8/17

Project / Client Trump Links Golf @ Ferry Point

MC #: 17002426A Pg. 2 of 2

1100 - Load #4 imported fill dumped, 0.0 PID Reading, no debris observed, 18cy, Ticket #134348

1210 - Load #5 imported fill dumped 0.0 PID Reading, no debris observed, 18cy. Ticket # 134362

1345 Load #6 Imported fill dumped 0.0 PID Reading, no debris observed, 18cy, Ticket #.

* 1215 - EAI completed smoke testing and spot treatment of any + all holes caused when the steel was being erected.
* 2nd smoke test *
* Potential 3rd smoke test after * the floor slab rebar is put in.

1245 - EAI Leaves site.

1430 - E. Sergent departs site.

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TK#: 134317

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Jaar Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jaar Rivas Company: Triple 6

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. NY 1054

Date: 12/8/17 Time: 6:01 AM Truck License Plate No.: 64405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 134317

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Dan Bowman Received:

**Load Identifier:** License No.: 64405 ME Load No.: 1-Total-48 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Sand w/ recycled concrete 1"-1½"

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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TK# 134327

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN Rivas Company: Triple G.

Address: 300 Hutchinson River Pkwy Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. 10541

Date: 12/8/17 Time: 7:59AM Truck License Plate No.: 64405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 134327

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Dan Bowman Received:

**Load Identifier:** License No.: _____ Load No.: Z - Total 49 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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Tax# 134342

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson River Pkwy. Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street Bronx. 10451

Date: 12/8/17 Time: 9:11 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No. If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134342

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

upervisor Name: Don Bowman Received:

**oad Identifier:** License No.: _____ Load No.: 3 - Total 50 Estimated Volume: 18 *Cubic Yards*

laced in Stockpile Bin No.:

asic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

mple Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

sults Received By (Name): _____ Date: _____

mpling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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TXH-134348

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rios
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rios Company: Triple G

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. 10451

Date: 12/8/17 Time: 10:18AM Truck License Plate No.: 69405 MF State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY (0451 Block/Lot: 134348

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Dan Bowman Received:

**Load Identifier:** License No.: _____ Load No.: 4-Total-51 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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TK# 134362

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/8/17 Time: 11:28AM Truck License Plate No.: 69405 MC State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134362

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Don Bouman Received:

Load Identifier: License No.: _____ Load No.: 5-Total-52 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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TK# 134369

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: [illegible] Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G.

Address: 300 Hutchinson River Pkwy. Phone: (___) Fax: (___)

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/8/17 Time: 12:43pm Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No. If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134369

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Don Bauman Received:

**Load Identifier:** License No.: _____ Load No.: 6-Tota-53 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: partly cloudy** **Wind: high winds** **Humidity**

**Date: December 13, 2017** **Time: 0900 – 1130** High Med (Low)

**Temp: 20-25** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors and JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: steel work by subcontractors; inspection of liquid boot for any damages; Weekly Construction Meeting.**

**Site Work Progress:**

**Steel work continued. Maser inspected the liquid boot layer for any signs of damage since the smoke testing of December 8. All areas inspected appeared to be intact. A third and final smoke test is planned for the week of December 18.**

**Air monitoring performed revealed no detections above background on the PID.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: steel frame superstructure of the new clubhouse .**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: overcast skies** **Wind: light** **Humidity**

**Date: December 18, 2017** **Time: 0600-1200** High Med Low

**Temp: 30-38** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction, NV5 (Re-bar work, concrete pour, concrete testing); EAI (smoke testing)**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: reinforcing bar installation by subcontractors; smoke testing by EAI, air monitoring and concrete pouring.**

**Site Work Progress:**

**Steel reinforcing bar installation continued on the south side of the new clubhouse; smoke testing of the vapor barrier was completed in advance of the concrete pour. Smoke testing revealed several areas of the liquid boot barrier to have been compromised during the re-bar installation. All vapor barrier defects were properly repaired with trowel grade by EAI in advance of the concrete pour. This was the third and final round of smoke testing.**

**Air monitoring revealed no detections above background on the PID.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo #1: smoke testing was conducted following the installation of re-bar; concrete trucks in background preparing for a pour.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: overcast skies** **Wind: light** **Humidity**

**Date: December 22, 2017** **Time: 0900-1100** High Med (Low)

**Temp: 25** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general**

**Site Work Progress:**
**Inspection of Erosion Control measures at clubhouse construction site and soil stockpile in parking lot.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: partly cloudy skies** **Wind: light** **Humidity**

**Date: December 27, 2017** **Time: 0900-1100** High Med (Low)

**Temp: 20** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general**

**Site Work Progress:**

**Inspection of Erosion Control measures at clubhouse construction site and soil stockpile in parking lot.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: sunny** **Wind: light** **Humidity**

**Date: January 3, 2018** **Time: 0900-1100** High Med Low

**Temp: 20** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks; weekly construction meeting; erosion control inspection**

**Site Work Progress:**

**Inspection of Erosion Control measures at clubhouse construction site and soil stockpile in parking lot.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Soil Stockpile in Parking Lot**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: sunny** **Wind: light** **Humidity**

**Date: January 10, 2018** **Time: 1000-1100** High Med Low

**Temp: 30** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Triple G Contractors, JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks; weekly construction meeting; erosion control inspection**

**Site Work Progress:**

**Inspection of Erosion Control measures at clubhouse construction site and soil stockpile in parking lot.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Soil Stockpile in Parking Lot**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: snow** **Wind: light** **Humidity**

**Date: January 17, 2018** **Time: 1000-1200** **Temp: 34** °F (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks; weekly construction meeting; erosion control inspection**

**Site Work Progress:**

**Inspection of Erosion Control measures at clubhouse construction site and soil stockpile in parking lot.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Progress on New Club House**

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**Photo 2: Sediment control features in catch basins**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: snow** **Wind: 20mph** **Humidity**

**Date: January 24, 2018** **Time: 0900-1500** High Med (Low)

**Temp: 30-35** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, EAI (for SSDS piping modifications), Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks; weekly construction meeting; erosion control inspection, oversight of SSDS piping modifications.**

**Site Work Progress:**

**Inspection of Erosion Control measures at clubhouse construction site and soil stockpile in parking lot.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: SSDS vertical piping relocated. Pipe was moved to be enclosed inside an interior wall of the new clubhouse.**

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**Photo 2: Workers secure tarps on soil stockpile in parking area**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: snow** **Wind: light** **Humidity**

**Date: January 25, 2018** **Time: 0800-0900** High Med (Low)

**Temp: 25** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks**

**Site Work Progress:**

**Arrived at the site to meet EAI to complete the work to relocate SSDS risers. JCS reports that EAI will not be on-site today. JCS to notify Maser when EAI will be back on-site (probably next week).**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Work Progress at New Club House**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: clear** **Wind: moderate** **Humidity**

**Date: January 31, 2018** **Time: 0900-1100** High Med (Low)

**Temp: 25** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks, weekly construction meeting, erosion control measures inspection**

**Site Work Progress:**

**General work tasks at new club house, weld inspections. Weekly construction meeting, inspection of former aeration core disposal area and former excavation site near the 7th green.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Work Progress at New Club House**

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**Photo 2: Soil stockpile in parking area**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: snow/rain** **Wind: moderate** **Humidity**

**Date: February 7, 2018** **Time: 1130 - 1400** **Temp: 30 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks, weekly construction meeting, erosion control measures inspection**

**Site Work Progress:**

**General work tasks at new club house were being performed by subcontractors. Limited work force was on-site due to the weather. Weekly construction meeting, inspection of erosion control measures, inspection of former aeration core disposal area and former excavation site near the 7th green.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Work Progress at New Club House**

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**Photo 2: Soil stockpile in parking area. Contractor to re-tarp and secure hay bails folowing the storm.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: clearing skies** **Wind:light**
**Humidity**

**Date: February 14, 2018** **Time: 0900 - 1200** High (Med) Low
**Temp: 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks, weekly construction meeting, erosion control measures inspection**

**Site Work Progress:**

**Club House: General work tasks being performed by subcontractors.**
**Weekly construction meeting, inspection of erosion control measures, inspection of former aeration core disposal area and former excavation site near the 7th green.**

**New silt fence was installed around the soil stockpile in the parking lot. New tarps and tarp anchors were placed over the same stockpile. Storm sewer sediment traps were also cleaned and replaced.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Work Progress at New Club House**

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**Photo 2: Soil stockpile in parking area. New silt fence installed; new tarps securely cover the pile.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: rain** **Wind:light** **Humidity**

**Date: February 22, 2018** **Time: 1000 - 1200** **(High) Med Low**

**Temp: 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks, oversight of EAI SSDS modifications**

**Site Work Progress:**

**Eai was a no-show today. Informs JCS they will be on-sitre tomorrow for SSDS modifications**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

**Photo 1: Work Progress at New Club House**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: light rain** **Wind:light** **Humidity**

**Date: February 23, 2018** **Time: 0700 - 1300** **Temp: 35 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks, erosion control measures inspection, oversight of EAI SSDS piping modifications**

**Site Work Progress:**

**Club House: General work tasks being performed by subcontractors. EAI modifies SSDS riser pipes inside the clubhouse. Makes ceiling and roof penetrations at two locations.**

**Weekly inspection of erosion control measures, inspection of former aeration core disposal area and former excavation site near the 7th green.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Work Progress at New Club House**

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**Photo 2: SSDS Ceiling penetration (typical)**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: partly cloudy** **Wind:light** **Humidity**

**Date: February 28, 2018** **Time: 0900 - 1200** High Med (Low)

**Temp: 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks, erosion control measures inspection, weekly construction meeting**

**Site Work Progress:**

**Club House: General work tasks being performed by subcontractors.**

**Weekly inspection of erosion control measures, inspection of former aeration core disposal area and former excavation site near the 7th green.**

**Two (2) piles of sand were observed in the construction area. It was reported—and observed—that the sand is being used to mix mortar for brick-laying.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Imported sand being mixed to make mortar.**

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**Photo 2: Soil Stockpile in parking lot**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: sunny & clear** **Wind:light** **Humidity**

**Date: March 6, 2018** **Time: 0800 - 1600** High Med (Low)

**Temp: 40-45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G, IEV Trucking**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks, soil importation from New York Recycling, trenching of new electical conduit for clock tower relocation, oversight of EAI SSDS installations**

**Site Work Progress:**

**Club House: General work tasks being performed by subcontractors including roof shingles and cupola installation**

**No SSDS work was conducted as EAI was not on-site as scheduled.**

**Inspection of former aeration core disposal area and former excavation site near the 7th green. Tarps and sand bags for the soil stockpile in the Parking Lot were being secured inadvance of tomorrow's forecast nor'easter.**

**Soil importation from New York Recylcing: a total of 108 cubic yards in 6 loads. Maser visited New York Recycling to confirm that stockpiled materials from that facility (which were sampled in September 2017) were still being used as the source of fill material for the new club house construction site.**

**Trenching for the installation of new electrical conduit to the new location of the clock tower. Trench is approximately 40 feet long, 2 feet deep, 18 inches wide. No obervations of demarcation layer, odors, smells, debris or PID readings.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1: Soil Importation from New York Recycling. 108 cubic yards delivered in 6 loads.**

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**Photo 2: New electrical conduit trench for the relocation of the clock tower.**



**Photo 3: Dump Truck bound for Trump Links Ferry Point being loaded at New York Recycling 475 Exterior Street, Bronx, NY. Dedicated bays with materials from the "Trump Pile" appear on the right side to the photograph.**

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**Photo #4: IEV Truck leaving New York Recycling with materials bound for the new Club House site at Trump Links, Ferry Point.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: increasing clouds** **Wind:light** **Humidity**

**Date: March 8, 2018** **Time: 0800 - 1200** High Med (Low)

**Temp: 35- 40** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for proposed new Clubhouse**

**Activities included: general work tasks, excavation to install the new foundation for the soon-to-be relocated clock tower, weekly construction meeting.**

**Site Work Progress:**

**Club House: General work tasks being performed by subcontractors.**

**Assessment of tarps covering the soil stockpile in the Parking Lot and other erosion control features. All found to be in satisfactory condition-with only minor displacements--following yesterday's nor'easter. Recommended to JCS that the tarp anchors be re-adjusted at the earliest opportunity.**

**Excavation for the installation of the new clock tower foundation was completed. The excavation is approximately 4 feet long, 4 feet wide and 4 feet deep. No groundwater, debris, smells or wastes were observed. The demarcation barrier was not encountered. Surplus cover and shaping material is being stockpiled adjacent to the construction area until it is ready to be used on-site and appropriately covered.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo #1: Excavation of the foundation for the soon-to-be-relocated clock tower**

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**Photo #2: post storm condition of the soil stockpile in the parking lot**

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**Photo #3: Work progress at the new club house. Concrete in foreground-derived from the perimeter sidewalk-is scheduled to be transported off-site for recycling.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny/Partially Cloudy** **Wind: moderate** **Humidity**

**Date: March 12, 2018 Time: 0900 - 1230** High Med (Low)

**Temp: 40 - 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: EAI, Inc., JCS Construction, Triple G**

**Active Site Work Areas: Maintenance Building, Two (2) Comfort Stations, Construction site for Clubhouse**

**Activities included: Methane Detection Alarm System Upgrading, Erosion Control Measures Inspection**

**Site Work Progress:**

**General documentation of methane detection improvements at the comfort stations and maintenance building. Note one of the comfort stations was off-site and owned by Ferry Point Park. Victor and Mike from EAI made the improvements to the system, which consisted of installing a RACO Thervotim into the sytem. This improved system is designed to send an alert message to monitors indicating a system malfunction.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**

**Date:**

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**Photo 1: Trump Golf Links Comfort Station**

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**Photo 2: Control System Installed.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Sun with increasing clouds** **Wind: light** **Humidity**

**Date: March 14, 2018 Time: 0900 - 1130** High Med (Low)

**Temp: 40 - 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS Construction, Triple G**

**Active Site Work Areas: Construction site for Clubhouse**

**Activities included: general work tasks being performed by subcontractors; weekly construction meeting, erosion control inspections**

**Site Work Progress:**

**General work tasks being performed by contractors; weekly erosion control inspections performed. No soil importation today. No SSDS work by EAI. Inspection of former aeration core and excavation areas.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Construction progress at the new Club House**

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**Photo 2: Surplus Cover/Shaping material from the Clock Tower electrical trench. Material will be re-used on site and covered**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Snow** **Wind: moderate** **Humidity**

**Date: March 21, 2018 Time: 1000 - 1100** High (Med) Low

**Temp: 30** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: No site contractors on-site today. All work cancelled due to weather**

**Active Site Work Areas: No active site work is being conducted today.**

**Activities included: weekly construction meeting cancelled. Inspection of erosion control features to the extent practical.**

**Site Work Progress:**

**Due to weather, no site work is being performed today. Inspection of former aeration core and excavation areas.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo 1: Construction progress at the new Club House**

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**Photo 2: Soil Stockpile in the parking lot**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: clear, sunny** **Wind: light** **Humidity**

**Date: March 23, 2018 Time: 1100 - 1300** High (Med) Low

**Temp: 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior work at the new club house continues. General storm clean-up activities have been completed**

**Activities included: Inspection of erosion control features.**

**Site Work Progress:**

**Interior work at the new club house continues.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo 1: Construction progress at the new Club House**

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**Photo 2: Soil Stockpile in the parking lot. JCS informed to re-tarp the pile.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: overcast** **Wind: light** **Humidity**

**Date: March 28, 2018 Time: 0930 - 1200** High (Med) Low

**Temp: 45** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior work at the new club house.**

**Activities included: Inspection of erosion control features, weekly construction meeting**

**Site Work Progress:**

**Interior work at the new club house continues.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Construction progress at the new Club House**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: overcast/fog/rain** **Wind: light** **Humidity**

**Date: April 4, 2018** **Time: 0930 - 1400** (High) Med Low

**Temp: 45 - 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior work at the new club house.**

**Activities included: Inspection of erosion control features, weekly construction meeting, oversight of new cart path excavations.**

**Site Work Progress:**

**Interior work at the new club house continues. Excavation for new cart path installation at the rear of the clubhouse.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Stakes marking out the proposed new cart path at the rear of the new club house.**

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**Photo 2: shallow excavations in cover material for the installation of the new cart path.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather:clear skies** **Wind: windy/gusty** **Humidity**

**Date: April 5, 2018** **Time: 0800 - 1530** High Med (Low)

**Temp: 45 - 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior work at the new club house.**

**Activities included: Inspection of erosion control features, oversight of new cart path excavations, soil importation**

**Site Work Progress:**

**Interior work at the new club house continues. Excavation for new cart path installation at the rear of the clubhouse continues. Soil importation: soils from NY Recycling, transporation by IEV Trucking. Total imported today 135 cubic yards in 5 loads.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo 1: Shallow excavations for new cart path along the 18th fairway at rear of new clubhouse.**

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**Photo 2: Third of five (5) 27 cubic yard loads delivered today. Total 135 cubic yards delivered today.**

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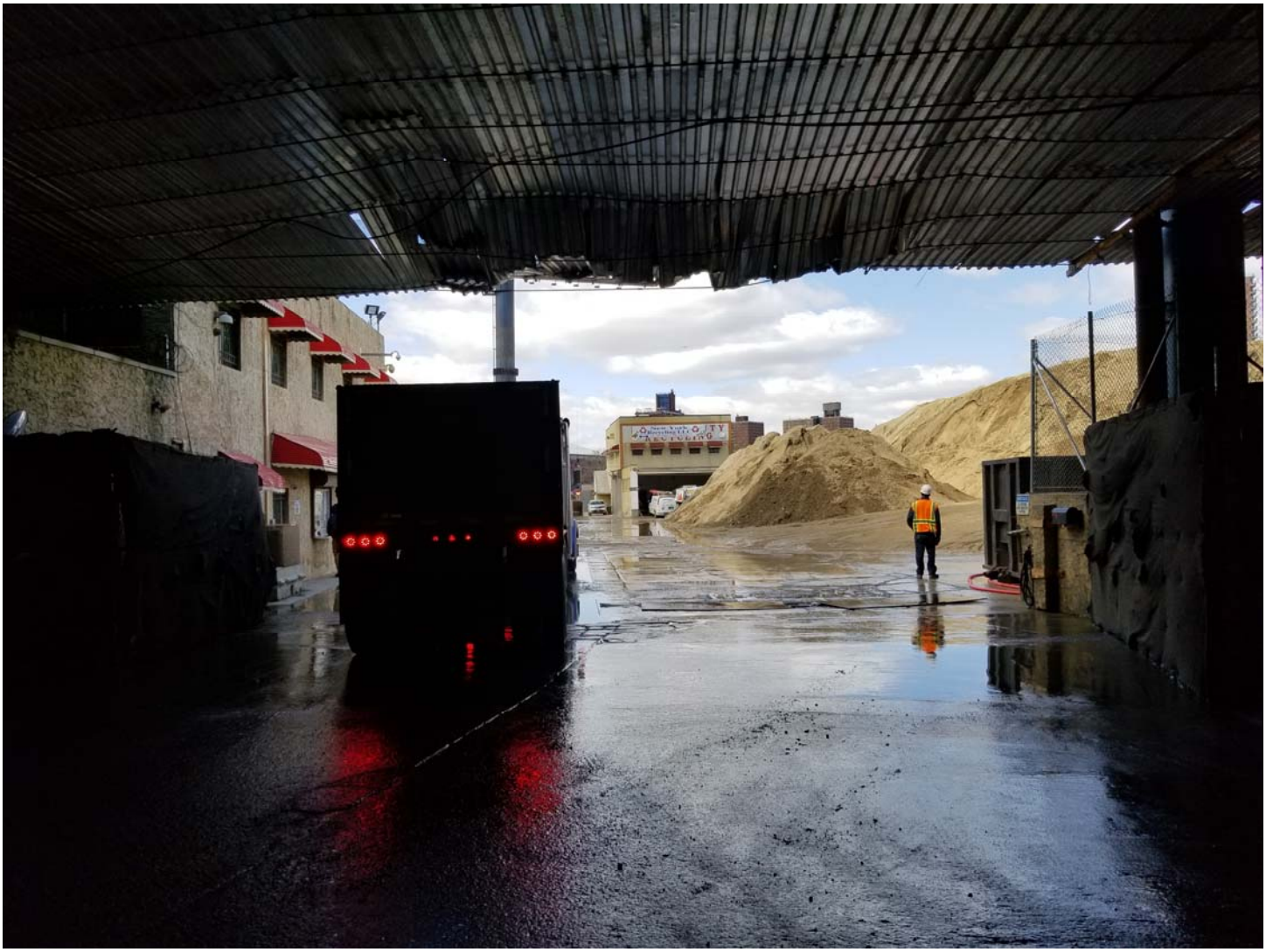

**Photo 3: IEV Truck at New York Recycling for soil pick-up.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: mostly clear skies** **Wind: breezy** **Humidity**

**Date: April 9, 2018** **Time: 0930 - 1200** High Med (Low)

**Temp: 45 - 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior work at the new club house.**

**Activities included: Inspection of erosion control features, oversight of new cart path excavations, soil stockpile in parking lot**

**Site Work Progress:**

**Interior work at the new club house continues. Excavation for new cart path installation at the rear of the clubhouse continues. Soil from the parking lot was originally scheduled to be re-used on site today. Contractor reports that parking lot soil stockpile might be used later in the week or next week. .**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Shallow excavations for new cart path along the 18th fairway at rear of new clubhouse.**

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**Photo 2: View of club house rear yard with new cart path being installed.**

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**Photo 3: Soil pile from the parking area is schedule for re-use on site in the near future. This material is classified as shaping material.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: most sunny skies** **Wind: light breeze** **Humidity**

**Date: April 11, 2018** **Time: 0930 - 1430** High Med (Low)

**Temp: 45 - 55** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior work at the new club house.**

**Activities included: Inspection of erosion control features, oversight of new cart path excavations, soil stockpile in parking lot**

**Site Work Progress:**

**Interior work at the new club house continues. Excavation for new cart path installation at the rear of the clubhouse continues. Soil from the parking lot was originally scheduled to be re-used on site this week. Contractor reports that parking lot soil stockpile might be used later in the week or next week. Soil which was imported from NY Recycling last week is being distributed at the rear of the clubhouse to bring elevations closer to final grade.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Shallow excavations for new cart path along the 18th fairway at rear of new clubhouse.**

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**Photo 2: View of club house rear yard with new cart path being installed.**

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**Photo 3: Soil pile from the parking area is schedule for re-use on site in the near future. This material is classified as shaping material.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: most cloudy skies** **Wind: light breeze** **Humidity**

**Date: April 18, 2018** **Time: 0930 - 1430** High Med (Low)

**Temp: 45 - 55** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: Inspection of erosion control features, oversight of new cart path excavations, soil stockpile in parking lot, weekly construction meeting and trenching for installation of storm water system**

**Site Work Progress:**

**Interior work at the new club house continues. There were no new excavations for new cart path installation at the rear of the clubhouse. Soil from the parking lot was originally scheduled to be re-used on site this week. This work has been delayed until next week. Contractor will provide Maser with advanced notice of the work schedule. Trenching for the installation of pipe for the stormwater system is underway. Trenching is through soils imported from NY Recycling. No indication of any MSW or debris in the trenches. No odors or PID readings.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Shallow excavations for stormwater transmission at front of new clubhouse.**



**Photo 2: View of club house rear yard in area of new cart path.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: most sunny skies** **Wind: light breeze** **Humidity**

**Date: April 23, 2018** **Time: 1300 - 1600** High Med (Low)

**Temp: 60** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: oversight of new cart path installation**

**Site Work Progress:**

**Interior work at the new club house continues. There were no new excavations for the cart path installation at the rear of the clubhouse. However a 6-inch layer of crushed stone and 4 inches of asphalt was installed along a 600 foot long pathway at the rear of the club house for the new cart path. A 2-inch thick layer of sealing material will be applied over the asphalt according to the contractor. Once completed, this will bring the total cover thickness to 12-inches. Soil from the parking lot stockpile remains in the parking lot—although there are plans to re-use this material on the construction site soon. Contractor will provide Maser with advanced notice of the work schedule. Trenching for the installation of pipe for the stormwater system has been completed. There were no obsevations of MSW, the demarcation barrier or debris in the trenches. Surplus materials are being stockpiled and temporarily covered before re-use on site. No odors or PID readings recorded.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: New golf cart path at rear of new Club House.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: rain** **Wind: breezy** **Humidity**

**Date: April 25, 2018** **Time: 1200 - 1400** High Med Low

**Temp: 50** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, EAI**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: installation of SSDS piping inside the new clubhouse**

**Site Work Progress:**

**EAI informed Maser (via e-mail this morning) that they would be in-site today to resume installation of the piping in the SSDS system. Work involved the SSDS pit on the southern side of the builing**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo 1: New SSDS piping and blower installation above the new offices at the Club House.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: most sunny skies** **Wind: breezey** **Humidity**

**Date: April 26, 2018** **Time: 1000 - 1500** High Med (Low)

**Temp: 55-65** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, EAI**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: weekly construction meeting, movement of soils, SSDS piping, blower and monitor installation. Inspection of Erosion Control meaures.**

**Site Work Progress:**

**EAI resumed the installation of SSDS piping by installing the riser on the northern SSDS pit into the utility spaces above the new offices. Piping for the southern SSDS pit was also configured and later connected to the SSDS blower. SSDS monitors were also installed. SSDS Sensors will be installed once their proposed new locations are reviewed and approved.**

**Soils (imported earlier from NY Recycling) were relocated from the front of the clubhouse to the rear of the building—to elevate the grade levels. Soils from the parking lot stockpile remain in-place in the parking lot.**

**Minor trenching work was implemented for the irrigation system between the club house and the new cart path. Excavations were shallow (12") and through soils that were relocated to the rear of the building—with no potential to encounter MSW.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: SSDS monitors installed in the utility space above the new offices.**

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**Photo: 2 SSDS blower installed in the utility space above the new offices.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: light rain** **Wind: light** **Humidity**

**Date: April 27, 2018** **Time: 1300 - 1430** **Temp: 55** °F High Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, EAI**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: EAI running electrical conduits for the SSDS sensors.**

**Site Work Progress:**

**EAI continued the installation of SSDS components by installing the electrical conduits for the sensors above the ceiling of the new offices, bathrooms etc. The actual SSDS Sensors will be installed once their proposed new locations are reviewed and approved.**

**There was no re-use of the soil stockpile in the parking lot.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: SSDS monitors installed in the utility space above the new offices.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: hot & humid** **Wind: light** **Humidity**

**Date: May 4, 2018** **Time: 1300 - 1430** **Temp: 75 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: Grading of area behind the clubhouse. Installation of filter fabric to provide drainage channels--prior to movement of soils from soil stock-pile in the parking lot.**

**Site Work Progress:**

**No new work on the SSDS this week. Some grading at the rear of the clubhouse took place today to accommodate the eventual movement of stockpiled soils from the parking lot to the rear of the clubhouse—between club house and the new cart path.**

**There was no re-use of the soil stockpile in the parking lot this week.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: grading activities at the rear of the clubhouse .**

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**Photo #2: installation of filter fabric and crushed stone to facilitate drainage.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: warm & sunny** **Wind: light** **Humidity**

**Date: May 7, 2018** **Time: 1200 - 1430** High Med Low

**Temp: 75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, Rinaldi**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: Re-use of soil stockpile in the parking lot; transport material to rear of clubhouse and used to increase the grade elevation.**

**Site Work Progress:**

**Contractor Rinaldi used a backhoe and small dump truck to begin the re-use process for soils stockpiled in the parking lot for the past several months. Soils were transported to the rear (eastern side) of the clubhouse and used to increase the grade elevation. Additional material is planned to be moved to the northern side of the clubhouse of the next several days or weeks.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: reuse of parking lot soils.**

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**Photo #2: re-use of parking lot soils to elevated grade at the rear of the clubhouse.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: warm & sunny** **Wind: light** **Humidity**

**Date: May 8, 2018** **Time: 1000 - 1430** High Med Low

**Temp: 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, Rinaldi**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: Re-use of soil stockpile in the parking lot; transport material to rear of clubhouse and used to increase the grade elevation.**

**Site Work Progress:**

**Contractor Rinaldi used a backhoe and small dump truck to begin the re-use process for soils stockpiled in the parking lot for the past several months. Soils were transported to the rear (eastern side) of the clubhouse and used to increase the grade elevation.**

**Weekly Erosion Control Inspections were conducted.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: re-use of soils from parking lot stockpile for grading activities at the rear of the clubhouse .**

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**Photo #2: remaining soils in parking lot.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: warm & sunny** **Wind: light** **Humidity**

**Date: May 16, 2018** **Time: 0900 - 1330** High Med (Low)

**Temp: 75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, Rinaldi, EAI**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: Re-use of soil stockpile in the parking lot; transport material to rear of clubhouse and used to increase the grade elevation.**

**EAI continues installation of SSDS components including sensors and monitors**

**Site Work Progress:**

**Contractor Rinaldi used a backhoe and small dump truck to begin the re-use process for soils stockpiled in the parking lot for the past several months. Soils were transported to the rear (eastern side) of the clubhouse and used to increase the grade elevation.**

**EAI continues work on SSDS component installations.**

**Weekly Erosion Control Inspections were conducted.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1: re-use of soils from parking lot stockpile for grading activities at the rear of the clubhouse .**

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**Photo #2: remaining soils in parking lot.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: overcast** **Wind: light** **Humidity**

**Date: May 23, 2018** **Time: 0900 - 1430** (High) Med Low

**Temp: 60** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, Rinaldi, EAI**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Activities included: Re-use of soil stockpile in the parking lot; transport material to rear of clubhouse and used to increase the grade elevation.**

**EAI continues installation of SSDS components including sensors and monitors**

**Site Work Progress:**

**Contractor Rinaldi used a backhoe and small dump truck to begin the re-use process for soils stockpiled in the parking lot for the past several months. Soils were transported to the rear (eastern side) of the clubhouse and used to increase the grade elevation.**

**EAI continues work on SSDS component installations.**

**Weekly Erosion Control Inspections were conducted.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1: re-use of soils from parking lot stockpile for grading activities at the rear of the clubhouse .**



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**Photo #2: Methane Sensor in ball room ceiling.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: sunny** **Wind: light** **Humidity**

**Date: May 25, 2018** **Time: 0900 - 1400** High (Med) Low

**Temp: 70-75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, EAI, Spinella Landscaping/Dynamic Environmental**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Importation of top soil for landscape beds on the western side (front) of the clubhouse. Topsoil was delivered by Dynamic Environmental Contractors from Spinella Landscaping Long Island, NY.**

**EAI continues installation of SSDS components including sensors and monitors**

**Site Work Progress:**

**Five, 30 yard loads of topsoil was delivered to the site from a commercial landscape source.**

**Installation of new sewer pump on the southern side of the clubhouse. Excavation did not encounter any MSW or demarcation Barriers. No PID readi ngs were measured above background concentrations.**

**EAI continues work on SSDS component installations.**

**Weekly Erosion Control Inspections were conducted.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1: installation of new sewer pump/housing on southern side of clubhouse. No demarcation barrier or MSW was encountered.**

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**Photo #2:Topsoil importation from Spinella Landscaping.**



**Photo #3: Methane sensor installation by EAI.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: overcast, drizzle** **Wind: light** **Humidity**

**Date: May 31, 2018** **Time: 1000 - 1430** (High) Med Low

**Temp: 60** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, EAI**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**The previous sewer pump installation was found to have been performed incorrectly. The unit will have to be re-excavated, re-oriented and piped.**

**Con Ed is on site for the installation of natural gas supply lines to the new club house. Trenching was performed to facilitate gas pipe installation. Excavations were shallow and through materials that were previously imported from NY Reclycling. Excavations did not encounter any demarcation barriers, MSW or debris. No odors or PID readings were recorded.**

**EAI continues installation of SSDS components including sensors and monitors. EAI reinstalled the suction blower on the southern side of the club house—which had been dismantled to allow the trades to install components of the HVAC-without interference.**

**Site Work Progress:**

**EAI continues work on SSDS component installations. Senors and monitors were installed. Sampling and calibration lines were prepared for installation.**

**Trenching for gas line installation was performed on the western (front) side of the clubhouse. Con Ed will be installing the servce line.**

**Weekly Erosion Control Inspections were conducted.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1: Topsoil from Spinella Landscaping staged on site for use in the landscape beds on the western side of the clubhouse.**

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**Photo #2: Trenching for gas line installation by Con Ed (western side of clubhouse)**



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**Photo #3: Suction blower re-installed—southern side of the clubhouse.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: partly cloudy** **Wind: light** **Humidity**

**Date: June 1, 2018** **Time: 0900 - 1430** **Temp: 75 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Continued movement of soils from the parking to lot the berm on the northwestern side of the new club house.**

**Site Work Progress:**

**EAI continues work on SSDS component installations. Senors and monitors were installed. Sampling and calibration lines were prepared for installation.**

**Trenching for gas line installation on the western (front) side of the clubhouse has been completed. Sewer pump installation is on-going on the southern side of the building.**

**Weekly Erosion Control Inspections were conducted.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Remnants of parking lot soil pile being moved to the construction site.**

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**Photo #2: Material being moved to the berm on the northwestern side of the clubhouse.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: partly cloudy** **Wind: light** **Humidity**

**Date: June 6, 2018** **Time: 1300 - 1700** High (Med) Low

**Temp: 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Continued movement of soils from the parking to lot the berm on the northwestern side of the new club house.**

**Inspections of SSDS components.**

**Meeting with NYSDEC –requirements for clubhouse opening June 11.**

**Site Work Progress:**

**in preparation for the meeting with NYSDEC, compliance inspections were conducted on the SSDS components.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Remnants of parking lot soil pile being moved to the construction site.**



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**Photo #2: Southern SSDS stack on roof of the new club house.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: partly cloudy** **Wind: light** **Humidity**

**Date: June 7, 2018** **Time: 0930 - 1300** (High) Med Low

**Temp: 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G, Woodard Curran, EAI**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Continued movement of soils from the parking to lot the berm on the northwestern side of the new club house.**

**Inspections of SSDS components and testing of suction blowers and sub-slab monitoring ports by EAI and WC.**

**Site Work Progress:**

**EAI and Woodard Curran tested the suction blowers and select sub-slab monitoring ports for the presence of a vacuum beneath the building. Ports on the northeastern and southwestern sides of the new clubhouse were tested. Vacuum pressures greater than -1 inch of water were record at both locations indicating the SSDS is functioning as designed.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Remnants of parking lot soil pile being moved to the construction site.**



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**Photo #2: Clock tower relocation has been completed.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: mostly cloudy** **Wind: light** **Humidity**

**Date: June 8, 2018** **Time: 1300 - 1600** High (Med) Low

**Temp: 75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Work progress on the re-installation of the sewer pump on the southern side of the clubhouse. No MSW, demarcation barrier or waste was encountered during the excavavtions.**

**Site Work Progress:**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components.**

**Paving of the delivery and cart path areas on the northern side of the club house continues.**

**Only a few yards of soil remains in the parking lot.**

**Erosion Control inspections were performed.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1: Paving operations in progress.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: sunny, clear** **Wind: breezy** **Humidity**

**Date: June 14, 2018** **Time: 1300 - 1600** High Med Low

**Temp: 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components.**

**Only a few yards of soil remains in the parking lot.**

**Erosion Control Inspections were completed.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Typical pressure probe port in floor of banquet hall.**

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**Photo 2: New Clubhouse following the June 11, 2018 Grand Opening.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: overcast skies** **Wind: breezy** **Humidity**

**Date: June 20, 2018** **Time: 0900 - 1200** High Med Low

**Temp: 75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**Weekly construction meeting teleconference.**

**Erosion Control Inspcetions conducted.**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components.**

**Only a few yards of soil remains in the parking lot.**

**Erosion Control Inspections completed.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Typical pressure probe port in floor of men's locker room.**

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**Photo 2: Remnants of soil stockpile in the parking lot.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: overcast skies** **Wind: breezy** **Humidity**

**Date: June 27, 2018** **Time: 0930 - 1130** High Med Low

**Temp: 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**Weekly construction meeting.**

**Erosion Control Inspcetions conducted.**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Site Traps in parking lot. Maintenance required.**

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**Photo 2: Remnants of soil stockpile in the parking lot.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: sunny skies** **Wind: breezy** **Humidity**

**Date: July 5, 2018** **Time: 0900 - 1330** High (Med) Low

**Temp: 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**Erosion Control Inspcetions conducted.**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: sunny skies** **Wind: breezy** **Humidity**

**Date: July 11, 2018** **Time: 0930 - 1330** High (Med) Low

**Temp: 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, Triple G**

**Active Site Work Areas: Interior and exterior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**Weekly construction meeting**

**Erosion Control Inspcetions conducted.**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: remnants of soil pile from parking lot.**

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**Photo 2: typical sediment trap. Traps are at approximately 25 to 50% capacity with sand and grass clippings. Maintenance needed and requested.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: cloudy** **Wind: light** **Humidity**

**Date: July 17, 2018** **Time: 1200- 1300** **Temp: 90** °F High Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS**

**Active Site Work Areas: Interior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**Erosion Control Inspcetions conducted.**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: remnants of soil pile from parking lot.**

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**Photo 2: service room**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: sunny** **Wind: light** **Humidity**

**Date: July 20, 2018** **Time: 1000 - 1200** High Med (Low)

**Temp: 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS**

**Active Site Work Areas: Interior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components. Replacement methane sensors are expected form the manufacturer next week.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: overcast** **Wind: moderate**
**Humidity**

**Date: July 25, 2018** **Time: 1000 - 1200** High (Med) Low
**Temp: 75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS**

**Active Site Work Areas: Interior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components. Replacement methane sensors are expected form the manufacturer this week according to EAI.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: intermittent rain** **Wind: moderate**
**Humidity**

**Date: August 1, 2018** **Time: 1000 - 1200** High Med Low

**Temp: 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS**

**Active Site Work Areas: Interior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components. Replacement methane sensors are expected from the manufacturer this week according to EAI.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: hazy, hot, humid** **Wind: light & variable** **Humidity**

**Date: August 8, 2018** **Time: 1000 - 1200** High Med Low

**Temp: 90** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS**

**Active Site Work Areas: Interior work at the new club house.**

**Remnants of the soil stockpile remain in the parking lot.**

**Site Work Progress:**

**SSDS blowers are operating. EAI is scheduling the installation of the remaining SSDS components. Several replacement methane sensors were reported to have been received by EAI. The balance of the sensors are expected this week. Sensor installation and testing is tentatively scheduled for the week of August 13 thru 17.**

**Only a few yards of soil remains in the parking lot.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: hot & humid** **Wind: light & variable** **Humidity**

**Date: August 14, 2018** **Time: 1000 - 1200** High (Med) Low

**Temp: 80** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: JCS, EAI**

**Active Site Work Areas: Interior work at the new club house.**

**Remnants of the soil stockpile from the parking lot have been removed. Parking lot is now clear of all stockpiled soils.**

**Site Work Progress:**

**SSDS blowers are operating. EAI is on-site installing new methane sensors and sensor heads. Testing of the new replacement equipment is also taking place.**

**All soils stockpiled in the parking lot have been removed. Sediment traps in the stockpile areas have been cleaned and removed. Only one sediment trap remains in an area where equipment is still being staged.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

**Photo 1: EAI personnel install, calibrate and test replacement methane sensors and heads.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: hot & humid** **Wind: light & variable** **Humidity**

**Date: August 15, 2018** **Time: 0900 - 1700** High (Med) Low

**Temp: 85** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Ranco Snad & Stone, Manorville, NY**

**Active Site Work Areas: All work today was conducted off-site at Ranco Sand & Stone South Street, Manorville (Suffolk County), NY**

**Site Work Progress:**

**Collection of soil sampls for Cover Material Quality Analyses. Site visit to Ranco Sand & Stone, Manorville, NY.**

**Samples collected as per Chemical Permit LimitsTable provided by Steve Lauria, Woodard Curran**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

**Photo 1: Ranco Sand & Stone facility, Manorville, NY.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: partly cloudy** **Wind: breezy** **Humidity**

**Date: August 22, 2018** **Time: 1000 - 1230** High Med (Low)

**Temp: 75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: JCS**

**Active Site Work Areas: Interior work at the new club house.**

**Remnants of the soil stockpile from the parking lot have been removed. Parking lot is now clear of all stockpiled soils.**

**Site Work Progress: SSDS blowers are operating. EAI installed new methane sensors and sensor heads last week. Testing results have been requested.**

**All soils stockpiled in the parking lot have been removed. Sediment traps in the stockpile areas have been cleaned and removed. Only one sediment trap remains in an area where equipment is still being staged.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: SSDS Control Monitor in New Club House**

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# DAILY FIELD OBSERVATION REPORT

**M T W TH F SA SU** **Weather:** Weather **Wind:** 0-5 mph **Humidity**
**Date:** 8-24-2018 **Time:** 7:30 (High Med Low)
**Temp:** 90+

**Name of Project:** Trump Links Golf Course - Ferry Point **Municipality:** Bronx, NY **Job No:** 17002426C

**Site Contractors:** Bellisimo Masonry & Construction (Anthony)

**Active Site Work Areas:** Proposed Gas Main installation & excavation

**Site Work Progress:** Arrived on-site at 7:30am

8:00am - Was informed by that excavation cannot commence until umbrella insurance issue is resolved.

9:00 am laying down plywood and began digging up the telecom line.

10:30am - met with Joe Rodinger. He explained that the demarcation barrier is a caution that says the msw is approximately 1-4 feet below that.

Standard SOP (according to Joe) is that we can dig to depth, replace demarcation barrier with a new one and then sand, pipe, etc.

Demarcation barrier varies from 10"-24". Barrier closest to road has no shaping material on top.

13:15 - Called and spoke to Anthony of Bellisimo, was told I was not needed anymore today.

**Remarks:** N/A

**Site Photographs:** Yes **Additional Action Required by Project Mgr. or Eng.: (YES NO)**

**Observed By:** Vince Carbone **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT

**M** T W TH F SA SU **Weather:** Weather **Wind:** 0-5 mph **Humidity** (High Med Low)
**Date:** 8-27-2018 **Time:** 7:30 **Temp:** 90+

**Name of Project:** Trump Links Golf Course - Ferry Point **Municipality:** Bronx, NY **Job No:**

**Site Contractors:** Bellisimo Masonry & Construction (Anthony)

**Active Site Work Areas:** Proposed Gas Main installation & excavation

**Site Work Progress:** Arrived on-site at 7:30am

8:00am - Walked down to construction area, the rest of the plywood has been staged on each side of the proposed excavation

Umbrella Insurance policy has not been agreed to, cannot progress without.

Departed site around 13:00 after Joe Rodinger dismissed me.

**Remarks:** N/A

**Site Photographs:** Yes **Additional Action Required by Project Mgr. or Eng.: (YES NO)**

**Observed By:** Vince Carbone **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: sunny** **Wind: breezy** **Humidity**

**Date: August 28, 2018** **Time: 0900 - 1500** High Med Low

**Temp: 95** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation along the northern side of the golf course just south of Schley Drive.**

**Site Work Progress: Over 500 linear feet of gas line trench was dug today. Cover material and shaping material was segregated on either side of the trench on plywood sheets for re-use after the gas main is installed.**

**No readings above background concentration on 4-gas meter or PID. No demarcation barriers or waste materials encountered.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Gas Main Trench along the northern side of the Golf Course south of Schley Drive. Cover and shaping material are segregated on either side of the trench for reuse.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny** **Wind: breezy** **Humidity**

**Date: August 29, 2018** **Time: 1000 - 1500** High (Med) Low

**Temp: 95** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation along the northern side of the golf course just south of Schley Drive. Gas main pipeline trench was extended southward to the golf cart path.**

**Site Work Progress: Gas Line trench was extended to its first intersection with the golf cart path along fairway #6. Cover material and shaping material was segregated on either side of the trench on plywood sheets for re-use after the gas main is installed.**

**No air monitoring measurements exceeded background concentrations. No waste materials encountered.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1: Looking northward, Gas Main Trench along the northern side of the Golf Course south of Schley Drive. Cover and shaping material are segregated on either side of the trench.**

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**Photo 2: Looking southward, the gas line pipeline route-heading south toward the golf cart path- prior to excavation.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: clear & sunny** **Wind: light & variable** **Humidity**

**Date: September 4, 2018** **Time: 1000 - 1400** High (Med) Low

**Temp: 90** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline: saw cutting in the maintenance area in preparation for trenching.**

**Also area between Buttrick & Schley is being prepared for pipeline installation by Con Edison.**

**No PID or four gas meter measurements above background levels.**

**Site Work Progress: Saw cutting from the cart path into the maintenance area was initiated today (contractor was to have completed this yesterday however they experienced problems with the saw cutting machine).**

**Con Edison is transporting and staging plastic 6-inch pipe at the trench on the northside of the golf course in preparation for installation.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1: Looking southward, Gas Main Trench along the northern side of the Golf Course along golf cart path Fairway #6.**

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**Photo 2: Saw cutting asphalt in the golf course maintenance area (north side of maintenance building).**

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# DAILY FIELD OBSERVATION REPORT

**M T (W) TH F SA SU** **Weather:** Weather **Wind:** 0-5 mph **Humidity** (High) Med Low)
**Date:** 9-5-2018 **Time:** 7:30 **Temp:** 90+

**Name of Project:** Trump Links Golf Course - Ferry Point **Municipality:** Bronx, NY **Job No:** 17002426C

**Site Contractors:** Bellisimo Masonry & Construction (Anthony)

**Active Site Work Areas:** Proposed Gas Main installation & excavation

**Site Work Progress:** Arrived on-site at 7:30am

Upon arrival, gas meter located in Chris' office was not working. Called Pine Environmental and had them deliver a new one.

7:45am - Began preliminary observations, asphalt in front on maintenance garage has been saw cut, had to offset in fron of bay door No. due to natural gas cap.

8:30am - ConEd arrived on-site.

9:15am - Orange Demarcation barrier is being laid down in trench (See attached map for location) (BLUE AREA)

9:20am - 3" of sand is being laid on top of orange demarcation barrier (Checking with measured broom stick handle)

10:00am - Anthony (Bellisimo) began removal asphalt layer from north and east side of the maintenance garage.
10:10am - Measured trench in asphalt - ranged from 36"-42"

**Remarks:** N/A

11:00am - Spoke to ConEd workers, they explained the bonding process. 20 min of intense heat (400-450 degrees) to bond two sections together and 20 minutes for the pieces to cool down before they can be placed in trench.

11:15am - Anthony (Bellisimo) began trenching across golf cart path (See attached map, YELLOW AREA). Steel plate placed over trench.

11:40am - Pine Environmental delivered new gas meter

12:00pm - ConEd front loader broke down, need to replace with new one

13:30pm - New front loader arrives and bonding continues
14:30 - Anthony (Bellisimo) was trenching along east side of maintenance garage. Exposed current 4"gas line (See attached map, GREEN AREA)

15:40pm - Orange demarcation barrier has been laid with 3" of sand on top from Buttrick Avenue to where the trench first crosses the golf cart path (See attached map)

15:45pm - 8 sections of new 6" gas pipe has been bonded and placed in trench.

16:30pm - Trenching has ended for the day

**Site Photographs:** Yes **Additional Action Required by Project Mgr. or Eng.: (YES (NO)**

**Observed By:** Vince Carbone **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny/Slightly Cloud** **Wind: light to mild** **Humidity**

**Date: September 6, 2018** **Time: 0900 - 1630** High (Med) Low

**Temp: 90** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation pipeline: saw cutting, trenching, and backfilling in the maintenance area.**

**Piping welded from Buttrick & Schley Ave to the cart path on Fairway #6 for pipeline installation by Con Edison.**

**No PID or four gas meter measurements above background levels.**

**Site Work Progress: The trench on the northeastern and northwestern sides of the maintenance building were backfilled with a minimum of 3" of clean fill. Thickness of the fill measured every 10' throughout an estimated ~170 LF trench. Trench on the northwestern side was extended 10 – 20 LF by cutting asphalt and excavating soil material nearby.**

**Con Edison welding and installing plastic 6-inch pipe at the trench on the northside of the golf course . Note: Areas with <18" of soil above the pipe require steel section above the pipe.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Trench Along the west side of Maintenance Building.**

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**Photo 2: Trench Along Maintenance Building prepared for Backfill.**

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**Photo 3: Con-Ed Welding & Installation Staging Area north side of golf course.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: cloudy** **Wind: breezy** **Humidity**

**Date: September 7, 2018** **Time: 1100 - 1630** High (Med) Low

**Temp: 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation along the northern and western sides of the maintenance facility. Testing of fittings and connections by RECONN. Gas main pipeline trench was saw cut and extended southward toward the golf cart path near the 8th tee box.**

**Site Work Progress: Pipeline pressure tests conducted by Con Edison. All fittings, joints and welds tested for integrity by RECONN.**

**No air monitoring measurements exceeded background concentrations.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Con Ed laborers preparing to install gas line along the northern side of the maintenance facility.**

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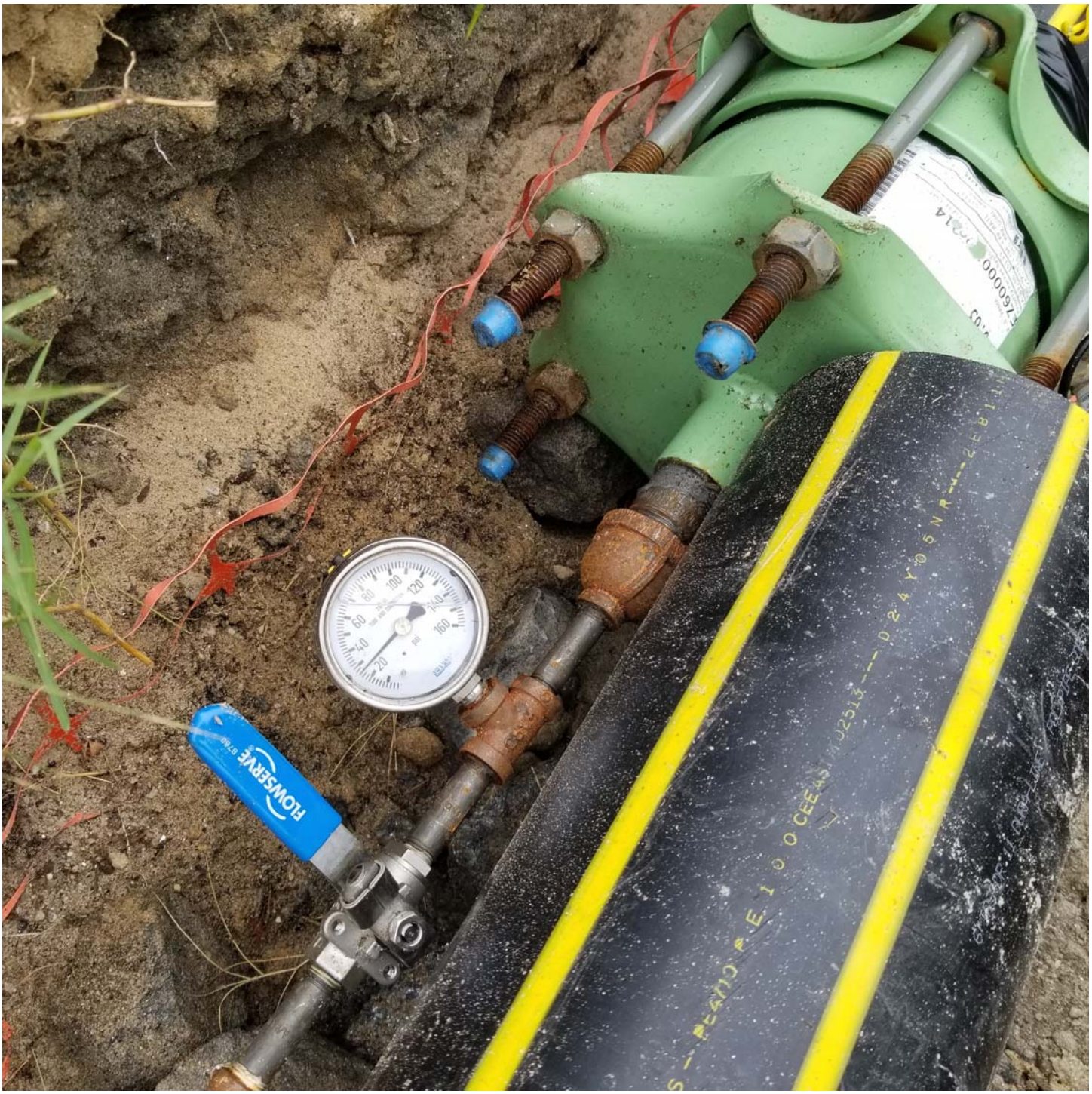


**Photo 2: Pressure tesing of the newly installed 6-inch gas line.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M** T W TH F SA SU **Weather: rain** **Wind: breezy** **Humidity**

**Date: September 10, 2018** **Time: 1100 - 1530** High Med Low

**Temp: 55** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation along the northern and western sides of the maintenance facility. Testing of fittings and connections by RECONN. Gas main pipeline trench was saw cut and extended southward toward the golf cart path near the 8th tee box. Pipeline installed.**

**Site Work Progress: Gas Line trench was extended to its first intersection with the golf cart path along fairway #8. Backfilling of pipeline in trenches on the northern and western sides of the maintenance facility. Weather slowed the progress of work today. All pipes that could be installaed, were installed.**

**No air monitoring measurements exceeded background concentrations.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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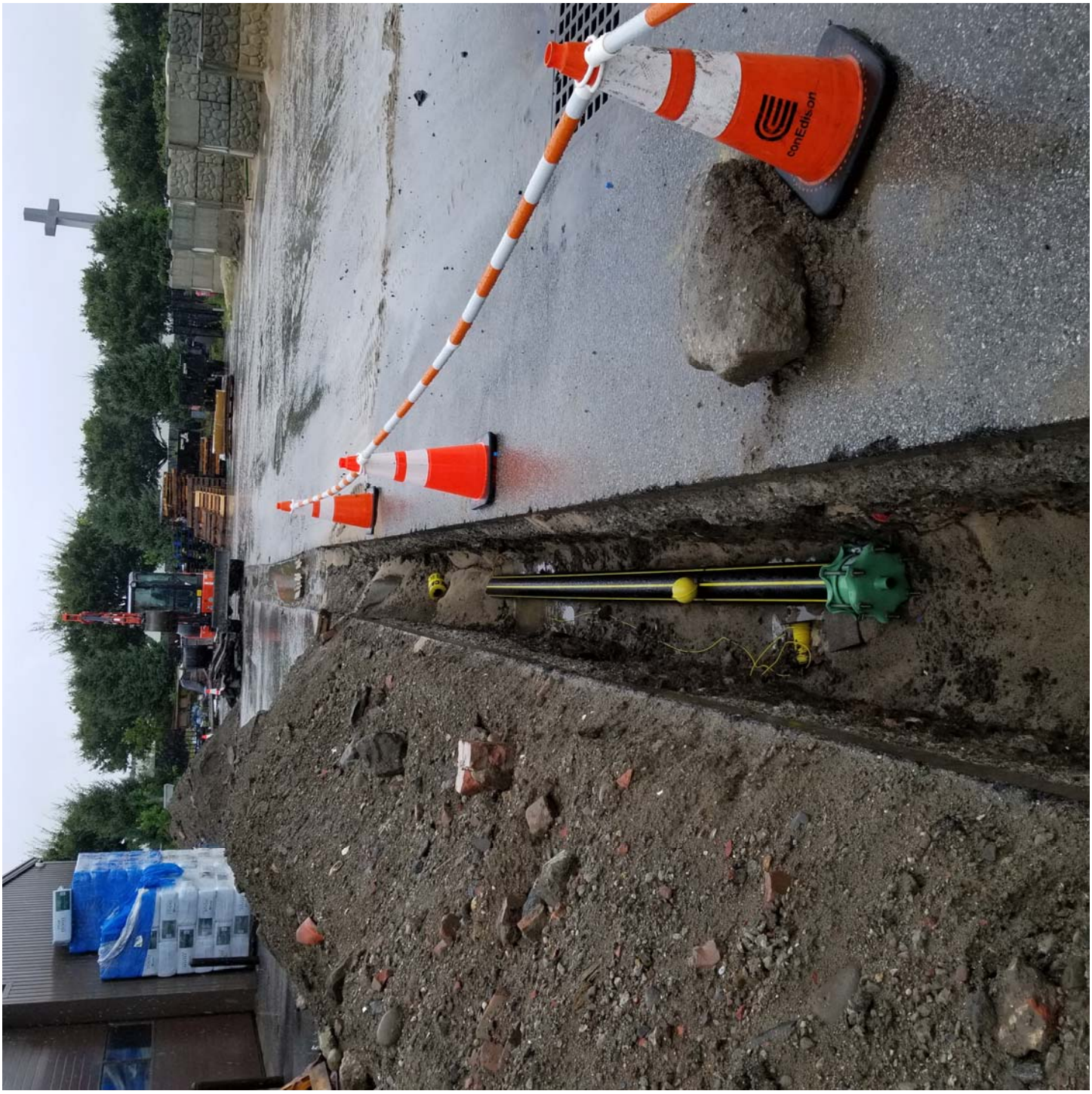


**Photo 1:Gas line along the northern side of the maintenance facility.**

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**P** **Photo 2 :Pipeline installation along the west side of the maintenance building.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: overcast with occasional drizzle** **Wind: calm** **Humidity**

**Date: September 11, 2018** **Time: 1030 - 1530** High Med Low

**Temp: 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation along the northern side of the maintenance facility northward toward the 7th fairway. Testing of fittings and connections by RECONN. Gas main pipeline along fairway #6 was backfilled to specifications. Approximatley 450 linear feet of backfill was completed today.**

**Site Work Progress: Backfilling of pipeline from the northern side of the golf course southward toward the cart path along Fairway #6. Pipeline installation continued from the maintenance facility northward toward the 7th Tee Box.**

**No air monitoring measurements exceeded background concentrations.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**

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**Photo 1:Gas line along the northern side of the maintenace facility.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Cloudy/Slightly Rainy** **Wind: light to mild** **Humidity**

**Date: September 12, 2018** **Time: 0900 - 1700** **Temp: 60 - 70** °F (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline - Backfilling in the Trenches North of Maintenance Garage**

**Piping welded around trench bends for installation by Con Edison.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Trenches in various locations were backfilled north of the maintenance building. Toward the northern end of the course near Buttrick & Dewey Ave prior backfilling and near the maintenance building area, clean cover sand was backfilled to a minimum of 3" thick above the gas pipe and shaping material soil was covered over. Areas near the intersection of the golf course were backfilled with a minimum of 3" thick clean fill sand at the base of the trench. Thickness of the clean fill above and below pipes were measured every 10' throughout the trench.**

**79,500 lbs of clean cover fill from Ranco Sand & Stone was delivered to the site and stored at the maintenance building.**

**Con Edison welded and installed plastic 6-inch pipe at trench bends near the trail intersection of the gas installation .**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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**Photo 1: Northern Trench Near Buttrick and Dewey Ave Backfilled to Grade with Shaping S**

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**Photo 2: Northern Trench Near Maintenance Building Backfilled to Grade with Shaping Soil**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Cloudy/Slightly Rainy** **Wind: light to mild** **Humidity**

**Date: September 13, 2018** **Time: 0800 - 1500** High (Med) Low

**Temp: 60 - 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline – Excavating Trenches South of Maintenance Garage toward clubhouse**

**Piping welded around trench bends for installation by Con Edison.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Roughly 500' of trench south of the maintenance building from the rear entrance along the path to the clubhouse was excavated. Trench depth ranged from 30 – 40" below ground surface. Near the fence line of the trench, gravel, plastic piping, and plastic liner was encountered. Roughly 10' of perforated pipe was damaged during the disturbance. The contractor (Anthony) was notified to repair the drainage area. Unmarked utilities were also encountered, but were not damaged. All materials were stocked onto plywood panels adjacent to the trench. Shaping layer soil was placed on one side of the trench, while cover sand was placed on the oppostie side for later backfilling.**

**Excess shaping material from backfilling activities was stockpiled in the bin northwest end of the maintenance building.**

**Con Edison continued welding and installing plastic 6-inch pipe at trenches north of the maintenance building.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**

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**Photo 1: Trench South of Maintenance Building Along Hutchinson River Parkway service road.**

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**Photo 2: Damaged Perforated Piping from Drainage Area. Repairs were made.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Cloudy/Slightly Sunny** **Wind: light to mild** **Humidity**

**Date: September 14, 2018** **Time: 0800 - 1500** High (Med) Low

**Temp: 60 - 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation – Excavating Trenches South of Maintenance Garage toward clubhouse, Backfilling Trenches North of Maintenance Garage**

**Piping installed in southern trenches by Con Edison.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Roughly 400' of trench south of the maintenance building along the western property line was excavated. Trench depth ranged from 30 – 40" below ground surface. Gravel, plastic piping, and plastic liner was encountered. Roughly 2' of perforated pipe was damaged during the disturbance. The contractor (Anthony) was notified to repair the drainage area. Portions of the trench were primarily composed of gravel from a drainage system and will be backfilled. Asphalt was cut and concrete was broken on the eastern rear gate prior to trenching. All materials were stocked onto plywood panels along the trench. Shaping layer soil was placed on one side while cover sand soil was placed on the other.**

**Roughly 20' of clean cover soil was backfilled over piping in trenches north of the maintenance building to a minimum thickness of 3". Caution tape was placed on top of the backfilled sand.**

**Con Edison performed a pressure tests on the pipeline sections near the automated gate located south of the maintenance garage. The test was successful with no leaks in the system. Plastic 6" pipe was installed in the trenches south of the maintenance building. The trench was not backfilled with 3" minimum of bedding. Anthony and Con Edison were notified that clean cover sand must be backfilled on the bedding of the trench either prior to installation or worked around the piping. Con Edison responded that the bedding will be installed.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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**Photo 1: Trench South of Maintenance Building Along Hutchinson River Parkway service road.**

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**Photo 2: Piping Installed in Trench near Rear Entrance Gate, Asphalt and Concrete to be Trenched.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny/Slightly Cloudy** **Wind: light to mild** **Humidity**

**Date: September 13, 2018** **Time: 0800 - 1500** **Temp: 60 - 70 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline – Excavating Trenches South of Maintenance Garage toward clubhouse, Backfilling Trenches North of Maintenance Garage**

**Piping installed in southern trenches by Con Edison.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Roughly 250' of trench south of the maintenance building was excavated. The trench was generally 36" below ground surface. Roughly 6' of perforated pipe was observed to be damaged during the trenching. The contractor (Anthony) was notified to repair the drainage areas prior.**

**Asphalt was cut and concrete was broken up near the rear gate prior to trenching. Broken up asphalt and concrete were stockpile separately for disposal. Remaining materials were stockpiled onto plywood panels along side the trench.**

**Clean cover soil was backfilled over 80 linear feet of piping in trenches north of the maintenance building to a minimum thickness of 3". Caution tape was placed on top of the backfilled sand.**

**Plastic 6" pipe at trenches south of the maintenance building were installed. The trenches were not initially backfilled with 3" minimum of bedding. Anthony and Con Edison are aware that clean cover sand must be backfilled on the bedding of the trench either prior to installation or worked around the piping. Con Edison responded that the bedding will be installed.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Trench South of Maintenance Building Along Hutchinson River Parkway service road (~1/2 Length from Rear Gate to Clubhouse, Gravel & Runoff Sand Excavated and stockpiled).**

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**Photo 2: Trench Between Buttrick & Dewey Ave and trail Crossroad backfilled with minimum of 3" thick clean Sand (Backfill subsequently leveled and caution tape placed above).**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather; Variable with heavy rains** **Wind: moderate** **Humidity**

**Date: September 18, 2018** **Time: 1000 - 1400** **Temp: 75 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation and Trenching along the cart path adjacent to Fairway #8.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Work was slowed to to heavy rains that were once Hurricane Florence. Trenching was advanced on the western side of the cart path near Fairway #8. Con Edison installed 6-inch gas line sections along this same route. Section couplings were tested and approved by RECONN.**

**Trenching operation is approximately 800 feet ahead of the pipeline installation.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Con Edison installing 6 inch pipeline section west of the cart path near Fairway #8.**

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**Photo 2: Trench on the east side of the cart path adjacent to Fairway #6 is backfilled.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather; mostly sunny and warm** **Wind: light & variable** **Humidity**

**Date: September 19, 2018** **Time: 1000 - 1500** **Temp: 70-75** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation and Trenching along the cart path adjacent to Fairway #8.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Gas line installation work continued along the utility cart path adjacent to Fairway #8. Con Edison crews were short manpower as most were getting re-certified for pipeline work installations. Bellisimo continued trenching and backfilling as appropriate.**

**To date: approximately 4,000 feet has been trenched; 2,800 feet has had pipeline installed, pressure tested and backfilled; 900 feet of open trench with pipe tested but not backfilled; 300 feet of open trench ready for pipeline installation.**

**Approximatley 1,000 feet of trenching remains.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather; mostly sunny** **Wind: light & variable** **Humidity**

**Date: September 20, 2018** **Time: 1000 - 1500** **Temp: 70 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation and Trenching along the cart path adjacent to Fairway #8 up to the intersection with the parking lot.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Gas line installation work continued along the utility cart path adjacent to Fairway #8 and up to the parking lot. Con Edison crews worked to weld, install and pressure test to pipe sections-monitoring by RECONN. Bellisimo continued trenching and backfilling as appropriate.**

**To date: approximately 4,500 feet has been trenched**

**Approximatley 500 feet of trenching remains. Trump is awaiting word from the engineer how close the new pipeline needs to to get to the new clubhouse to have sufficient gas supply.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT

**M T W TH F SA SU** **Weather: Cloudy** **Wind: 10-15mph** **Humidity** (High Med Low)
**Date: 9/21/2018** **Time: 7:30am**
**Temp: 65 degrees**

**Name of Project: Trump Links Gas Main** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Bellisimo Construction, ConEdison**

**Active Site Work Areas:**

**Site Work Progress:**
**Trenching began along west side of entrance to service road.**
**Trenching extended to wrap around to the front of the "Trump Links" sign**
**Began ripping up asphalt to connect to current gas box**
**Encountered water from either irrigation lines or rainfall in trench**
**ConEd connected gas main and pressure tested it (Passed)**
**Backfilled areas include only across the service road to allow access for cars**

**Remarks: N/A**

**Site Photographs: Yes** **Additional Action Required by Project Mgr. or Eng.: (YES NO)**

**Observed By: VJC** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather; mostly cloudy & wiindy** **Wind: windy** **Humidity**

**Date: September 24, 2018** **Time: 1000 - 1500** **Temp: 60-65** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation and Trenching extended to the Trump Links sign and across the driveway to the gas vault. Con Edison continued to weld sections of pipeline, install and test with RECONN inspections.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Gas line installation trenching is almost completed. Con Edison crews worked to weld, install and pressure test pipe sections-monitoring by RECONN. Bellisimo continued trenching and backfilling as appropriate.**

**To date: approximately 5,000 feet has been trenched**

**Con Edison engineer indicated that the because a 6-inch line was intstalled instead of a 4-inch line there will be a sufficient volume of fuel for the new clubhouse.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo 1: Gas Main Trench is extended beyond the Trump Links Sign to the existing gas vault.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: heavy rain** **Wind: gusty** **Humidity**

**Date: September 25, 2018** **Time: 1200 - 1500** **Temp: 65-70** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation and Trenching in front of New Club House**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Heavy rain hampered work progress today.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Trenching in front of the new club house.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny & warm** **Wind: light & variable** **Humidity**

**Date: September 26, 2018** **Time: 1200 - 1500** **Temp: 75 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison**

**Active Site Work Areas: Gas Main Installation and Trenching in front of New Club House. Attempts made to locate existing gas service to connect it to the new 6 inch main.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Backfilling of trench in front of new clubhouse after pipeline installation and testing by Con Edison. Locate existing 2-inch service line so that it can be connected to the new 6-inch gas main.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Trenching in front of the new club house in the vicinity of the existing 2-inch service line.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: mostly sunny & warm** **Wind: calm** **Humidity**

**Date: October 1, 2018** **Time: 1200 - 1400** **Temp: 70** °F High Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: topping of backfilled areas with cover material to bring grade a minimum of 27" above the top of the gas line. Cover material was imported from Ranco Sand & Stone.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: areas of the gas line on the northern side of the golf course were prepared with cover material. Work areas include the gas line route along Fairways #6 and #7.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Cover material from Ranco Sand & Stone placed over the gas line to provide adequate cover thickness.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: mostly sunny & warm** **Wind: calm** **Humidity**

**Date: October 2, 2018** **Time: 1200 - 1400** **Temp: 75 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: topping of backfilled areas with cover material to bring grade a minimum of 27" above the top of the gas line. Cover material was imported from Ranco Sand & Stone. Miscellaneous work throughout the job site as Con Edison was not on-site today.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: areas of the gas line on the northern side of the golf course were prepared with cover material. Work areas include the gas line route along Fairways #6, #7 and #8.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Cover material at pipeline route adjacent to Fairway #7.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny & warm** **Wind: calm** **Humidity**

**Date: October 3, 2018** **Time: 1200 - 1400** **Temp: 75 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: topping of backfilled areas with cover material to bring grade a minimum of 27" above the top of the gas line. Cover material was imported from Ranco Sand & Stone. Miscellaneous work throughout the job site as Con Edison was not on-site today.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: areas of the gas line on the northern side of the golf course were prepared with cover material. Work areas include the gas line route along Fairways #6, #7 and #8.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Cover material at pipeline route adjacent to Fairway #6.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: overcast & warm** **Wind: calm** **Humidity**

**Date: October 9, 2018** **Time: 1000 - 1500** **Temp: 70- 75** °F High Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas:Bellision Construction worked the gas pipeline route along side Fairway #6 adding sufficient cover material and grading. Additional landscaping work was conducted in from of the "Trump Links' sign. Con Edison workers were staged on the roadway north of the golf course-opening the roadway in preparation to make the connection with the gas main at Schley and Buttrick.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course were slow and meticulous due to the abundance of underground utilities.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Cover material at pipeline route adjacent to Fairway #6.**

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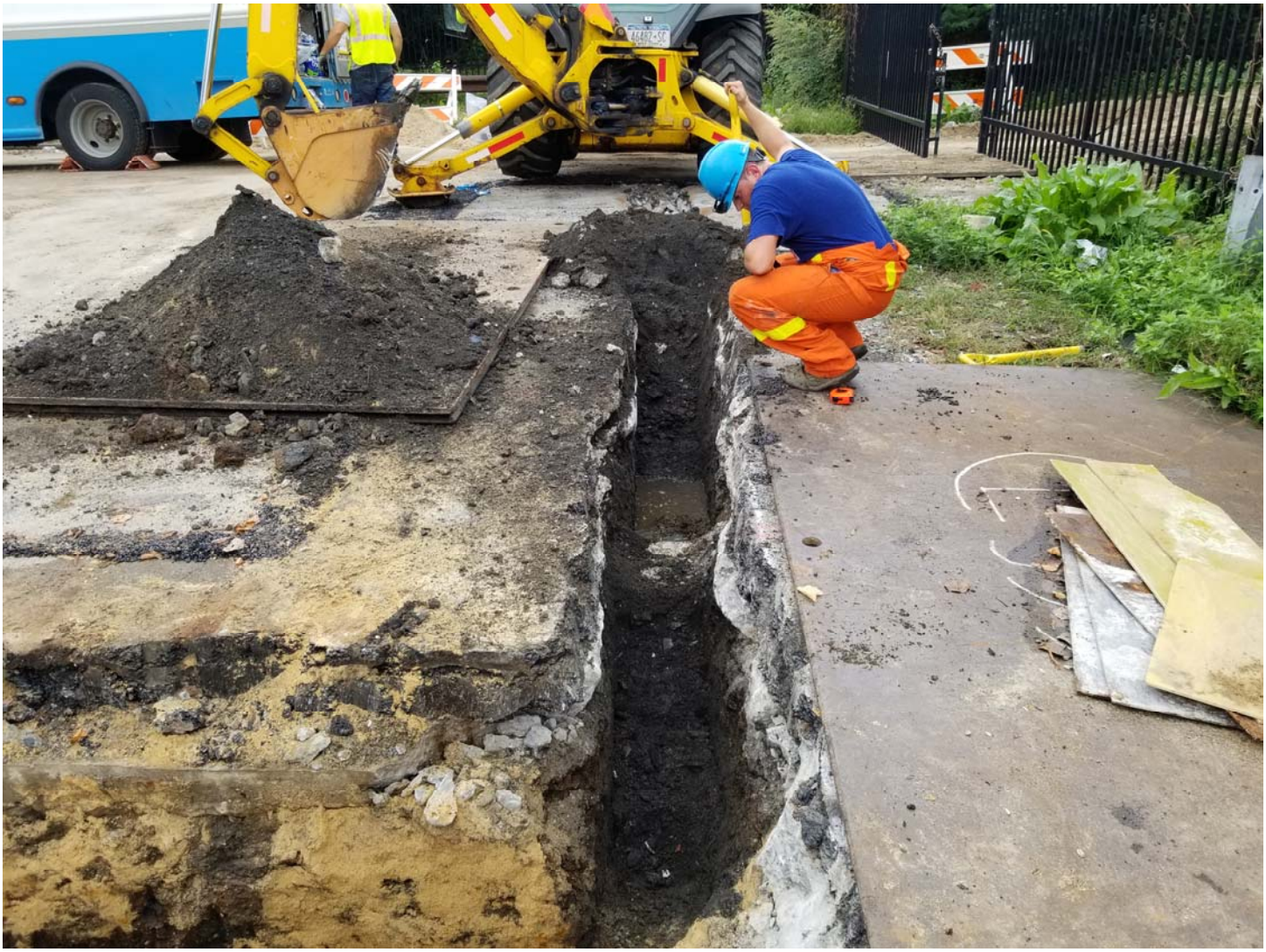

**Photo #2: excavations to connect the new gas line with the existing main near the intersection of Buttrick and Schley.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny & warm** **Wind: light** **Humidity**

**Date: October 10, 2018** **Time: 1030 - 1430** **Temp: 75-78 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Bellisimo continued construction work along the gas pipeline route along side Fairway #6 adding sufficient cover material and grading. Additional landscaping work was conducted in from of the "Trump Links' sign. Con Edison workers were not on-site today.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course have been backfilled. Con Edison was not on-site today so the schedule for the new gas line to be connectred to the Main is unclear.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo: 1 Cover material at pipeline route adjacent to Fairway #6.**

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**Photo #2: Area where the new gas line will be connected to the existing main at intersection of Schley and Buttrick.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: cloudy & mild** **Wind: steady winds** **Humidity**

**Date: October 15, 2018** **Time: 1030 - 1430** **Temp: 65** °F High Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Bellisimo continues miscellaneous construction work along the gas pipeline route along side Fairway #6 adding sufficient cover material and grading. Additional landscaping work was conducted in front of the "Trump Links' sign. Con Edison workers were not on-site today.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course have been covered with protective steel road plates. Con Edison was not on-site today so the schedule for the new gas line to be connected to the Main is unclear. Cover material was staged in the vicinity of open excavations so that it's ready to be deployed as soon as Con Edison makes the final gas line connections.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo: 1 Cover material staged at the northern end of the pipeline route in preparation for the connection to the gas main at Buttrick & Schley.**

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**Photo #2: Area where the new gas line will be connected to the existing main.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather:mostly sunny** **Wind: steady winds** **Humidity**

**Date: October 16, 2018** **Time: 1130 - 1430** **Temp: 50-55 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony) (offsite)**

**Active Site Work Areas: Bellisimo continues miscellaneous construction work along the gas pipeline route along side Fairway #6 adding sufficient cover material and grading—although they were not observed to be on-site today. Additional landscaping work was conducted in from of the "Trump Links' sign. Con Edison workers were not on-site today. Gas Main connection still needs to be accomplished at Buttrick & Schley and at the Club House.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course have been protected with steel road plates. Con Edison was not on-site today so the schedule for the new gas line to be connected to the Main is unclear. Cover material was staged in the vicinity of open excavations so that it's ready to be deployed as soon as Con Edison makes the final gas line connections.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Steel road plates cover the gas line excavation trench at Buttrick & Schley .**

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**Photo #2: Area where the new gas line will be connected to the existing service branch for the club house.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: clear & sunny** **Wind: steady winds** **Humidity**

**Date: October 18, 2018** **Time: 1100 - 1530** **Temp: 45** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Bellisimo continues miscellaneous construction work along the gas pipeline route along side Fairway #6. They are also restoring the cart path adjacent to Fairway #6.**

**Con Edison makes the connection of the 6-inch Gas Line to the 2-inch supply line near the new club house. RECONN inspects and tests all joints and connections.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course have been protected with steel road plates. Con Edison was on-site today and made the connection of the 6-ich gas line to the 2-inch supply line near the club house.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Con Edison making the connection of the 6-inch gas line to the 2-inch supply line near the Club house.**

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**Photo #2: Bellisimo working on the cart path adjacent to Fairway #6/Tee Box for Hole #7.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: mostly sunny & mild** **Wind: light** **Humidity**

**Date: October 19, 2018** **Time: 1200 - 1530** **Temp: 55 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Bellisimo continues miscellaneous construction work along the gas pipeline route at multiple locations.**

**Con Edison makes the connection of the 6-inch Gas Line to the main gas line at the intersection for Buttrick & Schley. RECONN inspects and tests all joints and connections.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: the new 6-inch gas line has now been connected to the gas main. Following testing, the new 5,000 foot gasline can be activated.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: mostly overcast skies** **Wind: breezy** **Humidity**

**Date: October 22, 2018** **Time: 1200 - 1500** **Temp: 50- 55** °F High Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: No contractors on site today**

**Active Site Work Areas: No active work areas as contractors were not onsite today. Open trenches at the new clubhouse and the connection point for the gas line were checked for air quality.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Contractors were not on-site today. Air quality measurements were collected at open trenches at the northern and southern end of the pipeline route. No measurements recorded above background levels.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Gas Line connected at northern end of pipeline route.**

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**Photo #2: Pipeline connection area at southern end of pipeline route near the new clubhouse.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: mostly overcast skies** **Wind: light** **Humidity**

**Date: January 15, 2019** **Time: 1200 - 1400** **Temp: 35** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: No contractors on site today**

**Active Site Work Areas: Contractors excavating area for the new back-up generator located between the new club house and the temporary club house.**

**Site Work Progress: Electrical conduit runs have been cut into the subsurface. No disturbance of the demarcation barrier or any signs for solid waste. No PID readings, odors or smells.**

**Digging is being done mostly by hand due to the fact that heavy equipment cannot access the area. Sawcutting and jacking of the highly compacted subsurface material is taking place. Contractors are attemping to complete the excavation since the pour fo the concrete pad is scheduled for tomorrow.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 contractors hand dig area for new generator installation.**

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**Photo #2: Sawcutting existing concrete in order to run electrical service to the new generator pad.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny skies** **Wind: moderate** **Humidity**

**Date: January 16, 2019** **Time: 1100 - 1300** **Temp: 35** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Contractors on site today**

**Active Site Work Areas: Contractors excavating area for the new back-up generator located between the new club house and the temporary club house.**

**Site Work Progress: Electrical conduit runs have been cut into the subsurface. No disturbance of the demarcation barrier or any signs for solid waste. No PID readings, odors or smells.**

**Digging is being done mostly by hand due to the fact that heavy equipment cannot access the area. Sawcutting and jacking of the highly compacted subsurface material is taking place.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 new generator pad in ready condition for the concrete pour**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: sunny skies, very mild** **Wind: light**
**Humidity**

**Date: February 5, 2019** **Time: 1200 - 1520** **Temp: 55 - 60** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Control Point Surveyors on site.**

**Active Site Work Areas: Photographs of completed concrete pad for the generator. Photographs of gas main route and SSDS components.**

**Site Work Progress: All exterior work related to the pouring of the concrete pad for the new generator has been completed. Generator has not yet been installed. Inspection of the previous gas line installation work shows that cover material has compacted in some areas. Hydroseeded areas are generally protected from wind and runoff. Future inspections will be scheduled.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 new generator pad between new club house and temporary club house.**

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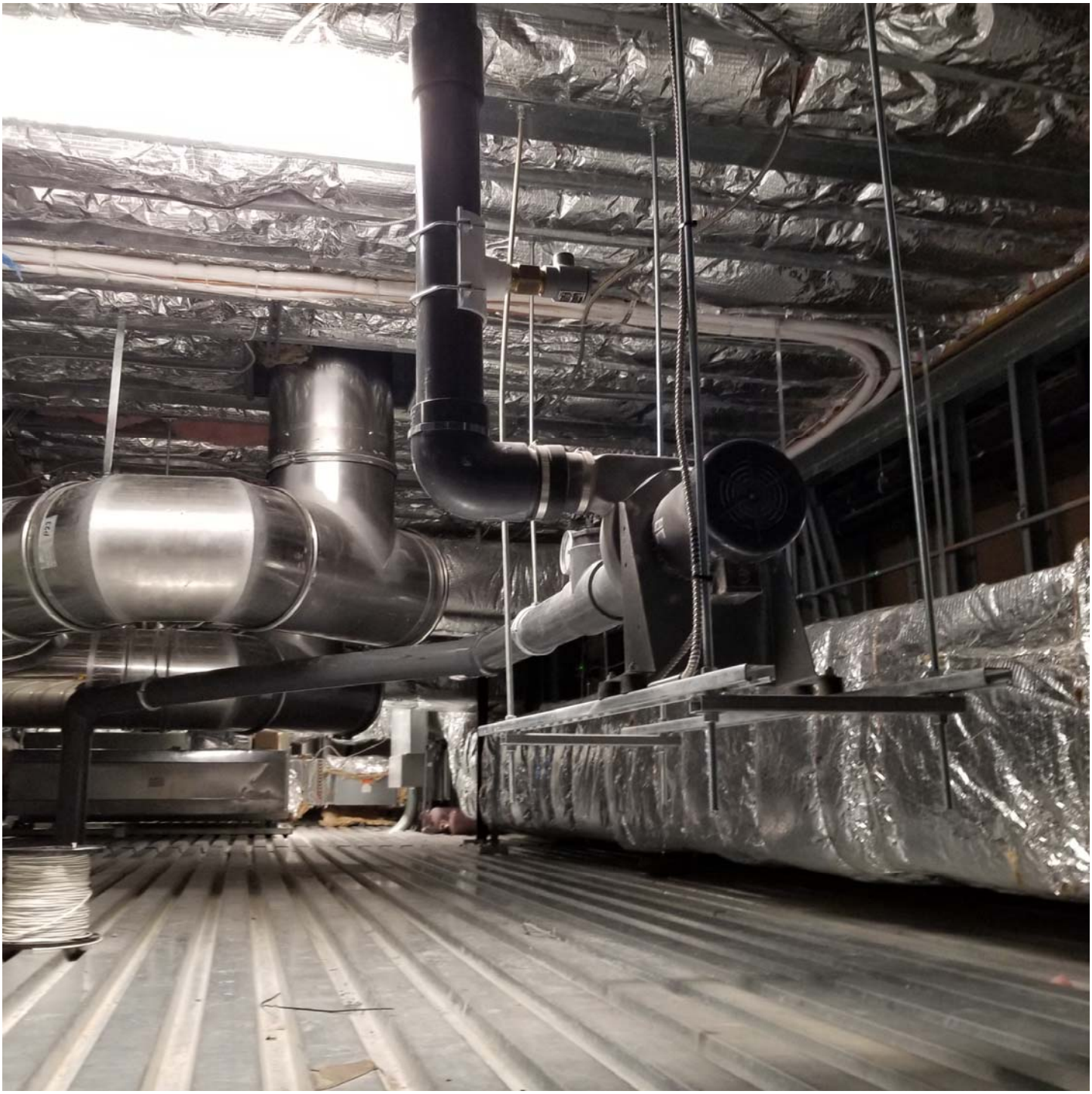

**Photo 2: SSDS fan in operation in mezzanine section south side of club house.**

# APPENDIX J

## Hampton-Clarke Project No. 7092827 Report dated October 30, 2017

Hampton-Clarke
Analytical & Field Services

175 ROUTE 46 WEST, UNIT D · FAIRFIELD, NJ 07004
2 MADISON ROAD, FAIRFIELD, NJ 07004
800-426-9992 · 973-244-9770
FAX: 973-244-9787
WWW.HCVLAB.COM

# Project: Trump Links

**Client PO:** Not Available

**Report To:** Maser Consulting
50 Chestnut Ridge Road
Montvale, NJ 07645

Attn: David Keil

**Received Date:** 9/28/2017

**Report Date:** 10/30/2017

**Deliverables:** NYDOH-R

**Lab ID:** AD00298

**Lab Project No:** 7092827

This report is a true report of results obtained from our tests of this material. The report relates only to those samples received and analyzed by the laboratory. All results meet the requirements of the NELAC Institute standards. Laboratory reports may not be reproduced, except in full, without the written approval of the laboratory.

In lieu of a formal contract document, the total aggregate liability of Hampton-Clarke to all parties shall not exceed Hampton-Clarke's total fee for analytical services rendered.

Robin Cousineau - Quality Assurance Director OR Jean Revolus - Laboratory Director

NJ (07071) NY (ELAP11408) CT (PH-0671)
PA (68-00463) KY (90124)

NELAP ACCREDITED TNI LABORATORY

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# Sample Summary

**Client:** Maser Consulting

**HC Project #:** 7092827

**Project:** Trump Links

| Lab# | SampleID | Matrix | Collection Date | Receipt Date |
|---|---|---|---|---|
| AD00298-001 | 475 EXTERIOR NYRECYCLE Grab | Soil/Terracore | 9/28/2017 | 9/28/2017 |
| AD00298-002 | 475 EXTERIOR NYRECYCLE COMP | Aqueous | 9/28/2017 | 9/28/2017 |

# HC Case Narrative

**Client:** Maser Consulting
**Project:** Trump Links

**HC Project:** 7092827

*This case narrative is in the form of an exception report. Method specific and/or QA/QC anomalies related to this report only are detailed below.*

## Volatile Organic Analysis:

The Method Blank Spike for batch 64307 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

The MS/MSD RPD, Matrix Spike and Matrix Spike Duplicate for batch 64307 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

## TCLP Volatile Organic Analysis:

The Method Blank Spike for batch 64316 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

The MS/MSD RPD, Matrix Spike and Matrix Spike Duplicate for batch 64316 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

## Base Neutral/Acid Extractable Analysis:

Sample AD00298-002 was analyzed at a dilution due to high concentration of target analytes.

The Method Blank Spike for batch 63050 and 63067 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

The MS/MSD RPD, Matrix Spike and Matrix Spike Duplicate for batch 63050 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

## PCB Analysis:

Data conforms to method requirements.

## Pesticide Analysis:

The Matrix Spike and Matrix Spike Duplicate for batch 63043 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

## Herbicide Analysis:

Data conforms to method requirements.

## Metals Analysis:

Due to contamination in LCS/LCSMR, batch 62650 was reset for Ba.

The Matrix Spike and Matrix Spike Duplicate for batch 62650 had recoveries outside QC limits. Please refer to the applicable Form 5/7 for the recoveries.

The RPD between the QC sample and the Method Replicate had recoveries outside QC limits in batches 62644 and 62650. Please refer to the applicable Form 6/9 for the recoveries.

The MS/MSD RPD had recoveries outside QC limits in batch 62650. Please refer to the applicable Form 6/9 for the recoveries.

The serial dilution for batches 62644 and 62650 is outside QC limits for one or more analytes. Please refer to the applicable Form 6/9 for the recoveries.

## TCLP Metals Analysis:

Data conforms to method requirements.

## Wet Chemistry Analysis:

Sample AD00298-002 was analyzed for Reactivity using SW-846 7.3. SW-846 7.3 is not a NELAP accredited parameter.

## Subcontracted Analysis:

Please refer to attached subcontracted laboratory report. Sample AD00298-001 submitted to eurofins for Dioxin Scan (1613) analysis, PCDD & PCDF (8290) analysis, and Organophosphorous Pesticides (8141) analysis.

Robin Cousineau
Quality Assurance Director

Or

Jean Revolus
Laboratory Director

10/30/2017
Date

# HC Executive Summary

**Client:** Maser Consulting

**HC Project #:** 7092827

**Project:** Trump Links

**Lab#: AD00298-002** **Sample ID: 475 EXTERIOR NYRECYCLE CO**

| Analyte | Units | RL | Result | Analytical Method |
|---|---|---|---|---|
| 2,3,7,8-TCDD | | | Attached | EPA 1613 |
| Barium | mg/kg | 11 | 200 | EPA 6010C |
| Barium | mg/l | 0.25 | 0.41 | EPA 6010C |
| Chromium | mg/kg | 5.4 | 46 | EPA 6010C |
| Copper | mg/kg | 5.4 | 58 | EPA 6010C |
| Lead | mg/kg | 5.4 | 120 | EPA 6010C |
| Arsenic | mg/kg | 0.22 | 6.0 | EPA 6020A |
| Mercury | mg/kg | 0.091 | 0.37 | EPA 7471B |
| a-Chlordane | mg/kg | 0.0054 | 0.0082 | EPA 8081B |
| Chlordane (Technical) | mg/kg | 0.027 | 0.055 | EPA 8081B |
| Chlordane (Total) | mg/kg | 0.0054 | 0.016 | EPA 8081B |
| p,p'-DDE | mg/kg | 0.0027 | 0.0052 | EPA 8081B |
| p,p'-DDT | mg/kg | 0.0027 | 0.0091 | EPA 8081B |
| y-Chlordane | mg/kg | 0.0054 | 0.0076 | EPA 8081B |
| Parathion | | | Attached | EPA 8141 |
| Anthracene | mg/kg | 0.18 | 0.24 | EPA 8270D |
| Benzo[a]anthracene | mg/kg | 0.18 | 0.95 | EPA 8270D |
| Benzo[a]pyrene | mg/kg | 0.18 | 0.94 | EPA 8270D |
| Benzo[b]fluoranthene | mg/kg | 0.18 | 1.2 | EPA 8270D |
| Benzo[g,h,i]perylene | mg/kg | 0.18 | 0.69 | EPA 8270D |
| Benzo[k]fluoranthene | mg/kg | 0.18 | 0.35 | EPA 8270D |
| Chrysene | mg/kg | 0.18 | 0.93 | EPA 8270D |
| Dibenzo[a,h]anthracene | mg/kg | 0.18 | 0.20 | EPA 8270D |
| Fluoranthene | mg/kg | 0.18 | 1.5 | EPA 8270D |
| Indeno[1,2,3-cd]pyrene | mg/kg | 0.18 | 0.62 | EPA 8270D |
| Phenanthrene | mg/kg | 0.18 | 0.61 | EPA 8270D |
| Pyrene | mg/kg | 0.18 | 1.7 | EPA 8270D |
| PCDD & PCDF | | | Attached | EPA 8290 |

# HC Report of Analysis

**Client:** Maser Consulting
**Project:** Trump Links

**HC Project #:** 7092827

**Sample ID:** 475 EXTERIOR NYRECYCLE Grab
**Lab#:** AD00298-001
**Matrix:** Soil/Terracore

**Collection Date:** 9/28/2017
**Receipt Date:** 9/28/2017

### % Solids SM2540G

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| % Solids | 1 | percent | | 91 |

### TCLP Volatiles 8260

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1 | mg/l | 0.0010 | ND |
| 1,2-Dichloroethane | 1 | mg/l | 0.00050 | ND |
| 1,4-Dichlorobenzene | 1 | mg/l | 0.0010 | ND |
| 2-Butanone | 1 | mg/l | 0.0010 | ND |
| Benzene | 1 | mg/l | 0.00050 | ND |
| Carbon tetrachloride | 1 | mg/l | 0.0010 | ND |
| Chlorobenzene | 1 | mg/l | 0.0010 | ND |
| Chloroform | 1 | mg/l | 0.0010 | ND |
| Tetrachloroethene | 1 | mg/l | 0.0010 | ND |
| Trichloroethene | 1 | mg/l | 0.0010 | ND |
| Vinyl chloride | 1 | mg/l | 0.0010 | ND |

### Volatile Organics (no search) 8260

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1,1-Trichloroethane | 1.46 | mg/kg | 0.0032 | ND |
| 1,1,2,2-Tetrachloroethane | 1.46 | mg/kg | 0.0032 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.46 | mg/kg | 0.0032 | ND |
| 1,1-Dichloroethane | 1.46 | mg/kg | 0.0032 | ND |
| 1,1-Dichloroethene | 1.46 | mg/kg | 0.0032 | ND |
| 1,2,3-Trichloropropane | 1.46 | mg/kg | 0.0032 | ND |
| 1,2,4-Trichlorobenzene | 1.46 | mg/kg | 0.0032 | ND |
| 1,2-Dichlorobenzene | 1.46 | mg/kg | 0.0032 | ND |
| 1,2-Dichloroethane | 1.46 | mg/kg | 0.0032 | ND |
| 1,3-Dichlorobenzene | 1.46 | mg/kg | 0.0032 | ND |
| 1,3-Dichloropropane | 1.46 | mg/kg | 0.0032 | ND |
| 1,4-Dichlorobenzene | 1.46 | mg/kg | 0.0032 | ND |
| 2-Butanone | 1.46 | mg/kg | 0.0032 | ND |
| 4-Methyl-2-pentanone | 1.46 | mg/kg | 0.0032 | ND |
| Acetone | 1.46 | mg/kg | 0.016 | ND |
| Benzene | 1.46 | mg/kg | 0.0016 | ND |
| Carbon disulfide | 1.46 | mg/kg | 0.0032 | ND |
| Carbon tetrachloride | 1.46 | mg/kg | 0.0032 | ND |
| Chlorobenzene | 1.46 | mg/kg | 0.0032 | ND |
| Chloroethane | 1.46 | mg/kg | 0.0032 | ND |
| Chloroform | 1.46 | mg/kg | 0.0032 | ND |
| Dibromochloromethane | 1.46 | mg/kg | 0.0032 | ND |
| Ethylbenzene | 1.46 | mg/kg | 0.0016 | ND |
| m&p-Xylenes | 1.46 | mg/kg | 0.0016 | ND |
| Methylene chloride | 1.46 | mg/kg | 0.0032 | ND |
| o-Xylene | 1.46 | mg/kg | 0.0016 | ND |
| Tetrachloroethene | 1.46 | mg/kg | 0.0032 | ND |
| Toluene | 1.46 | mg/kg | 0.0016 | ND |
| trans-1,2-Dichloroethene | 1.46 | mg/kg | 0.0032 | ND |
| Trichloroethene | 1.46 | mg/kg | 0.0032 | ND |

**Sample ID: 475 EXTERIOR NYRECYCLE Grab** **Collection Date: 9/28/2017**
**Lab#: AD00298-001** **Receipt Date: 9/28/2017**
**Matrix: Soil/Terracore**

| | | | | |
|---|---|---|---|---|
| Vinyl chloride | 1.46 | mg/kg | 0.0032 | ND |
| Xylenes (Total) | 1.46 | mg/kg | 0.0016 | ND |

**Sample ID:** 475 EXTERIOR NYRECYCLE COMP
**Lab#:** AD00298-002
**Matrix:** Aqueous

**Collection Date:** 9/28/2017
**Receipt Date:** 9/28/2017

### % Solids SM2540G

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| % Solids | 1 | percent | | 92 |

### 2,3,7,8-TCDD Scan

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 2,3,7,8-TCDD | 1 | | | Attached |

### Chlorinated Herbicides 8151

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 2,4,5-T | 1 | mg/kg | 0.011 | ND |
| 2,4-D | 1 | mg/kg | 0.011 | ND |
| Silvex | 1 | mg/kg | 0.011 | ND |

### Mercury (Soil/Waste) 7471B

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Mercury | 1 | mg/kg | 0.091 | 0.37 |

### Mercury (TCLP) 7470A

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Mercury | 1 | mg/l | 0.00050 | ND |

### Organochlorine Pesticides 8081

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| a-Chlordane | 1 | mg/kg | 0.0054 | 0.0082 |
| Aldrin | 1 | mg/kg | 0.0054 | ND |
| Alpha-BHC | 1 | mg/kg | 0.0011 | ND |
| beta-BHC | 1 | mg/kg | 0.0011 | ND |
| Chlordane (Technical) | 1 | mg/kg | 0.027 | 0.055 |
| Chlordane (Total) | 1 | mg/kg | 0.0054 | 0.016 |
| delta-BHC | 1 | mg/kg | 0.0054 | ND |
| Dieldrin | 1 | mg/kg | 0.0011 | ND |
| Endosulfan I | 1 | mg/kg | 0.0054 | ND |
| Endosulfan II | 1 | mg/kg | 0.0054 | ND |
| Endosulfan Sulfate | 1 | mg/kg | 0.0054 | ND |
| Endrin | 1 | mg/kg | 0.0054 | ND |
| Endrin Aldehyde | 1 | mg/kg | 0.0054 | ND |
| Endrin Ketone | 1 | mg/kg | 0.0054 | ND |
| gamma-BHC | 1 | mg/kg | 0.0011 | ND |
| Heptachlor | 1 | mg/kg | 0.0054 | ND |
| Heptachlor Epoxide | 1 | mg/kg | 0.0054 | ND |
| Methoxychlor | 1 | mg/kg | 0.0054 | ND |
| p,p'-DDD | 1 | mg/kg | 0.0027 | ND |
| p,p'-DDE | 1 | mg/kg | 0.0027 | 0.0052 |
| p,p'-DDT | 1 | mg/kg | 0.0027 | 0.0091 |
| Toxaphene | 1 | mg/kg | 0.027 | ND |
| y-Chlordane | 1 | mg/kg | 0.0054 | 0.0076 |

### Organophosphorous Pesticides 8141

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Parathion | 1 | | | Attached |

### PCB 8082

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Aroclor (Total) | 1 | mg/kg | 0.027 | ND |
| Aroclor-1016 | 1 | mg/kg | 0.027 | ND |
| Aroclor-1221 | 1 | mg/kg | 0.027 | ND |
| Aroclor-1232 | 1 | mg/kg | 0.027 | ND |

**Sample ID:** 475 EXTERIOR NYRECYCLE COMP
**Lab#:** AD00298-002
**Matrix:** Aqueous
**Collection Date:** 9/28/2017
**Receipt Date:** 9/28/2017

| | | | | |
|---|---|---|---|---|
| Aroclor-1242 | 1 | mg/kg | 0.027 | ND |
| Aroclor-1248 | 1 | mg/kg | 0.027 | ND |
| Aroclor-1254 | 1 | mg/kg | 0.027 | ND |
| Aroclor-1260 | 1 | mg/kg | 0.027 | ND |
| Aroclor-1262 | 1 | mg/kg | 0.027 | ND |
| Aroclor-1268 | 1 | mg/kg | 0.027 | ND |

**PCDD & PCDF (8290)**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **PCDD & PCDF** | 1 | | | Attached |

**RCRA Metals 6010**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Barium** | 1 | mg/kg | 11 | 200 |
| **Chromium** | 1 | mg/kg | 5.4 | 46 |
| **Copper** | 1 | mg/kg | 5.4 | 58 |
| **Lead** | 1 | mg/kg | 5.4 | 120 |

**RCRA Metals ICP-MS 6020**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Arsenic** | 1 | mg/kg | 0.22 | 6.0 |
| Cadmium | 1 | mg/kg | 0.43 | ND |
| Selenium | 1 | mg/kg | 2.2 | ND |
| Silver | 1 | mg/kg | 0.22 | ND |

**Reactive Cyanide**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Cyanide (Reactive) | 1 | mg/kg | 0.50 | ND |

**Reactive Sulfide**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Sulfide (Reactive) | 1 | mg/kg | 100 | ND |

**Semivolatile Organics (no search) 8270**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 5 | mg/kg | 0.18 | ND |
| 2,4-Dichlorophenol | 5 | mg/kg | 0.045 | ND |
| 2,4-Dinitrophenol | 5 | mg/kg | 0.91 | ND |
| 2,6-Dinitrotoluene | 5 | mg/kg | 0.18 | ND |
| 2-Chlorophenol | 5 | mg/kg | 0.18 | ND |
| 2-Methylnaphthalene | 5 | mg/kg | 0.18 | ND |
| 2-Methylphenol | 5 | mg/kg | 0.045 | ND |
| 2-Nitroaniline | 5 | mg/kg | 0.18 | ND |
| 2-Nitrophenol | 5 | mg/kg | 0.18 | ND |
| 3&4-Methylphenol | 5 | mg/kg | 0.045 | ND |
| 3,3'-Dichlorobenzidine | 5 | mg/kg | 0.18 | ND |
| 3-Nitroaniline | 5 | mg/kg | 0.18 | ND |
| 4-Chloro-3-methylphenol | 5 | mg/kg | 0.18 | ND |
| 4-Chloroaniline | 5 | mg/kg | 0.045 | ND |
| 4-Nitrophenol | 5 | mg/kg | 0.18 | ND |
| Acenaphthene | 5 | mg/kg | 0.18 | ND |
| Acenaphthylene | 5 | mg/kg | 0.18 | ND |
| Aniline | 5 | mg/kg | 0.045 | ND |
| **Anthracene** | 5 | mg/kg | 0.18 | 0.24 |
| **Benzo[a]anthracene** | 5 | mg/kg | 0.18 | 0.95 |
| **Benzo[a]pyrene** | 5 | mg/kg | 0.18 | 0.94 |
| **Benzo[b]fluoranthene** | 5 | mg/kg | 0.18 | 1.2 |
| **Benzo[g,h,i]perylene** | 5 | mg/kg | 0.18 | 0.69 |

**Sample ID:** 475 EXTERIOR NYRECYCLE COMP
**Lab#:** AD00298-002
**Matrix:** Aqueous
**Collection Date:** 9/28/2017
**Receipt Date:** 9/28/2017

| | | | | |
|---|---|---|---|---|
| **Benzo[k]fluoranthene** | **5** | **mg/kg** | **0.18** | **0.35** |
| bis(2-Ethylhexyl)phthalate | 5 | mg/kg | 0.18 | ND |
| Butylbenzylphthalate | 5 | mg/kg | 0.18 | ND |
| **Chrysene** | **5** | **mg/kg** | **0.18** | **0.93** |
| **Dibenzo[a,h]anthracene** | **5** | **mg/kg** | **0.18** | **0.20** |
| Dibenzofuran | 5 | mg/kg | 0.045 | ND |
| Diethylphthalate | 5 | mg/kg | 0.18 | ND |
| Dimethylphthalate | 5 | mg/kg | 0.18 | ND |
| Di-n-butylphthalate | 5 | mg/kg | 0.045 | ND |
| Di-n-octylphthalate | 5 | mg/kg | 0.18 | ND |
| **Fluoranthene** | **5** | **mg/kg** | **0.18** | **1.5** |
| Fluorene | 5 | mg/kg | 0.18 | ND |
| Hexachlorobenzene | 5 | mg/kg | 0.18 | ND |
| **Indeno[1,2,3-cd]pyrene** | **5** | **mg/kg** | **0.18** | **0.62** |
| Isophorone | 5 | mg/kg | 0.18 | ND |
| Naphthalene | 5 | mg/kg | 0.045 | ND |
| Nitrobenzene | 5 | mg/kg | 0.18 | ND |
| Pentachlorophenol | 5 | mg/kg | 0.91 | ND |
| **Phenanthrene** | **5** | **mg/kg** | **0.18** | **0.61** |
| Phenol | 5 | mg/kg | 0.18 | ND |
| **Pyrene** | **5** | **mg/kg** | **0.18** | **1.7** |

**TCLP Metals 6010**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Arsenic | 1 | mg/l | 0.10 | ND |
| **Barium** | **1** | **mg/l** | **0.25** | **0.41** |
| Cadmium | 1 | mg/l | 0.050 | ND |
| Chromium | 1 | mg/l | 0.10 | ND |
| Lead | 1 | mg/l | 0.050 | ND |
| Selenium | 1 | mg/l | 0.10 | ND |
| Silver | 1 | mg/l | 0.050 | ND |

# HC Reporting Limit Definitions/Data Qualifiers

## REPORTING DEFINITIONS

**DF** = Dilution Factor

**MDL** = Method Detection Limit

**RL*** = Reporting Limit

**ND** = Not Detected

**RT** = Retention Time

**NA** = Not Applicable

**Samples with elevated Reporting Limits (RLs) as a result of a dilution may not achieve client reporting limits in some cases. The elevated RLs are unavoidable consequences of sample dilution required to quantitate target analytes that exceed the calibration range of the instrument.*

## DATA QUALIFIERS

**A-** Indicates that the Tentatively Identified Compound (TIC) is suspected to be an aldol-condensation product. These compounds are by-products of acetone and methylene chloride used in the extraction process.

**B-** Indicates analyte was present in the Method Blank and sample.

**d-** For Pesticide and PCB analysis, the concentration between primary and secondary columns is greater than 40%. The lower concentration is generally reported.

**E-** Indicates the concentration exceeded the upper calibration range of the instrument.

**J-** Indicates the value is estimated because it is either a Tentatively Identified Compound (TIC) or the reported concentration is greater than the MDL but less than the RL. For samples results between the MDL and RL there is a possibility of false positives or misidentification at the quantitation levels. Additionally, the acceptance criteria for QC samples may not be met.

**R-** Retention Time is out.

**Y-** Indicates a contaminant found in the blank at less than 10% of the concentration of a contaminant found in the sample.

# Laboratory Chronicle

**Client:** Maser Consulting

**HC Project #:** 7092827

**Project:** Trump Links

**Lab#: AD00298-001** **Sample ID: 475 EXTERIOR NYRECYCLE Grab**

| Test Code | Prep Method | Prep Date | By | Analytical Method | Analysis Date | By |
|---|---|---|---|---|---|---|
| % Solids SM2540G | | | | SM 2540G | 9/29/17 00:00 | jessica |
| TCLP Volatiles 8260 | EPA 5030C | | | EPA 8260C | 10/2/17 09:16 | SG |
| TCLP Zero Headspace Extraction | EPA 1311 | 09/29/17 16:15 | jprevilon | | | |
| Volatile Organics (no search) 8260 | EPA5030/5035 | | | EPA 8260C | 9/29/17 08:03 | SG |

**Lab#: AD00298-002** **Sample ID: 475 EXTERIOR NYRECYCLE COMP**

| Test Code | Prep Method | Prep Date | By | Analytical Method | Analysis Date | By |
|---|---|---|---|---|---|---|
| % Solids SM2540G | | | | SM 2540G | 9/29/17 00:00 | jessica |
| 2,3,7,8-TCDD Scan | EPA 1613 | | | EPA 1613 | 10/21/17 19:41 | eurofins |
| Chlorinated Herbicides 8151 | | 10/03/17 10:30 | marie | EPA 8151A | 10/4/17 16:37 | MLC/MS/ZM |
| Mercury (Soil/Waste) 7471B | EPA 7471B | 09/30/17 11:00 | CARMELA | EPA 7471B | 10/2/17 12:38 | CJA |
| Mercury (TCLP) 7470A | EPA 7470A | 10/04/17 09:00 | aadewusi | EPA 7470A | 10/4/17 18:04 | OA |
| Organochlorine Pesticides 8081 | 3510C/3550C | 10/03/17 07:15 | jkr | EPA 8081B | 10/4/17 03:39 | MS/MLC/ZM |
| Organophosphorous Pesticides 8141 | | | | EPA 8141 | 10/9/17 20:24 | eurofins |
| PCB 8082 | 3510C/3550C | 10/03/17 07:15 | jkr | EPA 8082A | 10/3/17 21:37 | MS/MLC/ZM |
| PCDD & PCDF (8290) | | | | EPA 8290 | 10/5/17 00:00 | eurofins |
| RCRA Metals 6010 | 3005&10/3050 | 09/30/17 11:00 | CARMELA | EPA 6010C | 10/4/17 12:51 | CJA |
| RCRA Metals 6010 | 3005&10/3050 | 09/30/17 11:00 | CARMELA | EPA 6010C | 10/4/17 16:51 | CJA |
| RCRA Metals ICP-MS 6020 | 3005&10/3050 | 09/30/17 11:00 | Carmela | EPA 6020A | 10/2/17 14:35 | PC |
| RCRA Metals ICP-MS 6020 | 3005&10/3050 | 09/30/17 11:00 | Carmela | EPA 6020A | 10/3/17 14:25 | PC |
| Reactive Cyanide | SW846 7.3.3 | 10/03/17 | jessica | SW846 7.3.3 | 10/3/17 14:51 | JMP |
| Reactive Sulfide | SW846 7.3.4 | 10/03/17 | JMP | SW846 7.3.4 | 10/3/17 00:00 | JMP |
| Semivolatile Organics (no search) 8270 | 3510C/3550C | 10/03/17 11:15 | lynda | EPA 8270D | 10/4/17 15:12 | AH/JB |
| TCLP Metals 6010 | 3005&10/3050 | 10/04/17 09:00 | aadewusi | EPA 6010C | 10/4/17 16:32 | OA |
| TCLP Metals Extraction 1311 | EPA 1311 | 10/02/17 13:22 | Ramos | | 10/3/17 10:15 | Ramos |

# Chain of Custody

# Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992

A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

## CHAIN OF CUSTODY RECORD

7092827 0013

Project # (Lab Use Only): 7092827

Page 1 of 1

### 3) Reporting Requirements (Please Circle)

| Turnaround | Report Type | Electronic Data Deliv. |
|---|---|---|
| When Available: | Summary | NJ Hazsite |
| 1 Business Day (100%)* | Results + QC (Waste) | Excel Reg: NJ / NY / PA |
| 2 Business Days (75%)* | Reduced: | EnviroData |
| 3 Business Days (50%)* | [ ] NJ [✓] NY | EQuIS: |
| 4 Business Days (35%)* | [ ] PA [ ] Other___ | [ ] 4-File [ ] EZ |
| 5 Business Days (25%) | NJ Full / NY ASP CatB | [ ] NYDEC |
| 8 Business Days (Stand.) | NY ASP CatA | [ ] Region 2 or 5 |
| Other: | | Other: |

* Expedited TAT Not Always Available. Please Check with Lab.

### Customer Information

1a) Customer: Prater Consulting
Address: 50 Chestnut Ridge Road
Montvale, NJ 07645
1b) Email/Cell/Fax/Ph: (201) 937-3515
1c) Send Invoice to: D. Keil
1d) Send Report to: D. Keil

### Project Information

2a) Project: Trump Links
2b) Project Mgr: D. Keil
2c) Project Location (City/State): 475 Exterior Bronx, NY
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # A100298

===> Check If Contingent ===>

**Matrix Codes**
DW - Drinking Water; S - Soil; A - Air
GW - Ground Water; SL - Sludge
WW - Waste Water; OL - Oil
OT - Other (please specify under item 9, Comments)

7) Analysis (specify methods & parameter lists)

<=== Check If Contingent <===

| Lab Sample # | 4) Customer Sample ID | 5) Matrix | 6) Sample Date | 6) Sample Time | Sample Type: Composite (C) | Sample Type: Grab (G) | PCB's | Pesticides | 2,3,7,8-TCDD | VOA TCLP | Oil Solids | VOA Tentatively Identified Compounds | BNA | PEST / HERB | SVOA TCLP Metals | 8) # of Bottles: None | MeOH | En Core | NaOH | HCl | H2SO4 | HNO3 | Other: | 9) Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001/002 | 475 Exterior Nyklyne | S | 9/25 | [illegible] | X | | X | X | X | X | X | X | X | X | X | X | 6 | 2 | | | | | | 2 |
| | | | | | | | | | | | | | | | | | | | RS 9/28/17 | | | | | |

10) Relinquished by: D. Keil
Accepted by:
Date: 9/25/17
Time: 15:15

11) Sampler (print name):
Date:

Additional Notes

### Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2 ° 3

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

# PROJECT MODIFICATIONS

**Client:** MASER
**Project:** Trump Links

**HC Project #:**7092827

---

csmith192.168.1.73
10/3/2017 12:04:19 PM

---

Per David Kiel, The Total VO and TCLP VO are grab samples; expedite all analysis possible to a 4 day TAT.

# CONDITION UPON RECEIPT

Batch Number AD00298 Entered By: Ricardo
Date Entered 9/28/2017 4:04:00 PM

| | | |
|---|---|---|
| 1 | Yes | Is there a corresponding COC included with the samples? |
| 2 | Yes | Are the samples in a container such as a cooler or Ice chest? |
| 3 | NO | Are the COC seals intact? |
| 4 | T0056 | <--- Thermometer ID. Please specify the Temperature inside the container (in degC).<br>2.3 |
| 5 | Yes | Are the samples refrigerated (where required)/have they arrived on ice? |
| 6 | Yes | Are the samples within the holding times for the parameters listed on the COC? IF no, list parameters and samples: |
| 7 | Yes | Are all of the sample bottles intact? If no, specify sample numbers broken/leaking |
| 8 | Yes | Are all of the sample labels or numbers legible? If no specify: |
| 9 | Yes | Do the contents match the COC? If no, specify |
| 10 | Yes | Is there enough sample sent for the analyses listed on the COC? If no, specify: |
| 11 | Yes | Are samples preserved correctly? |
| 12 | Yes | Was temperature blank present (Place comment below if not)? If not was temperature of samples verified? |
| 13 | NA | Other comments ...Specify |
| 14 | NA | Corrective actions (Specify item number and corrective action taken). |

# Internal Chain of Custody

| Lab#: | DateTime: | Loc or User | Bot Nu | A/M | Analysis |
|---|---|---|---|---|---|
| AD00298-001 | 09/28/17 15:15 | RICAR | 0 | M | Received |
| AD00298-001 | 09/28/17 16:04 | RICAR | 0 | M | Login |
| AD00298-001 | 09/28/17 16:09 | R31 | 1 | A | NONE |
| AD00298-001 | 09/28/17 18:38 | WP | 1 | A | VOA |
| AD00298-001 | 09/28/17 18:43 | R31 | 1 | A | NONE |
| AD00298-001 | 09/28/17 16:09 | F18 | 2 | A | NONE |
| AD00298-001 | 09/28/17 16:09 | F18 | 4 | A | NONE |
| AD00298-001 | 09/29/17 07:35 | SG | 4 | A | VOA |
| AD00298-001 | 09/29/17 10:24 | JMP | 10 | A | SOLIDS |
| AD00298-001 | 09/29/17 10:26 | R12 | 10 | A | NONE |
| AD00298-001 | 09/29/17 15:46 | R12 | 10 | A | NONE |
| AD00298-001 | 09/29/17 15:46 | JP | 10 | A | tclp-zhe |
| AD00298-002 | 09/28/17 15:15 | RICAR | 0 | M | Received |
| AD00298-002 | 09/28/17 16:38 | RICAR | 0 | M | Login |
| AD00298-002 | 09/29/17 10:24 | JMP | 1 | A | SOLIDS |
| AD00298-002 | 09/29/17 10:26 | R12 | 1 | A | NONE |
| AD00298-002 | 09/30/17 11:04 | CJA | 1 | M | TDSI-HG |
| AD00298-002 | 09/30/17 16:04 | R12 | 1 | A | NONE |
| AD00298-002 | 10/02/17 12:07 | CJA | 1 | A | TDSI |
| AD00298-002 | 10/02/17 16:30 | R12 | 1 | A | NONE |
| AD00298-002 | 10/03/17 07:01 | JKR | 1 | A | P/P |
| AD00298-002 | 10/03/17 07:02 | R12 | 1 | A | NONE |
| AD00298-002 | 10/03/17 11:00 | JP | 1 | A | bna |
| AD00298-002 | 10/03/17 11:02 | R12 | 1 | A | NONE |
| AD00298-002 | 10/04/17 10:37 | JP | 1 | A | bna |
| AD00298-002 | 10/04/17 10:39 | R12 | 1 | A | NONE |
| AD00298-002 | 10/03/17 09:03 | JMP | 5 | A | RCN/BN/RS |
| AD00298-002 | 10/03/17 09:45 | R12 | 5 | A | NONE |
| AD00298-002 | 10/03/17 10:29 | R12 | 5 | A | NONE |
| AD00298-002 | 10/03/17 10:29 | MSL | 5 | A | herb |

| Lab#: | DateTime: | Loc or User | Bot Nu | A/M | Analysis |
|---|---|---|---|---|---|

Samples marked as received are stored in coolers or refrigerator R12, or R24 at 4 deg C until Login

# Volatile Data

# Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00298-001
Client Id: 475 EXTERIOR NYRECYC
Data File: 6M59253.D
Analysis Date: 09/29/17 08:03
Date Rec/Extracted: 09/28/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Soil
Initial Vol: 3.43g
Final Vol: NA
Dilution: 1.46
Solids: 91

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.0032 | U | 75-15-0 | Carbon Disulfide | 0.0032 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.0032 | U | 56-23-5 | Carbon Tetrachloride | 0.0032 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluor | 0.0032 | U | 108-90-7 | Chlorobenzene | 0.0032 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.0032 | U | 75-00-3 | Chloroethane | 0.0032 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.0032 | U | 67-66-3 | Chloroform | 0.0032 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.0032 | U | 124-48-1 | Dibromochloromethane | 0.0032 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0032 | U | 100-41-4 | Ethylbenzene | 0.0016 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0032 | U | 79601-23-1 | m&p-Xylenes | 0.0016 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.0032 | U | 75-09-2 | Methylene Chloride | 0.0032 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0032 | U | 95-47-6 | o-Xylene | 0.0016 | U |
| 142-28-9 | 1,3-Dichloropropane | 0.0032 | U | 127-18-4 | Tetrachloroethene | 0.0032 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0032 | U | 108-88-3 | Toluene | 0.0016 | U |
| 78-93-3 | 2-Butanone | 0.0032 | U | 156-60-5 | trans-1,2-Dichloroethene | 0.0032 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 0.0032 | U | 79-01-6 | Trichloroethene | 0.0032 | U |
| 67-64-1 | Acetone | 0.016 | U | 75-01-4 | Vinyl Chloride | 0.0032 | U |
| 71-43-2 | Benzene | 0.0016 | U | 1330-20-7 | Xylenes (Total) | 0.0016 | U |

Worksheet #: 439138

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT Reviewed)

7092827 0019

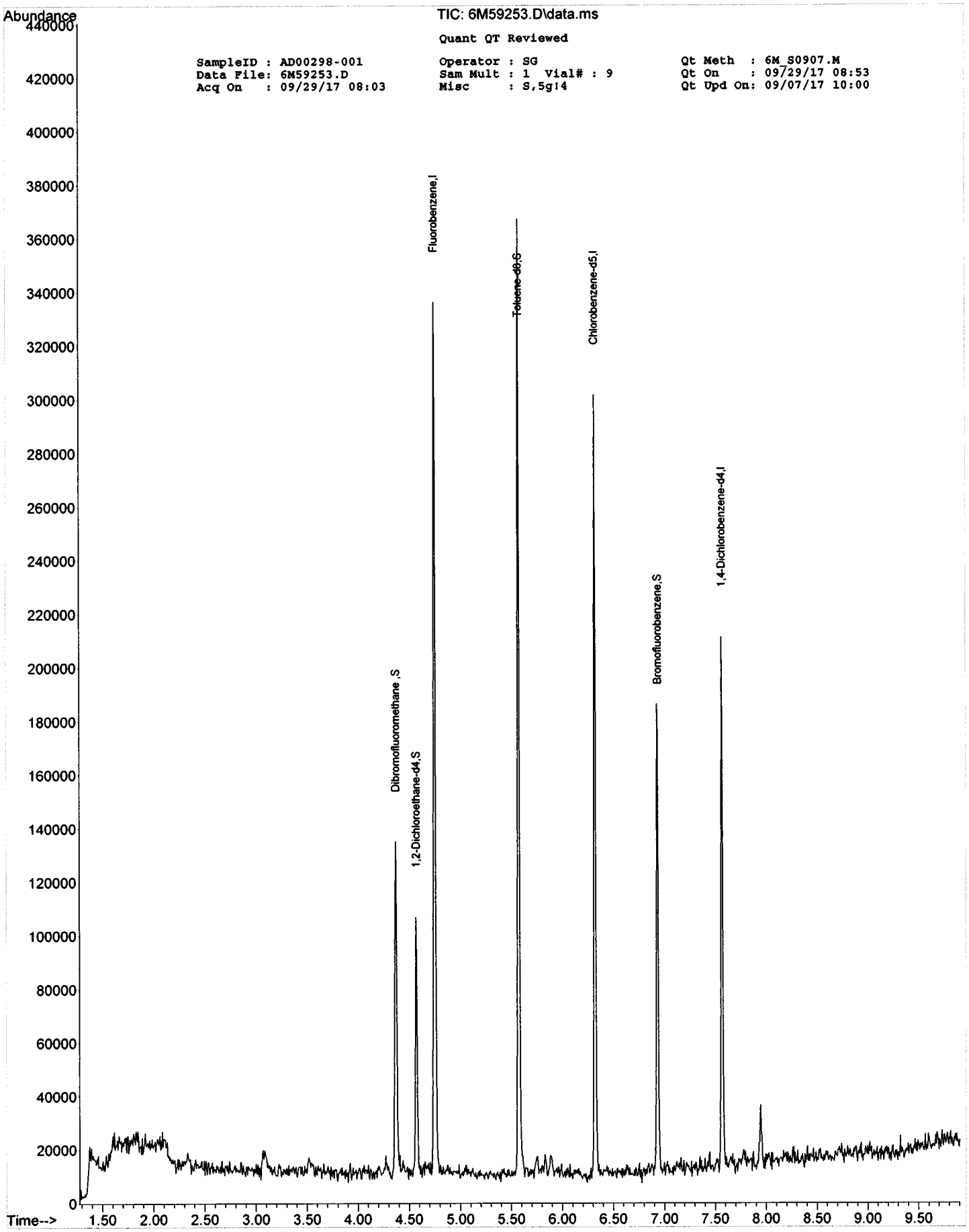
SampleID : AD00298-001 Operator : SG Qt Meth : 6M_S090717
Data File: 6M59253.D Sam Mult : 1 Vial# : 9 Qt On : 09/29/17 08:53
Acq On : 09/29/17 08:03 Misc : S,5g!4 Qt Upd On: 09/07/17 10:00

Data Path : G:\GcMsData\2017\GCMS_6\Data\09-29-17\
Qt Path : G:\GcMsData\2017\GCMS_6\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 4.750 | 96 | 163949 | 30.00 | ug/l | -0.01 |
| 52) Chlorobenzene-d5 | 6.321 | 117 | 84388 | 30.00 | ug/l | -0.01 |
| 70) 1,4-Dichlorobenzene-d4 | 7.567 | 152 | 31276 | 30.00 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.371 | 111 | 49551 | 36.58 | ug/l | -0.01 |
| Spiked Amount 30.000 | | | Recovery = 121.93% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.569 | 67 | 21279 | 34.02 | ug/l | -0.01 |
| Spiked Amount 30.000 | | | Recovery = 113.40% | | | |
| 66) Toluene-d8 | 5.574 | 98 | 138950 | 30.33 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 101.10% | | | |
| 76) Bromofluorobenzene | 6.935 | 174 | 29705 | 32.41 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 108.03% | | | |

| Target Compounds | Qvalue |
|---|---|

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 6M59253.D\data.ms
Quant QT Reviewed
SampleID : AD00298-001
Data File: 6M59253.D
Acq On : 09/29/17 08:03
Operator : SG
Sam Mult : 1 Vial# : 9
Misc : S,5g!4
Qt Meth : 6M_S0907.M
Qt On : 09/29/17 08:53
Qt Upd On: 09/07/17 10:00
Dibromofluoromethane,S
1,2-Dichloroethane-d4,S
Fluorobenzene,I
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I
Time-->

# Form1

ORGANICS VOLATILE REPORT

Sample Number: DAILY BLANK
Client Id:
Data File: 6M59251.D
Analysis Date: 09/29/17 07:22
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Soil
Initial Vol: 5g
Final Vol: NA
Dilution: 1.00
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.0020 | U | 75-15-0 | Carbon Disulfide | 0.0020 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.0020 | U | 56-23-5 | Carbon Tetrachloride | 0.0020 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluor | 0.0020 | U | 108-90-7 | Chlorobenzene | 0.0020 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.0020 | U | 75-00-3 | Chloroethane | 0.0020 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.0020 | U | 67-66-3 | Chloroform | 0.0020 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.0020 | U | 124-48-1 | Dibromochloromethane | 0.0020 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0020 | U | 100-41-4 | Ethylbenzene | 0.0010 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0020 | U | 79601-23-1 | m&p-Xylenes | 0.0010 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.0020 | U | 75-09-2 | Methylene Chloride | 0.0020 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0020 | U | 95-47-6 | o-Xylene | 0.0010 | U |
| 142-28-9 | 1,3-Dichloropropane | 0.0020 | U | 127-18-4 | Tetrachloroethene | 0.0020 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0020 | U | 108-88-3 | Toluene | 0.0010 | U |
| 78-93-3 | 2-Butanone | 0.0020 | U | 156-60-5 | trans-1,2-Dichloroethene | 0.0020 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 0.0020 | U | 79-01-6 | Trichloroethene | 0.0020 | U |
| 67-64-1 | Acetone | 0.010 | U | 75-01-4 | Vinyl Chloride | 0.0020 | U |
| 71-43-2 | Benzene | 0.0010 | U | | | | |

Worksheet #: 439138

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT/LSC Reviewed)

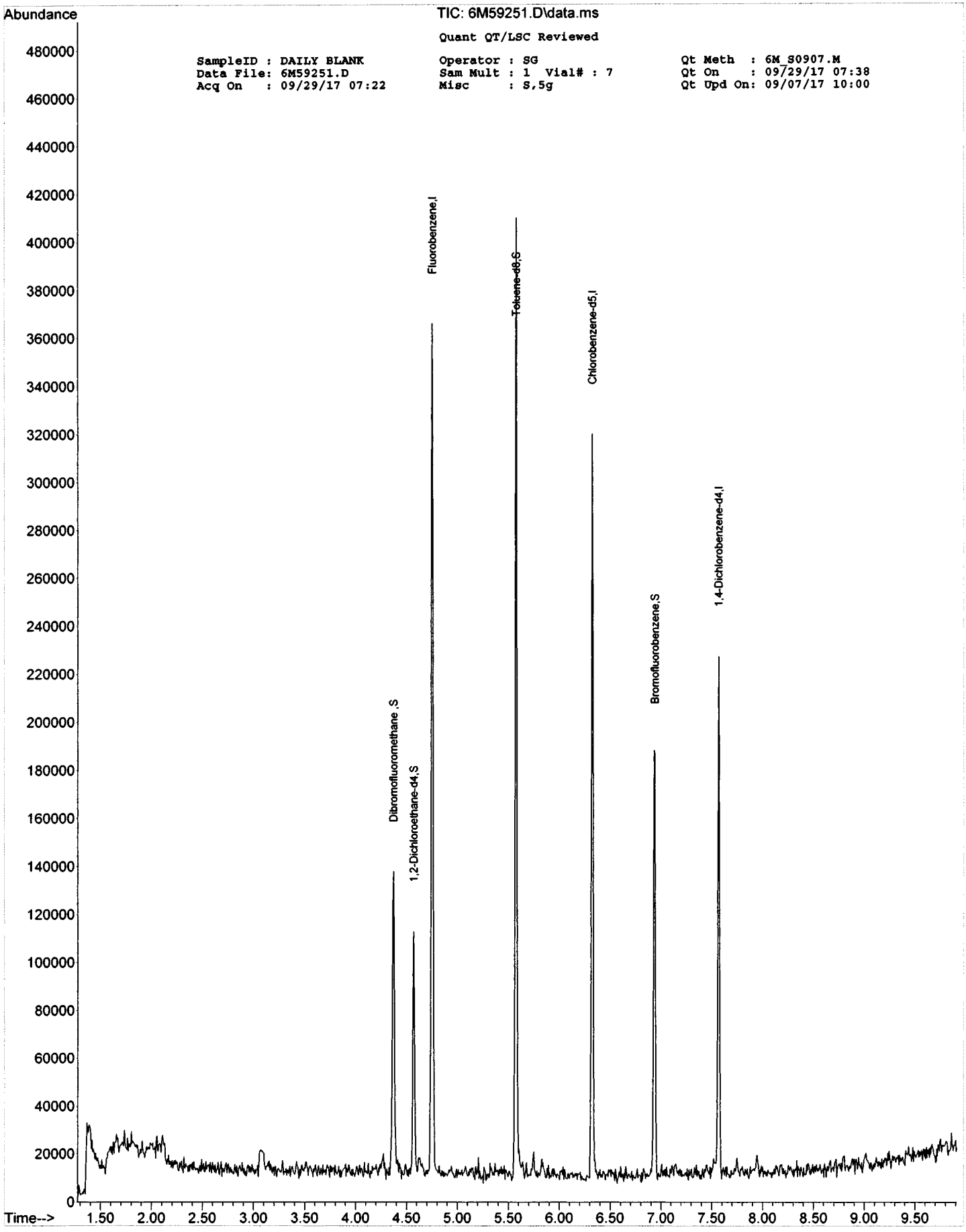
7092827 0022

SampleID : DAILY BLANK Operator : SG Qt Meth : 6M_S0907.M
Data File: 6M59251.D Sam Mult : 1 Vial# : 7 Qt On : 09/29/17 07:38
Acq On : 09/29/17 07:22 Misc : S,5g Qt Upd On: 09/07/17 10:00

Data Path : G:\GcMsData\2017\GCMS_6\Data\09-29-17\
Qt Path : G:\GcMsData\2017\GCMS_6\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 4.750 | 96 | 175495 | 30.00 | ug/l | -0.01 |
| 52) Chlorobenzene-d5 | 6.321 | 117 | 92814 | 30.00 | ug/l | -0.01 |
| 70) 1,4-Dichlorobenzene-d4 | 7.566 | 152 | 34937 | 30.00 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.371 | 111 | 55101 | 38.00 | ug/l | -0.01 |
| Spiked Amount 30.000 | | | Recovery = 126.67% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.569 | 67 | 22522 | 33.64 | ug/l | -0.01 |
| Spiked Amount 30.000 | | | Recovery = 112.13% | | | |
| 66) Toluene-d8 | 5.574 | 98 | 146197 | 29.01 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 96.70% | | | |
| 76) Bromofluorobenzene | 6.934 | 174 | 30854 | 30.13 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 100.43% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 6M59251.D\data.ms
Quant QT/LSC Reviewed
SampleID : DAILY BLANK
Data File: 6M59251.D
Acq On : 09/29/17 07:22
Operator : SG
Sam Mult : 1 Vial# : 7
Misc : S,5g
Qt Meth : 6M_S0907.M
Qt On : 09/29/17 07:38
Qt Upd On: 09/07/17 10:00
Dibromofluoromethane,S
1,2-Dichloroethane-d4,S
Fluorobenzene,I
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I
480000
460000
440000
420000
400000
380000
360000
340000
320000
300000
280000
260000
240000
220000
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
Time-->
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00
6.50
7.00
7.50
8.00
8.50
9.00
9.50

# FORM2

## Surrogate Recovery

Method: EPA 8260C

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column1 S2 Recov | Column1 S3 Recov | Column1 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6M59251.D | DAILY BLANK | S | 09/29/17 07:22 | 1 | | 127 | 112 | 97 | 100 | | |
| 6M59253.D | AD00298-001 | S | 09/29/17 08:03 | 1 | | 122 | 113 | 101 | 108 | | |
| 6M59256.D | MBS64307 | S | 09/29/17 08:53 | 1 | | 112 | 118 | 100 | 102 | | |
| 6M59257.D | AD00091-024(MS) | S | 09/29/17 09:09 | 1 | | 91 | 82 | 122 | 104 | | |
| 6M59258.D | AD00091-024(MSD) | S | 09/29/17 09:26 | 1 | | 90 | 75 | 122 | 103 | | |
| 6M59277.D | AD00091-024 | S | 09/29/17 14:42 | 1 | | 123 | 123 | 94 | 102 | | |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8260C

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=Dibromofluoromethane | 30 | 63-140 |
| S2=1,2-Dichloroethane-d4 | 30 | 63-143 |
| S3=Toluene-d8 | 30 | 68-122 |
| S4=Bromofluorobenzene | 30 | 64-129 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64307

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 6M59256.D | MBS64307 | 9/29/2017 8:53:00 AM |
| Non Spike(If applicable): | | |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Soil | QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 58.4125 | 0 | 50 | 117 | 20 | 130 |
| Dichlorodifluoromethane | 1 | 21.1145 | 0 | 50 | 42 | 20 | 130 |
| Chloromethane | 1 | 47.4999 | 0 | 50 | 95 | 20 | 130 |
| Bromomethane | 1 | 51.6614 | 0 | 50 | 103 | 20 | 130 |
| Vinyl Chloride | 1 | 47.4669 | 0 | 50 | 95 | 20 | 130 |
| Chloroethane | 1 | 47.7232 | 0 | 50 | 95 | 20 | 130 |
| Trichlorofluoromethane | 1 | 61.2703 | 0 | 50 | 123 | 20 | 130 |
| Ethyl ether | 1 | 43.8466 | 0 | 50 | 88 | 50 | 130 |
| Furan | 1 | 45.888 | 0 | 50 | 92 | 50 | 130 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 46.7675 | 0 | 50 | 94 | 50 | 130 |
| Methylene Chloride | 1 | 47.7871 | 0 | 50 | 96 | 50 | 130 |
| Acrolein | 1 | 169.7341 | 0 | 200 | 85 | 20 | 130 |
| Acrylonitrile | 1 | 41.7925 | 0 | 50 | 84 | 20 | 130 |
| Iodomethane | 1 | 61.7347 | 0 | 50 | 123 | 50 | 130 |
| Acetone | 1 | 298.4298 | 0 | 200 | 149* | 20 | 130 |
| Carbon Disulfide | 1 | 64.7424 | 0 | 50 | 129 | 50 | 130 |
| t-Butyl Alcohol | 1 | 216.1739 | 0 | 200 | 108 | 20 | 130 |
| n-Hexane | 1 | 43.7846 | 0 | 50 | 88 | 50 | 130 |
| Di-isopropyl-ether | 1 | 43.5546 | 0 | 50 | 87 | 50 | 130 |
| 1,1-Dichloroethene | 1 | 32.3067 | 0 | 50 | 65 | 50 | 130 |
| Methyl Acetate | 1 | 41.647 | 0 | 50 | 83 | 50 | 130 |
| Methyl-t-butyl ether | 1 | 38.5845 | 0 | 50 | 77 | 50 | 130 |
| 1,1-Dichloroethane | 1 | 48.3268 | 0 | 50 | 97 | 50 | 130 |
| trans-1,2-Dichloroethene | 1 | 47.8015 | 0 | 50 | 96 | 50 | 130 |
| Ethyl-t-butyl ether | 1 | 39.1607 | 0 | 50 | 78 | 50 | 130 |
| cis-1,2-Dichloroethene | 1 | 46.4619 | 0 | 50 | 93 | 50 | 130 |
| Bromochloromethane | 1 | 33.8689 | 0 | 50 | 68 | 50 | 130 |
| 2,2-Dichloropropane | 1 | 43.548 | 0 | 50 | 87 | 50 | 130 |
| Ethyl acetate | 1 | 48.5455 | 0 | 50 | 97 | 50 | 130 |
| 1,4-Dioxane | 1 | 2603.958 | 0 | 2500 | 104 | 50 | 130 |
| 1,1-Dichloropropene | 1 | 48.8289 | 0 | 50 | 98 | 50 | 130 |
| Chloroform | 1 | 45.3348 | 0 | 50 | 91 | 50 | 130 |
| Cyclohexane | 1 | 40.9155 | 0 | 50 | 82 | 50 | 130 |
| 1,2-Dichloroethane | 1 | 49.0922 | 0 | 50 | 98 | 50 | 130 |
| 2-Butanone | 1 | 48.1217 | 0 | 50 | 96 | 20 | 130 |
| 1,1,1-Trichloroethane | 1 | 46.0366 | 0 | 50 | 92 | 50 | 130 |
| Carbon Tetrachloride | 1 | 48.3382 | 0 | 50 | 97 | 50 | 130 |
| Vinyl Acetate | 1 | 39.3918 | 0 | 50 | 79 | 50 | 130 |
| Bromodichloromethane | 1 | 43.3777 | 0 | 50 | 87 | 50 | 130 |
| Methylcyclohexane | 1 | 42.7708 | 0 | 50 | 86 | 50 | 130 |
| Dibromomethane | 1 | 50.6767 | 0 | 50 | 101 | 50 | 130 |
| 1,2-Dichloropropane | 1 | 40.7171 | 0 | 50 | 81 | 50 | 130 |
| Trichloroethene | 1 | 44.1908 | 0 | 50 | 88 | 50 | 130 |
| Benzene | 1 | 45.0411 | 0 | 50 | 90 | 50 | 130 |
| tert-Amyl methyl ether | 1 | 36.0946 | 0 | 50 | 72 | 50 | 130 |
| Iso-propylacetate | 1 | 42.6147 | 0 | 50 | 85 | 50 | 130 |
| Methyl methacrylate | 1 | 45.4727 | 0 | 50 | 91 | 50 | 130 |
| Dibromochloromethane | 1 | 50.3179 | 0 | 50 | 101 | 50 | 130 |
| 2-Chloroethylvinylether | 1 | 40.0014 | 0 | 50 | 80 | 50 | 130 |
| cis-1,3-Dichloropropene | 1 | 40.8153 | 0 | 50 | 82 | 50 | 130 |
| trans-1,3-Dichloropropene | 1 | 38.0716 | 0 | 50 | 76 | 50 | 130 |
| Ethyl methacrylate | 1 | 40.3793 | 0 | 50 | 81 | 50 | 130 |
| 1,1,2-Trichloroethane | 1 | 45.5803 | 0 | 50 | 91 | 50 | 130 |
| 1,2-Dibromoethane | 1 | 46.4988 | 0 | 50 | 93 | 50 | 130 |
| 1,3-Dichloropropane | 1 | 45.5561 | 0 | 50 | 91 | 50 | 130 |
| 4-Methyl-2-Pentanone | 1 | 40.1342 | 0 | 50 | 80 | 20 | 130 |
| 2-Hexanone | 1 | 39.6314 | 0 | 50 | 79 | 20 | 130 |
| Tetrachloroethene | 1 | 47.3499 | 0 | 50 | 95 | 50 | 130 |
| Toluene | 1 | 44.3817 | 0 | 50 | 89 | 50 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 49.465 | 0 | 50 | 99 | 50 | 130 |
| Chlorobenzene | 1 | 42.187 | 0 | 50 | 84 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64307

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 31.4529 | 0 | 50 | 63 | 50 | 130 |
| n-Amyl acetate | 1 | 38.1759 | 0 | 50 | 76 | 50 | 130 |
| Bromoform | 1 | 42.5865 | 0 | 50 | 85 | 20 | 130 |
| Ethylbenzene | 1 | 45.454 | 0 | 50 | 91 | 50 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 36.7101 | 0 | 50 | 73 | 50 | 130 |
| Styrene | 1 | 45.9495 | 0 | 50 | 92 | 50 | 130 |
| m&p-Xylenes | 1 | 83.3752 | 0 | 100 | 83 | 50 | 130 |
| o-Xylene | 1 | 41.5956 | 0 | 50 | 83 | 50 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 40.0909 | 0 | 50 | 80 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 42.7266 | 0 | 50 | 85 | 50 | 130 |
| 1,4-Dichlorobenzene | 1 | 41.7483 | 0 | 50 | 83 | 50 | 130 |
| 1,2-Dichlorobenzene | 1 | 42.9087 | 0 | 50 | 86 | 50 | 130 |
| Isopropylbenzene | 1 | 40.9099 | 0 | 50 | 82 | 50 | 130 |
| Cyclohexanone | 1 | 180.514 | 0 | 250 | 72 | 50 | 130 |
| Camphene | 1 | 42.2603 | 0 | 50 | 85 | 50 | 130 |
| 1,2,3-Trichloropropane | 1 | 42.8148 | 0 | 50 | 86 | 50 | 130 |
| 2-Chlorotoluene | 1 | 44.6097 | 0 | 50 | 89 | 50 | 130 |
| p-Ethyltoluene | 1 | 43.9309 | 0 | 50 | 88 | 50 | 130 |
| 4-Chlorotoluene | 1 | 46.2716 | 0 | 50 | 93 | 50 | 130 |
| n-Propylbenzene | 1 | 41.7214 | 0 | 50 | 83 | 50 | 130 |
| Bromobenzene | 1 | 43.2018 | 0 | 50 | 86 | 50 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 38.2972 | 0 | 50 | 77 | 50 | 130 |
| Butyl methacrylate | 1 | 37.392 | 0 | 50 | 75 | 50 | 130 |
| t-Butylbenzene | 1 | 41.8507 | 0 | 50 | 84 | 50 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 39.9484 | 0 | 50 | 80 | 50 | 130 |
| sec-Butylbenzene | 1 | 40.1796 | 0 | 50 | 80 | 50 | 130 |
| 4-Isopropyltoluene | 1 | 39.7219 | 0 | 50 | 79 | 50 | 130 |
| n-Butylbenzene | 1 | 40.1306 | 0 | 50 | 80 | 50 | 130 |
| p-Diethylbenzene | 1 | 42.2301 | 0 | 50 | 84 | 50 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 39.2736 | 0 | 50 | 79 | 50 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 36.5137 | 0 | 50 | 73 | 50 | 130 |
| Camphor | 1 | 251.0284 | 0 | 500 | 50 | 50 | 130 |
| Hexachlorobutadiene | 1 | 35.0004 | 0 | 50 | 70 | 50 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 31.5375 | 0 | 50 | 63 | 50 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 28.6857 | 0 | 50 | 57 | 50 | 130 |
| Naphthalene | 1 | 25.1884 | 0 | 50 | 50 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64307

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 6M59257.D | AD00091-024(MS) | 9/29/2017 9:09:00 AM |
| Non Spike(If applicable): 6M59277.D | AD00091-024 | 9/29/2017 2:42:00 PM |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Soil | QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 39.8635 | 0 | 50 | 80 | 20 | 130 |
| Dichlorodifluoromethane | 1 | 28.0765 | 0 | 50 | 56 | 20 | 130 |
| Chloromethane | 1 | 38.262 | 0 | 50 | 77 | 20 | 130 |
| Bromomethane | 1 | 36.6432 | 0 | 50 | 73 | 20 | 130 |
| Vinyl Chloride | 1 | 23.5948 | 0 | 50 | 47 | 20 | 130 |
| Chloroethane | 1 | 39.7443 | 0 | 50 | 79 | 20 | 130 |
| Trichlorofluoromethane | 1 | 51.533 | 0 | 50 | 103 | 20 | 130 |
| Ethyl ether | 1 | 33.119 | 0 | 50 | 66 | 50 | 130 |
| Furan | 1 | 23.7085 | 0 | 50 | 47* | 50 | 130 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 42.5205 | 0 | 50 | 85 | 50 | 130 |
| Methylene Chloride | 1 | 35.7875 | 0 | 50 | 72 | 50 | 130 |
| Acrolein | 1 | 143.4806 | 0 | 200 | 72 | 20 | 130 |
| Acrylonitrile | 1 | 35.1931 | 0 | 50 | 70 | 20 | 130 |
| Iodomethane | 1 | 23.0118 | 0 | 50 | 46* | 50 | 130 |
| Acetone | 1 | 242.5282 | 0 | 200 | 121 | 20 | 130 |
| Carbon Disulfide | 1 | 51.9508 | 0 | 50 | 104 | 50 | 130 |
| t-Butyl Alcohol | 1 | 171.1774 | 0 | 200 | 86 | 20 | 130 |
| n-Hexane | 1 | 35.3117 | 0 | 50 | 71 | 50 | 130 |
| Di-isopropyl-ether | 1 | 37.3683 | 0 | 50 | 75 | 50 | 130 |
| 1,1-Dichloroethene | 1 | 28.6575 | 0 | 50 | 57 | 50 | 130 |
| Methyl Acetate | 1 | 37.8856 | 0 | 50 | 76 | 50 | 130 |
| Methyl-t-butyl ether | 1 | 32.7981 | 0 | 50 | 66 | 50 | 130 |
| 1,1-Dichloroethane | 1 | 40.3315 | 0 | 50 | 81 | 50 | 130 |
| trans-1,2-Dichloroethene | 1 | 40.6148 | 0 | 50 | 81 | 50 | 130 |
| Ethyl-t-butyl ether | 1 | 31.8889 | 0 | 50 | 64 | 50 | 130 |
| cis-1,2-Dichloroethene | 1 | 40.2079 | 0 | 50 | 80 | 50 | 130 |
| Bromochloromethane | 1 | 28.7757 | 0 | 50 | 58 | 50 | 130 |
| 2,2-Dichloropropane | 1 | 40.0924 | 0 | 50 | 80 | 50 | 130 |
| Ethyl acetate | 1 | 38.2165 | 0 | 50 | 76 | 50 | 130 |
| 1,4-Dioxane | 1 | 2254.419 | 0 | 2500 | 90 | 50 | 130 |
| 1,1-Dichloropropene | 1 | 41.0603 | 0 | 50 | 82 | 50 | 130 |
| Chloroform | 1 | 36.4694 | 0 | 50 | 73 | 50 | 130 |
| Cyclohexane | 1 | 34.9404 | 0 | 50 | 70 | 50 | 130 |
| 1,2-Dichloroethane | 1 | 41.4891 | 0 | 50 | 83 | 50 | 130 |
| 2-Butanone | 1 | 42.0447 | 0 | 50 | 84 | 20 | 130 |
| 1,1,1-Trichloroethane | 1 | 40.9569 | 0 | 50 | 82 | 50 | 130 |
| Carbon Tetrachloride | 1 | 36.4267 | 0 | 50 | 73 | 50 | 130 |
| Vinyl Acetate | 1 | 29.7231 | 0 | 50 | 59 | 50 | 130 |
| Bromodichloromethane | 1 | 34.544 | 0 | 50 | 69 | 50 | 130 |
| Methylcyclohexane | 1 | 35.2553 | 0 | 50 | 71 | 50 | 130 |
| Dibromomethane | 1 | 41.5451 | 0 | 50 | 83 | 50 | 130 |
| 1,2-Dichloropropane | 1 | 34.4827 | 0 | 50 | 69 | 50 | 130 |
| Trichloroethene | 1 | 25.9108 | 0 | 50 | 52 | 50 | 130 |
| Benzene | 1 | 32.5597 | 0 | 50 | 65 | 50 | 130 |
| tert-Amyl methyl ether | 1 | 30.1705 | 0 | 50 | 60 | 50 | 130 |
| Iso-propylacetate | 1 | 43.3083 | 0 | 50 | 87 | 50 | 130 |
| Methyl methacrylate | 1 | 49.3727 | 0 | 50 | 99 | 50 | 130 |
| Dibromochloromethane | 1 | 45.803 | 0 | 50 | 92 | 50 | 130 |
| 2-Chloroethylvinylether | 1 | 39.5237 | 0 | 50 | 79 | 50 | 130 |
| cis-1,3-Dichloropropene | 1 | 48.503 | 0 | 50 | 97 | 50 | 130 |
| trans-1,3-Dichloropropene | 1 | 47.0076 | 0 | 50 | 94 | 50 | 130 |
| Ethyl methacrylate | 1 | 45.1695 | 0 | 50 | 90 | 50 | 130 |
| 1,1,2-Trichloroethane | 1 | 54.801 | 0 | 50 | 110 | 50 | 130 |
| 1,2-Dibromoethane | 1 | 45.668 | 0 | 50 | 91 | 50 | 130 |
| 1,3-Dichloropropane | 1 | 54.2007 | 0 | 50 | 108 | 50 | 130 |
| 4-Methyl-2-Pentanone | 1 | 45.1533 | 0 | 50 | 90 | 20 | 130 |
| 2-Hexanone | 1 | 49.1212 | 0 | 50 | 98 | 20 | 130 |
| Tetrachloroethene | 1 | 55.7929 | 0 | 50 | 112 | 50 | 130 |
| Toluene | 1 | 47.8545 | 0 | 50 | 96 | 50 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 52.9831 | 0 | 50 | 106 | 50 | 130 |
| Chlorobenzene | 1 | 48.1178 | 0 | 50 | 96 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3

## Recovery Data Laboratory Limits

### QC Batch: MBS64307

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 23.586 | 0 | 50 | 47* | 50 | 130 |
| n-Amyl acetate | 1 | 29.9631 | 0 | 50 | 60 | 50 | 130 |
| Bromoform | 1 | 35.2066 | 0 | 50 | 70 | 20 | 130 |
| Ethylbenzene | 1 | 30.0534 | 0 | 50 | 60 | 50 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 31.8168 | 0 | 50 | 64 | 50 | 130 |
| Styrene | 1 | 34.5728 | 0 | 50 | 69 | 50 | 130 |
| m&p-Xylenes | 1 | 59.6228 | 0 | 100 | 60 | 50 | 130 |
| o-Xylene | 1 | 28.8077 | 0 | 50 | 58 | 50 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 32.54 | 0 | 50 | 65 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 31.4532 | 0 | 50 | 63 | 50 | 130 |
| 1,4-Dichlorobenzene | 1 | 32.1446 | 0 | 50 | 64 | 50 | 130 |
| 1,2-Dichlorobenzene | 1 | 32.6726 | 0 | 50 | 65 | 50 | 130 |
| Isopropylbenzene | 1 | 31.0477 | 0 | 50 | 62 | 50 | 130 |
| Cyclohexanone | 1 | 138.9404 | 0 | 250 | 56 | 50 | 130 |
| Camphene | 1 | 34.5305 | 0 | 50 | 69 | 50 | 130 |
| 1,2,3-Trichloropropane | 1 | 37.4488 | 0 | 50 | 75 | 50 | 130 |
| 2-Chlorotoluene | 1 | 39.8861 | 0 | 50 | 80 | 50 | 130 |
| p-Ethyltoluene | 1 | 32.4194 | 0 | 50 | 65 | 50 | 130 |
| 4-Chlorotoluene | 1 | 37.2774 | 0 | 50 | 75 | 50 | 130 |
| n-Propylbenzene | 1 | 33.5616 | 0 | 50 | 67 | 50 | 130 |
| Bromobenzene | 1 | 37.7389 | 0 | 50 | 75 | 50 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 29.9986 | 0 | 50 | 60 | 50 | 130 |
| Butyl methacrylate | 1 | 32.1586 | 0 | 50 | 64 | 50 | 130 |
| t-Butylbenzene | 1 | 31.3335 | 0 | 50 | 63 | 50 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 29.3475 | 0 | 50 | 59 | 50 | 130 |
| sec-Butylbenzene | 1 | 29.1259 | 0 | 50 | 58 | 50 | 130 |
| 4-Isopropyltoluene | 1 | 30.9337 | 0 | 50 | 62 | 50 | 130 |
| n-Butylbenzene | 1 | 31.3014 | 0 | 50 | 63 | 50 | 130 |
| p-Diethylbenzene | 1 | 33.1163 | 0 | 50 | 66 | 50 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 30.4027 | 0 | 50 | 61 | 50 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 31.0564 | 0 | 50 | 62 | 50 | 130 |
| Camphor | 1 | 478.3473 | 0 | 500 | 96 | 50 | 130 |
| Hexachlorobutadiene | 1 | 27.3384 | 0 | 50 | 55 | 50 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 24.5874 | 0 | 50 | 49* | 50 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 22.9994 | 0 | 50 | 46* | 50 | 130 |
| Naphthalene | 1 | 25.0174 | 0 | 50 | 50 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64307

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 6M59258.D | AD00091-024(MSD) | 9/29/2017 9:26:00 AM |
| Non Spike(If applicable): 6M59277.D | AD00091-024 | 9/29/2017 2:42:00 PM |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Soil | QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 53.6212 | 0 | 50 | 107 | 20 | 130 |
| Dichlorodifluoromethane | 1 | 28.9838 | 0 | 50 | 58 | 20 | 130 |
| Chloromethane | 1 | 40.4329 | 0 | 50 | 81 | 20 | 130 |
| Bromomethane | 1 | 36.0111 | 0 | 50 | 72 | 20 | 130 |
| Vinyl Chloride | 1 | 39.9415 | 0 | 50 | 80 | 20 | 130 |
| Chloroethane | 1 | 38.6589 | 0 | 50 | 77 | 20 | 130 |
| Trichlorofluoromethane | 1 | 52.2923 | 0 | 50 | 105 | 20 | 130 |
| Ethyl ether | 1 | 35.0986 | 0 | 50 | 70 | 50 | 130 |
| Furan | 1 | 36.181 | 0 | 50 | 72 | 50 | 130 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 43.0554 | 0 | 50 | 86 | 50 | 130 |
| Methylene Chloride | 1 | 37.3463 | 0 | 50 | 75 | 50 | 130 |
| Acrolein | 1 | 91.0123 | 0 | 200 | 46 | 20 | 130 |
| Acrylonitrile | 1 | 32.1245 | 0 | 50 | 64 | 20 | 130 |
| Iodomethane | 1 | 41.4824 | 0 | 50 | 83 | 50 | 130 |
| Acetone | 1 | 275.4014 | 0 | 200 | 138* | 20 | 130 |
| Carbon Disulfide | 1 | 53.4698 | 0 | 50 | 107 | 50 | 130 |
| t-Butyl Alcohol | 1 | 160.889 | 0 | 200 | 80 | 20 | 130 |
| n-Hexane | 1 | 35.5929 | 0 | 50 | 71 | 50 | 130 |
| Di-isopropyl-ether | 1 | 34.7625 | 0 | 50 | 70 | 50 | 130 |
| 1,1-Dichloroethene | 1 | 43.7102 | 0 | 50 | 87 | 50 | 130 |
| Methyl Acetate | 1 | 32.7766 | 0 | 50 | 66 | 50 | 130 |
| Methyl-t-butyl ether | 1 | 31.4797 | 0 | 50 | 63 | 50 | 130 |
| 1,1-Dichloroethane | 1 | 38.4997 | 0 | 50 | 77 | 50 | 130 |
| trans-1,2-Dichloroethene | 1 | 39.1524 | 0 | 50 | 78 | 50 | 130 |
| Ethyl-t-butyl ether | 1 | 28.8234 | 0 | 50 | 58 | 50 | 130 |
| cis-1,2-Dichloroethene | 1 | 37.6711 | 0 | 50 | 75 | 50 | 130 |
| Bromochloromethane | 1 | 28.3662 | 0 | 50 | 57 | 50 | 130 |
| 2,2-Dichloropropane | 1 | 34.4102 | 0 | 50 | 69 | 50 | 130 |
| Ethyl acetate | 1 | 37.7287 | 0 | 50 | 75 | 50 | 130 |
| 1,4-Dioxane | 1 | 1891.192 | 0 | 2500 | 76 | 50 | 130 |
| 1,1-Dichloropropene | 1 | 39.9262 | 0 | 50 | 80 | 50 | 130 |
| Chloroform | 1 | 33.3975 | 0 | 50 | 67 | 50 | 130 |
| Cyclohexane | 1 | 30.9365 | 0 | 50 | 62 | 50 | 130 |
| 1,2-Dichloroethane | 1 | 37.4186 | 0 | 50 | 75 | 50 | 130 |
| 2-Butanone | 1 | 29.4387 | 0 | 50 | 59 | 20 | 130 |
| 1,1,1-Trichloroethane | 1 | 37.3736 | 0 | 50 | 75 | 50 | 130 |
| Carbon Tetrachloride | 1 | 36.4686 | 0 | 50 | 73 | 50 | 130 |
| Vinyl Acetate | 1 | 31.3002 | 0 | 50 | 63 | 50 | 130 |
| Bromodichloromethane | 1 | 32.535 | 0 | 50 | 65 | 50 | 130 |
| Methylcyclohexane | 1 | 34.8658 | 0 | 50 | 70 | 50 | 130 |
| Dibromomethane | 1 | 36.4936 | 0 | 50 | 73 | 50 | 130 |
| 1,2-Dichloropropane | 1 | 33.3567 | 0 | 50 | 67 | 50 | 130 |
| Trichloroethene | 1 | 28.3944 | 0 | 50 | 57 | 50 | 130 |
| Benzene | 1 | 33.1748 | 0 | 50 | 66 | 50 | 130 |
| tert-Amyl methyl ether | 1 | 28.6872 | 0 | 50 | 57 | 50 | 130 |
| Iso-propylacetate | 1 | 37.9272 | 0 | 50 | 76 | 50 | 130 |
| Methyl methacrylate | 1 | 37.4277 | 0 | 50 | 75 | 50 | 130 |
| Dibromochloromethane | 1 | 38.0323 | 0 | 50 | 76 | 50 | 130 |
| 2-Chloroethylvinylether | 1 | 35.7998 | 0 | 50 | 72 | 50 | 130 |
| cis-1,3-Dichloropropene | 1 | 40.2917 | 0 | 50 | 81 | 50 | 130 |
| trans-1,3-Dichloropropene | 1 | 39.9803 | 0 | 50 | 80 | 50 | 130 |
| Ethyl methacrylate | 1 | 40.0629 | 0 | 50 | 80 | 50 | 130 |
| 1,1,2-Trichloroethane | 1 | 44.1038 | 0 | 50 | 88 | 50 | 130 |
| 1,2-Dibromoethane | 1 | 41.3371 | 0 | 50 | 83 | 50 | 130 |
| 1,3-Dichloropropane | 1 | 46.0973 | 0 | 50 | 92 | 50 | 130 |
| 4-Methyl-2-Pentanone | 1 | 37.722 | 0 | 50 | 75 | 20 | 130 |
| 2-Hexanone | 1 | 39.8634 | 0 | 50 | 80 | 20 | 130 |
| Tetrachloroethene | 1 | 47.2322 | 0 | 50 | 94 | 50 | 130 |
| Toluene | 1 | 40.6097 | 0 | 50 | 81 | 50 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 39.9707 | 0 | 50 | 80 | 50 | 130 |
| Chlorobenzene | 1 | 44.2151 | 0 | 50 | 88 | 50 | 130 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64307

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 20.3952 | 0 | 50 | 41* | 50 | 130 |
| n-Amyl acetate | 1 | 23.2272 | 0 | 50 | 46* | 50 | 130 |
| Bromoform | 1 | 34.8214 | 0 | 50 | 70 | 20 | 130 |
| Ethylbenzene | 1 | 26.5404 | 0 | 50 | 53 | 50 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 27.6131 | 0 | 50 | 55 | 50 | 130 |
| Styrene | 1 | 31.6457 | 0 | 50 | 63 | 50 | 130 |
| m&p-Xylenes | 1 | 55.3437 | 0 | 100 | 55 | 50 | 130 |
| o-Xylene | 1 | 27.0899 | 0 | 50 | 54 | 50 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 29.4915 | 0 | 50 | 59 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 30.6817 | 0 | 50 | 61 | 50 | 130 |
| 1,4-Dichlorobenzene | 1 | 29.6723 | 0 | 50 | 59 | 50 | 130 |
| 1,2-Dichlorobenzene | 1 | 29.872 | 0 | 50 | 60 | 50 | 130 |
| Isopropylbenzene | 1 | 28.853 | 0 | 50 | 58 | 50 | 130 |
| Cyclohexanone | 1 | 153.7055 | 0 | 250 | 61 | 50 | 130 |
| Camphene | 1 | 31.1778 | 0 | 50 | 62 | 50 | 130 |
| 1,2,3-Trichloropropane | 1 | 34.4503 | 0 | 50 | 69 | 50 | 130 |
| 2-Chlorotoluene | 1 | 33.5518 | 0 | 50 | 67 | 50 | 130 |
| p-Ethyltoluene | 1 | 30.0788 | 0 | 50 | 60 | 50 | 130 |
| 4-Chlorotoluene | 1 | 35.8599 | 0 | 50 | 72 | 50 | 130 |
| n-Propylbenzene | 1 | 31.107 | 0 | 50 | 62 | 50 | 130 |
| Bromobenzene | 1 | 36.0617 | 0 | 50 | 72 | 50 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 27.9892 | 0 | 50 | 56 | 50 | 130 |
| Butyl methacrylate | 1 | 30.3549 | 0 | 50 | 61 | 50 | 130 |
| t-Butylbenzene | 1 | 30.664 | 0 | 50 | 61 | 50 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 26.1812 | 0 | 50 | 52 | 50 | 130 |
| sec-Butylbenzene | 1 | 26.3274 | 0 | 50 | 53 | 50 | 130 |
| 4-Isopropyltoluene | 1 | 28.8711 | 0 | 50 | 58 | 50 | 130 |
| n-Butylbenzene | 1 | 29.2496 | 0 | 50 | 58 | 50 | 130 |
| p-Diethylbenzene | 1 | 30.5 | 0 | 50 | 61 | 50 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 28.6909 | 0 | 50 | 57 | 50 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 28.5557 | 0 | 50 | 57 | 50 | 130 |
| Camphor | 1 | 407.6238 | 0 | 500 | 82 | 50 | 130 |
| Hexachlorobutadiene | 1 | 24.6675 | 0 | 50 | 49* | 50 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 25.6733 | 0 | 50 | 51 | 50 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 23.2643 | 0 | 50 | 47* | 50 | 130 |
| Naphthalene | 1 | 26.5186 | 0 | 50 | 53 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
# RPD Data Laboratory Limits
## QC Batch: MBS64307

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 6M59258.D | AD00091-024(MSD) | 9/29/2017 9:26:00 AM |
| Duplicate(If applicable): | 6M59257.D | AD00091-024(MS) | 9/29/2017 9:09:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8260C  Matrix: Soil  QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 53.6212 | 39.8635 | 29 | 30 |
| Dichlorodifluoromethane | 1 | 28.9838 | 28.0765 | 3.2 | 30 |
| Chloromethane | 1 | 40.4329 | 38.262 | 5.5 | 30 |
| Bromomethane | 1 | 36.0111 | 36.6432 | 1.7 | 30 |
| Vinyl Chloride | 1 | 39.9415 | 23.5948 | 51* | 40 |
| Chloroethane | 1 | 38.6589 | 39.7443 | 2.8 | 30 |
| Trichlorofluoromethane | 1 | 52.2923 | 51.533 | 1.5 | 30 |
| Ethyl ether | 1 | 35.0986 | 33.119 | 5.8 | 30 |
| Furan | 1 | 36.181 | 23.7085 | 42* | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 43.0554 | 42.5205 | 1.3 | 30 |
| Methylene Chloride | 1 | 37.3463 | 35.7875 | 4.3 | 30 |
| Acrolein | 1 | 91.0123 | 143.4806 | 45* | 30 |
| Acrylonitrile | 1 | 32.1245 | 35.1931 | 9.1 | 30 |
| Iodomethane | 1 | 41.4824 | 23.0118 | 57* | 30 |
| Acetone | 1 | 275.4014 | 242.5282 | 13 | 30 |
| Carbon Disulfide | 1 | 53.4698 | 51.9508 | 2.9 | 30 |
| t-Butyl Alcohol | 1 | 160.889 | 171.1774 | 6.2 | 30 |
| n-Hexane | 1 | 35.5929 | 35.3117 | 0.79 | 30 |
| Di-isopropyl-ether | 1 | 34.7625 | 37.3683 | 7.2 | 30 |
| 1,1-Dichloroethene | 1 | 43.7102 | 28.6575 | 42* | 40 |
| Methyl Acetate | 1 | 32.7766 | 37.8856 | 14 | 30 |
| Methyl-t-butyl ether | 1 | 31.4797 | 32.7981 | 4.1 | 30 |
| 1,1-Dichloroethane | 1 | 38.4997 | 40.3315 | 4.6 | 40 |
| trans-1,2-Dichloroethene | 1 | 39.1524 | 40.6148 | 3.7 | 30 |
| Ethyl-t-butyl ether | 1 | 28.8234 | 31.8889 | 10 | 30 |
| cis-1,2-Dichloroethene | 1 | 37.6711 | 40.2079 | 6.5 | 30 |
| Bromochloromethane | 1 | 28.3662 | 28.7757 | 1.4 | 30 |
| 2,2-Dichloropropane | 1 | 34.4102 | 40.0924 | 15 | 30 |
| Ethyl acetate | 1 | 37.7287 | 38.2165 | 1.3 | 30 |
| 1,4-Dioxane | 1 | 1891.192 | 2254.419 | 18 | 30 |
| 1,1-Dichloropropene | 1 | 39.9262 | 41.0603 | 2.8 | 30 |
| Chloroform | 1 | 33.3975 | 36.4694 | 8.8 | 40 |
| Cyclohexane | 1 | 30.9365 | 34.9404 | 12 | 30 |
| 1,2-Dichloroethane | 1 | 37.4186 | 41.4891 | 10 | 40 |
| 2-Butanone | 1 | 29.4387 | 42.0447 | 35 | 40 |
| 1,1,1-Trichloroethane | 1 | 37.3736 | 40.9569 | 9.1 | 30 |
| Carbon Tetrachloride | 1 | 36.4686 | 36.4267 | 0.11 | 40 |
| Vinyl Acetate | 1 | 31.3002 | 29.7231 | 5.2 | 30 |
| Bromodichloromethane | 1 | 32.535 | 34.544 | 6 | 30 |
| Methylcyclohexane | 1 | 34.8658 | 35.2553 | 1.1 | 30 |
| Dibromomethane | 1 | 36.4936 | 41.5451 | 13 | 30 |
| 1,2-Dichloropropane | 1 | 33.3567 | 34.4827 | 3.3 | 30 |
| Trichloroethene | 1 | 28.3944 | 25.9108 | 9.1 | 40 |
| Benzene | 1 | 33.1748 | 32.5597 | 1.9 | 40 |
| tert-Amyl methyl ether | 1 | 28.6872 | 30.1705 | 5 | 30 |
| Iso-propylacetate | 1 | 37.9272 | 43.3083 | 13 | 30 |
| Methyl methacrylate | 1 | 37.4277 | 49.3727 | 28 | 30 |
| Dibromochloromethane | 1 | 38.0323 | 45.803 | 19 | 30 |
| 2-Chloroethylvinylether | 1 | 35.7998 | 39.5237 | 9.9 | 30 |
| cis-1,3-Dichloropropene | 1 | 40.2917 | 48.503 | 18 | 30 |
| trans-1,3-Dichloropropene | 1 | 39.9803 | 47.0076 | 16 | 30 |
| Ethyl methacrylate | 1 | 40.0629 | 45.1695 | 12 | 30 |
| 1,1,2-Trichloroethane | 1 | 44.1038 | 54.801 | 22 | 30 |
| 1,2-Dibromoethane | 1 | 41.3371 | 45.668 | 10 | 30 |
| 1,3-Dichloropropane | 1 | 46.0973 | 54.2007 | 16 | 30 |
| 4-Methyl-2-Pentanone | 1 | 37.722 | 45.1533 | 18 | 30 |
| 2-Hexanone | 1 | 39.8634 | 49.1212 | 21 | 30 |
| Tetrachloroethene | 1 | 47.2322 | 55.7929 | 17 | 40 |
| Toluene | 1 | 40.6097 | 47.8545 | 16 | 40 |
| 1,1,1,2-Tetrachloroethane | 1 | 39.9707 | 52.9831 | 28 | 30 |
| Chlorobenzene | 1 | 44.2151 | 48.1178 | 8.5 | 40 |
| n-Butyl acrylate | 1 | 20.3952 | 23.586 | 15 | 30 |
| n-Amyl acetate | 1 | 23.2272 | 29.9631 | 25 | 30 |

# Form3
## RPD Data Laboratory Limits
### QC Batch: MBS64307

| | | | | | |
|---|---|---|---|---|---|
| Bromoform | 1 | 34.8214 | 35.2066 | 1.1 | 30 |
| Ethylbenzene | 1 | 26.5404 | 30.0534 | 12 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | 27.6131 | 31.8168 | 14 | 30 |
| Styrene | 1 | 31.6457 | 34.5728 | 8.8 | 30 |
| m&p-Xylenes | 1 | 55.3437 | 59.6228 | 7.4 | 30 |
| o-Xylene | 1 | 27.0899 | 28.8077 | 6.1 | 30 |
| trans-1,4-Dichloro-2-butene | 1 | 29.4915 | 32.54 | 9.8 | 30 |
| 1,3-Dichlorobenzene | 1 | 30.6817 | 31.4532 | 2.5 | 30 |
| 1,4-Dichlorobenzene | 1 | 29.6723 | 32.1446 | 8 | 40 |
| 1,2-Dichlorobenzene | 1 | 29.872 | 32.6726 | 9 | 40 |
| Isopropylbenzene | 1 | 28.853 | 31.0477 | 7.3 | 30 |
| Cyclohexanone | 1 | 153.7055 | 138.9404 | 10 | 30 |
| Camphene | 1 | 31.1778 | 34.5305 | 10 | 30 |
| 1,2,3-Trichloropropane | 1 | 34.4503 | 37.4488 | 8.3 | 30 |
| 2-Chlorotoluene | 1 | 33.5518 | 39.8861 | 17 | 30 |
| p-Ethyltoluene | 1 | 30.0788 | 32.4194 | 7.5 | 30 |
| 4-Chlorotoluene | 1 | 35.8599 | 37.2774 | 3.9 | 30 |
| n-Propylbenzene | 1 | 31.107 | 33.5616 | 7.6 | 40 |
| Bromobenzene | 1 | 36.0617 | 37.7389 | 4.5 | 30 |
| 1,3,5-Trimethylbenzene | 1 | 27.9892 | 29.9986 | 6.9 | 30 |
| Butyl methacrylate | 1 | 30.3549 | 32.1586 | 5.8 | 30 |
| t-Butylbenzene | 1 | 30.664 | 31.3335 | 2.2 | 30 |
| 1,2,4-Trimethylbenzene | 1 | 26.1812 | 29.3475 | 11 | 30 |
| sec-Butylbenzene | 1 | 26.3274 | 29.1259 | 10 | 40 |
| 4-Isopropyltoluene | 1 | 28.8711 | 30.9337 | 6.9 | 30 |
| n-Butylbenzene | 1 | 29.2496 | 31.3014 | 6.8 | 30 |
| p-Diethylbenzene | 1 | 30.5 | 33.1163 | 8.2 | 30 |
| 1,2,4,5-Tetramethylbenzene | 1 | 28.6909 | 30.4027 | 5.8 | 30 |
| 1,2-Dibromo-3-Chloropropane | 1 | 28.5557 | 31.0564 | 8.4 | 30 |
| Camphor | 1 | 407.6238 | 478.3473 | 16 | 30 |
| Hexachlorobutadiene | 1 | 24.6675 | 27.3384 | 10 | 30 |
| 1,2,4-Trichlorobenzene | 1 | 25.6733 | 24.5874 | 4.3 | 30 |
| 1,2,3-Trichlorobenzene | 1 | 23.2643 | 22.9994 | 1.1 | 30 |
| Naphthalene | 1 | 26.5186 | 25.0174 | 5.8 | 30 |

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: DAILY BLANK
Blank Data File: 6M59251.D
Matrix: Soil

Blank Analysis Date: 09/29/17 07:22
Blank Extraction Date: NA
(If Applicable)
Method: EPA 8260C

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD00298-001 | 6M59253.D | 09/29/17 08:03 |
| AD00091-024 | 6M59277.D | 09/29/17 14:42 |
| AD00091-024(MSD | 6M59258.D | 09/29/17 09:26 |
| AD00091-024(MS) | 6M59257.D | 09/29/17 09:09 |
| MBS64307 | 6M59256.D | 09/29/17 08:53 |

# Form 5

**Tune Name:** BFB TUNE
**Instrument:** GCMS 6
**Data File:** 6M58197.D
**Analysis Date:** 09/07/17 05:28
**Method:** EPA 8260C

**Tune Scan/Time Range:** Average of 4.059 to 4.069 min

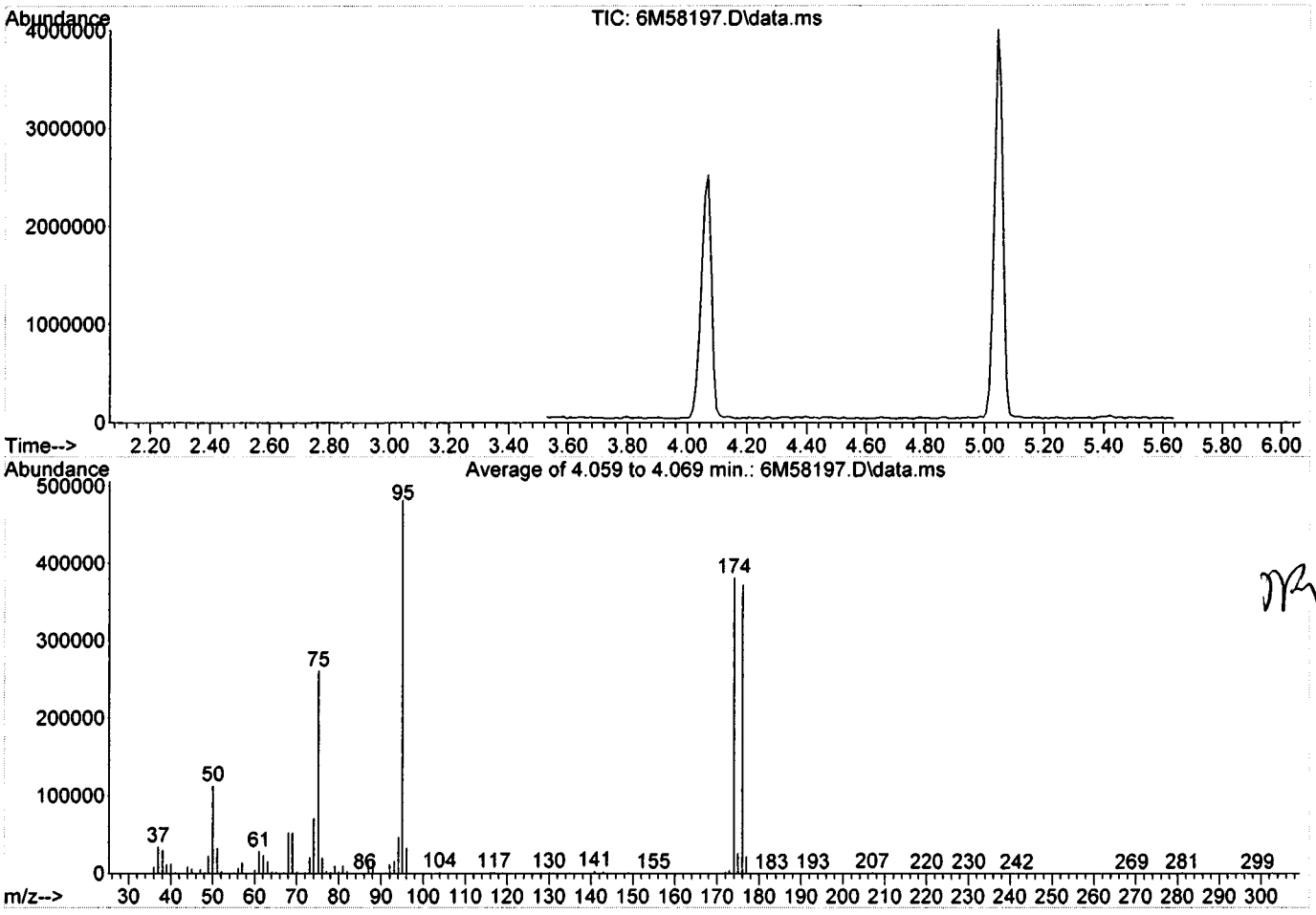
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 23.5 | 113196 | PASS |
| 75 | 95 | 30 | 60 | 54.2 | 261536 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 482336 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 32948 | PASS |
| 173 | 174 | 0.00 | 2 | 1.3 | 4869 | PASS |
| 174 | 95 | 50 | 100 | 79.1 | 381472 | PASS |
| 175 | 174 | 5 | 9 | 7.0 | 26632 | PASS |
| 176 | 174 | 95 | 101 | 97.7 | 372576 | PASS |
| 177 | 176 | 5 | 9 | 5.9 | 21908 | PASS |

| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 6M58200.D | CAL @ 0.5 PPB | 09/07/17 06:11 |
| 6M58201.D | CAL @ 1 PPB | 09/07/17 06:28 |
| 6M58202.D | CAL @ 2 PPB | 09/07/17 06:45 |
| 6M58203.D | CAL @ 5 PPB | 09/07/17 07:01 |
| 6M58204.D | CAL @ 20 PPB | 09/07/17 07:18 |
| 6M58206.D | CAL @ 50 PPB | 09/07/17 07:51 |
| 6M58208.D | CAL @ 500 PPB | 09/07/17 08:25 |
| 6M58210.D | CAL @ 250 PPB | 09/07/17 08:58 |
| 6M58212.D | CAL @ 100 PPB | 09/07/17 09:31 |
| 6M58216.D | ICV | 09/07/17 10:38 |

Data Path : G:\GcMsData\2017\GCMS_6\Data\09-07-17\
Data File : 6M58197.D
Acq On : 7 Sep 2017 5:28
Operator : SG
Sample : BFB TUNE
Misc : S,5g
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : G:\GcMsData\2017\GCMS_6\MethodQt\6M_S0724.M
Title : @GCMS_6,ug,624,8260
Last Update : Mon Jul 24 14:56:44 2017




Spectrum Information: Average of 4.059 to 4.069 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 23.5 | 113196 | PASS |
| 75 | 95 | 30 | 60 | 54.2 | 261536 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 482336 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 32948 | PASS |
| 173 | 174 | 0.00 | 2 | 1.3 | 4869 | PASS |
| 174 | 95 | 50 | 100 | 79.1 | 381472 | PASS |
| 175 | 174 | 5 | 9 | 7.0 | 26632 | PASS |
| 176 | 174 | 95 | 101 | 97.7 | 372576 | PASS |
| 177 | 176 | 5 | 9 | 5.9 | 21908 | PASS |

# Form 5

**Tune Name:** BFB TUNE
**Instrument:** GCMS 6
**Data File:** 6M59245.D
**Analysis Date:** 09/29/17 05:45
**Method:** EPA 8260C

**Tune Scan/Time Range:** Average of 4.032 to 4.052 min

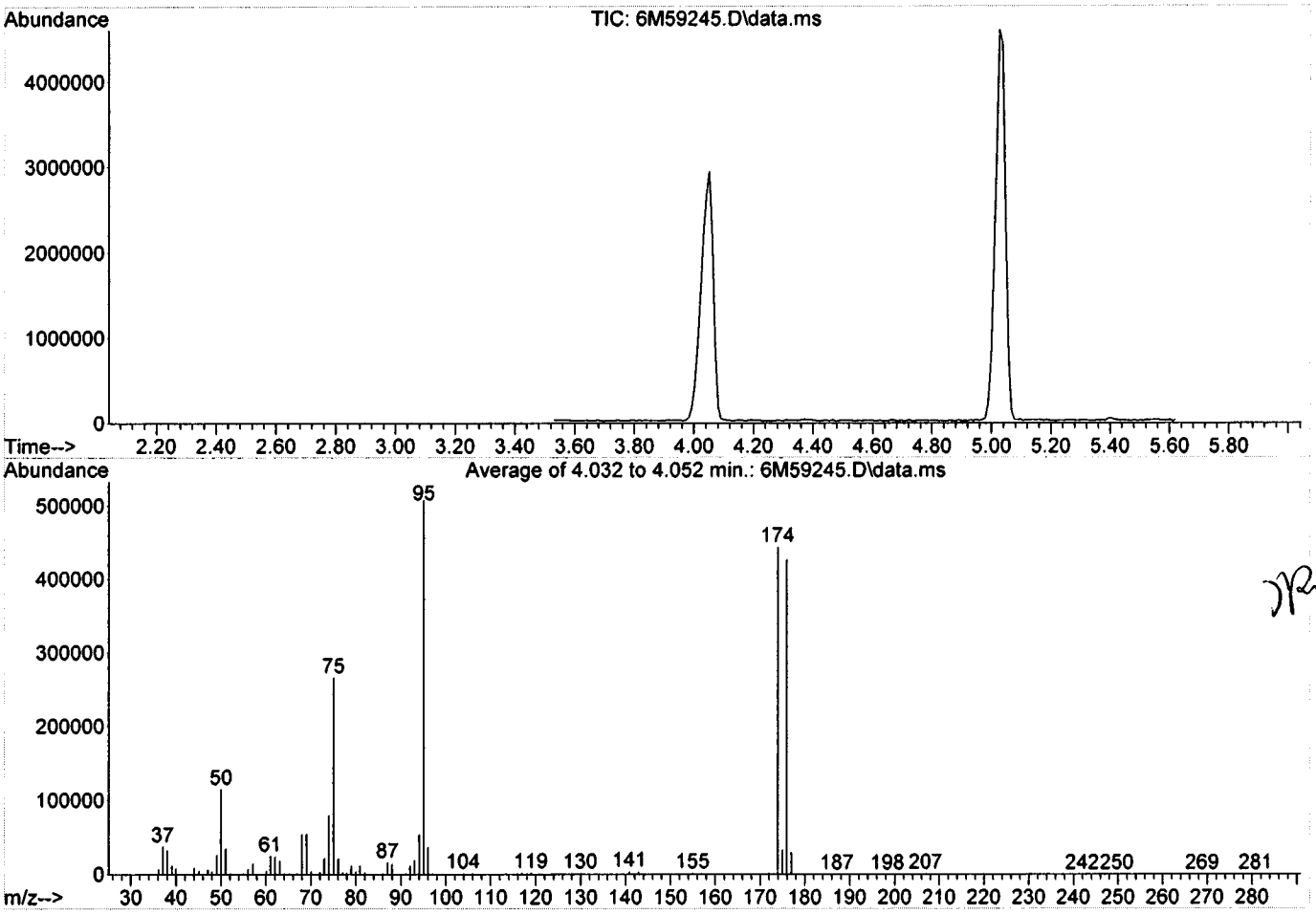
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 22.8 | 115475 | PASS |
| 75 | 95 | 30 | 60 | 52.6 | 267029 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 507520 | PASS |
| 96 | 95 | 5 | 9 | 7.3 | 36965 | PASS |
| 173 | 174 | 0.00 | 2 | 0.3 | 1184 | PASS |
| 174 | 95 | 50 | 100 | 87.5 | 444096 | PASS |
| 175 | 174 | 5 | 9 | 7.3 | 32605 | PASS |
| 176 | 174 | 95 | 101 | 96.1 | 426773 | PASS |
| 177 | 176 | 5 | 9 | 7.0 | 29712 | PASS |

| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 6M59246.D | BLK | 09/29/17 05:54 |
| 6M59247.D | 50 PPB | 09/29/17 06:15 |
| 6M59248.D | CAL @ 50 PPB | 09/29/17 06:32 |
| 6M59249.D | BLK | 09/29/17 06:48 |
| 6M59250.D | BLK | 09/29/17 07:05 |
| 6M59251.D | DAILY BLANK | 09/29/17 07:22 |
| 6M59252.D | BLK | 09/29/17 07:46 |
| 6M59253.D | AD00298-001 | 09/29/17 08:03 |
| 6M59254.D | AD00289-008 | 09/29/17 08:19 |
| 6M59255.D | AD00289-007 | 09/29/17 08:36 |
| 6M59256.D | MBS64307 | 09/29/17 08:53 |
| 6M59257.D | AD00091-024(MS) | 09/29/17 09:09 |
| 6M59258.D | AD00091-024(MSD | 09/29/17 09:26 |
| 6M59259.D | BLK | 09/29/17 09:43 |
| 6M59260.D | AD00296-011 | 09/29/17 09:59 |
| 6M59261.D | AD00289-001 | 09/29/17 10:16 |
| 6M59262.D | AD00289-002 | 09/29/17 10:32 |
| 6M59263.D | AD00289-003 | 09/29/17 10:49 |
| 6M59264.D | AD00289-004 | 09/29/17 11:06 |
| 6M59265.D | AD00289-005 | 09/29/17 11:22 |
| 6M59266.D | AD00289-006 | 09/29/17 11:39 |
| 6M59267.D | AD00289-009 | 09/29/17 11:56 |
| 6M59268.D | AD00290-001 | 09/29/17 12:12 |
| 6M59269.D | AD00290-003 | 09/29/17 12:29 |
| 6M59270.D | AD00290-005 | 09/29/17 12:46 |
| 6M59271.D | AD00290-007 | 09/29/17 13:02 |
| 6M59272.D | AD00290-009 | 09/29/17 13:19 |
| 6M59273.D | AD00290-013 | 09/29/17 13:36 |
| 6M59274.D | AD00290-011 | 09/29/17 13:52 |
| 6M59275.D | AD00316-023 | 09/29/17 14:09 |
| 6M59276.D | AD00316-025 | 09/29/17 14:26 |
| 6M59277.D | AD00091-024 | 09/29/17 14:42 |

Data Path : G:\GcMsData\2017\GCMS_6\Data\09-29-17\
Data File : 6M59245.D
Acq On : 29 Sep 2017 5:45
Operator : SG
Sample : BFB TUNE
Misc : S,5g
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : G:\GcMsData\2017\GCMS_6\MethodQt\6M_S0907.M
Title : @GCMS_6,ug,624,8260
Last Update : Thu Sep 07 09:58:16 2017




Spectrum Information: Average of 4.032 to 4.052 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 22.8 | 115475 | PASS |
| 75 | 95 | 30 | 60 | 52.6 | 267029 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 507520 | PASS |
| 96 | 95 | 5 | 9 | 7.3 | 36965 | PASS |
| 173 | 174 | 0.00 | 2 | 0.3 | 1184 | PASS |
| 174 | 95 | 50 | 100 | 87.5 | 444096 | PASS |
| 175 | 174 | 5 | 9 | 7.3 | 32605 | PASS |
| 176 | 174 | 95 | 101 | 96.1 | 426773 | PASS |
| 177 | 176 | 5 | 9 | 7.0 | 29712 | PASS |

# Form 6
## Initial Calibration

Method: EPA 8260C

Instrument: GCMS_6

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 6M58204.D | CAL @ 20 PPB | 09/07/17 07:18 | 2 | 6M58203.D | CAL @ 5 PPB | 09/07/17 07:01 |
| 3 | 6M58202.D | CAL @ 2 PPB | 09/07/17 06:45 | 4 | 6M58206.D | CAL @ 50 PPB | 09/07/17 07:51 |
| 5 | 6M58212.D | CAL @ 100 PPB | 09/07/17 09:31 | 6 | 6M58210.D | CAL @ 250 PPB | 09/07/17 08:58 |
| 7 | 6M58208.D | CAL @ 500 PPB | 09/07/17 08:25 | 8 | 6M58201.D | CAL @ 1 PPB | 09/07/17 06:28 |
| 9 | 6M58200.D | CAL @ 0.5 PPB | 09/07/17 06:11 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 0 | Avg | 0.9855 | 1.2130 | 1.4696 | 0.9316 | 1.3288 | 1.1575 | 1.0733 | ----- | ----- | 1.17 | 1.45 | 0.996 | 0.999 | 16 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Dichlorodifluorometha | 1 | 0 | Avg | 0.6286 | 0.7638 | 0.7601 | 0.6418 | 0.9041 | 0.7814 | 0.7223 | ----- | ----- | 0.743 | 1.44 | 0.996 | 0.999 | 13 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Chloromethane | 1 | 0 | Avg | 0.5564 | 0.6122 | 0.4689 | 0.5251 | 0.7607 | 0.6574 | 0.6127 | ----- | ----- | 0.599 | 1.61 | 0.996 | 0.998 | 16 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromomethane | 1 | 0 | Avg | 0.3476 | 0.3865 | 0.4270 | 0.3155 | 0.4289 | 0.3815 | 0.3573 | ----- | ----- | 0.378 | 1.98 | 0.997 | 0.999 | 11 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Vinyl Chloride | 1 | 0 | Avg | 0.4862 | 0.4896 | 0.4890 | 0.4606 | 0.6501 | 0.5525 | 0.5186 | ----- | ----- | 0.521 | 1.69 | 0.996 | 0.998 | 12 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Chloroethane | 1 | 0 | Avg | 0.3451 | 0.4040 | 0.4811 | 0.3144 | 0.4340 | 0.3708 | 0.3533 | ----- | ----- | 0.386 | 2.06 | 0.997 | 0.999 | 15 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Trichlorofluoromethan | 1 | 0 | Avg | 0.4718 | 0.6437 | 0.6954 | 0.4284 | 0.5396 | 0.5360 | 0.5101 | ----- | ----- | 0.546 | 2.28 | 0.999 | 0.999 | 17 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethyl ether | 1 | 0 | Avg | 0.1905 | 0.2165 | 0.2817 | 0.1791 | 0.2514 | 0.2206 | 0.2192 | ----- | ----- | 0.223 | 2.49 | 0.999 | 0.999 | 16 | 0.50 a | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Furan | 1 | 0 | Avg | 1.1019 | 0.8798 | 1.4430 | 1.0667 | 1.4483 | 1.2551 | 1.2446 | ----- | ----- | 1.21 | 2.54 | 0.998 | 0.999 | 17 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,1,2-Trichloro-1,2,2-tr | 1 | 0 | Avg | 0.5356 | 0.6290 | 0.7726 | 0.5218 | 0.6954 | 0.6153 | 0.5492 | ----- | ----- | 0.617 | 2.70 | 0.995 | 0.999 | 15 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Methylene Chloride | 1 | 0 | Avg | 0.3826 | 0.4081 | 0.4676 | 0.3354 | 0.4076 | 0.3748 | 0.3629 | ----- | ----- | 0.391 | 3.09 | 0.999 | 1.00 | 11 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Acrolein | 1 | 0 | Qua | 0.0115 | 0.0140 | 0.0169 | 0.0177 | 0.0219 | 0.0191 | 0.0201 | ----- | ----- | 0.0174 | 2.62 | 0.999 | 0.999 | 21 | | 100.0 | 25.00 | 10.00 | 250.0 | 500.0 | 1250. | 2500. | | |
| Acrylonitrile | 1 | 0 | Avg | 0.0424 | 0.0447 | 0.0489 | 0.0362 | 0.0480 | 0.0422 | 0.0439 | ----- | ----- | 0.0438 | 3.29 | 0.999 | 0.999 | 9.6 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Iodomethane | 1 | 0 | Avg | 0.5496 | 0.5746 | 0.4021 | 0.5431 | 0.7086 | 0.6458 | 0.6293 | ----- | ----- | 0.579 | 2.83 | 0.999 | 0.999 | 17 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Acetone | 1 | 0 | Avg | 0.0319 | 0.0326 | 0.0475 | 0.0352 | 0.0489 | 0.0397 | 0.0411 | ----- | ----- | 0.0396 | 2.73 | 0.998 | 0.998 | 17 | 0.10 a | 100.0 | 25.00 | 10.00 | 250.0 | 500.0 | 1250. | 2500. | | |
| Carbon Disulfide | 1 | 0 | Avg | 1.2081 | 1.3518 | 0.9110 | 1.1995 | 1.5693 | 1.4637 | 1.3894 | ----- | ----- | 1.30 | 2.89 | 0.998 | 0.999 | 17 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| t-Butyl Alcohol | 1 | 0 | Avg | 0.0085 | 0.0083 | 0.0104 | 0.0069 | 0.0081 | 0.0068 | 0.0077 | ----- | ----- | 0.00815 | 3.14 | 0.996 | 0.998 | 15 | | 100.0 | 25.00 | 10.00 | 250.0 | 500.0 | 1250. | 2500. | | |
| n-Hexane | 1 | 0 | Avg | 0.7547 | 0.7978 | 0.8706 | 0.7509 | 1.0524 | 0.9545 | 0.8709 | ----- | ----- | 0.865 | 3.53 | 0.996 | 0.999 | 13 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Di-isopropyl-ether | 1 | 0 | Avg | 1.2050 | 1.2505 | 1.4864 | 1.2252 | 1.5430 | 1.4212 | 1.3863 | ----- | ----- | 1.36 | 3.69 | 0.999 | 0.999 | 9.9 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,1-Dichloroethene | 1 | 0 | Avg | 0.9675 | 0.9759 | 0.8666 | 0.8869 | 1.2386 | 1.0937 | 0.9824 | ----- | ----- | 1.00 | 2.70 | 0.995 | 0.999 | 13 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Methyl Acetate | 1 | 0 | Qua | 0.2013 | 0.2143 | 0.3120 | 0.1554 | 0.1918 | 0.1593 | 0.1635 | ----- | ----- | 0.200 | 2.99 | 0.998 | 0.998 | 27 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Methyl-t-butyl ether | 1 | 0 | Avg | 0.4427 | 0.5302 | 0.5099 | 0.4308 | 0.5229 | 0.4887 | 0.4964 | 0.6765 | ----- | 0.512 | 3.30 | 1.00 | 1.00 | 15 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1-Dichloroethane | 1 | 0 | Avg | 0.9166 | 0.8143 | 0.9638 | 0.8640 | 1.0577 | 0.9820 | 0.9225 | ----- | ----- | 0.932 | 3.66 | 0.998 | 1.00 | 8.6 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| trans-1,2-Dichloroethe | 1 | 0 | Avg | 0.4241 | 0.5329 | 0.6859 | 0.4795 | 0.5879 | 0.5497 | 0.5064 | ----- | ----- | 0.538 | 3.31 | 0.997 | 0.999 | 16 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethyl-t-butyl ether | 1 | 0 | Avg | 0.8647 | 0.8741 | 0.9587 | 0.8381 | 0.9999 | 0.9523 | 0.9698 | ----- | ----- | 0.923 | 3.96 | 1.00 | 1.00 | 6.7 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| cis-1,2-Dichloroethene | 1 | 0 | Avg | 0.8733 | 0.9239 | 1.0941 | 0.8172 | 1.0170 | 0.9600 | 0.9019 | ----- | ----- | 0.941 | 4.08 | 0.998 | 1.00 | 9.8 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromochloromethane | 1 | 0 | Avg | 0.3751 | 0.2790 | 0.3042 | 0.3484 | 0.3814 | 0.3725 | 0.3653 | ----- | ----- | 0.347 | 4.24 | 1.00 | 1.00 | 11 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2,2-Dichloropropane | 1 | 0 | Avg | 0.7768 | 0.8940 | 0.9527 | 0.7439 | 0.9413 | 0.9020 | 0.8590 | ----- | ----- | 0.867 | 4.09 | 0.999 | 0.999 | 9.2 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethyl acetate | 1 | 0 | Avg | 0.1347 | 0.1732 | 0.1381 | 0.1401 | 0.1525 | 0.1334 | 0.1488 | ----- | ----- | 0.146 | 4.11 | 0.997 | 0.999 | 9.6 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,4-Dioxane | 1 | 0 | Avg | 0.0013 | 0.0014 | 0.0016 | 0.0010 | 0.0013 | 0.0010 | 0.0013 | ----- | ----- | 0.00132 | 5.14 | 0.989 | 0.996 | 16 | | 1000. | 250.0 | 100.0 | 2500. | 5000. | 1250 | 2500 | | |
| 1,1-Dichloropropene | 1 | 0 | Avg | 0.8568 | 0.9170 | 0.9840 | 0.8681 | 0.9979 | 0.9242 | 0.8447 | ----- | ----- | 0.913 | 4.50 | 0.997 | 1.00 | 6.7 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Chloroform | 1 | 0 | Avg | 0.9441 | 1.0540 | 1.2008 | 0.8363 | 0.9368 | 0.9110 | 0.8767 | ----- | ----- | 0.966 | 4.28 | 0.999 | 1.00 | 13 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Dibromofluoromethan | 1 | 0 | Avg | 0.2588 | 0.2585 | 0.2724 | 0.2334 | 0.2439 | 0.2284 | 0.2295 | 0.2458 | 0.2599 | 0.248 | 4.38 | -1 | -1 | 6.3 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Cyclohexane | 1 | 0 | Avg | 1.0396 | 1.1238 | 1.3353 | 1.0782 | 1.3387 | 1.2673 | 1.1670 | ----- | ----- | 1.19 | 4.44 | 0.997 | 0.999 | 10 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dichloroethane-d4 | 1 | 0 | Avg | 0.1158 | 0.1166 | 0.1216 | 0.1123 | 0.1091 | 0.1087 | 0.1047 | 0.1233 | 0.1175 | 0.114 | 4.58 | -1 | -1 | 5.4 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| 1,2-Dichloroethane | 1 | 0 | Avg | 0.5499 | 0.6325 | 0.7422 | 0.4895 | 0.5216 | 0.4949 | 0.4650 | ----- | ----- | 0.557 | 4.62 | 0.999 | 1.00 | 18 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2-Butanone | 1 | 0 | Avg | 0.0978 | 0.0980 | 0.0659 | 0.0651 | 0.0820 | 0.0606 | 0.0712 | ----- | ----- | 0.0773 | 4.09 | 0.992 | 0.995 | 20 | 0.10 a | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,1,1-Trichloroethane | 1 | 0 | Avg | 0.9381 | 1.0202 | 1.2661 | 0.9165 | 1.0844 | 1.0273 | 0.9548 | ----- | ----- | 1.03 | 4.40 | 0.998 | 1.00 | 12 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Carbon Tetrachloride | 1 | 0 | Avg | 0.8502 | 0.9424 | 1.1111 | 0.8444 | 0.9511 | 0.8579 | 0.8079 | ----- | ----- | 0.909 | 4.50 | 0.998 | 1.00 | 11 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Vinyl Acetate | 1 | 0 | Avg | 0.1647 | 0.1788 | 0.2381 | 0.1603 | 0.1882 | 0.1694 | 0.1729 | ----- | ----- | 0.182 | 3.30 | 0.999 | 0.999 | 15 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromodichloromethan | 1 | 0 | Avg | 0.5366 | 0.6522 | 0.6420 | 0.5029 | 0.5541 | 0.5278 | 0.5411 | ----- | ----- | 0.565 | 5.21 | 1.00 | 1.00 | 10 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |

***Flags***

***a - failed the min rf criteria***

***c - failed the minimum correlation coeff criteria(if applicable)***

***Note:*** Avg Rsd: 12.5

***Corr 1 = Correlation Coefficient for linear Eq.***

***Corr 2 = Correlation Coefficient for quad Eq.***

***Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.***

# Form 6
## Initial Calibration

Method: EPA 8260C

Instrument: GCMS_6

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 6M58204.D | CAL @ 20 PPB | 09/07/17 07:18 | 2 | 6M58203.D | CAL @ 5 PPB | 09/07/17 07:01 |
| 3 | 6M58202.D | CAL @ 2 PPB | 09/07/17 06:45 | 4 | 6M58206.D | CAL @ 50 PPB | 09/07/17 07:51 |
| 5 | 6M58212.D | CAL @ 100 PPB | 09/07/17 09:31 | 6 | 6M58210.D | CAL @ 250 PPB | 09/07/17 08:58 |
| 7 | 6M58208.D | CAL @ 500 PPB | 09/07/17 08:25 | 8 | 6M58201.D | CAL @ 1 PPB | 09/07/17 06:28 |
| 9 | 6M58200.D | CAL @ 0.5 PPB | 09/07/17 06:11 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | 1 | 0 | Avg | 0.8900 | 1.0053 | 0.9958 | 0.9252 | 1.1791 | 1.0555 | 0.9620 | ----- | ----- | 1.00 | 5.06 | 0.996 | 0.999 | 9.5 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Dibromomethane | 1 | 0 | Avg | 0.1751 | 0.1846 | 0.2297 | 0.1568 | 0.1761 | 0.1698 | 0.1619 | ----- | ----- | 0.179 | 5.15 | 0.999 | 1.00 | 13 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dichloropropane | 1 | 0 | Avg | 0.4115 | 0.5062 | 0.5648 | 0.3877 | 0.4342 | 0.4145 | 0.3967 | ----- | ----- | 0.445 | 5.08 | 0.999 | 1.00 | 15 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Trichloroethene | 1 | 0 | Avg | 0.5428 | 0.6586 | 0.7625 | 0.5201 | 0.6066 | 0.5759 | 0.5304 | ----- | ----- | 0.600 | 4.95 | 0.998 | 1.00 | 14 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Benzene | 1 | 0 | Avg | 1.7013 | 1.9042 | 2.2314 | 1.6574 | 1.9156 | 1.8400 | 1.7344 | 2.5945 | ----- | 1.95 | 4.62 | 0.999 | 1.00 | 16 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| tert-Amyl methyl ether | 1 | 0 | Avg | 0.5402 | 0.5701 | 0.6738 | 0.4908 | 0.5584 | 0.5975 | 0.5699 | ----- | ----- | 0.572 | 4.65 | 0.999 | 0.999 | 9.8 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Iso-propylacetate | 1 | 0 | Avg | 0.6358 | 0.6650 | 0.7267 | 0.5466 | 0.5990 | 0.6259 | 0.6599 | ----- | ----- | 0.637 | 4.62 | 0.999 | 1.00 | 8.9 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Methyl methacrylate | 1 | 0 | Avg | 0.3443 | 0.3178 | 0.4920 | 0.2886 | 0.3695 | 0.3602 | 0.3324 | ----- | ----- | 0.358 | 5.11 | 0.998 | 0.999 | 18 | 0.50 a | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Dibromochloromethan | 1 | 0 | Avg | 0.4903 | 0.5270 | 0.5493 | 0.4688 | 0.4920 | 0.5135 | 0.5154 | ----- | ----- | 0.508 | 6.03 | 1.00 | 1.00 | 5.2 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2-Chloroethylvinylethe | 1 | 0 | Avg | 0.1428 | 0.1677 | 0.2082 | 0.1384 | 0.1476 | 0.1576 | 0.1679 | ----- | ----- | 0.162 | 5.35 | 0.999 | 1.00 | 15 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| cis-1,3-Dichloropropen | 1 | 0 | Avg | 0.8414 | 0.8550 | 0.9530 | 0.8275 | 0.9438 | 0.9880 | 1.0012 | ----- | ----- | 0.916 | 5.44 | 1.00 | 1.00 | 7.9 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| trans-1,3-Dichloroprop | 1 | 0 | Avg | 0.5790 | 0.6140 | 0.7303 | 0.5779 | 0.6622 | 0.6932 | 0.7204 | ----- | ----- | 0.654 | 5.71 | 0.999 | 1.00 | 9.8 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethyl methacrylate | 1 | 0 | Avg | 0.3924 | 0.4618 | 0.4379 | 0.4159 | 0.4520 | 0.4559 | 0.4719 | ----- | ----- | 0.441 | 5.73 | 1.00 | 1.00 | 6.4 | 0.50 a | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,1,2-Trichloroethane | 1 | 0 | Avg | 0.3432 | 0.3955 | 0.4822 | 0.3241 | 0.3246 | 0.3287 | 0.3198 | ----- | ----- | 0.360 | 5.82 | 1.00 | 1.00 | 17 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dibromoethane | 1 | 0 | Qua | 0.3125 | 0.3546 | 0.4647 | 0.3116 | 0.3125 | 0.3118 | 0.3137 | 0.7011 | ----- | 0.385 | 6.10 | 1.00 | 1.00 | 36 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,3-Dichloropropane | 1 | 0 | Avg | 0.6469 | 0.7026 | 0.9231 | 0.5957 | 0.6307 | 0.6033 | 0.5751 | ----- | ----- | 0.668 | 5.91 | 0.999 | 1.00 | 18 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 4-Methyl-2-Pentanone | 1 | 0 | Avg | 0.2497 | 0.2569 | 0.3432 | 0.2482 | 0.2409 | 0.2505 | 0.2652 | ----- | ----- | 0.265 | 5.50 | 0.999 | 1.00 | 13 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2-Hexanone | 1 | 0 | Avg | 0.1691 | 0.1803 | 0.1913 | 0.1496 | 0.1597 | 0.1567 | 0.1720 | ----- | ----- | 0.168 | 5.92 | 0.998 | 1.00 | 8.6 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Tetrachloroethene | 1 | 0 | Avg | 0.8468 | 0.9224 | 1.1001 | 0.8383 | 0.9308 | 0.9632 | 0.7954 | ----- | ----- | 0.914 | 5.90 | 0.990 | 0.999 | 11 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Toluene-d8 | 1 | 0 | Avg | 1.6645 | 1.5936 | 1.5853 | 1.6589 | 1.6482 | 1.5838 | 1.6599 | 1.6328 | 1.6319 | 1.63 | 5.58 | -1 | -1 | 2.0 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Toluene | 1 | 0 | Qua | 1.8397 | 1.9737 | 2.5301 | 1.8715 | 2.0815 | 2.0415 | 1.8871 | 3.4195 | ----- | 2.21 | 5.62 | 0.998 | 1.00 | 24 | 0.40 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,1,2-Tetrachloroeth | 1 | 0 | Avg | 0.5935 | 0.6554 | 0.6883 | 0.5724 | 0.5887 | 0.5830 | 0.5119 | ----- | ----- | 0.599 | 6.38 | 0.996 | 1.00 | 9.6 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Chlorobenzene | 1 | 0 | Avg | 1.8482 | 1.9392 | 2.3874 | 1.7659 | 1.9481 | 1.9023 | 1.7687 | ----- | ----- | 1.94 | 6.35 | 0.998 | 1.00 | 11 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| n-Butyl acrylate | 1 | 0 | Avg | 0.9928 | 1.3316 | 1.2073 | 1.1633 | 1.3924 | 1.7152 | 1.6248 | ----- | ----- | 1.35 | 6.59 | 0.998 | 0.998 | 19 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| n-Amyl acetate | 1 | 0 | Avg | 0.9551 | 0.8607 | 1.1576 | 1.0239 | 1.1747 | 1.3319 | 1.2847 | ----- | ----- | 1.11 | 6.70 | 0.999 | 0.999 | 16 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromoform | 1 | 0 | Avg | 0.4624 | 0.4880 | 0.5808 | 0.4943 | 0.5160 | 0.6843 | 0.6049 | ----- | ----- | 0.547 | 6.78 | 0.994 | 0.996 | 14 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethylbenzene | 1 | 0 | Avg | 1.9349 | 2.0525 | 2.5132 | 1.9599 | 2.4383 | 2.7262 | 1.8905 | 2.9938 | ----- | 2.31 | 6.39 | 0.963 | 0.993 | 18 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,2,2-Tetrachloroeth | 1 | 0 | Avg | 0.7210 | 0.8888 | 1.1081 | 0.7034 | 0.7127 | 0.7650 | 0.6570 | ----- | ----- | 0.794 | 7.00 | 0.994 | 0.999 | 20 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromofluorobenzene | 1 | 0 | Avg | 0.8713 | 0.8126 | 0.8598 | 0.8784 | 0.8513 | 1.0214 | 0.9570 | 0.8229 | 0.8379 | 0.879 | 6.94 | -1 | -1 | 7.7 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Styrene | 1 | 0 | Avg | 3.2097 | 3.3073 | 3.4640 | 3.4512 | 3.9728 | 4.4071 | 3.5374 | ----- | ----- | 3.62 | 6.66 | 0.986 | 0.997 | 12 | 0.30 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| m&p-Xylenes | 1 | 0 | Avg | 2.5808 | 2.6654 | 2.8194 | 2.6178 | 3.0702 | 3.3541 | 2.5448 | 4.2092 | 3.8700 | 3.08 | 6.44 | 0.981 | 0.996 | 20 | 0.10 | 40.00 | 10.00 | 4.00 | 100.0 | 200.0 | 500.0 | 1000. | 2.00 | 1.00 |
| o-Xylene | 1 | 0 | Avg | 2.2947 | 2.3327 | 2.5953 | 2.2911 | 2.6847 | 2.9618 | 2.3058 | 3.7432 | ----- | 2.65 | 6.66 | 0.983 | 0.997 | 19 | 0.30 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| trans-1,4-Dichloro-2-b | 1 | 0 | Avg | 1.0968 | 1.1082 | 1.1584 | 0.9954 | 1.1921 | 1.2485 | 1.0246 | ----- | ----- | 1.12 | 7.00 | 0.989 | 0.998 | 8.0 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,3-Dichlorobenzene | 1 | 0 | Avg | 2.8489 | 3.1830 | 3.7342 | 2.8214 | 3.0918 | 2.9791 | 2.7711 | ----- | ----- | 3.06 | 7.54 | 0.998 | 1.00 | 11 | 0.60 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,4-Dichlorobenzene | 1 | 0 | Avg | 2.6564 | 3.0420 | 3.7248 | 2.6183 | 2.8438 | 2.7935 | 2.6359 | ----- | ----- | 2.90 | 7.59 | 0.999 | 1.00 | 14 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dichlorobenzene | 1 | 0 | Avg | 2.1727 | 2.4036 | 2.3665 | 2.1265 | 2.2590 | 2.2241 | 2.1919 | ----- | ----- | 2.25 | 7.81 | 1.00 | 1.00 | 4.5 | 0.40 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Isopropylbenzene | 1 | 0 | Avg | 7.5749 | 7.8566 | 8.6469 | 7.9080 | 9.3649 | 10.503 | 7.8148 | 12.287 | ----- | 8.99 | 6.84 | 0.976 | 0.995 | 18 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Cyclohexanone | 1 | 0 | Avg | 0.0906 | 0.1181 | 0.1366 | 0.0936 | 0.1150 | 0.1218 | 0.0955 | ----- | ----- | 0.110 | 7.00 | 0.983 | 0.997 | 16 | | 100.0 | 25.00 | 10.00 | 250.0 | 500.0 | 1250. | 2500. | | |
| Camphene | 1 | 0 | Avg | 4.2415 | 4.2962 | 4.8482 | 4.4280 | 5.4963 | 5.9631 | 4.4777 | ----- | ----- | 4.82 | 7.00 | 0.976 | 0.996 | 14 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2,3-Trichloropropane | 1 | 0 | Avg | 0.9349 | 0.9589 | 1.3388 | 0.9421 | 0.9915 | 1.1117 | 0.9781 | ----- | ----- | 1.04 | 7.03 | 0.996 | 0.998 | 14 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2-Chlorotoluene | 1 | 0 | Avg | 5.7267 | 5.8593 | 6.3699 | 5.2714 | 6.0729 | 5.7292 | 5.1714 | ----- | ----- | 5.74 | 7.13 | 0.997 | 1.00 | 7.3 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |

Avg Rsd: 12.5

***Flags***

***a - failed the min rf criteria***

***c - failed the minimum correlation coeff criteria(if applicable)***

***Note:***

***Corr 1 = Correlation Coefficient for linear Eq.***

***Corr 2 = Correlation Coefficient for quad Eq.***

***Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.***

Method: EPA 8260C

# Form 6
## Initial Calibration

Instrument: GCMS_6

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 6M58204.D | CAL @ 20 PPB | 09/07/17 07:18 | 2 | 6M58203.D | CAL @ 5 PPB | 09/07/17 07:01 |
| 3 | 6M58202.D | CAL @ 2 PPB | 09/07/17 06:45 | 4 | 6M58206.D | CAL @ 50 PPB | 09/07/17 07:51 |
| 5 | 6M58212.D | CAL @ 100 PPB | 09/07/17 09:31 | 6 | 6M58210.D | CAL @ 250 PPB | 09/07/17 08:58 |
| 7 | 6M58208.D | CAL @ 500 PPB | 09/07/17 08:25 | 8 | 6M58201.D | CAL @ 1 PPB | 09/07/17 06:28 |
| 9 | 6M58200.D | CAL @ 0.5 PPB | 09/07/17 06:11 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| p-Ethyltoluene | 1 | 0 | Avg | 8.3057 | 8.4325 | 9.2306 | 8.3989 | 9.6699 | 9.2599 | 8.0542 | ----- | ----- | 8.76 | 7.12 | 0.994 | 1.00 | 7.0 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 4-Chlorotoluene | 1 | 0 | Avg | 4.6568 | 5.4643 | 5.6493 | 5.1257 | 5.4221 | 5.2224 | 5.1605 | ----- | ----- | 5.24 | 7.19 | 1.00 | 1.00 | 6.1 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| n-Propylbenzene | 1 | 0 | Avg | 9.6266 | 10.020 | 11.144 | 9.8545 | 11.709 | 11.700 | 8.7871 | 13.364 | ----- | 10.8 | 7.06 | 0.977 | 0.998 | 14 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromobenzene | 1 | 0 | Avg | 3.2378 | 3.5793 | 3.7149 | 3.1082 | 3.4030 | 3.7082 | 3.2631 | ----- | ----- | 3.43 | 7.04 | 0.996 | 0.999 | 7.0 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,3,5-Trimethylbenzen | 1 | 0 | Avg | 6.1813 | 6.6712 | 7.1546 | 6.4763 | 7.1088 | 6.5669 | 5.8401 | 9.1803 | ----- | 6.90 | 7.15 | 0.996 | 1.00 | 15 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Butyl methacrylate | 1 | 0 | Avg | 1.8301 | 1.6302 | 2.0508 | 1.8511 | 2.0833 | 2.0762 | 2.0771 | ----- | ----- | 1.94 | 7.16 | 1.00 | 1.00 | 9.1 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| t-Butylbenzene | 1 | 0 | Avg | 5.5780 | 5.9066 | 6.4134 | 6.0816 | 7.0553 | 6.6183 | 6.0290 | 8.4928 | ----- | 6.52 | 7.34 | 0.997 | 1.00 | 14 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,4-Trimethylbenzen | 1 | 0 | Avg | 6.0862 | 6.4055 | 6.5033 | 6.2198 | 7.0171 | 6.6303 | 6.1509 | 9.3944 | ----- | 6.80 | 7.36 | 0.998 | 1.00 | 16 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| sec-Butylbenzene | 1 | 0 | Avg | 8.2784 | 8.4703 | 8.7845 | 8.6620 | 10.339 | 9.6921 | 8.0878 | 10.845 | ----- | 9.15 | 7.45 | 0.990 | 0.999 | 11 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 4-Isopropyltoluene | 1 | 0 | Avg | 6.3764 | 6.5063 | 6.8248 | 6.7663 | 7.7643 | 7.2045 | 6.4565 | 8.1324 | ----- | 7.00 | 7.52 | 0.996 | 1.00 | 9.2 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Butylbenzene | 1 | 0 | Avg | 8.5859 | 9.2774 | 9.3854 | 9.1061 | 10.276 | 9.6351 | 8.4520 | 11.412 | ----- | 9.52 | 7.75 | 0.995 | 1.00 | 10 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| p-Diethylbenzene | 1 | 0 | Avg | 3.9941 | 3.8505 | 3.9646 | 4.3071 | 4.8018 | 4.5481 | 4.0465 | ----- | ----- | 4.22 | 7.74 | 0.996 | 1.00 | 8.3 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2,4,5-Tetramethylbe | 1 | 0 | Avg | 4.1160 | 4.3912 | 4.5243 | 4.6022 | 5.1245 | 5.2238 | 4.9187 | ----- | ----- | 4.70 | 8.19 | 0.999 | 1.00 | 8.6 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dibromo-3-Chloro | 1 | 0 | Avg | 0.0807 | 0.0704 | 0.0983 | 0.0763 | 0.0700 | 0.0854 | 0.0944 | ----- | ----- | 0.0822 | 8.25 | 0.996 | 1.00 | 14 | 0.05 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Camphor | 1 | 0 | Avg | 0.0159 | 0.0172 | 0.0171 | 0.0142 | 0.0180 | 0.0191 | 0.0219 | ----- | ----- | 0.0177 | 8.67 | 0.996 | 1.00 | 14 | | 200.0 | 50.00 | 20.00 | 500.0 | 1000. | 2500. | 5000. | | |
| Hexachlorobutadiene | 1 | 0 | Avg | 1.3338 | 1.5418 | 2.2860 | 1.4181 | 1.6495 | 1.6728 | 1.5093 | ----- | ----- | 1.63 | 8.81 | 0.997 | 0.999 | 19 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2,4-Trichlorobenzen | 1 | 0 | Avg | 1.1332 | 1.0844 | 1.3321 | 1.1534 | 1.2257 | 1.2600 | 1.2406 | ----- | ----- | 1.20 | 8.72 | 1.00 | 1.00 | 7.1 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2,3-Trichlorobenzen | 1 | 0 | Avg | 0.7929 | 0.9783 | 0.9256 | 0.7811 | 0.8138 | 0.8272 | 0.8253 | ----- | ----- | 0.849 | 9.02 | 1.00 | 1.00 | 8.7 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Naphthalene | 1 | 0 | Avg | 0.8774 | 1.0627 | 1.1434 | 0.9209 | 1.0636 | 1.0073 | 1.0664 | 1.1192 | ----- | 1.03 | 8.88 | 0.999 | 1.00 | 9.0 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |

| *Flags* | *Note:* Avg Rsd: 12.5 |
|---|---|
| *a - failed the min rf criteria* | *Corr 1 = Correlation Coefficient for linear Eq.* |
| *c - failed the minimum correlation coeff criteria(if applicable)* | *Corr 2 = Correlation Coefficient for quad Eq.* |
| | *Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.* |

# Form7

Continuing Calibration

**Calibration Name:** CAL @ 50 PPB **Data File:** 6M59248.D **Instrument:** GCMS 6

**Cont Calibration Date/Time** 9/29/2017 6:32:00 A Method: EPA 8260C

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorobenzene | 1 | 0 | I | 4.75 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| Chlorodifluoromethane | 1 | 0 | | 1.43 | 30.51 | 50 | 20 | 0.1 | 1.166 | 0.711 | 38.97 | C1 |
| Dichlorodifluoromethane | 1 | 0 | | 1.42 | 41.32 | 50 | 20 | 0.1 | 0.743 | 0.614 | 17.36 | |
| Chloromethane | 1 | 0 | | 1.58 | 56.23 | 50 | 20 | 0.1 | 0.599 | 0.674 | 12.46 | |
| Bromomethane | 1 | 0 | | 1.96 | 54.91 | 50 | 20 | 0.1 | 0.378 | 0.415 | 9.81 | |
| Vinyl Chloride | 1 | 0 | | 1.68 | 53.91 | 50 | 20 | 0.1 | 0.521 | 0.562 | 7.83 | |
| Chloroethane | 1 | 0 | | 2.04 | 56.64 | 50 | 20 | 0.1 | 0.386 | 0.437 | 13.28 | |
| Trichlorofluoromethane | 1 | 0 | | 2.26 | 64.31 | 50 | 20 | 0.1 | 0.546 | 0.703 | 28.61 | C1 |
| Ethyl ether | 1 | 0 | | 2.49 | 50.05 | 50 | 20 | 0.5 | 0.223 | 0.223 | 0.09 | |
| Furan | 1 | 0 | | 2.52 | 54.51 | 50 | 20 | 0.5 | 1.206 | 1.314 | 9.01 | |
| 1,1,2-Trichloro-1,2,2-trifluoroetha | 1 | 0 | | 2.67 | 57.31 | 50 | 20 | 0.1 | 0.617 | 0.707 | 14.62 | |
| Methylene Chloride | 1 | 0 | | 3.07 | 51.71 | 50 | 20 | 0.1 | 0.391 | 0.405 | 3.43 | |
| Acrolein | 1 | 0 | | 2.60 | 237.31 | 250 | 20 | | 0.017 | 0.018 | 5.08 | |
| Acrylonitrile | 1 | 0 | | 3.28 | 52.64 | 50 | 20 | | 0.044 | 0.046 | 5.27 | |
| Iodomethane | 1 | 0 | | 2.81 | 53.49 | 50 | 20 | | 0.579 | 0.620 | 6.99 | |
| Acetone | 1 | 0 | | 2.72 | 242.78 | 250 | 20 | 0.1 | 0.040 | 0.038 | 2.89 | |
| Carbon Disulfide | 1 | 0 | | 2.87 | 57.69 | 50 | 20 | 0.1 | 1.299 | 1.499 | 15.39 | |
| t-Butyl Alcohol | 1 | 0 | | 3.12 | 211.61 | 250 | 20 | | 0.008 | 0.007 | 15.36 | |
| n-Hexane | 1 | 0 | | 3.51 | 54.39 | 50 | 20 | | 0.865 | 0.940 | 8.77 | |
| Di-isopropyl-ether | 1 | 0 | | 3.67 | 54.23 | 50 | 20 | | 1.360 | 1.475 | 8.45 | |
| 1,1-Dichloroethene | 1 | 0 | | 2.68 | 59.67 | 50 | 20 | 0.1 | 1.002 | 1.195 | 19.34 | |
| Methyl Acetate | 1 | 0 | | 2.98 | 40.53 | 50 | 20 | 0.1 | 0.200 | 0.136 | 18.95 | |
| Methyl-t-butyl ether | 1 | 0 | | 3.28 | 46.54 | 50 | 20 | 0.1 | 0.512 | 0.477 | 6.92 | |
| 1,1-Dichloroethane | 1 | 0 | | 3.64 | 56.77 | 50 | 20 | 0.2 | 0.932 | 1.058 | 13.53 | |
| trans-1,2-Dichloroethene | 1 | 0 | | 3.29 | 59.78 | 50 | 20 | 0.1 | 0.538 | 0.643 | 19.55 | |
| Ethyl-t-butyl ether | 1 | 0 | | 3.94 | 49.18 | 50 | 20 | 0.5 | 0.923 | 0.907 | 1.64 | |
| cis-1,2-Dichloroethene | 1 | 0 | | 4.07 | 59.21 | 50 | 20 | 0.1 | 0.941 | 1.115 | 18.43 | |
| Bromochloromethane | 1 | 0 | | 4.23 | 44.94 | 50 | 20 | | 0.347 | 0.312 | 10.12 | |
| 2,2-Dichloropropane | 1 | 0 | | 4.07 | 59.93 | 50 | 20 | | 0.867 | 1.039 | 19.87 | |
| Ethyl acetate | 1 | 0 | | 4.10 | 53.30 | 50 | 20 | | 0.146 | 0.155 | 6.60 | |
| 1,4-Dioxane | 1 | 0 | | 5.13 | 3108.35 | 2500 | 20 | | 0.001 | 0.002 | 24.33 | C1 |
| 1,1-Dichloropropene | 1 | 0 | | 4.49 | 59.94 | 50 | 20 | | 0.913 | 1.095 | 19.87 | |
| Chloroform | 1 | 0 | | 4.27 | 58.54 | 50 | 20 | 0.2 | 0.966 | 1.131 | 17.09 | |
| Dibromofluoromethane | 1 | 0 | S | 4.37 | 30.16 | 75 | ** | | 0.248 | 0.249 | 0.52 | |
| Cyclohexane | 1 | 0 | | 4.43 | 50.21 | 50 | 20 | 0.1 | 1.193 | 1.198 | 0.41 | |
| 1,2-Dichloroethane-d4 | 1 | 0 | S | 4.57 | 29.62 | 75 | ** | | 0.114 | 0.113 | 1.25 | |
| 1,2-Dichloroethane | 1 | 0 | | 4.61 | 59.58 | 50 | 20 | 0.1 | 0.557 | 0.663 | 19.16 | |
| 2-Butanone | 1 | 0 | | 4.08 | 52.64 | 50 | 20 | 0.1 | 0.077 | 0.081 | 5.28 | |
| 1,1,1-Trichloroethane | 1 | 0 | | 4.39 | 59.75 | 50 | 20 | 0.1 | 1.030 | 1.231 | 19.50 | |
| Carbon Tetrachloride | 1 | 0 | | 4.49 | 54.94 | 50 | 20 | 0.1 | 0.909 | 0.999 | 9.88 | |
| Vinyl Acetate | 1 | 0 | | 3.28 | 47.33 | 50 | 20 | | 0.182 | 0.172 | 5.35 | |
| Bromodichloromethane | 1 | 0 | | 5.20 | 55.72 | 50 | 20 | 0.2 | 0.565 | 0.630 | 11.45 | |
| Methylcyclohexane | 1 | 0 | | 5.05 | 57.02 | 50 | 20 | 0.1 | 1.002 | 1.143 | 14.04 | |
| Dibromomethane | 1 | 0 | | 5.14 | 59.54 | 50 | 20 | | 0.179 | 0.213 | 19.08 | |
| 1,2-Dichloropropane | 1 | 0 | | 5.07 | 53.93 | 50 | 20 | 0.1 | 0.445 | 0.480 | 7.86 | |
| Trichloroethene | 1 | 0 | | 4.95 | 47.29 | 50 | 20 | 0.2 | 0.600 | 0.567 | 5.42 | |
| Benzene | 1 | 0 | | 4.61 | 51.46 | 50 | 20 | 0.5 | 1.947 | 2.004 | 2.91 | |
| tert-Amyl methyl ether | 1 | 0 | | 4.64 | 46.79 | 50 | 20 | | 0.572 | 0.535 | 6.42 | |
| Chlorobenzene-d5 | 1 | 0 | I | 6.32 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| Iso-propylacetate | 1 | 0 | | 4.61 | 57.09 | 50 | 20 | 0.5 | 0.637 | 0.727 | 14.18 | |
| Methyl methacrylate | 1 | 0 | | 5.10 | 61.48 | 50 | 20 | 0.5 | 0.358 | 0.440 | 22.95 | C1 |
| Dibromochloromethane | 1 | 0 | | 6.02 | 62.09 | 50 | 20 | 0.1 | 0.508 | 0.631 | 24.18 | C1 |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL @ 50 PPB **Data File:** 6M59248.D **Instrument:** GCMS 6

**Cont Calibration Date/Time** 9/29/2017 6:32:00 A Method: EPA 8260C

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chloroethylvinylether | 1 | 0 | | 5.34 | 60.44 | 50 | 20 | | 0.162 | 0.195 | 20.89 | C1 |
| cis-1,3-Dichloropropene | 1 | 0 | | 5.43 | 73.22 | 50 | 20 | 0.2 | 0.916 | 1.341 | 46.45 | C1 |
| trans-1,3-Dichloropropene | 1 | 0 | | 5.71 | 70.98 | 50 | 20 | 0.1 | 0.654 | 0.928 | 41.96 | C1 |
| Ethyl methacrylate | 1 | 0 | | 5.73 | 65.96 | 50 | 20 | 0.5 | 0.441 | 0.582 | 31.92 | C1 |
| 1,1,2-Trichloroethane | 1 | 0 | | 5.81 | 73.28 | 50 | 20 | 0.1 | 0.360 | 0.527 | 46.55 | C1 |
| 1,2-Dibromoethane | 1 | 0 | | 6.10 | 65.85 | 50 | 20 | 0.1 | 0.385 | 0.410 | 31.70 | C1 |
| 1,3-Dichloropropane | 1 | 0 | | 5.90 | 72.26 | 50 | 20 | | 0.668 | 0.966 | 44.52 | C1 |
| 4-Methyl-2-Pentanone | 1 | 0 | | 5.50 | 59.75 | 50 | 20 | 0.1 | 0.265 | 0.317 | 19.50 | |
| 2-Hexanone | 1 | 0 | | 5.91 | 58.27 | 50 | 20 | 0.1 | 0.168 | 0.196 | 16.54 | |
| Tetrachloroethene | 1 | 0 | | 5.89 | 80.56 | 50 | 20 | 0.2 | 0.914 | 1.472 | 61.11 | C1 |
| Toluene-d8 | 1 | 0 | S | 5.58 | 36.72 | 75 | ** | | 1.629 | 1.994 | 22.41 | |
| Toluene | 1 | 0 | | 5.61 | 68.65 | 50 | 20 | 0.4 | 2.206 | 2.896 | 37.31 | C1 |
| 1,1,1,2-Tetrachloroethane | 1 | 0 | | 6.37 | 69.26 | 50 | 20 | | 0.599 | 0.830 | 38.51 | C1 |
| Chlorobenzene | 1 | 0 | | 6.34 | 70.43 | 50 | 20 | 0.5 | 1.937 | 2.729 | 40.86 | C1 |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 7.57 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| n-Butyl acrylate | 1 | 0 | | 6.58 | 46.42 | 50 | 20 | 0.5 | 1.347 | 1.250 | 7.15 | |
| n-Amyl acetate | 1 | 0 | | 6.70 | 50.24 | 50 | 20 | 0.5 | 1.113 | 1.118 | 0.48 | |
| Bromoform | 1 | 0 | | 6.77 | 61.20 | 50 | 20 | 0.1 | 0.547 | 0.670 | 22.40 | C1 |
| Ethylbenzene | 1 | 0 | | 6.38 | 49.26 | 50 | 20 | 0.1 | 2.314 | 2.279 | 1.49 | |
| 1,1,2,2-Tetrachloroethane | 1 | 0 | | 6.99 | 53.37 | 50 | 20 | 0.1 | 0.794 | 0.847 | 6.74 | |
| Bromofluorobenzene | 1 | 0 | S | 6.93 | 32.09 | 75 | ** | | 0.879 | 0.940 | 6.96 | |
| Styrene | 1 | 0 | | 6.65 | 59.90 | 50 | 20 | 0.3 | 3.621 | 4.339 | 19.80 | |
| m&p-Xylenes | 1 | 0 | | 6.44 | 101.61 | 100 | 20 | 0.1 | 3.081 | 3.131 | 1.61 | |
| o-Xylene | 1 | 0 | | 6.65 | 50.75 | 50 | 20 | 0.3 | 2.651 | 2.691 | 1.49 | |
| trans-1,4-Dichloro-2-butene | 1 | 0 | | 7.00 | 56.95 | 50 | 20 | | 1.118 | 1.273 | 13.91 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 7.54 | 54.73 | 50 | 20 | 0.6 | 3.061 | 3.351 | 9.45 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 7.59 | 54.45 | 50 | 20 | 0.5 | 2.902 | 3.160 | 8.90 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 7.80 | 54.43 | 50 | 20 | 0.4 | 2.249 | 2.449 | 8.86 | |
| Isopropylbenzene | 1 | 0 | | 6.83 | 52.55 | 50 | 20 | 0.1 | 8.995 | 9.453 | 5.10 | |
| Cyclohexanone | 1 | 0 | | 7.00 | 246.23 | 250 | 20 | | 0.110 | 0.109 | 1.51 | |
| Camphene | 1 | 0 | | 7.00 | 59.69 | 50 | 20 | | 4.822 | 5.756 | 19.38 | |
| 1,2,3-Trichloropropane | 1 | 0 | | 7.03 | 59.91 | 50 | 20 | | 1.037 | 1.242 | 19.82 | |
| 2-Chlorotoluene | 1 | 0 | | 7.12 | 57.53 | 50 | 20 | | 5.743 | 6.608 | 15.07 | |
| p-Ethyltoluene | 1 | 0 | | 7.11 | 57.87 | 50 | 20 | | 8.765 | 10.145 | 15.75 | |
| 4-Chlorotoluene | 1 | 0 | | 7.18 | 60.72 | 50 | 20 | | 5.243 | 6.367 | 21.44 | C1 |
| n-Propylbenzene | 1 | 0 | | 7.06 | 56.95 | 50 | 20 | | 10.776 | 12.274 | 13.90 | |
| Bromobenzene | 1 | 0 | | 7.03 | 58.31 | 50 | 20 | | 3.431 | 4.001 | 16.62 | |
| 1,3,5-Trimethylbenzene | 1 | 0 | | 7.14 | 50.61 | 50 | 20 | | 6.897 | 6.981 | 1.21 | |
| Butyl methacrylate | 1 | 0 | | 7.15 | 53.14 | 50 | 20 | 0.5 | 1.943 | 2.065 | 6.28 | |
| t-Butylbenzene | 1 | 0 | | 7.33 | 55.82 | 50 | 20 | | 6.522 | 7.281 | 11.63 | |
| 1,2,4-Trimethylbenzene | 1 | 0 | | 7.35 | 51.28 | 50 | 20 | | 6.801 | 6.975 | 2.56 | |
| sec-Butylbenzene | 1 | 0 | | 7.45 | 50.23 | 50 | 20 | | 9.145 | 9.187 | 0.46 | |
| 4-Isopropyltoluene | 1 | 0 | | 7.52 | 52.43 | 50 | 20 | | 7.004 | 7.344 | 4.85 | |
| n-Butylbenzene | 1 | 0 | | 7.75 | 51.90 | 50 | 20 | | 9.517 | 9.879 | 3.80 | |
| p-Diethylbenzene | 1 | 0 | | 7.74 | 55.05 | 50 | 20 | | 4.216 | 4.642 | 10.10 | |
| 1,2,4,5-Tetramethylbenzene | 1 | 0 | | 8.18 | 52.16 | 50 | 20 | | 4.700 | 4.903 | 4.31 | |
| 1,2-Dibromo-3-Chloropropane | 1 | 0 | | 8.25 | 41.62 | 50 | 20 | 0.05 | 0.082 | 0.068 | 16.75 | |
| Camphor | 1 | 0 | | 8.67 | 430.96 | 500 | 20 | | 0.018 | 0.015 | 13.81 | |
| Hexachlorobutadiene | 1 | 0 | | 8.80 | 50.37 | 50 | 20 | | 1.630 | 1.642 | 0.74 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 8.72 | 48.10 | 50 | 20 | 0.2 | 1.204 | 1.158 | 3.80 | |
| 1,2,3-Trichlorobenzene | 1 | 0 | | 9.01 | 43.78 | 50 | 20 | | 0.849 | 0.743 | 12.45 | |
| Naphthalene | 1 | 0 | | 8.88 | 47.20 | 50 | 20 | | 1.033 | 0.975 | 5.59 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

7092827 0043

# FORM8

## Internal Standard Areas

Evaluation Std Data File: 6M58204.D  Method: EPA 8260C

Analysis Date/Time: 09/07/17 07:18

Lab File ID: CAL @ 20 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 221245 | 4.76 | 122422 | 6.33 | 58835 | 7.57 | | | | | | | | |
| Eval File Area Limit: | 110622-442490 | | 61211-244844 | | 29418-117670 | | | | | | | | | |
| Eval File Rt Limit: | 4.26-5.26 | | 5.83-6.83 | | 7.07-8.07 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 6M58200.D | CAL @ 0.5 PPB | 201509 | 4.76 | 107609 | 6.33 | 46309 | 7.57 |
| 6M58201.D | CAL @ 1 PPB | 200880 | 4.76 | 109155 | 6.33 | 51276 | 7.57 |
| 6M58202.D | CAL @ 2 PPB | 215580 | 4.76 | 121488 | 6.33 | 56120 | 7.58 |
| 6M58203.D | CAL @ 5 PPB | 202042 | 4.76 | 114052 | 6.33 | 54207 | 7.58 |
| 6M58204.D | CAL @ 20 PPB | 221245 | 4.76 | 122422 | 6.33 | 58835 | 7.57 |
| 6M58206.D | CAL @ 50 PPB | 265114 | 4.76 | 143311 | 6.33 | 67986 | 7.58 |
| 6M58208.D | CAL @ 500 PPB | 238632 | 4.77 | 132837 | 6.35 | 57930 | 7.59 |
| 6M58210.D | CAL @ 250 PPB | 268404 | 4.76 | 143282 | 6.33 | 54251 | 7.57 |
| 6M58212.D | CAL @ 100 PPB | 242458 | 4.76 | 138078 | 6.33 | 61562 | 7.58 |
| 6M58216.D | ICV | 226291 | 4.76 | 124385 | 6.33 | 52478 | 7.58 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

7092827 0044

# FORM8

## Internal Standard Areas

Evaluation Std Data File: 6M59248.D  Method: EPA 8260C

Analysis Date/Time: 09/29/17 06:32

Lab File ID: CAL @ 50 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 203204 | 4.75 | 85877 | 6.32 | 43315 | 7.57 | | | | | | | | |
| Eval File Area Limit: | 101602-406408 | | 42938-171754 | | 21658-86630 | | | | | | | | | |
| Eval File Rt Limit: | 4.25-5.25 | | 5.82-6.82 | | 7.07-8.07 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 6M59246.D | BLK | 150344 | 4.75 | 89253 | 6.32 | 35124 | 7.57 |
| 6M59247.D | 50 PPB | 204742 | 4.75 | 108935 | 6.32 | 46425 | 7.57 |
| 6M59249.D | BLK | 165083 | 4.75 | 81669 | 6.32 | 32302 | 7.57 |
| 6M59250.D | BLK | 161638 | 4.75 | 71539 | 6.32 | 29403 | 7.57 |
| 6M59251.D | DAILY BLANK | 175495 | 4.75 | 92814 | 6.32 | 34937 | 7.57 |
| 6M59252.D | BLK | 186777 | 4.74 | 96998 | 6.32 | 31318 | 7.57 |
| 6M59253.D | AD00298-001 | 163949 | 4.75 | 84388 | 6.32 | 31276 | 7.57 |
| 6M59254.D | AD00289-008 | 157573 | 4.76 | 63242 | 6.33 | 29725 | 7.58 |
| 6M59255.D | AD00289-007 | 154530 | 4.75 | 84315 | 6.32 | 31881 | 7.57 |
| 6M59256.D | MBS64307 | 183073 | 4.75 | 95624 | 6.32 | 43542 | 7.57 |
| 6M59257.D | AD00091-024(MS) | 198746 | 4.75 | 75341 | 6.32 | 43489 | 7.57 |
| 6M59258.D | AD00091-024(MSD) | 180476 | 4.75 | 78934 | 6.32 | 43504 | 7.57 |
| 6M59259.D | BLK | 187962 | 4.75 | 100510 | 6.32 | 39515 | 7.57 |
| 6M59260.D | AD00296-011 | 162045 | 4.75 | 68317 | 6.32 | 31653 | 7.57 |
| 6M59261.D | AD00289-001 | 159547 | 4.75 | 89263 | 6.32 | 35374 | 7.57 |
| 6M59262.D | AD00289-002 | 166357 | 4.75 | 94201 | 6.32 | 35770 | 7.57 |
| 6M59263.D | AD00289-003 | 177309 | 4.75 | 93416 | 6.32 | 35381 | 7.57 |
| 6M59264.D | AD00289-004 | 158735 | 4.75 | 70914 | 6.32 | 30697 | 7.57 |
| 6M59265.D | AD00289-005 | 159040 | 4.76 | 91093 | 6.33 | 33557 | 7.57 |
| 6M59266.D | AD00289-006 | 157378 | 4.75 | 87858 | 6.32 | 31671 | 7.57 |
| 6M59267.D | AD00289-009 | 162437 | 4.76 | 91094 | 6.33 | 33537 | 7.58 |
| 6M59268.D | AD00290-001 | 147882 | 4.76 | 77572 | 6.33 | 27198 | 7.58 |
| 6M59269.D | AD00290-003 | 157726 | 4.75 | 85924 | 6.33 | 31330 | 7.57 |
| 6M59270.D | AD00290-005 | 152620 | 4.75 | 81606 | 6.33 | 23353 | 7.57 |
| 6M59271.D | AD00290-007 | 160854 | 4.75 | 85959 | 6.32 | 26901 | 7.57 |
| 6M59272.D | AD00290-009 | 168350 | 4.75 | 95438 | 6.32 | 28973 | 7.57 |
| 6M59273.D | AD00290-013 | 161326 | 4.75 | 83527 | 6.33 | 33673 | 7.57 |
| 6M59274.D | AD00290-011 | 162709 | 4.75 | 77938 | 6.32 | 32211 | 7.57 |
| 6M59275.D | AD00316-023 | 147107 | 4.76 | 83235 | 6.33 | 28018 | 7.58 |
| 6M59276.D | AD00316-025 | 142192 | 4.76 | 59310 | 6.33 | 26903 | 7.57 |
| 6M59277.D | AD00091-024 | 162201 | 4.75 | 88966 | 6.32 | 29979 | 7.57 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

# TCLP Volatile Data

# Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00298-001(T)
Client Id: 475 EXTERIOR NYRECYC
Data File: 3M117852.D
Analysis Date: 10/02/17 09:16
Date Rec/Extracted: 09/28/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

**Units: mg/L**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 75-35-4 | 1,1-Dichloroethene | 0.0010 | U | 108-90-7 | Chlorobenzene | 0.0010 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.00050 | U | 67-66-3 | Chloroform | 0.0010 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0010 | U | 127-18-4 | Tetrachloroethene | 0.0010 | U |
| 78-93-3 | 2-Butanone | 0.0010 | U | 79-01-6 | Trichloroethene | 0.0010 | U |
| 71-43-2 | Benzene | 0.00050 | U | 75-01-4 | Vinyl Chloride | 0.0010 | U |
| 56-23-5 | Carbon Tetrachloride | 0.0010 | U | | | | |

Worksheet #: 439213

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT Reviewed)

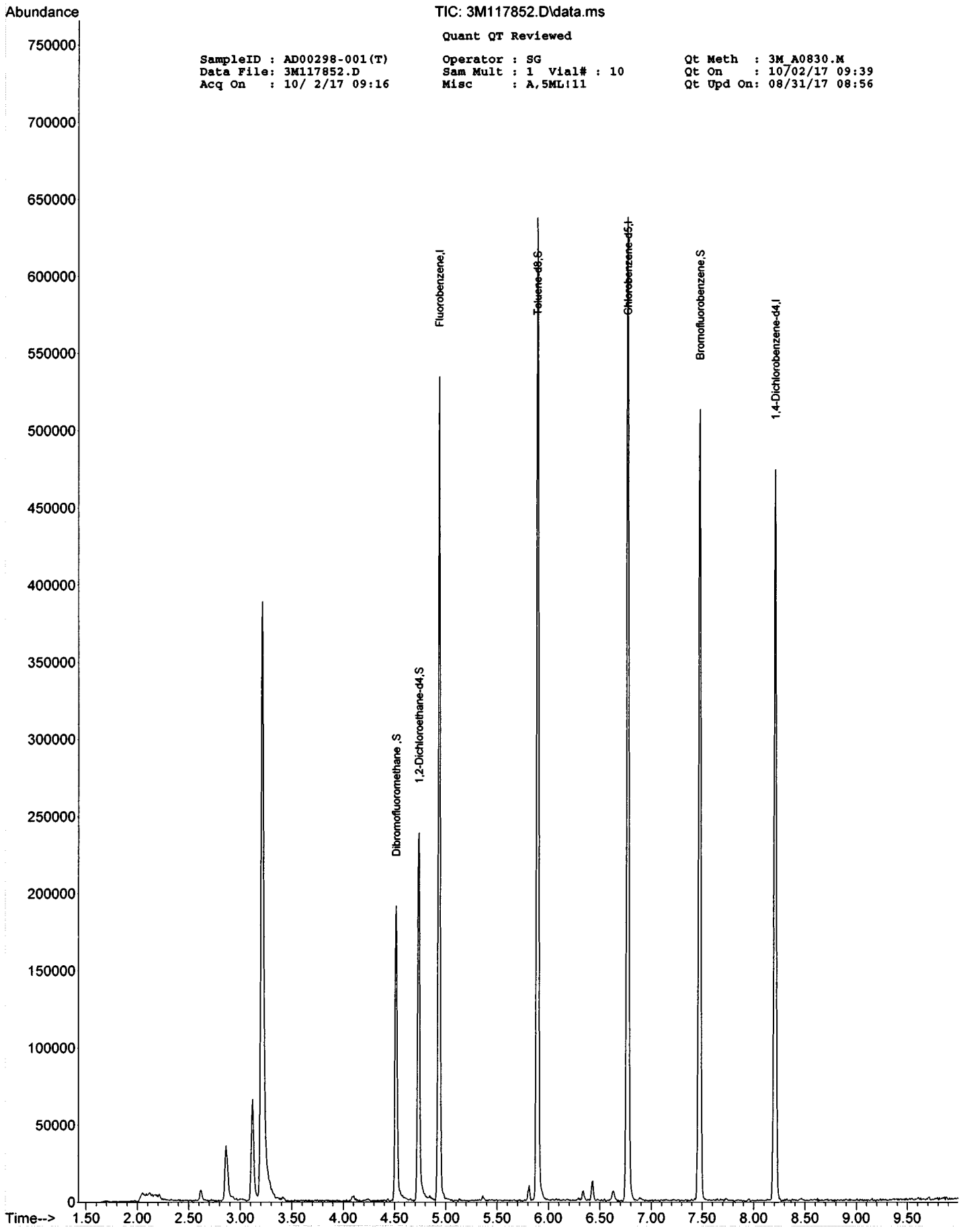
7092827 0047

SampleID : AD00298-001(T) Operator : SG Qt Meth : 3M_A0830.M
Data File: 3M117852.D Sam Mult : 1 Vial# : 10 Qt On : 10/02/17 09:39
Acq On : 10/ 2/17 09:16 Misc : A,5ML!11 Qt Upd On: 08/31/17 08:56

Data Path : G:\GcMsData\2017\GCMS_3\Data\10-02-17\
Qt Path : G:\GcMsData\2017\GCMS_3\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 4.934 | 96 | 267821 | 30.00 | ug/l | -0.02 |
| 52) Chlorobenzene-d5 | 6.766 | 117 | 243367 | 30.00 | ug/l | -0.03 |
| 70) 1,4-Dichlorobenzene-d4 | 8.207 | 152 | 102317 | 30.00 | ug/l | -0.03 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.513 | 111 | 83110 | 33.34 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 111.13% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.735 | 67 | 64006 | 33.73 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 112.43% | | | |
| 66) Toluene-d8 | 5.889 | 98 | 289766 | 27.04 | ug/l | -0.03 |
| Spiked Amount 30.000 | | | Recovery = 90.13% | | | |
| 76) Bromofluorobenzene | 7.474 | 174 | 103961 | 27.93 | ug/l | -0.03 |
| Spiked Amount 30.000 | | | Recovery = 93.10% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 3M117852.D\data.ms
Quant QT Reviewed
SampleID : AD00298-001(T)
Data File: 3M117852.D
Acq On : 10/ 2/17 09:16
Operator : SG
Sam Mult : 1 Vial# : 10
Misc : A,5ML;11
Qt Meth : 3M_A0830.M
Qt On : 10/02/17 09:39
Qt Upd On: 08/31/17 08:56
Dibromofluoromethane,S
1,2-Dichloroethane-d4,S
Fluorobenzene,I
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I
Time-->

# Form1

ORGANICS VOLATILE REPORT

Sample Number: DAILY BLANK
Client Id:
Data File: 3M117850.D
Analysis Date: 10/02/17 08:38
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

**Units: mg/L**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 75-35-4 | 1,1-Dichloroethene | 0.0010 | U | 108-90-7 | Chlorobenzene | 0.0010 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.00050 | U | 67-66-3 | Chloroform | 0.0010 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0010 | U | 127-18-4 | Tetrachloroethene | 0.0010 | U |
| 78-93-3 | 2-Butanone | 0.0010 | U | 79-01-6 | Trichloroethene | 0.0010 | U |
| 71-43-2 | Benzene | 0.00050 | U | 75-01-4 | Vinyl Chloride | 0.0010 | U |
| 56-23-5 | Carbon Tetrachloride | 0.0010 | U | | | | |

Worksheet #: 439213

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT Reviewed)

7092827 0050

SampleID : DAILY BLANK Operator : SG Qt Meth : 3M_A0830.M
Data File: 3M117850.D Sam Mult : 1 Vial# : 8 Qt On : 10/02/17 09:11
Acq On : 10/ 2/17 08:38 Misc : A,5ML Qt Upd On: 08/31/17 08:56

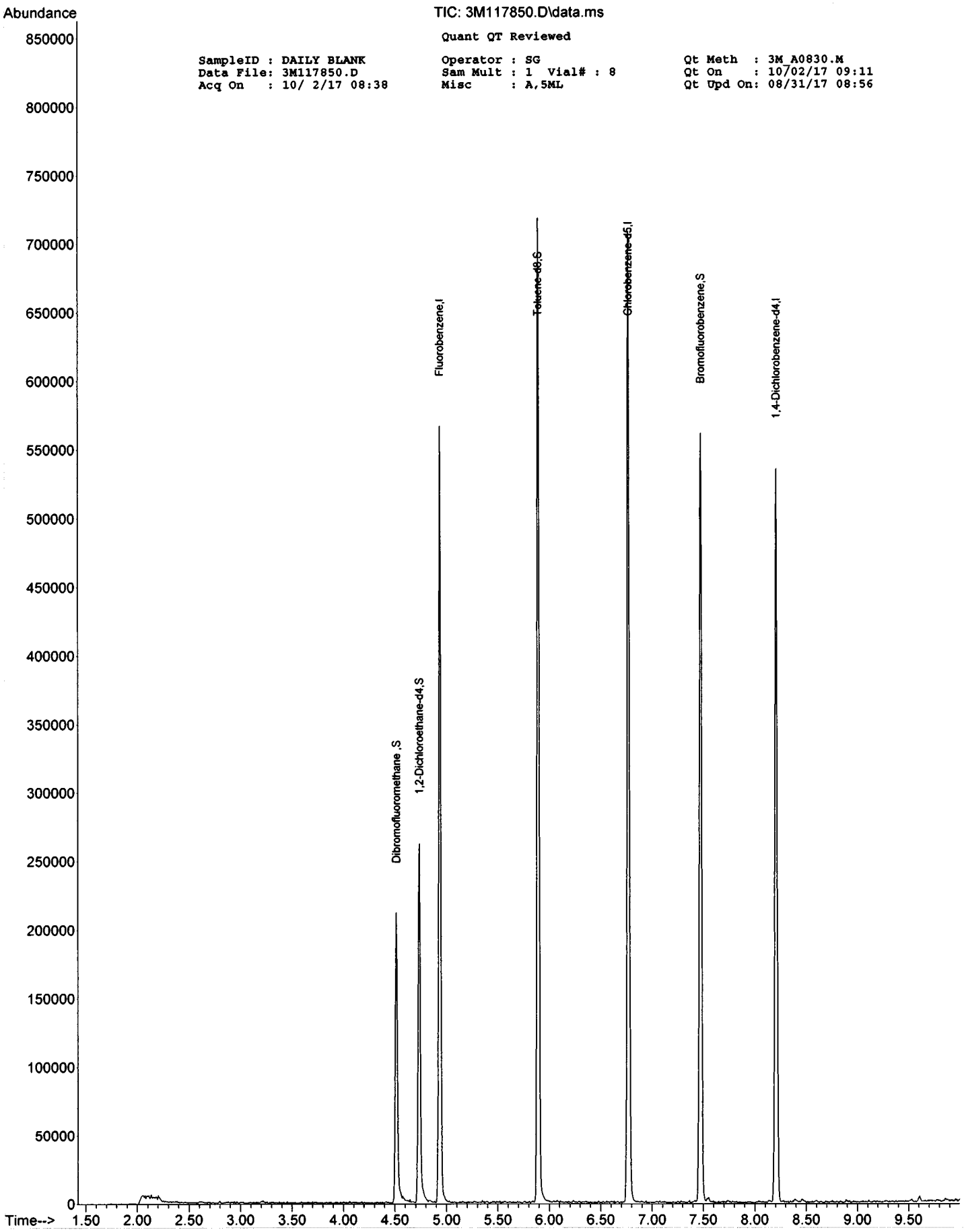
Data Path : G:\GcMsData\2017\GCMS_3\Data\10-02-17\
Qt Path : G:\GcMsData\2017\GCMS_3\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 4.934 | 96 | 294126 | 30.00 | ug/l | -0.02 |
| 52) Chlorobenzene-d5 | 6.766 | 117 | 276144 | 30.00 | ug/l | -0.03 |
| 70) 1,4-Dichlorobenzene-d4 | 8.208 | 152 | 114800 | 30.00 | ug/l | -0.03 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.513 | 111 | 91176 | 33.31 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = | 111.03% | | |
| 39) 1,2-Dichloroethane-d4 | 4.736 | 67 | 71645 | 34.38 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = | 114.60% | | |
| 66) Toluene-d8 | 5.889 | 98 | 324448 | 26.68 | ug/l | -0.03 |
| Spiked Amount 30.000 | | | Recovery = | 88.93% | | |
| 76) Bromofluorobenzene | 7.475 | 174 | 115858 | 27.75 | ug/l | -0.03 |
| Spiked Amount 30.000 | | | Recovery = | 92.50% | | |

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed




Abundance
TIC: 3M117850.D\data.ms
Quant QT Reviewed
SampleID : DAILY BLANK
Data File: 3M117850.D
Acq On : 10/ 2/17 08:38
Operator : SG
Sam Mult : 1 Vial# : 8
Misc : A,5ML
Qt Meth : 3M_A0830.M
Qt On : 10/02/17 09:11
Qt Upd On: 08/31/17 08:56
Dibromofluoromethane ,S
1,2-Dichloroethane-d4,S
Fluorobenzene,I
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I
Time-->

# Form1

ORGANICS VOLATILE REPORT

Sample Number: EF-1V-264202(093017)
Client Id:
Data File: 3M117858.D
Analysis Date: 10/02/17 10:57
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

**Units: mg/L**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 75-35-4 | 1,1-Dichloroethene | 0.0010 | U | 108-90-7 | Chlorobenzene | 0.0010 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.00050 | U | 67-66-3 | Chloroform | 0.0010 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0010 | U | 127-18-4 | Tetrachloroethene | 0.0010 | U |
| 78-93-3 | 2-Butanone | 0.0010 | U | 79-01-6 | Trichloroethene | 0.0010 | U |
| 71-43-2 | Benzene | 0.00050 | U | 75-01-4 | Vinyl Chloride | 0.0010 | U |
| 56-23-5 | Carbon Tetrachloride | 0.0010 | U | | | | |

Worksheet #: 439213

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT Reviewed)

7092827 0053

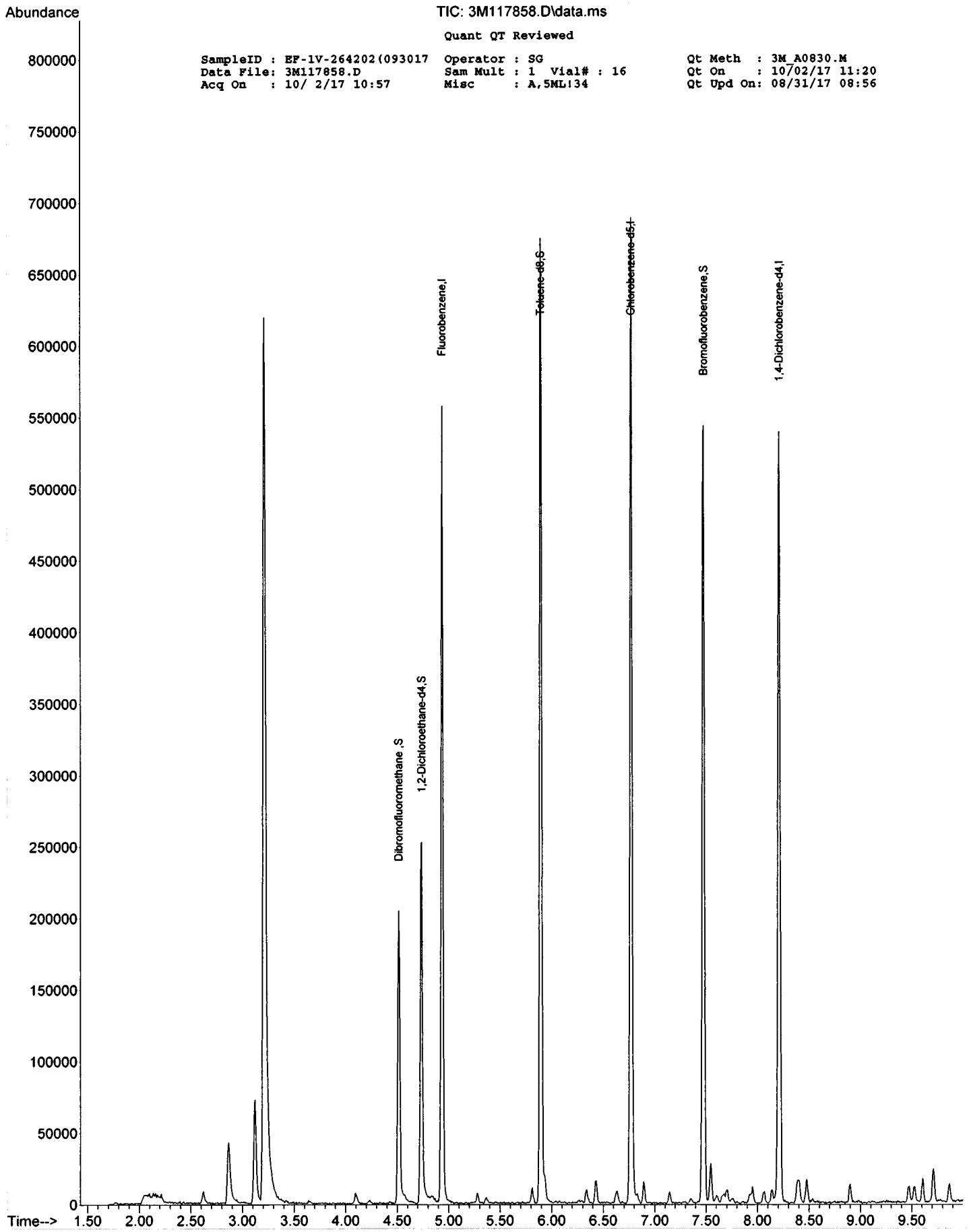
SampleID : EF-1V-264202(093017 Operator : SG Qt Meth : 3M_A0830.M
Data File: 3M117858.D Sam Mult : 1 Vial# : 16 Qt On : 10/02/17 11:20
Acq On : 10/ 2/17 10:57 Misc : A,5ML!34 Qt Upd On: 08/31/17 08:56

Data Path : G:\GcMsData\2017\GCMS_3\Data\10-02-17\
Qt Path : G:\GcMsData\2017\GCMS_3\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 4.935 | 96 | 293549 | 30.00 | ug/l | -0.02 |
| 52) Chlorobenzene-d5 | 6.767 | 117 | 269102 | 30.00 | ug/l | -0.02 |
| 70) 1,4-Dichlorobenzene-d4 | 8.209 | 152 | 114493 | 30.00 | ug/l | -0.02 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.514 | 111 | 91783 | 33.59 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 111.97% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.737 | 67 | 70683 | 33.99 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 113.30% | | | |
| 66) Toluene-d8 | 5.890 | 98 | 312038 | 26.34 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 87.80% | | | |
| 76) Bromofluorobenzene | 7.476 | 174 | 115431 | 27.72 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 92.40% | | | |

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 3M117858.D\data.ms
Quant QT Reviewed
SampleID : EF-1V-264202(093017
Data File: 3M117858.D
Acq On : 10/ 2/17 10:57
Operator : SG
Sam Mult : 1 Vial# : 16
Misc : A,5ML!34
Qt Meth : 3M_A0830.M
Qt On : 10/02/17 11:20
Qt Upd On: 08/31/17 08:56
Dibromofluoromethane ,S
1,2-Dichloroethane-d4,S
Fluorobenzene,I
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I
Time-->

# FORM2

## Surrogate Recovery

Method: EPA 8260C

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column1 S2 Recov | Column1 S3 Recov | Column1 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3M117850.D | DAILY BLANK | A | 10/02/17 08:38 | 1 | | 111 | 115 | 89 | 92 | | |
| 3M117858.D | EF-1V-264202(093017) | A | 10/02/17 10:57 | 1 | | 112 | 113 | 88 | 92 | | |
| 3M117852.D | AD00298-001(T) | A | 10/02/17 09:16 | 1 | | 111 | 112 | 90 | 93 | | |
| 3M117855.D | MBS64316 | A | 10/02/17 10:06 | 1 | | 109 | 115 | 90 | 92 | | |
| 3M117856.D | AD00298-001(T:MS) | A | 10/02/17 10:23 | 1 | | 111 | 118 | 88 | 93 | | |
| 3M117857.D | AD00298-001(T:MSD) | A | 10/02/17 10:40 | 1 | | 112 | 111 | 89 | 92 | | |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8260C

### Aqueous Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=Dibromofluoromethane | 30 | 73-131 |
| S2=1,2-Dichloroethane-d4 | 30 | 78-128 |
| S3=Toluene-d8 | 30 | 79-111 |
| S4=Bromofluorobenzene | 30 | 82-112 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64316

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 3M117855.D | MBS64316 | 10/2/2017 10:06:00 AM |
| Non Spike(If applicable): | | |
| Inst Blank(If applicable): | | |
| Method: 8260C | Matrix: Aqueous | QC Type: MBS |

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 26.5785 | 0 | 20 | 133 | 50 | 150 |
| Dichlorodifluoromethane | 1 | 31.65 | 0 | 20 | 158* | 50 | 150 |
| Chloromethane | 1 | 26.0383 | 0 | 20 | 130 | 50 | 150 |
| Bromomethane | 1 | 19.4432 | 0 | 20 | 97 | 50 | 150 |
| Vinyl Chloride | 1 | 21.9915 | 0 | 20 | 110 | 50 | 150 |
| Chloroethane | 1 | 25.6002 | 0 | 20 | 128 | 50 | 150 |
| Trichlorofluoromethane | 1 | 26.6957 | 0 | 20 | 133 | 50 | 150 |
| Ethyl ether | 1 | 22.7419 | 0 | 20 | 114 | 50 | 150 |
| Furan | 1 | 27.3193 | 0 | 20 | 137 | 50 | 150 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 27.7815 | 0 | 20 | 139 | 50 | 150 |
| Methylene Chloride | 1 | 23.5352 | 0 | 20 | 118 | 70 | 130 |
| Acrolein | 1 | 48.5203 | 0 | 100 | 49* | 50 | 150 |
| Acrylonitrile | 1 | 22.3408 | 0 | 20 | 112 | 50 | 150 |
| Iodomethane | 1 | 24.3437 | 0 | 20 | 122 | 50 | 150 |
| Acetone | 1 | 122.608 | 0 | 100 | 123 | 50 | 150 |
| Carbon Disulfide | 1 | 26.6617 | 0 | 20 | 133 | 50 | 150 |
| t-Butyl Alcohol | 1 | 79.2683 | 0 | 100 | 79 | 50 | 150 |
| n-Hexane | 1 | 28.4752 | 0 | 20 | 142* | 70 | 130 |
| Di-isopropyl-ether | 1 | 24.3658 | 0 | 20 | 122 | 70 | 130 |
| 1,1-Dichloroethene | 1 | 25.2091 | 0 | 20 | 126 | 70 | 130 |
| Methyl Acetate | 1 | 22.1348 | 0 | 20 | 111 | 50 | 150 |
| Methyl-t-butyl ether | 1 | 24.0075 | 0 | 20 | 120 | 70 | 130 |
| 1,1-Dichloroethane | 1 | 24.5353 | 0 | 20 | 123 | 70 | 130 |
| trans-1,2-Dichloroethene | 1 | 24.3665 | 0 | 20 | 122 | 70 | 130 |
| Ethyl-t-butyl ether | 1 | 24.8354 | 0 | 20 | 124 | 70 | 130 |
| cis-1,2-Dichloroethene | 1 | 24.8089 | 0 | 20 | 124 | 70 | 130 |
| Bromochloromethane | 1 | 23.1528 | 0 | 20 | 116 | 70 | 130 |
| 2,2-Dichloropropane | 1 | 29.585 | 0 | 20 | 148* | 70 | 130 |
| Ethyl acetate | 1 | 22.899 | 0 | 20 | 114 | 50 | 130 |
| 1,4-Dioxane | 1 | 1159.251 | 0 | 1000 | 116 | 50 | 150 |
| 1,1-Dichloropropene | 1 | 27.4763 | 0 | 20 | 137* | 70 | 130 |
| Chloroform | 1 | 23.7502 | 0 | 20 | 119 | 70 | 130 |
| Cyclohexane | 1 | 28.3176 | 0 | 20 | 142* | 70 | 130 |
| 1,2-Dichloroethane | 1 | 25.4495 | 0 | 20 | 127 | 70 | 130 |
| 2-Butanone | 1 | 24.2526 | 0 | 20 | 121 | 50 | 150 |
| 1,1,1-Trichloroethane | 1 | 26.0128 | 0 | 20 | 130 | 70 | 130 |
| Carbon Tetrachloride | 1 | 25.925 | 0 | 20 | 130 | 50 | 150 |
| Vinyl Acetate | 1 | 26.4368 | 0 | 20 | 132 | 50 | 150 |
| Bromodichloromethane | 1 | 22.9821 | 0 | 20 | 115 | 70 | 130 |
| Methylcyclohexane | 1 | 27.9987 | 0 | 20 | 140* | 70 | 130 |
| Dibromomethane | 1 | 22.5756 | 0 | 20 | 113 | 70 | 130 |
| 1,2-Dichloropropane | 1 | 24.3515 | 0 | 20 | 122 | 70 | 130 |
| Trichloroethene | 1 | 24.8547 | 0 | 20 | 124 | 70 | 130 |
| Benzene | 1 | 25.6476 | 0 | 20 | 128 | 70 | 130 |
| tert-Amyl methyl ether | 1 | 26.4672 | 0 | 20 | 132* | 70 | 130 |
| Iso-propylacetate | 1 | 20.4978 | 0 | 20 | 102 | 70 | 130 |
| Methyl methacrylate | 1 | 19.4786 | 0 | 20 | 97 | 70 | 130 |
| Dibromochloromethane | 1 | 17.7329 | 0 | 20 | 89 | 70 | 130 |
| 2-Chloroethylvinylether | 1 | 17.4371 | 0 | 20 | 87 | 70 | 130 |
| cis-1,3-Dichloropropene | 1 | 18.3138 | 0 | 20 | 92 | 70 | 130 |
| trans-1,3-Dichloropropene | 1 | 18.035 | 0 | 20 | 90 | 70 | 130 |
| Ethyl methacrylate | 1 | 19.417 | 0 | 20 | 97 | 70 | 130 |
| 1,1,2-Trichloroethane | 1 | 17.4882 | 0 | 20 | 87 | 70 | 130 |
| 1,2-Dibromoethane | 1 | 17.5703 | 0 | 20 | 88 | 70 | 130 |
| 1,3-Dichloropropane | 1 | 19.5984 | 0 | 20 | 98 | 70 | 130 |
| 4-Methyl-2-Pentanone | 1 | 18.87 | 0 | 20 | 94 | 50 | 150 |
| 2-Hexanone | 1 | 19.5436 | 0 | 20 | 98 | 50 | 150 |
| Tetrachloroethene | 1 | 20.318 | 0 | 20 | 102 | 50 | 130 |
| Toluene | 1 | 19.986 | 0 | 20 | 100 | 70 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 20.0233 | 0 | 20 | 100 | 70 | 130 |
| Chlorobenzene | 1 | 18.6185 | 0 | 20 | 93 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3

## Recovery Data Laboratory Limits

### QC Batch: MBS64316

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 11.9279 | 0 | 20 | 60* | 70 | 130 |
| n-Amyl acetate | 1 | 17.7899 | 0 | 20 | 89 | 70 | 130 |
| Bromoform | 1 | 13.2229 | 0 | 20 | 66* | 70 | 130 |
| Ethylbenzene | 1 | 20.4479 | 0 | 20 | 102 | 70 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 14.163 | 0 | 20 | 71 | 70 | 130 |
| Styrene | 1 | 18.0976 | 0 | 20 | 90 | 70 | 130 |
| m&p-Xylenes | 1 | 37.2107 | 0 | 40 | 93 | 70 | 130 |
| o-Xylene | 1 | 18.4604 | 0 | 20 | 92 | 70 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 18.5113 | 0 | 20 | 93 | 50 | 150 |
| 1,3-Dichlorobenzene | 1 | 16.1821 | 0 | 20 | 81 | 70 | 130 |
| 1,4-Dichlorobenzene | 1 | 15.7936 | 0 | 20 | 79 | 70 | 130 |
| 1,2-Dichlorobenzene | 1 | 14.8427 | 0 | 20 | 74 | 70 | 130 |
| Isopropylbenzene | 1 | 17.8161 | 0 | 20 | 89 | 70 | 130 |
| Cyclohexanone | 1 | 157.8638 | 0 | 100 | 158* | 50 | 150 |
| Camphene | 1 | 18.7145 | 0 | 20 | 94 | 70 | 130 |
| 1,2,3-Trichloropropane | 1 | 16.5216 | 0 | 20 | 83 | 70 | 130 |
| 2-Chlorotoluene | 1 | 19.8479 | 0 | 20 | 99 | 70 | 130 |
| p-Ethyltoluene | 1 | 15.8297 | 0 | 20 | 79 | 70 | 130 |
| 4-Chlorotoluene | 1 | 18.4702 | 0 | 20 | 92 | 70 | 130 |
| n-Propylbenzene | 1 | 18.6961 | 0 | 20 | 93 | 70 | 130 |
| Bromobenzene | 1 | 18.8272 | 0 | 20 | 94 | 70 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 19.5672 | 0 | 20 | 98 | 70 | 130 |
| Butyl methacrylate | 1 | 17.8162 | 0 | 20 | 89 | 70 | 130 |
| t-Butylbenzene | 1 | 16.8719 | 0 | 20 | 84 | 70 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 17.9837 | 0 | 20 | 90 | 70 | 130 |
| sec-Butylbenzene | 1 | 17.5815 | 0 | 20 | 88 | 70 | 130 |
| 4-Isopropyltoluene | 1 | 15.8823 | 0 | 20 | 79 | 70 | 130 |
| n-Butylbenzene | 1 | 18.4638 | 0 | 20 | 92 | 70 | 130 |
| p-Diethylbenzene | 1 | 17.2749 | 0 | 20 | 86 | 70 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 17.1464 | 0 | 20 | 86 | 70 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 8.5498 | 0 | 20 | 43* | 50 | 150 |
| Camphor | 1 | 131.6018 | 0 | 200 | 66 | 50 | 150 |
| Hexachlorobutadiene | 1 | 10.9505 | 0 | 20 | 55 | 50 | 150 |
| 1,2,4-Trichlorobenzene | 1 | 13.948 | 0 | 20 | 70 | 70 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 12.5877 | 0 | 20 | 63* | 70 | 130 |
| Naphthalene | 1 | 13.1773 | 0 | 20 | 66 | 50 | 150 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64316

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 3M117856.D | AD00298-001(T:MS) | 10/2/2017 10:23:00 AM |
| Non Spike(If applicable): 3M117852.D | AD00298-001(T) | 10/2/2017 9:16:00 AM |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Aqueous | QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 25.7503 | 0 | 20 | 129 | 50 | 150 |
| Dichlorodifluoromethane | 1 | 20.7432 | 0 | 20 | 104 | 50 | 150 |
| Chloromethane | 1 | 23.5767 | 0 | 20 | 118 | 50 | 150 |
| Bromomethane | 1 | 16.1622 | 0 | 20 | 81 | 50 | 150 |
| Vinyl Chloride | 1 | 17.2151 | 0 | 20 | 86 | 50 | 150 |
| Chloroethane | 1 | 23.2441 | 0 | 20 | 116 | 50 | 150 |
| Trichlorofluoromethane | 1 | 21.4193 | 0 | 20 | 107 | 50 | 150 |
| Ethyl ether | 1 | 20.1451 | 0 | 20 | 101 | 50 | 150 |
| Furan | 1 | 23.6126 | 0 | 20 | 118 | 50 | 150 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 22.1374 | 0 | 20 | 111 | 50 | 150 |
| Methylene Chloride | 1 | 69.6851 | 0 | 20 | 348* | 70 | 130 |
| Acrolein | 1 | 45.8559 | 0 | 100 | 46* | 50 | 150 |
| Acrylonitrile | 1 | 20.6433 | 0 | 20 | 103 | 50 | 150 |
| Iodomethane | 1 | 20.5077 | 0 | 20 | 103 | 50 | 150 |
| Acetone | 1 | 158.9283 | 0 | 100 | 159* | 50 | 150 |
| Carbon Disulfide | 1 | 21.7324 | 0 | 20 | 109 | 50 | 150 |
| t-Butyl Alcohol | 1 | 76.0062 | 0 | 100 | 76 | 50 | 150 |
| n-Hexane | 1 | 23.5922 | 0 | 20 | 118 | 70 | 130 |
| Di-isopropyl-ether | 1 | 20.7803 | 0 | 20 | 104 | 70 | 130 |
| 1,1-Dichloroethene | 1 | 19.5318 | 0 | 20 | 98 | 70 | 130 |
| Methyl Acetate | 1 | 40.3987 | 0 | 20 | 202* | 50 | 150 |
| Methyl-t-butyl ether | 1 | 20.5004 | 0 | 20 | 103 | 70 | 130 |
| 1,1-Dichloroethane | 1 | 21.334 | 0 | 20 | 107 | 70 | 130 |
| trans-1,2-Dichloroethene | 1 | 21.6352 | 0 | 20 | 108 | 70 | 130 |
| Ethyl-t-butyl ether | 1 | 21.3198 | 0 | 20 | 107 | 70 | 130 |
| cis-1,2-Dichloroethene | 1 | 22.0185 | 0 | 20 | 110 | 70 | 130 |
| Bromochloromethane | 1 | 20.1735 | 0 | 20 | 101 | 70 | 130 |
| 2,2-Dichloropropane | 1 | 25.9992 | 0 | 20 | 130 | 70 | 130 |
| Ethyl acetate | 1 | 26.191 | 0 | 20 | 131* | 50 | 130 |
| 1,4-Dioxane | 1 | 1042.757 | 0 | 1000 | 104 | 50 | 150 |
| 1,1-Dichloropropene | 1 | 23.6903 | 0 | 20 | 118 | 70 | 130 |
| Chloroform | 1 | 20.6277 | 0 | 20 | 103 | 70 | 130 |
| Cyclohexane | 1 | 23.4473 | 0 | 20 | 117 | 70 | 130 |
| 1,2-Dichloroethane | 1 | 21.5976 | 0 | 20 | 108 | 70 | 130 |
| 2-Butanone | 1 | 14.2542 | 0 | 20 | 71 | 50 | 150 |
| 1,1,1-Trichloroethane | 1 | 21.555 | 0 | 20 | 108 | 70 | 130 |
| Carbon Tetrachloride | 1 | 21.8262 | 0 | 20 | 109 | 50 | 150 |
| Vinyl Acetate | 1 | 23.8046 | 0 | 20 | 119 | 50 | 150 |
| Bromodichloromethane | 1 | 19.9474 | 0 | 20 | 100 | 70 | 130 |
| Methylcyclohexane | 1 | 24.072 | 0 | 20 | 120 | 70 | 130 |
| Dibromomethane | 1 | 19.2599 | 0 | 20 | 96 | 70 | 130 |
| 1,2-Dichloropropane | 1 | 20.591 | 0 | 20 | 103 | 70 | 130 |
| Trichloroethene | 1 | 21.6731 | 0 | 20 | 108 | 70 | 130 |
| Benzene | 1 | 22.4149 | 0 | 20 | 112 | 70 | 130 |
| tert-Amyl methyl ether | 1 | 22.8645 | 0 | 20 | 114 | 70 | 130 |
| Iso-propylacetate | 1 | 16.6278 | 0 | 20 | 83 | 70 | 130 |
| Methyl methacrylate | 1 | 16.7031 | 0 | 20 | 84 | 70 | 130 |
| Dibromochloromethane | 1 | 15.4876 | 0 | 20 | 77 | 70 | 130 |
| 2-Chloroethylvinylether | 1 | 15.1528 | 0 | 20 | 76 | 70 | 130 |
| cis-1,3-Dichloropropene | 1 | 15.2533 | 0 | 20 | 76 | 70 | 130 |
| trans-1,3-Dichloropropene | 1 | 15.2512 | 0 | 20 | 76 | 70 | 130 |
| Ethyl methacrylate | 1 | 16.454 | 0 | 20 | 82 | 70 | 130 |
| 1,1,2-Trichloroethane | 1 | 15.261 | 0 | 20 | 76 | 70 | 130 |
| 1,2-Dibromoethane | 1 | 15.3008 | 0 | 20 | 77 | 70 | 130 |
| 1,3-Dichloropropane | 1 | 16.6773 | 0 | 20 | 83 | 70 | 130 |
| 4-Methyl-2-Pentanone | 1 | 16.8565 | 0 | 20 | 84 | 50 | 150 |
| 2-Hexanone | 1 | 16.1262 | 0 | 20 | 81 | 50 | 150 |
| Tetrachloroethene | 1 | 16.9423 | 0 | 20 | 85 | 50 | 130 |
| Toluene | 1 | 16.927 | 0 | 20 | 85 | 70 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 16.7706 | 0 | 20 | 84 | 70 | 130 |
| Chlorobenzene | 1 | 15.8841 | 0 | 20 | 79 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64316

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 10.1536 | 0 | 20 | 51* | 70 | 130 |
| n-Amyl acetate | 1 | 15.5528 | 0 | 20 | 78 | 70 | 130 |
| Bromoform | 1 | 11.5419 | 0 | 20 | 58* | 70 | 130 |
| Ethylbenzene | 1 | 16.1844 | 0 | 20 | 81 | 70 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 12.5463 | 0 | 20 | 63* | 70 | 130 |
| Styrene | 1 | 14.9223 | 0 | 20 | 75 | 70 | 130 |
| m&p-Xylenes | 1 | 30.8253 | 0 | 40 | 77 | 70 | 130 |
| o-Xylene | 1 | 15.7245 | 0 | 20 | 79 | 70 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 16.1536 | 0 | 20 | 81 | 50 | 150 |
| 1,3-Dichlorobenzene | 1 | 13.533 | 0 | 20 | 68* | 70 | 130 |
| 1,4-Dichlorobenzene | 1 | 13.4358 | 0 | 20 | 67* | 70 | 130 |
| 1,2-Dichlorobenzene | 1 | 13.2098 | 0 | 20 | 66* | 70 | 130 |
| Isopropylbenzene | 1 | 15.4041 | 0 | 20 | 77 | 70 | 130 |
| Cyclohexanone | 1 | 127.7919 | 0 | 100 | 128 | 50 | 150 |
| Camphene | 1 | 16.2738 | 0 | 20 | 81 | 70 | 130 |
| 1,2,3-Trichloropropane | 1 | 14.4698 | 0 | 20 | 72 | 70 | 130 |
| 2-Chlorotoluene | 1 | 16.5302 | 0 | 20 | 83 | 70 | 130 |
| p-Ethyltoluene | 1 | 14.6902 | 0 | 20 | 73 | 70 | 130 |
| 4-Chlorotoluene | 1 | 16.3309 | 0 | 20 | 82 | 70 | 130 |
| n-Propylbenzene | 1 | 15.7837 | 0 | 20 | 79 | 70 | 130 |
| Bromobenzene | 1 | 14.2328 | 0 | 20 | 71 | 70 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 17.7035 | 0 | 20 | 89 | 70 | 130 |
| Butyl methacrylate | 1 | 15.8353 | 0 | 20 | 79 | 70 | 130 |
| t-Butylbenzene | 1 | 14.5616 | 0 | 20 | 73 | 70 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 15.3996 | 0 | 20 | 77 | 70 | 130 |
| sec-Butylbenzene | 1 | 15.081 | 0 | 20 | 75 | 70 | 130 |
| 4-Isopropyltoluene | 1 | 13.8305 | 0 | 20 | 69* | 70 | 130 |
| n-Butylbenzene | 1 | 15.839 | 0 | 20 | 79 | 70 | 130 |
| p-Diethylbenzene | 1 | 15.0486 | 0 | 20 | 75 | 70 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 14.4518 | 0 | 20 | 72 | 70 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 8.0623 | 0 | 20 | 40* | 50 | 150 |
| Camphor | 1 | 124.2357 | 0 | 200 | 62 | 50 | 150 |
| Hexachlorobutadiene | 1 | 10.1634 | 0 | 20 | 51 | 50 | 150 |
| 1,2,4-Trichlorobenzene | 1 | 11.4416 | 0 | 20 | 57* | 70 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 11.2716 | 0 | 20 | 56* | 70 | 130 |
| Naphthalene | 1 | 11.942 | 0 | 20 | 60 | 50 | 150 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64316

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 3M117857.D | AD00298-001(T:MSD) | 10/2/2017 10:40:00 AM |
| Non Spike(If applicable): 3M117852.D | AD00298-001(T) | 10/2/2017 9:16:00 AM |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Aqueous | QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 26.4471 | 0 | 20 | 132 | 50 | 150 |
| Dichlorodifluoromethane | 1 | 22.9858 | 0 | 20 | 115 | 50 | 150 |
| Chloromethane | 1 | 21.769 | 0 | 20 | 109 | 50 | 150 |
| Bromomethane | 1 | 17.6941 | 0 | 20 | 88 | 50 | 150 |
| Vinyl Chloride | 1 | 17.8576 | 0 | 20 | 89 | 50 | 150 |
| Chloroethane | 1 | 21.984 | 0 | 20 | 110 | 50 | 150 |
| Trichlorofluoromethane | 1 | 23.2215 | 0 | 20 | 116 | 50 | 150 |
| Ethyl ether | 1 | 21.5629 | 0 | 20 | 108 | 50 | 150 |
| Furan | 1 | 24.5687 | 0 | 20 | 123 | 50 | 150 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 23.3772 | 0 | 20 | 117 | 50 | 150 |
| Methylene Chloride | 1 | 76.3627 | 0 | 20 | 382* | 70 | 130 |
| Acrolein | 1 | 51.0922 | 0 | 100 | 51 | 50 | 150 |
| Acrylonitrile | 1 | 20.8867 | 0 | 20 | 104 | 50 | 150 |
| Iodomethane | 1 | 22.3012 | 0 | 20 | 112 | 50 | 150 |
| Acetone | 1 | 162.8284 | 0 | 100 | 163* | 50 | 150 |
| Carbon Disulfide | 1 | 23.4113 | 0 | 20 | 117 | 50 | 150 |
| t-Butyl Alcohol | 1 | 82.7668 | 0 | 100 | 83 | 50 | 150 |
| n-Hexane | 1 | 24.6315 | 0 | 20 | 123 | 70 | 130 |
| Di-isopropyl-ether | 1 | 22.3161 | 0 | 20 | 112 | 70 | 130 |
| 1,1-Dichloroethene | 1 | 20.2802 | 0 | 20 | 101 | 70 | 130 |
| Methyl Acetate | 1 | 43.7527 | 0 | 20 | 219* | 50 | 150 |
| Methyl-t-butyl ether | 1 | 21.5158 | 0 | 20 | 108 | 70 | 130 |
| 1,1-Dichloroethane | 1 | 21.8663 | 0 | 20 | 109 | 70 | 130 |
| trans-1,2-Dichloroethene | 1 | 22.5309 | 0 | 20 | 113 | 70 | 130 |
| Ethyl-t-butyl ether | 1 | 22.3311 | 0 | 20 | 112 | 70 | 130 |
| cis-1,2-Dichloroethene | 1 | 23.5239 | 0 | 20 | 118 | 70 | 130 |
| Bromochloromethane | 1 | 20.6859 | 0 | 20 | 103 | 70 | 130 |
| 2,2-Dichloropropane | 1 | 27.118 | 0 | 20 | 136* | 70 | 130 |
| Ethyl acetate | 1 | 28.2578 | 0 | 20 | 141* | 50 | 130 |
| 1,4-Dioxane | 1 | 1083.956 | 0 | 1000 | 108 | 50 | 150 |
| 1,1-Dichloropropene | 1 | 25.0456 | 0 | 20 | 125 | 70 | 130 |
| Chloroform | 1 | 22.018 | 0 | 20 | 110 | 70 | 130 |
| Cyclohexane | 1 | 24.9968 | 0 | 20 | 125 | 70 | 130 |
| 1,2-Dichloroethane | 1 | 23.2411 | 0 | 20 | 116 | 70 | 130 |
| 2-Butanone | 1 | 13.5683 | 0 | 20 | 68 | 50 | 150 |
| 1,1,1-Trichloroethane | 1 | 22.8 | 0 | 20 | 114 | 70 | 130 |
| Carbon Tetrachloride | 1 | 23.7839 | 0 | 20 | 119 | 50 | 150 |
| Vinyl Acetate | 1 | 24.4428 | 0 | 20 | 122 | 50 | 150 |
| Bromodichloromethane | 1 | 21.4372 | 0 | 20 | 107 | 70 | 130 |
| Methylcyclohexane | 1 | 25.4819 | 0 | 20 | 127 | 70 | 130 |
| Dibromomethane | 1 | 20.068 | 0 | 20 | 100 | 70 | 130 |
| 1,2-Dichloropropane | 1 | 22.0094 | 0 | 20 | 110 | 70 | 130 |
| Trichloroethene | 1 | 22.3153 | 0 | 20 | 112 | 70 | 130 |
| Benzene | 1 | 23.6188 | 0 | 20 | 118 | 70 | 130 |
| tert-Amyl methyl ether | 1 | 24.2649 | 0 | 20 | 121 | 70 | 130 |
| Iso-propylacetate | 1 | 17.8647 | 0 | 20 | 89 | 70 | 130 |
| Methyl methacrylate | 1 | 18.3321 | 0 | 20 | 92 | 70 | 130 |
| Dibromochloromethane | 1 | 16.0823 | 0 | 20 | 80 | 70 | 130 |
| 2-Chloroethylvinylether | 1 | 14.6868 | 0 | 20 | 73 | 70 | 130 |
| cis-1,3-Dichloropropene | 1 | 15.9388 | 0 | 20 | 80 | 70 | 130 |
| trans-1,3-Dichloropropene | 1 | 16.4992 | 0 | 20 | 82 | 70 | 130 |
| Ethyl methacrylate | 1 | 18.1806 | 0 | 20 | 91 | 70 | 130 |
| 1,1,2-Trichloroethane | 1 | 15.8892 | 0 | 20 | 79 | 70 | 130 |
| 1,2-Dibromoethane | 1 | 15.8912 | 0 | 20 | 79 | 70 | 130 |
| 1,3-Dichloropropane | 1 | 18.0447 | 0 | 20 | 90 | 70 | 130 |
| 4-Methyl-2-Pentanone | 1 | 18.3201 | 0 | 20 | 92 | 50 | 150 |
| 2-Hexanone | 1 | 16.8195 | 0 | 20 | 84 | 50 | 150 |
| Tetrachloroethene | 1 | 18.6877 | 0 | 20 | 93 | 50 | 130 |
| Toluene | 1 | 17.911 | 0 | 20 | 90 | 70 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 17.4204 | 0 | 20 | 87 | 70 | 130 |
| Chlorobenzene | 1 | 16.4979 | 0 | 20 | 82 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS64316

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 11.0714 | 0 | 20 | 55* | 70 | 130 |
| n-Amyl acetate | 1 | 16.5036 | 0 | 20 | 83 | 70 | 130 |
| Bromoform | 1 | 12.066 | 0 | 20 | 60* | 70 | 130 |
| Ethylbenzene | 1 | 16.0583 | 0 | 20 | 80 | 70 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 13.2803 | 0 | 20 | 66* | 70 | 130 |
| Styrene | 1 | 16.2237 | 0 | 20 | 81 | 70 | 130 |
| m&p-Xylenes | 1 | 33.3128 | 0 | 40 | 83 | 70 | 130 |
| o-Xylene | 1 | 16.1477 | 0 | 20 | 81 | 70 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 16.9728 | 0 | 20 | 85 | 50 | 150 |
| 1,3-Dichlorobenzene | 1 | 14.4343 | 0 | 20 | 72 | 70 | 130 |
| 1,4-Dichlorobenzene | 1 | 14.3289 | 0 | 20 | 72 | 70 | 130 |
| 1,2-Dichlorobenzene | 1 | 14.365 | 0 | 20 | 72 | 70 | 130 |
| Isopropylbenzene | 1 | 15.9204 | 0 | 20 | 80 | 70 | 130 |
| Cyclohexanone | 1 | 102.9977 | 0 | 100 | 103 | 50 | 150 |
| Camphene | 1 | 18.9428 | 0 | 20 | 95 | 70 | 130 |
| 1,2,3-Trichloropropane | 1 | 15.1801 | 0 | 20 | 76 | 70 | 130 |
| 2-Chlorotoluene | 1 | 17.9384 | 0 | 20 | 90 | 70 | 130 |
| p-Ethyltoluene | 1 | 14.9363 | 0 | 20 | 75 | 70 | 130 |
| 4-Chlorotoluene | 1 | 16.6947 | 0 | 20 | 83 | 70 | 130 |
| n-Propylbenzene | 1 | 16.5972 | 0 | 20 | 83 | 70 | 130 |
| Bromobenzene | 1 | 16.8712 | 0 | 20 | 84 | 70 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 19.0686 | 0 | 20 | 95 | 70 | 130 |
| Butyl methacrylate | 1 | 16.5494 | 0 | 20 | 83 | 70 | 130 |
| t-Butylbenzene | 1 | 15.4145 | 0 | 20 | 77 | 70 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 15.9981 | 0 | 20 | 80 | 70 | 130 |
| sec-Butylbenzene | 1 | 15.517 | 0 | 20 | 78 | 70 | 130 |
| 4-Isopropyltoluene | 1 | 14.7588 | 0 | 20 | 74 | 70 | 130 |
| n-Butylbenzene | 1 | 16.6225 | 0 | 20 | 83 | 70 | 130 |
| p-Diethylbenzene | 1 | 16.2374 | 0 | 20 | 81 | 70 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 15.8952 | 0 | 20 | 79 | 70 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 9.0425 | 0 | 20 | 45* | 50 | 150 |
| Camphor | 1 | 126.2721 | 0 | 200 | 63 | 50 | 150 |
| Hexachlorobutadiene | 1 | 10.8944 | 0 | 20 | 54 | 50 | 150 |
| 1,2,4-Trichlorobenzene | 1 | 12.6757 | 0 | 20 | 63* | 70 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 12.222 | 0 | 20 | 61* | 70 | 130 |
| Naphthalene | 1 | 12.7867 | 0 | 20 | 64 | 50 | 150 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
# RPD Data Laboratory Limits
## QC Batch: MBS64316

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3M117857.D | AD00298-001(T:MSD) | 10/2/2017 10:40:00 AM |
| Duplicate(If applicable): | 3M117856.D | AD00298-001(T:MS) | 10/2/2017 10:23:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8260C  Matrix: Aqueous  QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 26.4471 | 25.7503 | 2.7 | 20 |
| Dichlorodifluoromethane | 1 | 22.9858 | 20.7432 | 10 | 20 |
| Chloromethane | 1 | 21.769 | 23.5767 | 8 | 20 |
| Bromomethane | 1 | 17.6941 | 16.1622 | 9 | 20 |
| Vinyl Chloride | 1 | 17.8576 | 17.2151 | 3.7 | 40 |
| Chloroethane | 1 | 21.984 | 23.2441 | 5.6 | 20 |
| Trichlorofluoromethane | 1 | 23.2215 | 21.4193 | 8.1 | 20 |
| Ethyl ether | 1 | 21.5629 | 20.1451 | 6.8 | 20 |
| Furan | 1 | 24.5687 | 23.6126 | 4 | 20 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 23.3772 | 22.1374 | 5.4 | 20 |
| Methylene Chloride | 1 | 76.3627 | 69.6851 | 9.1 | 20 |
| Acrolein | 1 | 51.0922 | 45.8559 | 11 | 20 |
| Acrylonitrile | 1 | 20.8867 | 20.6433 | 1.2 | 20 |
| Iodomethane | 1 | 22.3012 | 20.5077 | 8.4 | 20 |
| Acetone | 1 | 162.8284 | 158.9283 | 2.4 | 20 |
| Carbon Disulfide | 1 | 23.4113 | 21.7324 | 7.4 | 20 |
| t-Butyl Alcohol | 1 | 82.7668 | 76.0062 | 8.5 | 20 |
| n-Hexane | 1 | 24.6315 | 23.5922 | 4.3 | 20 |
| Di-isopropyl-ether | 1 | 22.3161 | 20.7803 | 7.1 | 20 |
| 1,1-Dichloroethene | 1 | 20.2802 | 19.5318 | 3.8 | 40 |
| Methyl Acetate | 1 | 43.7527 | 40.3987 | 8 | 20 |
| Methyl-t-butyl ether | 1 | 21.5158 | 20.5004 | 4.8 | 20 |
| 1,1-Dichloroethane | 1 | 21.8663 | 21.334 | 2.5 | 40 |
| trans-1,2-Dichloroethene | 1 | 22.5309 | 21.6352 | 4.1 | 20 |
| Ethyl-t-butyl ether | 1 | 22.3311 | 21.3198 | 4.6 | 20 |
| cis-1,2-Dichloroethene | 1 | 23.5239 | 22.0185 | 6.6 | 20 |
| Bromochloromethane | 1 | 20.6859 | 20.1735 | 2.5 | 20 |
| 2,2-Dichloropropane | 1 | 27.118 | 25.9992 | 4.2 | 20 |
| Ethyl acetate | 1 | 28.2578 | 26.191 | 7.6 | 20 |
| 1,4-Dioxane | 1 | 1083.956 | 1042.757 | 3.9 | 20 |
| 1,1-Dichloropropene | 1 | 25.0456 | 23.6903 | 5.6 | 20 |
| Chloroform | 1 | 22.018 | 20.6277 | 6.5 | 40 |
| Cyclohexane | 1 | 24.9968 | 23.4473 | 6.4 | 20 |
| 1,2-Dichloroethane | 1 | 23.2411 | 21.5976 | 7.3 | 40 |
| 2-Butanone | 1 | 13.5683 | 14.2542 | 4.9 | 40 |
| 1,1,1-Trichloroethane | 1 | 22.8 | 21.555 | 5.6 | 20 |
| Carbon Tetrachloride | 1 | 23.7839 | 21.8262 | 8.6 | 40 |
| Vinyl Acetate | 1 | 24.4428 | 23.8046 | 2.6 | 20 |
| Bromodichloromethane | 1 | 21.4372 | 19.9474 | 7.2 | 20 |
| Methylcyclohexane | 1 | 25.4819 | 24.072 | 5.7 | 20 |
| Dibromomethane | 1 | 20.068 | 19.2599 | 4.1 | 20 |
| 1,2-Dichloropropane | 1 | 22.0094 | 20.591 | 6.7 | 20 |
| Trichloroethene | 1 | 22.3153 | 21.6731 | 2.9 | 40 |
| Benzene | 1 | 23.6188 | 22.4149 | 5.2 | 40 |
| tert-Amyl methyl ether | 1 | 24.2649 | 22.8645 | 5.9 | 20 |
| Iso-propylacetate | 1 | 17.8647 | 16.6278 | 7.2 | 20 |
| Methyl methacrylate | 1 | 18.3321 | 16.7031 | 9.3 | 20 |
| Dibromochloromethane | 1 | 16.0823 | 15.4876 | 3.8 | 20 |
| 2-Chloroethylvinylether | 1 | 14.6868 | 15.1528 | 3.1 | 20 |
| cis-1,3-Dichloropropene | 1 | 15.9388 | 15.2533 | 4.4 | 20 |
| trans-1,3-Dichloropropene | 1 | 16.4992 | 15.2512 | 7.9 | 20 |
| Ethyl methacrylate | 1 | 18.1806 | 16.454 | 10 | 20 |
| 1,1,2-Trichloroethane | 1 | 15.8892 | 15.261 | 4 | 20 |
| 1,2-Dibromoethane | 1 | 15.8912 | 15.3008 | 3.8 | 20 |
| 1,3-Dichloropropane | 1 | 18.0447 | 16.6773 | 7.9 | 20 |
| 4-Methyl-2-Pentanone | 1 | 18.3201 | 16.8565 | 8.3 | 20 |
| 2-Hexanone | 1 | 16.8195 | 16.1262 | 4.2 | 20 |
| Tetrachloroethene | 1 | 18.6877 | 16.9423 | 9.8 | 40 |
| Toluene | 1 | 17.911 | 16.927 | 5.6 | 40 |
| 1,1,1,2-Tetrachloroethane | 1 | 17.4204 | 16.7706 | 3.8 | 20 |
| Chlorobenzene | 1 | 16.4979 | 15.8841 | 3.8 | 40 |
| n-Butyl acrylate | 1 | 11.0714 | 10.1536 | 8.6 | 20 |
| n-Amyl acetate | 1 | 16.5036 | 15.5528 | 5.9 | 20 |

# Form3
## RPD Data Laboratory Limits
### QC Batch: MBS64316

| | | | | | |
|---|---|---|---|---|---|
| Bromoform | 1 | 12.066 | 11.5419 | 4.4 | 20 |
| Ethylbenzene | 1 | 16.0583 | 16.1844 | 0.78 | 20 |
| 1,1,2,2-Tetrachloroethane | 1 | 13.2803 | 12.5463 | 5.7 | 20 |
| Styrene | 1 | 16.2237 | 14.9223 | 8.4 | 20 |
| m&p-Xylenes | 1 | 33.3128 | 30.8253 | 7.8 | 20 |
| o-Xylene | 1 | 16.1477 | 15.7245 | 2.7 | 20 |
| trans-1,4-Dichloro-2-butene | 1 | 16.9728 | 16.1536 | 4.9 | 20 |
| 1,3-Dichlorobenzene | 1 | 14.4343 | 13.533 | 6.4 | 20 |
| 1,4-Dichlorobenzene | 1 | 14.3289 | 13.4358 | 6.4 | 40 |
| 1,2-Dichlorobenzene | 1 | 14.365 | 13.2098 | 8.4 | 40 |
| Isopropylbenzene | 1 | 15.9204 | 15.4041 | 3.3 | 20 |
| Cyclohexanone | 1 | 102.9977 | 127.7919 | 21 * | 20 |
| Camphene | 1 | 18.9428 | 16.2738 | 15 | 20 |
| 1,2,3-Trichloropropane | 1 | 15.1801 | 14.4698 | 4.8 | 20 |
| 2-Chlorotoluene | 1 | 17.9384 | 16.5302 | 8.2 | 20 |
| p-Ethyltoluene | 1 | 14.9363 | 14.6902 | 1.7 | 20 |
| 4-Chlorotoluene | 1 | 16.6947 | 16.3309 | 2.2 | 20 |
| n-Propylbenzene | 1 | 16.5972 | 15.7837 | 5 | 40 |
| Bromobenzene | 1 | 16.8712 | 14.2328 | 17 | 20 |
| 1,3,5-Trimethylbenzene | 1 | 19.0686 | 17.7035 | 7.4 | 20 |
| Butyl methacrylate | 1 | 16.5494 | 15.8353 | 4.4 | 20 |
| t-Butylbenzene | 1 | 15.4145 | 14.5616 | 5.7 | 20 |
| 1,2,4-Trimethylbenzene | 1 | 15.9981 | 15.3996 | 3.8 | 20 |
| sec-Butylbenzene | 1 | 15.517 | 15.081 | 2.8 | 40 |
| 4-Isopropyltoluene | 1 | 14.7588 | 13.8305 | 6.5 | 20 |
| n-Butylbenzene | 1 | 16.6225 | 15.839 | 4.8 | 20 |
| p-Diethylbenzene | 1 | 16.2374 | 15.0486 | 7.6 | 20 |
| 1,2,4,5-Tetramethylbenzene | 1 | 15.8952 | 14.4518 | 9.5 | 20 |
| 1,2-Dibromo-3-Chloropropane | 1 | 9.0425 | 8.0623 | 11 | 20 |
| Camphor | 1 | 126.2721 | 124.2357 | 1.6 | 20 |
| Hexachlorobutadiene | 1 | 10.8944 | 10.1634 | 6.9 | 20 |
| 1,2,4-Trichlorobenzene | 1 | 12.6757 | 11.4416 | 10 | 20 |
| 1,2,3-Trichlorobenzene | 1 | 12.222 | 11.2716 | 8.1 | 20 |
| Naphthalene | 1 | 12.7867 | 11.942 | 6.8 | 20 |

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: DAILY BLANK
Blank Data File: 3M117850.D
Matrix: Aqueous

Blank Analysis Date: 10/02/17 08:38
Blank Extraction Date: NA
(If Applicable)
Method: EPA 8260C

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD00298-001(T) | 3M117852.D | 10/02/17 09:16 |
| EF-1V-264202(093 | 3M117858.D | 10/02/17 10:57 |
| AD00298-001(T:M | 3M117857.D | 10/02/17 10:40 |
| AD00298-001(T:M | 3M117856.D | 10/02/17 10:23 |
| MBS64316 | 3M117855.D | 10/02/17 10:06 |

# Form 5

**Tune Name:** BFB TUNE
**Instrument:** GCMS 3
**Data File:** 3M116065.D
**Analysis Date:** 08/30/17 07:56
**Method:** EPA 8260C

**Tune Scan/Time Range:** Average of 4.926 to 5.005 min

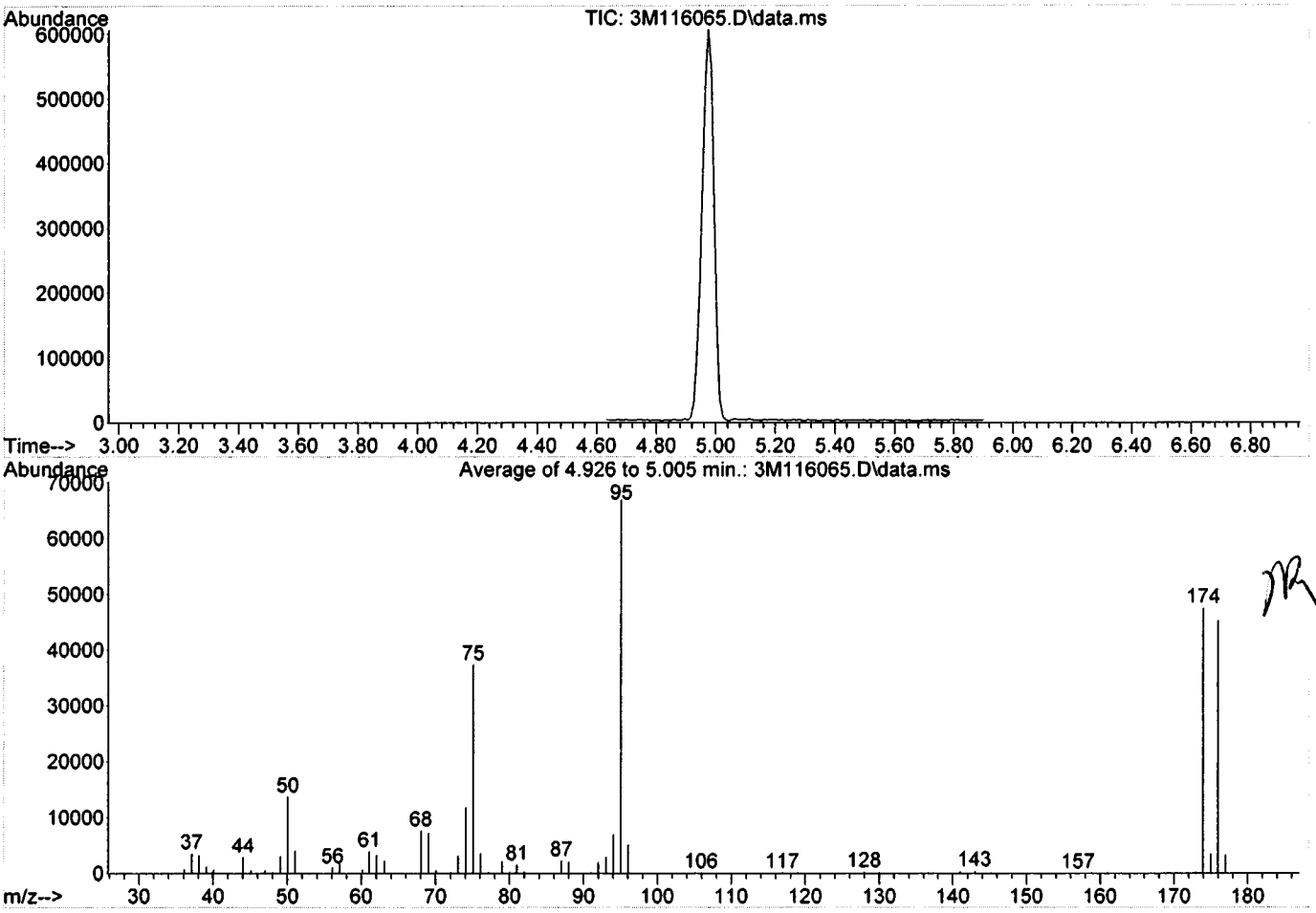
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 20.5 | 13736 | PASS |
| 75 | 95 | 30 | 60 | 55.9 | 37424 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 66989 | PASS |
| 96 | 95 | 5 | 9 | 7.6 | 5102 | PASS |
| 173 | 174 | 0.00 | 2 | 0.7 | 311 | PASS |
| 174 | 95 | 50 | 100 | 71.0 | 47548 | PASS |
| 175 | 174 | 5 | 9 | 7.4 | 3518 | PASS |
| 176 | 174 | 95 | 101 | 95.3 | 45310 | PASS |
| 177 | 176 | 5 | 9 | 7.4 | 3351 | PASS |

| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 3M116066.D | BLK | 08/30/17 08:06 |
| 3M116067.D | CAL @ 0.5 PPB | 08/30/17 08:23 |
| 3M116068.D | 1 PPB | 08/30/17 08:40 |
| 3M116069.D | CAL @ 5 PPB | 08/30/17 08:57 |
| 3M116070.D | CAL @ 10 PPB | 08/30/17 09:13 |
| 3M116071.D | CAL @ 20 PPB | 08/30/17 09:30 |
| 3M116072.D | CAL @ 500 PPB | 08/30/17 09:46 |
| 3M116074.D | CAL @ 250 PPB | 08/30/17 10:20 |
| 3M116076.D | CAL @ 100 PPB | 08/30/17 10:54 |
| 3M116078.D | CAL @ 50 PPB | 08/30/17 11:27 |
| 3M116091.D | CAL @ 1 PPB | 08/30/17 14:54 |
| 3M116092.D | ICV | 08/30/17 15:16 |

Data Path : G:\GcMsData\2017\GCMS_3\Data\08-30-17\
Data File : 3M116065.D
Acq On : 30 Aug 2017 7:56
Operator : SG
Sample : BFB TUNE
Misc : A,5ML
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : G:\GcMsData\2017\GCMS_3\MethodQt\3M_A0731.M
Title : @GCMS_3,ug,624,8260
Last Update : Mon Jul 31 14:52:13 2017




Spectrum Information: Average of 4.926 to 5.005 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 20.5 | 13736 | PASS |
| 75 | 95 | 30 | 60 | 55.9 | 37424 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 66989 | PASS |
| 96 | 95 | 5 | 9 | 7.6 | 5102 | PASS |
| 173 | 174 | 0.00 | 2 | 0.7 | 311 | PASS |
| 174 | 95 | 50 | 100 | 71.0 | 47548 | PASS |
| 175 | 174 | 5 | 9 | 7.4 | 3518 | PASS |
| 176 | 174 | 95 | 101 | 95.3 | 45310 | PASS |
| 177 | 176 | 5 | 9 | 7.4 | 3351 | PASS |

# Form 5

**Tune Name:** BFB TUNE
**Instrument:** GCMS 3
**Data File:** 3M117845.D
**Analysis Date:** 10/02/17 07:08
**Method:** EPA 8260C

**Tune Scan/Time Range:** Average of 5.039 to 5.049 min

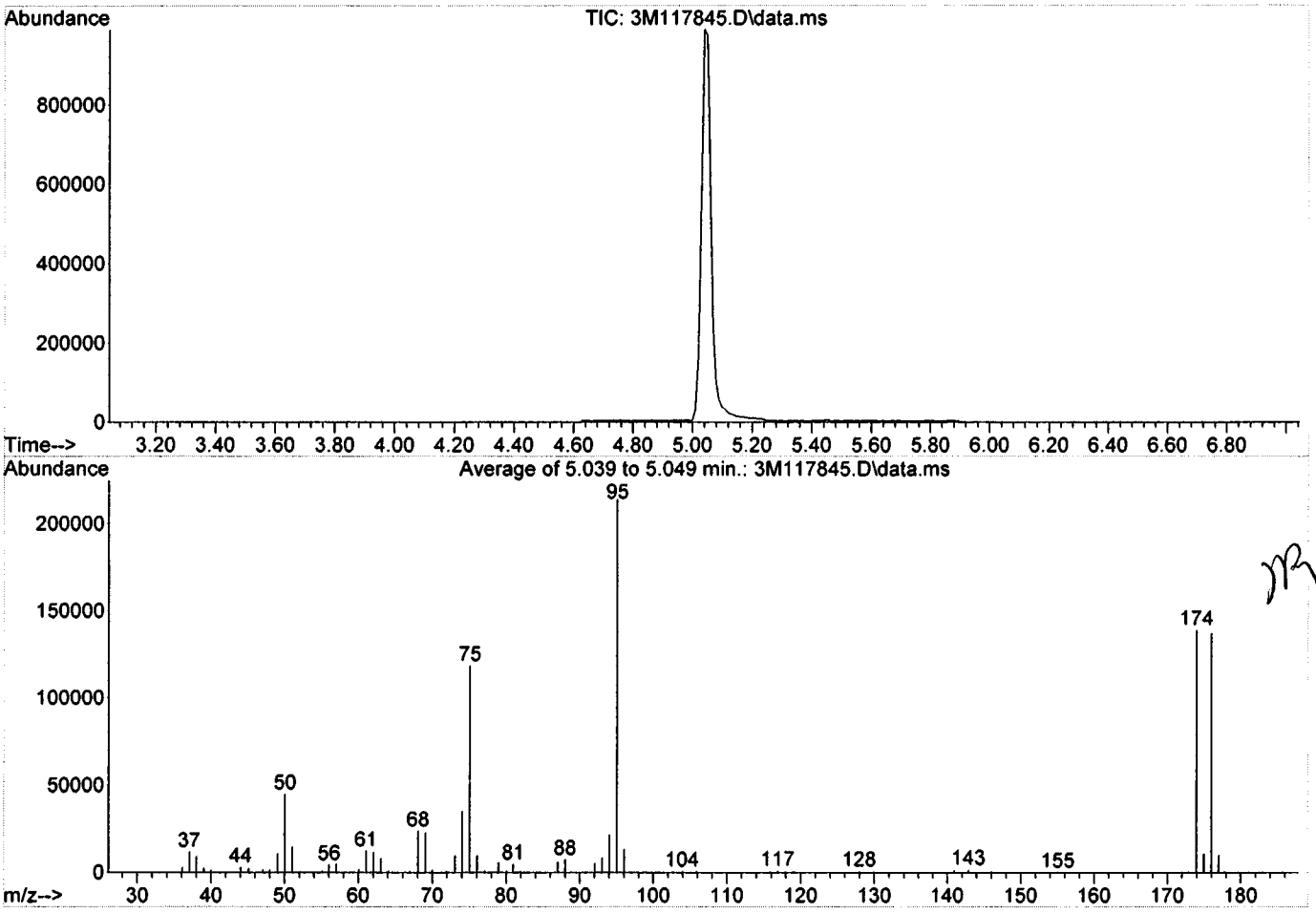
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 20.9 | 44880 | PASS |
| 75 | 95 | 30 | 60 | 55.4 | 118644 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 214304 | PASS |
| 96 | 95 | 5 | 9 | 6.3 | 13531 | PASS |
| 173 | 174 | 0.00 | 2 | 0.4 | 572 | PASS |
| 174 | 95 | 50 | 100 | 65.0 | 139196 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 10739 | PASS |
| 176 | 174 | 95 | 101 | 98.7 | 137380 | PASS |
| 177 | 176 | 5 | 9 | 7.3 | 10068 | PASS |

| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 3M117846.D | 20 PPB | 10/02/17 07:27 |
| 3M117847.D | CAL @ 20 PPB | 10/02/17 07:44 |
| 3M117848.D | BLK | 10/02/17 08:04 |
| 3M117849.D | DAILY BLANK | 10/02/17 08:21 |
| 3M117850.D | DAILY BLANK | 10/02/17 08:38 |
| 3M117851.D | AD00297-001(T) | 10/02/17 08:59 |
| 3M117852.D | AD00298-001(T) | 10/02/17 09:16 |
| 3M117853.D | AD00319-002(T) | 10/02/17 09:32 |
| 3M117854.D | MBS64315 | 10/02/17 09:49 |
| 3M117855.D | MBS64316 | 10/02/17 10:06 |
| 3M117856.D | AD00298-001(T:M | 10/02/17 10:23 |
| 3M117857.D | AD00298-001(T:M | 10/02/17 10:40 |
| 3M117858.D | EF-1V-264202(093 | 10/02/17 10:57 |
| 3M117859.D | EF-3V-10896(0928 | 10/02/17 11:13 |
| 3M117860.D | EF-3V-10896(0929 | 10/02/17 11:30 |
| 3M117861.D | AD00308-017 | 10/02/17 11:50 |
| 3M117862.D | AD00301-015 | 10/02/17 12:07 |
| 3M117863.D | AD00301-016 | 10/02/17 12:23 |
| 3M117864.D | 00295-002 | 10/02/17 12:40 |
| 3M117865.D | AD00308-015 | 10/02/17 12:57 |
| 3M117866.D | AD00311-008 | 10/02/17 13:14 |
| 3M117867.D | AD00311-009 | 10/02/17 13:30 |
| 3M117868.D | AD00311-001 | 10/02/17 13:47 |
| 3M117869.D | AD00311-002 | 10/02/17 14:04 |
| 3M117870.D | AD00311-003 | 10/02/17 14:21 |
| 3M117871.D | AD00311-004 | 10/02/17 14:37 |
| 3M117872.D | AD00311-005 | 10/02/17 14:54 |
| 3M117873.D | AD00311-007 | 10/02/17 15:11 |
| 3M117874.D | AD00311-006 | 10/02/17 15:28 |
| 3M117875.D | AD00308-005 | 10/02/17 15:44 |
| 3M117876.D | AD00308-009 | 10/02/17 16:01 |
| 3M117877.D | AD00277-001 | 10/02/17 16:18 |
| 3M117878.D | BLK | 10/02/17 16:34 |
| 3M117879.D | AD00311-002 | 10/02/17 16:51 |
| 3M117880.D | AD00311-004 | 10/02/17 17:08 |
| 3M117881.D | AD00311-005 | 10/02/17 17:25 |
| 3M117882.D | AD00311-006 | 10/02/17 17:41 |
| 3M117883.D | AD00311-003 | 10/02/17 17:58 |
| 3M117884.D | AD00311-007 | 10/02/17 18:12 |

Data Path : G:\GcMsData\2017\GCMS_3\Data\10-02-17\
Data File : 3M117845.D
Acq On : 2 Oct 2017 7:08
Operator : SG
Sample : BFB TUNE
Misc : A,5ML
ALS Vial : 3 Sample Multiplier: 1

Integration File: RTEINT.P

Method : G:\GcMsData\2017\GCMS_3\MethodQt\3M_A0830.M
Title : @GCMS_3,ug,624,8260
Last Update : Wed Aug 30 15:24:38 2017




Spectrum Information: Average of 5.039 to 5.049 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 20.9 | 44880 | PASS |
| 75 | 95 | 30 | 60 | 55.4 | 118644 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 214304 | PASS |
| 96 | 95 | 5 | 9 | 6.3 | 13531 | PASS |
| 173 | 174 | 0.00 | 2 | 0.4 | 572 | PASS |
| 174 | 95 | 50 | 100 | 65.0 | 139196 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 10739 | PASS |
| 176 | 174 | 95 | 101 | 98.7 | 137380 | PASS |
| 177 | 176 | 5 | 9 | 7.3 | 10068 | PASS |

Method: EPA 8260C

# Form 6
## Initial Calibration

Instrument: GCMS_3

| Level # | Data File: | Cal Identifier: | Analysis Date/Time | Level # | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3M116071.D | CAL @ 20 PPB | 08/30/17 09:30 | 2 | 3M116069.D | CAL @ 5 PPB | 08/30/17 08:57 |
| 3 | 3M116070.D | CAL @ 10 PPB | 08/30/17 09:13 | 4 | 3M116078.D | CAL @ 50 PPB | 08/30/17 11:27 |
| 5 | 3M116076.D | CAL @ 100 PPB | 08/30/17 10:54 | 6 | 3M116074.D | CAL @ 250 PPB | 08/30/17 10:20 |
| 7 | 3M116072.D | CAL @ 500 PPB | 08/30/17 09:46 | 8 | 3M116091.D | CAL @ 1 PPB | 08/30/17 14:54 |
| 9 | 3M116067.D | CAL @ 0.5 PPB | 08/30/17 08:23 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 0 | Avg | 0.3531 | 0.2097 | 0.3334 | 0.3556 | 0.3793 | 0.3822 | ---- | 0.2780 | ---- | 0.327 | 1.58 | 1.00 | 1.00 | 19 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | | 1.00 | |
| Dichlorodifluorometha | 1 | 0 | Qua | 0.1005 | 0.0863 | 0.0941 | 0.0984 | 0.1068 | 0.1083 | 0.1106 | 0.0234 | ---- | 0.0911 | 1.58 | 1.00 | 1.00 | 31 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Chloromethane | 1 | 0 | Avg | 0.1631 | 0.1450 | 0.1767 | 0.1610 | 0.1644 | 0.1668 | 0.1733 | 0.1299 | ---- | 0.160 | 1.73 | 1.00 | 1.00 | 9.6 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromomethane | 1 | 0 | Avg | 0.1020 | 0.0959 | 0.0956 | 0.0842 | 0.0752 | ---- | ---- | 0.1077 | ---- | 0.0935 | 2.12 | 0.994 | 0.999 | 13 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | | | 1.00 | |
| Vinyl Chloride | 1 | 0 | Avg | 0.1921 | 0.1666 | 0.1887 | 0.1801 | 0.1844 | 0.1850 | 0.1863 | 0.1466 | ---- | 0.179 | 1.83 | 1.00 | 1.00 | 8.4 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Chloroethane | 1 | 0 | Avg | 0.1143 | 0.0776 | 0.1133 | 0.1124 | 0.1114 | 0.1005 | ---- | 0.0891 | ---- | 0.103 | 2.20 | 0.998 | 1.00 | 14 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | | 1.00 | |
| Trichlorofluoromethan | 1 | 0 | Avg | 0.3422 | 0.3262 | 0.3476 | 0.3472 | 0.3487 | 0.3312 | 0.3099 | 0.2565 | ---- | 0.326 | 2.41 | 0.999 | 1.00 | 9.6 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethyl ether | 1 | 0 | Avg | 0.2148 | 0.1568 | 0.1993 | 0.2189 | 0.2187 | 0.2191 | 0.2017 | 0.2211 | ---- | 0.206 | 2.63 | 0.998 | 1.00 | 11 | 0.50 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Furan | 1 | 0 | Avg | 0.3791 | 0.3139 | 0.3599 | 0.3941 | 0.3902 | 0.3850 | 0.3490 | 0.3530 | ---- | 0.366 | 2.68 | 0.997 | 1.00 | 7.4 | 0.50 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,2-Trichloro-1,2,2-tr | 1 | 0 | Avg | 0.1330 | 0.1241 | 0.1360 | 0.1429 | 0.1502 | 0.1416 | 0.1342 | 0.1288 | ---- | 0.136 | 2.82 | 0.999 | 1.00 | 6.1 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Methylene Chloride | 1 | 0 | Avg | 0.2538 | 0.2111 | 0.2462 | 0.2577 | 0.2635 | 0.2646 | 0.2456 | 0.2964 | ---- | 0.255 | 3.23 | 0.999 | 1.00 | 9.4 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Acrolein | 1 | 0 | Avg | 0.0391 | 0.0322 | 0.0369 | 0.0418 | 0.0438 | 0.0459 | 0.0413 | 0.0318 | ---- | 0.0392 | 2.75 | 0.997 | 1.00 | 13 | | 100.0 | 25.00 | 50.00 | 250.0 | 500.0 | 1250. | 2500. | 5.00 | |
| Acrylonitrile | 1 | 0 | Avg | 0.0781 | 0.0653 | 0.0683 | 0.0855 | 0.0873 | 0.0911 | 0.0782 | 0.0670 | ---- | 0.0776 | 3.45 | 0.994 | 0.999 | 13 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Iodomethane | 1 | 0 | Avg | 0.2232 | 0.1781 | 0.2082 | 0.2225 | 0.2360 | 0.2379 | 0.2242 | 0.2058 | ---- | 0.217 | 2.97 | 0.999 | 1.00 | 9.0 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Acetone | 1 | 0 | Avg | 0.0814 | 0.0602 | 0.0807 | 0.0881 | 0.0879 | 0.0897 | 0.0787 | 0.0899 | ---- | 0.0821 | 2.88 | 0.996 | 1.00 | 12 | 0.10 a | 100.0 | 25.00 | 50.00 | 250.0 | 500.0 | 1250. | 2500. | 5.00 | |
| Carbon Disulfide | 1 | 0 | Avg | 0.4503 | 0.3433 | 0.4288 | 0.4670 | 0.5034 | 0.5066 | 0.4732 | 0.3631 | ---- | 0.442 | 3.03 | 0.999 | 1.00 | 14 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| t-Butyl Alcohol | 1 | 0 | Qua | 0.0216 | 0.0173 | 0.0215 | 0.0282 | 0.0302 | 0.0322 | 0.0278 | 0.0217 | ---- | 0.0251 | 3.31 | 0.994 | 0.999 | 21 | | 100.0 | 25.00 | 50.00 | 250.0 | 500.0 | 1250. | 2500. | 5.00 | |
| n-Hexane | 1 | 0 | Avg | 0.0825 | 0.0663 | 0.0723 | 0.0811 | 0.0920 | 0.0909 | 0.0914 | 0.0858 | ---- | 0.0829 | 3.67 | 1.00 | 1.00 | 11 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Di-isopropyl-ether | 1 | 0 | Avg | 0.6388 | 0.4974 | 0.6027 | 0.6706 | 0.6625 | 0.6633 | 0.5688 | 0.6838 | ---- | 0.624 | 3.83 | 0.994 | 1.00 | 10 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1-Dichloroethene | 1 | 0 | Avg | 0.3374 | 0.2926 | 0.3225 | 0.3482 | 0.3536 | 0.3459 | 0.3176 | 0.1794 | ---- | 0.312 | 2.83 | 0.998 | 1.00 | 18 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Methyl Acetate | 1 | 0 | Avg | 0.2738 | 0.2240 | 0.2692 | 0.2966 | 0.2991 | 0.3106 | 0.2845 | 0.2934 | ---- | 0.281 | 3.14 | 0.998 | 1.00 | 9.5 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Methyl-t-butyl ether | 1 | 0 | Avg | 0.6642 | 0.5156 | 0.6307 | 0.6912 | 0.6881 | 0.6489 | 0.5318 | 0.6298 | 0.6008 | 0.622 | 3.45 | 0.989 | 1.00 | 10 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | 0.50 |
| 1,1-Dichloroethane | 1 | 0 | Avg | 0.4011 | 0.3301 | 0.4028 | 0.4082 | 0.4217 | 0.4134 | 0.3703 | 0.3842 | ---- | 0.392 | 3.81 | 0.997 | 1.00 | 7.6 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| trans-1,2-Dichloroethe | 1 | 0 | Avg | 0.2217 | 0.1801 | 0.2173 | 0.2365 | 0.2355 | 0.2280 | 0.1983 | 0.1726 | ---- | 0.211 | 3.46 | 0.995 | 1.00 | 12 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethyl-t-butyl ether | 1 | 0 | Avg | 0.7748 | 0.6179 | 0.7392 | 0.8182 | 0.8242 | 0.7895 | 0.6714 | 0.7001 | ---- | 0.742 | 4.09 | 0.993 | 1.00 | 9.9 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| cis-1,2-Dichloroethene | 1 | 0 | Avg | 0.4520 | 0.3585 | 0.4296 | 0.4507 | 0.4526 | 0.4411 | 0.3893 | 0.4739 | ---- | 0.431 | 4.22 | 0.996 | 1.00 | 8.9 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromochloromethane | 1 | 0 | Avg | 0.1780 | 0.1553 | 0.1764 | 0.1877 | 0.1899 | 0.1836 | 0.2297 | 0.2228 | ---- | 0.190 | 4.39 | 0.991 | 0.999 | 13 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 2,2-Dichloropropane | 1 | 0 | Avg | 0.3372 | 0.2745 | 0.3176 | 0.3235 | 0.3420 | 0.3258 | 0.2779 | 0.2387 | ---- | 0.305 | 4.23 | 0.993 | 1.00 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethyl acetate | 1 | 0 | Avg | 0.2298 | 0.1924 | 0.1928 | 0.2752 | 0.2486 | 0.2688 | 0.2247 | 0.1873 | ---- | 0.227 | 4.25 | 0.992 | 0.999 | 15 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,4-Dioxane | 1 | 0 | Avg | 0.0031 | 0.0023 | 0.0031 | 0.0033 | 0.0033 | 0.0033 | 0.0028 | 0.0027 | ---- | 0.00302 | 5.40 | 0.992 | 1.00 | 12 | | 1000. | 250.0 | 500.0 | 2500. | 5000. | 1250 | 2500 | 50.00 | |
| 1,1-Dichloropropene | 1 | 0 | Avg | 0.3025 | 0.2562 | 0.2899 | 0.3098 | 0.3099 | 0.2898 | 0.2448 | 0.2778 | ---- | 0.285 | 4.65 | 0.992 | 1.00 | 8.5 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Chloroform | 1 | 0 | Avg | 0.4938 | 0.4339 | 0.4850 | 0.5017 | 0.4993 | 0.4710 | 0.4213 | 0.5127 | ---- | 0.477 | 4.43 | 0.996 | 1.00 | 7.0 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Dibromofluoromethan | 1 | 0 | Avg | 0.2898 | 0.2937 | 0.2932 | 0.2754 | 0.2773 | 0.2662 | 0.2397 | 0.2906 | 0.2864 | 0.279 | 4.53 | -1 | -1 | 6.3 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Cyclohexane | 1 | 0 | Avg | 0.1732 | 0.1418 | 0.1618 | 0.1753 | 0.1900 | 0.1894 | 0.1795 | 0.1153 | ---- | 0.166 | 4.59 | 0.999 | 1.00 | 15 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dichloroethane-d4 | 1 | 0 | Avg | 0.2177 | 0.2299 | 0.2208 | 0.2056 | 0.2081 | 0.1911 | 0.1801 | 0.2258 | 0.2334 | 0.213 | 4.76 | -1 | -1 | 8.5 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| 1,2-Dichloroethane | 1 | 0 | Avg | 0.5132 | 0.4506 | 0.5335 | 0.4943 | 0.4690 | 0.4194 | 0.3338 | 0.6030 | 0.5484 | 0.485 | 4.80 | 0.984 | 1.00 | 16 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | 0.50 |
| 2-Butanone | 1 | 0 | Avg | 0.1352 | 0.0806 | 0.1432 | 0.1612 | 0.1355 | 0.1551 | 0.1456 | 0.1170 | ---- | 0.134 | 4.24 | 0.999 | 0.999 | 19 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,1-Trichloroethane | 1 | 0 | Avg | 0.4286 | 0.3531 | 0.4095 | 0.4247 | 0.4274 | 0.4067 | 0.3461 | 0.3707 | ---- | 0.396 | 4.56 | 0.993 | 1.00 | 8.6 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Carbon Tetrachloride | 1 | 0 | Avg | 0.3173 | 0.2750 | 0.3060 | 0.3034 | 0.3082 | 0.2817 | 0.2271 | 0.2779 | ---- | 0.287 | 4.66 | 0.986 | 1.00 | 10 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Vinyl Acetate | 1 | 0 | Avg | 0.4435 | 0.3373 | 0.4283 | 0.4659 | 0.4705 | 0.4620 | 0.3977 | 0.4386 | ---- | 0.431 | 3.82 | 0.994 | 1.00 | 10 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromodichloromethan | 1 | 0 | Avg | 0.4046 | 0.3204 | 0.3766 | 0.4044 | 0.4088 | 0.3986 | 0.3396 | 0.3506 | ---- | 0.376 | 5.48 | 0.993 | 1.00 | 9.2 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |

***Flags***

***a - failed the min rf criteria***

***c - failed the minimum correlation coeff criteria(if applicable)***

***Note:*** Avg Rsd: 12.5

***Corr 1 = Correlation Coefficient for linear Eq.***

***Corr 2 = Correlation Coefficient for quad Eq.***

***Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.***

# Form 6
## Initial Calibration

Method: EPA 8260C

Instrument: GCMS_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3M116071.D | CAL @ 20 PPB | 08/30/17 09:30 | 2 | 3M116069.D | CAL @ 5 PPB | 08/30/17 08:57 |
| 3 | 3M116070.D | CAL @ 10 PPB | 08/30/17 09:13 | 4 | 3M116078.D | CAL @ 50 PPB | 08/30/17 11:27 |
| 5 | 3M116076.D | CAL @ 100 PPB | 08/30/17 10:54 | 6 | 3M116074.D | CAL @ 250 PPB | 08/30/17 10:20 |
| 7 | 3M116072.D | CAL @ 500 PPB | 08/30/17 09:46 | 8 | 3M116091.D | CAL @ 1 PPB | 08/30/17 14:54 |
| 9 | 3M116067.D | CAL @ 0.5 PPB | 08/30/17 08:23 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | 1 | 0 | Avg | 0.1299 | 0.1023 | 0.1219 | 0.1335 | 0.1358 | 0.1463 | 0.1352 | 0.0813 | ----- | 0.123 | 5.30 | 0.998 | 1.00 | 17 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Dibromomethane | 1 | 0 | Avg | 0.1971 | 0.1503 | 0.1901 | 0.1967 | 0.1980 | 0.1850 | 0.1549 | 0.2183 | ----- | 0.186 | 5.40 | 0.991 | 1.00 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dichloropropane | 1 | 0 | Avg | 0.2184 | 0.1736 | 0.2114 | 0.2244 | 0.2283 | 0.2258 | 0.2051 | 0.1961 | ----- | 0.210 | 5.33 | 0.998 | 1.00 | 8.8 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Trichloroethene | 1 | 0 | Avg | 0.2363 | 0.1962 | 0.2398 | 0.2487 | 0.2536 | 0.2449 | 0.2116 | 0.1860 | ----- | 0.227 | 5.18 | 0.994 | 1.00 | 11 | 0.20 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Benzene | 1 | 0 | Avg | 0.7988 | 0.6618 | 0.7732 | 0.8051 | 0.8047 | 0.7357 | 0.5737 | 0.7970 | 0.8635 | 0.757 | 4.79 | 0.982 | 1.00 | 12 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | 0.50 |
| tert-Amyl methyl ether | 1 | 0 | Avg | 0.6779 | 0.5361 | 0.6498 | 0.7137 | 0.7008 | 0.6468 | 0.5053 | 0.5753 | ----- | 0.626 | 4.83 | 0.982 | 1.00 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Iso-propylacetate | 1 | 0 | Avg | 0.6679 | 0.4958 | 0.6319 | 0.7345 | 0.7192 | 0.6836 | 0.5801 | 0.5867 | ----- | 0.638 | 4.79 | 0.992 | 1.00 | 13 | 0.50 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Methyl methacrylate | 1 | 0 | Avg | 0.3933 | 0.2947 | 0.3655 | 0.4010 | 0.4344 | 0.4079 | 0.3659 | 0.3783 | ----- | 0.380 | 5.36 | 0.996 | 1.00 | 11 | 0.50 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Dibromochloromethan | 1 | 0 | Avg | 0.3824 | 0.2990 | 0.3639 | 0.3935 | 0.3991 | 0.3912 | 0.3548 | 0.3226 | ----- | 0.363 | 6.44 | 0.997 | 1.00 | 10 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 2-Chloroethylvinylethe | 1 | 0 | Avg | 0.2097 | 0.1757 | 0.1852 | 0.2348 | 0.2350 | 0.2408 | 0.2366 | 0.1590 | ----- | 0.210 | 5.64 | 1.00 | 1.00 | 15 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| cis-1,3-Dichloropropen | 1 | 0 | Avg | 0.5105 | 0.3821 | 0.4788 | 0.5439 | 0.5448 | 0.5484 | 0.5157 | 0.4221 | ----- | 0.493 | 5.75 | 0.999 | 1.00 | 13 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| trans-1,3-Dichloroprop | 1 | 0 | Avg | 0.5108 | 0.3555 | 0.4923 | 0.5507 | 0.5492 | 0.5370 | 0.4917 | 0.3797 | ----- | 0.483 | 6.07 | 0.998 | 1.00 | 16 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethyl methacrylate | 1 | 0 | Avg | 0.3755 | 0.2666 | 0.3647 | 0.4117 | 0.3972 | 0.3987 | 0.3532 | 0.3338 | ----- | 0.363 | 6.08 | 0.996 | 1.00 | 13 | 0.50 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,2-Trichloroethane | 1 | 0 | Avg | 0.3025 | 0.2716 | 0.3004 | 0.3208 | 0.3122 | 0.3153 | 0.2851 | 0.3318 | ----- | 0.305 | 6.19 | 0.997 | 1.00 | 6.4 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dibromoethane | 1 | 0 | Avg | 0.3186 | 0.2627 | 0.3179 | 0.3402 | 0.3371 | 0.3360 | 0.3169 | 0.3244 | ----- | 0.319 | 6.53 | 0.999 | 1.00 | 7.7 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,3-Dichloropropane | 1 | 0 | Avg | 0.5316 | 0.4330 | 0.5217 | 0.5557 | 0.5323 | 0.5029 | 0.4357 | 0.5338 | ----- | 0.506 | 6.29 | 0.994 | 1.00 | 9.2 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 4-Methyl-2-Pentanone | 1 | 0 | Avg | 0.3191 | 0.2464 | 0.2993 | 0.3604 | 0.3640 | 0.3833 | 0.3649 | 0.2368 | ----- | 0.322 | 5.82 | 0.999 | 1.00 | 18 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 2-Hexanone | 1 | 0 | Avg | 0.2380 | 0.1578 | 0.2289 | 0.2622 | 0.2562 | 0.2603 | 0.2399 | 0.1867 | ----- | 0.229 | 6.31 | 0.998 | 1.00 | 16 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Tetrachloroethene | 1 | 0 | Avg | 0.2007 | 0.1724 | 0.1882 | 0.2023 | 0.1899 | 0.1823 | 0.1487 | 0.1699 | ----- | 0.182 | 6.29 | 0.988 | 1.00 | 9.8 | 0.20 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Toluene-d8 | 1 | 0 | Avg | 1.2946 | 1.3204 | 1.3162 | 1.3156 | 1.2970 | 1.3413 | 1.3766 | 1.3028 | 1.3230 | 1.32 | 5.91 | -1 | -1 | 1.9 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Toluene | 1 | 0 | Avg | 0.6536 | 0.5769 | 0.6517 | 0.6753 | 0.6570 | 0.6397 | 0.5789 | 0.6844 | ----- | 0.640 | 5.96 | 0.997 | 1.00 | 6.3 | 0.40 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,1,2-Tetrachloroeth | 1 | 0 | Avg | 0.2989 | 0.2367 | 0.2882 | 0.2980 | 0.2900 | 0.2564 | 0.2009 | 0.3049 | ----- | 0.272 | 6.85 | 0.981 | 1.00 | 14 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Chlorobenzene | 1 | 0 | Avg | 0.7352 | 0.6666 | 0.7516 | 0.7608 | 0.7469 | 0.7155 | 0.6432 | 0.7933 | ----- | 0.727 | 6.81 | 0.997 | 1.00 | 6.9 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Butyl acrylate | 1 | 0 | Qua | 1.7730 | 1.2091 | 1.6473 | 1.9980 | 1.9464 | 2.1462 | 1.9939 | 1.1407 | ----- | 1.73 | 7.07 | 0.999 | 0.999 | 22 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Amyl acetate | 1 | 0 | Avg | 1.4072 | 0.9853 | 1.3358 | 1.5447 | 1.4771 | 1.5877 | 1.4704 | 1.0975 | ----- | 1.36 | 7.21 | 0.999 | 1.00 | 16 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromoform | 1 | 0 | Avg | 0.6566 | 0.4591 | 0.5835 | 0.6868 | 0.6699 | 0.7580 | 0.7183 | 0.5419 | ----- | 0.634 | 7.32 | 0.999 | 0.999 | 16 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethylbenzene | 1 | 0 | Avg | 0.5416 | 0.4036 | 0.5243 | 0.5775 | 0.5392 | 0.5285 | 0.3971 | 0.5410 | ----- | 0.507 | 6.85 | 0.977 | 0.999 | 13 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,2,2-Tetrachloroeth | 1 | 0 | Avg | 0.9956 | 0.7463 | 0.9615 | 1.0396 | 1.0107 | 1.0786 | 1.0245 | 0.8840 | ----- | 0.968 | 7.56 | 0.999 | 1.00 | 11 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromofluorobenzene | 1 | 0 | Avg | 1.0726 | 1.0207 | 1.0607 | 1.0792 | 1.0567 | 1.1594 | 1.2344 | 1.0530 | 1.0836 | 1.09 | 7.50 | -1 | -1 | 6.0 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Styrene | 1 | 0 | Avg | 1.9030 | 1.4468 | 1.8511 | 1.9457 | 1.8392 | 1.8376 | 1.4491 | 1.5065 | ----- | 1.72 | 7.17 | 0.985 | 0.999 | 12 | 0.30 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| m&p-Xylenes | 1 | 0 | Avg | 0.9217 | 0.7824 | 0.9420 | 0.9584 | 0.8817 | 0.8946 | 0.7150 | 0.9555 | 0.8276 | 0.875 | 6.92 | 0.987 | 0.999 | 9.6 | 0.10 | 40.00 | 10.00 | 20.00 | 100.0 | 200.0 | 500.0 | 1000. | 2.00 | 1.00 |
| o-Xylene | 1 | 0 | Avg | 0.9890 | 0.7445 | 0.9902 | 1.0135 | 0.9348 | 0.9436 | 0.7650 | 0.8720 | ----- | 0.907 | 7.17 | 0.988 | 0.999 | 11 | 0.30 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| trans-1,4-Dichloro-2-b | 1 | 0 | Avg | 0.4379 | 0.2682 | 0.3982 | 0.4409 | 0.4356 | 0.4740 | 0.4198 | 0.2968 | ----- | 0.396 | 7.59 | 0.996 | 0.999 | 19 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,3-Dichlorobenzene | 1 | 0 | Avg | 1.1114 | 0.8169 | 1.1202 | 1.1460 | 1.0372 | 1.1207 | 1.0054 | 1.1776 | ----- | 1.07 | 8.20 | 0.997 | 0.999 | 11 | 0.60 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,4-Dichlorobenzene | 1 | 0 | Avg | 1.1681 | 0.9111 | 1.1664 | 1.1938 | 1.0901 | 1.1865 | 1.0501 | 1.2909 | ----- | 1.13 | 8.25 | 0.996 | 0.999 | 10 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dichlorobenzene | 1 | 0 | Avg | 1.1945 | 0.8686 | 1.1377 | 1.1830 | 1.1022 | 1.1874 | 1.0581 | 1.1466 | ----- | 1.11 | 8.50 | 0.997 | 0.999 | 9.7 | 0.40 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Isopropylbenzene | 1 | 0 | Avg | 1.9987 | 1.5767 | 1.9572 | 2.1091 | 1.8792 | 2.0768 | 1.8286 | 1.6128 | ----- | 1.88 | 7.38 | 0.996 | 0.999 | 11 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Cyclohexanone | 1 | 0 | Qua | 0.0485 | 0.0368 | 0.0492 | 0.0541 | 0.0537 | 0.0592 | 0.0562 | 0.0788 | ----- | 0.0546 | 7.48 | 0.999 | 0.999 | 22 | | 100.0 | 25.00 | 50.00 | 250.0 | 500.0 | 1250. | 2500. | 5.00 | |
| Camphene | 1 | 0 | Avg | 0.6378 | 0.4252 | 0.6114 | 0.6980 | 0.6184 | 0.6784 | 0.5350 | 0.4753 | ----- | 0.585 | 7.57 | 0.985 | 0.998 | 17 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,3-Trichloropropane | 1 | 0 | Avg | 1.2826 | 0.9690 | 1.2210 | 1.3257 | 1.2823 | 1.3349 | 1.1782 | 1.1475 | ----- | 1.22 | 7.60 | 0.996 | 1.00 | 9.9 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 2-Chlorotoluene | 1 | 0 | Avg | 1.2840 | 1.0503 | 1.3009 | 1.3531 | 1.1776 | 1.1184 | 0.8325 | 1.1077 | ----- | 1.15 | 7.72 | 0.974 | 0.999 | 15 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |

***Flags***
***a - failed the min rf criteria***
***c - failed the minimum correlation coeff criteria(if applicable)***

***Note:*** Avg Rsd: 12.5
***Corr 1 = Correlation Coefficient for linear Eq.***
***Corr 2 = Correlation Coefficient for quad Eq.***
***Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.***

Method: EPA 8260C

# Form 6
## Initial Calibration

Instrument: GCMS_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3M116071.D | CAL @ 20 PPB | 08/30/17 09:30 | 2 | 3M116069.D | CAL @ 5 PPB | 08/30/17 08:57 |
| 3 | 3M116070.D | CAL @ 10 PPB | 08/30/17 09:13 | 4 | 3M116078.D | CAL @ 50 PPB | 08/30/17 11:27 |
| 5 | 3M116076.D | CAL @ 100 PPB | 08/30/17 10:54 | 6 | 3M116074.D | CAL @ 250 PPB | 08/30/17 10:20 |
| 7 | 3M116072.D | CAL @ 500 PPB | 08/30/17 09:46 | 8 | 3M116091.D | CAL @ 1 PPB | 08/30/17 14:54 |
| 9 | 3M116067.D | CAL @ 0.5 PPB | 08/30/17 08:23 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| p-Ethyltoluene | 1 | 0 | Avg | 2.1459 | 1.7497 | 2.2822 | 2.3141 | 2.0467 | 2.1222 | 1.9103 | 1.8553 | ----- | 2.05 | 7.70 | 0.997 | 1.00 | 9.8 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 4-Chlorotoluene | 1 | 0 | Avg | 1.4128 | 1.0498 | 1.3277 | 1.3756 | 1.2451 | 1.3154 | 1.0872 | 1.2415 | ----- | 1.26 | 7.78 | 0.991 | 0.999 | 10 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Propylbenzene | 1 | 0 | Avg | 2.1133 | 1.5878 | 2.0600 | 2.1692 | 1.8719 | 2.0608 | 1.7144 | 1.6555 | ----- | 1.90 | 7.63 | 0.992 | 0.998 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromobenzene | 1 | 0 | Avg | 1.8594 | 1.5783 | 1.8366 | 2.1248 | 1.9743 | 2.0104 | 1.7196 | 1.8763 | ----- | 1.87 | 7.61 | 0.994 | 1.00 | 9.1 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,3,5-Trimethylbenzen | 1 | 0 | Avg | 1.5435 | 1.0736 | 1.3842 | 1.4207 | 1.1915 | 1.1935 | 0.8100 | 1.2921 | ----- | 1.24 | 7.73 | 0.956 | 0.998 | 18 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Butyl methacrylate | 1 | 0 | Avg | 1.1485 | 0.9188 | 1.1503 | 1.2386 | 1.1470 | 1.1319 | 0.9415 | 0.8802 | ----- | 1.07 | 7.73 | 0.991 | 1.00 | 13 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| t-Butylbenzene | 1 | 0 | Avg | 1.3339 | 1.0132 | 1.3318 | 1.4568 | 1.2420 | 1.4081 | 1.2216 | 1.0958 | ----- | 1.26 | 7.95 | 0.995 | 0.999 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,4-Trimethylbenzen | 1 | 0 | Avg | 1.8226 | 1.3245 | 1.7748 | 1.8479 | 1.6252 | 1.8200 | 1.5173 | 1.3651 | ----- | 1.64 | 7.97 | 0.992 | 0.998 | 13 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| sec-Butylbenzene | 1 | 0 | Avg | 1.5524 | 1.0827 | 1.4564 | 1.6163 | 1.4064 | 1.6486 | 1.4371 | 1.1705 | ----- | 1.42 | 8.08 | 0.995 | 0.998 | 14 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 4-Isopropyltoluene | 1 | 0 | Avg | 1.3648 | 0.9230 | 1.3145 | 1.4135 | 1.2159 | 1.4232 | 1.1975 | 1.2258 | ----- | 1.26 | 8.16 | 0.992 | 0.998 | 13 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Butylbenzene | 1 | 0 | Avg | 1.5134 | 1.0150 | 1.4434 | 1.6175 | 1.3919 | 1.5953 | 1.3586 | 1.1910 | ----- | 1.39 | 8.43 | 0.994 | 0.998 | 15 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| p-Diethylbenzene | 1 | 0 | Avg | 0.8774 | 0.5458 | 0.7932 | 0.8966 | 0.7741 | 0.9092 | 0.7641 | 0.6292 | ----- | 0.774 | 8.41 | 0.992 | 0.998 | 17 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,4,5-Tetramethylbe | 1 | 0 | Avg | 1.3685 | 0.8160 | 1.2821 | 1.2942 | 1.1749 | 1.4789 | 1.0222 | 0.9824 | ----- | 1.18 | 8.92 | 0.963 | 0.992 | 19 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dibromo-3-Chloro | 1 | 0 | Qua | 0.1966 | 0.1312 | 0.1792 | 0.2137 | 0.2185 | 0.2533 | 0.2540 | 0.1443 | ----- | 0.199 | 9.01 | 0.999 | 0.999 | 23 | 0.05 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Camphor | 1 | 0 | Qua | 0.1002 | 0.0609 | 0.0920 | 0.1080 | 0.1065 | 0.1142 | 0.1031 | 0.0642 | 0.0717 | 0.0912 | 9.49 | 0.998 | 0.999 | 22 | | 200.0 | 50.00 | 100.0 | 500.0 | 1000. | 2500. | 5000. | 10.00 | 5.00 |
| Hexachlorobutadiene | 1 | 0 | Qua | 0.2579 | 0.1813 | 0.2602 | 0.3633 | 0.2870 | 0.3036 | 0.2496 | 0.6205 | ----- | 0.315 | 9.64 | 0.989 | 0.999 | 42 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,4-Trichlorobenzen | 1 | 0 | Avg | 0.5387 | 0.3230 | 0.5233 | 0.5630 | 0.4944 | 0.5772 | 0.4813 | 0.5457 | ----- | 0.506 | 9.55 | 0.992 | 0.998 | 16 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,3-Trichlorobenzen | 1 | 0 | Avg | 0.4836 | 0.3246 | 0.4801 | 0.5323 | 0.4769 | 0.5583 | 0.4509 | 0.5264 | ----- | 0.479 | 9.90 | 0.988 | 0.997 | 15 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Naphthalene | 1 | 0 | Avg | 1.6370 | 1.0211 | 1.4730 | 1.6344 | 1.5313 | 1.8257 | 1.3774 | 1.3943 | ----- | 1.49 | 9.73 | 0.979 | 0.995 | 16 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |

*Flags*
*a - failed the min rf criteria*
*c - failed the minimum correlation coeff criteria(if applicable)*

*Note:* Avg Rsd: 12.5
*Corr 1 = Correlation Coefficient for linear Eq.*
*Corr 2 = Correlation Coefficient for quad Eq.*
*Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.*

# Form7

Continuing Calibration

**Calibration Name:** CAL @ 20 PPB **Data File:** 3M117847.D **Instrument:** GCMS 3

**Cont Calibration Date/Time** 10/2/2017 7:44:00 A Method: EPA 8260C

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorobenzene | 1 | 0 | I | 4.94 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| Chlorodifluoromethane | 1 | 0 | | 1.58 | 15.07 | 20 | 20 | 0.1 | 0.327 | 0.247 | 24.65 | C1 |
| Dichlorodifluoromethane | 1 | 0 | | 1.58 | 36.44 | 20 | 20 | 0.1 | 0.091 | 0.192 | 82.20 | C1 |
| Chloromethane | 1 | 0 | | 1.73 | 26.77 | 20 | 20 | 0.1 | 0.160 | 0.214 | 33.87 | C1 |
| Bromomethane | 1 | 0 | | 2.10 | 19.77 | 20 | 20 | 0.1 | 0.093 | 0.092 | 1.14 | |
| Vinyl Chloride | 1 | 0 | | 1.81 | 22.25 | 20 | 20 | 0.1 | 0.179 | 0.199 | 11.25 | |
| Chloroethane | 1 | 0 | | 2.18 | 22.31 | 20 | 20 | 0.1 | 0.103 | 0.115 | 11.54 | |
| Trichlorofluoromethane | 1 | 0 | | 2.39 | 23.49 | 20 | 20 | 0.1 | 0.326 | 0.383 | 17.44 | |
| Ethyl ether | 1 | 0 | | 2.62 | 22.93 | 20 | 20 | 0.5 | 0.206 | 0.237 | 14.67 | |
| Furan | 1 | 0 | | 2.66 | 23.49 | 20 | 20 | 0.5 | 0.366 | 0.429 | 17.47 | |
| 1,1,2-Trichloro-1,2,2-trifluoroetha | 1 | 0 | | 2.80 | 23.66 | 20 | 20 | 0.1 | 0.136 | 0.161 | 18.32 | |
| Methylene Chloride | 1 | 0 | | 3.22 | 21.44 | 20 | 20 | 0.1 | 0.255 | 0.273 | 7.19 | |
| Acrolein | 1 | 0 | | 2.74 | 99.71 | 100 | 20 | | 0.039 | 0.039 | 0.29 | |
| Acrylonitrile | 1 | 0 | | 3.43 | 23.27 | 20 | 20 | | 0.078 | 0.090 | 16.37 | |
| Iodomethane | 1 | 0 | | 2.96 | 18.05 | 20 | 20 | | 0.217 | 0.196 | 9.73 | |
| Acetone | 1 | 0 | | 2.86 | 114.95 | 100 | 20 | 0.1 | 0.082 | 0.094 | 14.95 | |
| Carbon Disulfide | 1 | 0 | | 3.01 | 19.55 | 20 | 20 | 0.1 | 0.442 | 0.432 | 2.26 | |
| t-Butyl Alcohol | 1 | 0 | | 3.29 | 80.17 | 100 | 20 | | 0.025 | 0.027 | 19.83 | |
| n-Hexane | 1 | 0 | | 3.65 | 25.49 | 20 | 20 | | 0.083 | 0.106 | 27.46 | C1 |
| Di-isopropyl-ether | 1 | 0 | | 3.81 | 23.64 | 20 | 20 | | 0.624 | 0.737 | 18.18 | |
| 1,1-Dichloroethene | 1 | 0 | | 2.81 | 23.07 | 20 | 20 | 0.1 | 0.312 | 0.360 | 15.37 | |
| Methyl Acetate | 1 | 0 | | 3.12 | 22.74 | 20 | 20 | 0.1 | 0.281 | 0.320 | 13.69 | |
| Methyl-t-butyl ether | 1 | 0 | | 3.43 | 23.85 | 20 | 20 | 0.1 | 0.622 | 0.742 | 19.23 | |
| 1,1-Dichloroethane | 1 | 0 | | 3.79 | 22.69 | 20 | 20 | 0.2 | 0.392 | 0.444 | 13.43 | |
| trans-1,2-Dichloroethene | 1 | 0 | | 3.44 | 23.11 | 20 | 20 | 0.1 | 0.211 | 0.244 | 15.56 | |
| Ethyl-t-butyl ether | 1 | 0 | | 4.08 | 23.99 | 20 | 20 | 0.5 | 0.742 | 0.890 | 19.97 | |
| cis-1,2-Dichloroethene | 1 | 0 | | 4.21 | 23.96 | 20 | 20 | 0.1 | 0.431 | 0.516 | 19.81 | |
| Bromochloromethane | 1 | 0 | | 4.37 | 23.18 | 20 | 20 | | 0.190 | 0.221 | 15.90 | |
| 2,2-Dichloropropane | 1 | 0 | | 4.21 | 28.24 | 20 | 20 | | 0.305 | 0.430 | 41.18 | C1 |
| Ethyl acetate | 1 | 0 | | 4.23 | 19.07 | 20 | 20 | | 0.227 | 0.217 | 4.67 | |
| 1,4-Dioxane | 1 | 0 | | 5.38 | 1122.96 | 1000 | 20 | | 0.003 | 0.003 | 12.30 | |
| 1,1-Dichloropropene | 1 | 0 | | 4.64 | 23.85 | 20 | 20 | | 0.285 | 0.340 | 19.25 | |
| Chloroform | 1 | 0 | | 4.41 | 23.20 | 20 | 20 | 0.2 | 0.477 | 0.554 | 16.02 | |
| Dibromofluoromethane | 1 | 0 | S | 4.52 | 32.72 | 30 | ** | | 0.279 | 0.305 | 9.06 | |
| Cyclohexane | 1 | 0 | | 4.57 | 25.44 | 20 | 20 | 0.1 | 0.166 | 0.211 | 27.19 | C1 |
| 1,2-Dichloroethane-d4 | 1 | 0 | S | 4.74 | 32.87 | 30 | ** | | 0.213 | 0.233 | 9.58 | |
| 1,2-Dichloroethane | 1 | 0 | | 4.78 | 23.50 | 20 | 20 | 0.1 | 0.485 | 0.570 | 17.52 | |
| 2-Butanone | 1 | 0 | | 4.22 | 20.13 | 20 | 20 | 0.1 | 0.134 | 0.135 | 0.65 | |
| 1,1,1-Trichloroethane | 1 | 0 | | 4.54 | 22.59 | 20 | 20 | 0.1 | 0.396 | 0.447 | 12.94 | |
| Carbon Tetrachloride | 1 | 0 | | 4.65 | 23.64 | 20 | 20 | 0.1 | 0.287 | 0.339 | 18.21 | |
| Vinyl Acetate | 1 | 0 | | 3.81 | 23.92 | 20 | 20 | | 0.431 | 0.515 | 19.58 | |
| Bromodichloromethane | 1 | 0 | | 5.47 | 23.50 | 20 | 20 | 0.2 | 0.376 | 0.441 | 17.50 | |
| Methylcyclohexane | 1 | 0 | | 5.28 | 24.70 | 20 | 20 | 0.1 | 0.123 | 0.152 | 23.50 | C1 |
| Dibromomethane | 1 | 0 | | 5.39 | 21.38 | 20 | 20 | | 0.186 | 0.199 | 6.91 | |
| 1,2-Dichloropropane | 1 | 0 | | 5.31 | 23.95 | 20 | 20 | 0.1 | 0.210 | 0.252 | 19.77 | |
| Trichloroethene | 1 | 0 | | 5.16 | 21.67 | 20 | 20 | 0.2 | 0.227 | 0.246 | 8.35 | |
| Benzene | 1 | 0 | | 4.78 | 23.44 | 20 | 20 | 0.5 | 0.757 | 0.887 | 17.21 | |
| tert-Amyl methyl ether | 1 | 0 | | 4.81 | 23.63 | 20 | 20 | | 0.626 | 0.739 | 18.14 | |
| Chlorobenzene-d5 | 1 | 0 | I | 6.77 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| Iso-propylacetate | 1 | 0 | | 4.77 | 20.35 | 20 | 20 | 0.5 | 0.638 | 0.649 | 1.75 | |
| Methyl methacrylate | 1 | 0 | | 5.34 | 20.62 | 20 | 20 | 0.5 | 0.380 | 0.392 | 3.12 | |
| Dibromochloromethane | 1 | 0 | | 6.42 | 18.49 | 20 | 20 | 0.1 | 0.363 | 0.336 | 7.53 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL @ 20 PPB **Data File:** 3M117847.D **Instrument:** GCMS 3

**Cont Calibration Date/Time** 10/2/2017 7:44:00 A Method: EPA 8260C

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chloroethylvinylether | 1 | 0 | | 5.62 | 18.16 | 20 | 20 | | 0.210 | 0.190 | 9.19 | |
| cis-1,3-Dichloropropene | 1 | 0 | | 5.73 | 19.20 | 20 | 20 | 0.2 | 0.493 | 0.474 | 3.99 | |
| trans-1,3-Dichloropropene | 1 | 0 | | 6.05 | 19.91 | 20 | 20 | 0.1 | 0.483 | 0.481 | 0.44 | |
| Ethyl methacrylate | 1 | 0 | | 6.07 | 20.58 | 20 | 20 | 0.5 | 0.363 | 0.373 | 2.89 | |
| 1,1,2-Trichloroethane | 1 | 0 | | 6.17 | 18.85 | 20 | 20 | 0.1 | 0.305 | 0.287 | 5.76 | |
| 1,2-Dibromoethane | 1 | 0 | | 6.51 | 18.14 | 20 | 20 | 0.1 | 0.319 | 0.290 | 9.32 | |
| 1,3-Dichloropropane | 1 | 0 | | 6.28 | 19.79 | 20 | 20 | | 0.506 | 0.501 | 1.04 | |
| 4-Methyl-2-Pentanone | 1 | 0 | | 5.81 | 19.53 | 20 | 20 | 0.1 | 0.322 | 0.314 | 2.36 | |
| 2-Hexanone | 1 | 0 | | 6.29 | 19.67 | 20 | 20 | 0.1 | 0.229 | 0.225 | 1.67 | |
| Tetrachloroethene | 1 | 0 | | 6.27 | 19.28 | 20 | 20 | 0.2 | 0.182 | 0.175 | 3.59 | |
| Toluene-d8 | 1 | 0 | S | 5.90 | 27.49 | 30 | ** | | 1.321 | 1.211 | 8.35 | |
| Toluene | 1 | 0 | | 5.94 | 18.46 | 20 | 20 | 0.4 | 0.640 | 0.591 | 7.69 | |
| 1,1,1,2-Tetrachloroethane | 1 | 0 | | 6.83 | 19.37 | 20 | 20 | | 0.272 | 0.263 | 3.14 | |
| Chlorobenzene | 1 | 0 | | 6.79 | 18.62 | 20 | 20 | 0.5 | 0.727 | 0.676 | 6.91 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 8.21 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| n-Butyl acrylate | 1 | 0 | | 7.05 | 17.27 | 20 | 20 | 0.5 | 1.732 | 1.863 | 13.64 | |
| n-Amyl acetate | 1 | 0 | | 7.19 | 17.72 | 20 | 20 | 0.5 | 1.363 | 1.208 | 11.40 | |
| Bromoform | 1 | 0 | | 7.30 | 14.57 | 20 | 20 | 0.1 | 0.634 | 0.462 | 27.14 | C1 |
| Ethylbenzene | 1 | 0 | | 6.83 | 17.26 | 20 | 20 | 0.1 | 0.507 | 0.437 | 13.71 | |
| 1,1,2,2-Tetrachloroethane | 1 | 0 | | 7.54 | 16.81 | 20 | 20 | 0.1 | 0.968 | 0.813 | 15.95 | |
| Bromofluorobenzene | 1 | 0 | S | 7.48 | 27.42 | 30 | ** | | 1.091 | 0.997 | 8.60 | |
| Styrene | 1 | 0 | | 7.16 | 17.32 | 20 | 20 | 0.3 | 1.722 | 1.492 | 13.39 | |
| m&p-Xylenes | 1 | 0 | | 6.90 | 34.28 | 40 | 20 | 0.1 | 0.875 | 0.750 | 14.29 | |
| o-Xylene | 1 | 0 | | 7.15 | 17.41 | 20 | 20 | 0.3 | 0.907 | 0.789 | 12.94 | |
| trans-1,4-Dichloro-2-butene | 1 | 0 | | 7.57 | 19.29 | 20 | 20 | | 0.396 | 0.382 | 3.55 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 8.18 | 16.27 | 20 | 20 | 0.6 | 1.067 | 0.868 | 18.64 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 8.23 | 15.59 | 20 | 20 | 0.5 | 1.132 | 0.883 | 22.03 | C1 |
| 1,2-Dichlorobenzene | 1 | 0 | | 8.48 | 15.58 | 20 | 20 | 0.4 | 1.110 | 0.865 | 22.10 | C1 |
| Isopropylbenzene | 1 | 0 | | 7.36 | 16.26 | 20 | 20 | 0.1 | 1.880 | 1.529 | 18.69 | |
| Cyclohexanone | 1 | 0 | | 7.46 | 134.35 | 100 | 20 | | 0.055 | 0.079 | 34.35 | C1 |
| Camphene | 1 | 0 | | 7.55 | 17.79 | 20 | 20 | | 0.585 | 0.520 | 11.04 | |
| 1,2,3-Trichloropropane | 1 | 0 | | 7.59 | 16.77 | 20 | 20 | | 1.218 | 1.021 | 16.13 | |
| 2-Chlorotoluene | 1 | 0 | | 7.70 | 18.72 | 20 | 20 | | 1.153 | 1.079 | 6.39 | |
| p-Ethyltoluene | 1 | 0 | | 7.68 | 16.89 | 20 | 20 | | 2.053 | 1.734 | 15.53 | |
| 4-Chlorotoluene | 1 | 0 | | 7.76 | 18.16 | 20 | 20 | | 1.257 | 1.141 | 9.22 | |
| n-Propylbenzene | 1 | 0 | | 7.61 | 17.12 | 20 | 20 | | 1.904 | 1.630 | 14.40 | |
| Bromobenzene | 1 | 0 | | 7.60 | 18.26 | 20 | 20 | | 1.873 | 1.710 | 8.70 | |
| 1,3,5-Trimethylbenzene | 1 | 0 | | 7.71 | 17.66 | 20 | 20 | | 1.239 | 1.094 | 11.70 | |
| Butyl methacrylate | 1 | 0 | | 7.71 | 19.71 | 20 | 20 | 0.5 | 1.070 | 1.054 | 1.43 | |
| t-Butylbenzene | 1 | 0 | | 7.93 | 15.99 | 20 | 20 | | 1.263 | 1.010 | 20.04 | |
| 1,2,4-Trimethylbenzene | 1 | 0 | | 7.96 | 16.69 | 20 | 20 | | 1.637 | 1.367 | 16.53 | |
| sec-Butylbenzene | 1 | 0 | | 8.06 | 16.15 | 20 | 20 | | 1.421 | 1.147 | 19.27 | |
| 4-Isopropyltoluene | 1 | 0 | | 8.14 | 15.41 | 20 | 20 | | 1.260 | 0.971 | 22.93 | C1 |
| n-Butylbenzene | 1 | 0 | | 8.41 | 16.80 | 20 | 20 | | 1.391 | 1.168 | 16.01 | |
| p-Diethylbenzene | 1 | 0 | | 8.39 | 16.22 | 20 | 20 | | 0.774 | 0.627 | 18.92 | |
| 1,2,4,5-Tetramethylbenzene | 1 | 0 | | 8.91 | 16.95 | 20 | 20 | | 1.177 | 0.998 | 15.24 | |
| 1,2-Dibromo-3-Chloropropane | 1 | 0 | | 8.99 | 10.36 | 20 | 20 | 0.05 | 0.199 | 0.122 | 48.22 | C1 |
| Camphor | 1 | 0 | | 9.48 | 128.79 | 200 | 20 | | 0.091 | 0.076 | 35.60 | C1 |
| Hexachlorobutadiene | 1 | 0 | | 9.61 | 10.47 | 20 | 20 | | 0.315 | 0.177 | 47.66 | C1 |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 9.53 | 14.84 | 20 | 20 | 0.2 | 0.506 | 0.375 | 25.81 | C1 |
| 1,2,3-Trichlorobenzene | 1 | 0 | | 9.87 | 13.25 | 20 | 20 | | 0.479 | 0.317 | 33.76 | C1 |
| Naphthalene | 1 | 0 | | 9.72 | 14.65 | 20 | 20 | | 1.487 | 1.089 | 26.74 | C1 |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 3M116071.D  Method: EPA 8260C

Analysis Date/Time: 08/30/17 09:30

Lab File ID: CAL @ 20 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 364306 | 4.96 | 273923 | 6.80 | 105153 | 8.24 | | | | | | | | |
| Eval File Area Limit: | 182153-728612 | | 136962-547846 | | 52576-210306 | | | | | | | | | |
| Eval File Rt Limit: | 4.46-5.46 | | 6.3-7.3 | | 7.74-8.74 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 3M116066.D | BLK | 353021 | 4.96 | 274151 | 6.79 | 106563 | 8.23 |
| 3M116067.D | CAL @ 0.5 PPB | 336206 | 4.96 | 259608 | 6.80 | 96458 | 8.24 |
| 3M116068.D | 1 PPB | 357134 | 4.96 | 263337 | 6.80 | 107813 | 8.23 |
| 3M116069.D | CAL @ 5 PPB | 369383 | 4.96 | 267997 | 6.80 | 109499 | 8.24 |
| 3M116070.D | CAL @ 10 PPB | 362525 | 4.96 | 266489 | 6.80 | 103754 | 8.24 |
| 3M116071.D | CAL @ 20 PPB | 364306 | 4.96 | 273923 | 6.80 | 105153 | 8.24 |
| 3M116072.D | CAL @ 500 PPB | 376570 | 4.96 | 267343 | 6.80 | 91959 | 8.24 |
| 3M116074.D | CAL @ 250 PPB | 382080 | 4.96 | 290851 | 6.80 | 105324 | 8.24 |
| 3M116076.D | CAL @ 100 PPB | 393642 | 4.96 | 301549 | 6.80 | 120814 | 8.24 |
| 3M116078.D | CAL @ 50 PPB | 399843 | 4.96 | 295879 | 6.80 | 114444 | 8.24 |
| 3M116091.D | CAL @ 1 PPB | 353172 | 4.96 | 261085 | 6.80 | 102692 | 8.24 |
| 3M116092.D | ICV | 344812 | 4.96 | 263983 | 6.80 | 97855 | 8.24 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

## Internal Standard Areas

Evaluation Std Data File: 3M117847.D  Method: EPA 8260C

Analysis Date/Time: 10/02/17 07:44

Lab File ID: CAL @ 20 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 329680 | 4.94 | 302353 | 6.77 | 134029 | 8.21 | | | | | | | | |
| Eval File Area Limit: | 164840-659360 | | 151176-604706 | | 67014-268058 | | | | | | | | | |
| Eval File Rt Limit: | 4.44-5.44 | | 6.27-7.27 | | 7.71-8.71 | | | | | | | | | |

| Data File | Sample | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3M117846.D | 20 PPB | 333888 | 4.93 | 306713 | 6.77 | 127979 | 8.21 | |
| 3M117848.D | BLK | 314942 | 4.93 | 291671 | 6.77 | 114826 | 8.21 | |
| 3M117849.D | DAILY BLANK | 289557 | 4.93 | 268254 | 6.77 | 115278 | 8.21 | |
| 3M117850.D | DAILY BLANK | 294126 | 4.93 | 276144 | 6.77 | 114800 | 8.21 | |
| 3M117851.D | AD00297-001(T) | 267390 | 4.93 | 249852 | 6.77 | 95983 | 8.21 | |
| 3M117852.D | AD00298-001(T) | 267821 | 4.93 | 243367 | 6.77 | 102317 | 8.21 | |
| 3M117853.D | AD00319-002(T) | 294417 | 4.93 | 263189 | 6.77 | 115767 | 8.21 | |
| 3M117854.D | MBS64315 | 285460 | 4.93 | 274612 | 6.77 | 116376 | 8.21 | |
| 3M117855.D | MBS64316 | 282470 | 4.94 | 265249 | 6.77 | 116506 | 8.21 | |
| 3M117856.D | AD00298-001(T:MS) | 308338 | 4.93 | 299919 | 6.77 | 128143 | 8.21 | |
| 3M117857.D | AD00298-001(T:MSD) | 281025 | 4.93 | 271404 | 6.77 | 117379 | 8.21 | |
| 3M117858.D | EF-1V-264202(093017 | 293549 | 4.93 | 269102 | 6.77 | 114493 | 8.21 | |
| 3M117859.D | EF-3V-10896(092817) | 287283 | 4.93 | 268289 | 6.77 | 115211 | 8.21 | |
| 3M117860.D | EF-3V-10896(092917) | 206726 | 4.93 | 193741 | 6.77 | 83822 | 8.21 | |
| 3M117861.D | AD00308-017 | 268379 | 4.94 | 247753 | 6.77 | 95780 | 8.21 | |
| 3M117862.D | AD00301-015 | 298146 | 4.94 | 277127 | 6.77 | 116122 | 8.21 | |
| 3M117863.D | AD00301-016 | 250623 | 4.94 | 238465 | 6.77 | 101582 | 8.21 | |
| 3M117864.D | 00295-002 | 257904 | 4.93 | 240765 | 6.77 | 97806 | 8.21 | |
| 3M117865.D | AD00308-015 | 268267 | 4.93 | 253681 | 6.77 | 101980 | 8.21 | |
| 3M117866.D | AD00311-008 | 268108 | 4.94 | 260054 | 6.77 | 108630 | 8.21 | |
| 3M117867.D | AD00311-009 | 255510 | 4.94 | 239794 | 6.77 | 98326 | 8.21 | |
| 3M117868.D | AD00311-001 | 263293 | 4.93 | 249001 | 6.77 | 103471 | 8.21 | |
| 3M117869.D | AD00311-002 | 250411 | 4.94 | 231165 | 6.77 | 96142 | 8.21 | |
| 3M117870.D | AD00311-003 | 281200 | 4.94 | 266660 | 6.77 | 110496 | 8.21 | |
| 3M117871.D | AD00311-004 | 243642 | 4.94 | 239419 | 6.77 | 96014 | 8.21 | |
| 3M117872.D | AD00311-005 | 240751 | 4.94 | 230035 | 6.77 | 98097 | 8.21 | |
| 3M117873.D | AD00311-007 | 263460 | 4.94 | 250238 | 6.77 | 108361 | 8.21 | |
| 3M117874.D | AD00311-006 | 243578 | 4.93 | 229372 | 6.77 | 94926 | 8.21 | |
| 3M117875.D | AD00308-005 | 243987 | 4.94 | 228505 | 6.77 | 96320 | 8.21 | |
| 3M117876.D | AD00308-009 | 245721 | 4.94 | 233333 | 6.77 | 101485 | 8.21 | |
| 3M117877.D | AD00277-001 | 255181 | 4.94 | 247021 | 6.77 | 109395 | 8.21 | |
| 3M117878.D | BLK | 250532 | 4.94 | 244722 | 6.77 | 105563 | 8.21 | |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

## Internal Standard Areas

Evaluation Std Data File: 3M117847.D  Method: EPA 8260C

Analysis Date/Time: 10/02/17 07:44

Lab File ID: CAL @ 20 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 329680 | 4.94 | 302353 | 6.77 | 134029 | 8.21 | | | | | | | | |
| Eval File Area Limit: | 164840-659360 | | 151176-604706 | | 67014-268058 | | | | | | | | | |
| Eval File Rt Limit: | 4.44-5.44 | | 6.27-7.27 | | 7.71-8.71 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 3M117879.D | AD00311-002 | 250470 | 4.94 | 243400 | 6.77 | 105963 | 8.21 |
| 3M117880.D | AD00311-004 | 269216 | 4.93 | 257447 | 6.77 | 111679 | 8.21 |
| 3M117881.D | AD00311-005 | 270076 | 4.94 | 257810 | 6.77 | 113197 | 8.21 |
| 3M117882.D | AD00311-006 | 269796 | 4.94 | 263173 | 6.77 | 111231 | 8.21 |
| 3M117883.D | AD00311-003 | 253185 | 4.94 | 242366 | 6.77 | 103293 | 8.21 |
| 3M117884.D | AD00311-007 | 264953 | 4.94 | 255959 | 6.77 | 110200 | 8.21 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

# Base Neutral/Acid Extractable Data

# Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD00298-002(5X)(R)
Client Id: 475 EXTERIOR NYRECYC
Data File: 7M87023.D
Analysis Date: 10/04/17 15:12
Date Rec/Extracted: 09/28/17-10/04/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Soil
Initial Vol: 30g
Final Vol: 0.5ml
Dilution: 5
Solids: 92

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 95-95-4 | 2,4,5-Trichlorophenol | 0.18 | U | **191-24-2** | **Benzo[g,h,i]perylene** | **0.18** | **0.69** |
| 120-83-2 | 2,4-Dichlorophenol | 0.045 | U | **207-08-9** | **Benzo[k]fluoranthene** | **0.18** | **0.35** |
| 51-28-5 | 2,4-Dinitrophenol | 0.91 | U | 117-81-7 | bis(2-Ethylhexyl)phthalate | 0.18 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 0.18 | U | 85-68-7 | Butylbenzylphthalate | 0.18 | U |
| 95-57-8 | 2-Chlorophenol | 0.18 | U | **218-01-9** | **Chrysene** | **0.18** | **0.93** |
| 91-57-6 | 2-Methylnaphthalene | 0.18 | U | **53-70-3** | **Dibenzo[a,h]anthracene** | **0.18** | **0.20** |
| 95-48-7 | 2-Methylphenol | 0.045 | U | 132-64-9 | Dibenzofuran | 0.045 | U |
| 88-74-4 | 2-Nitroaniline | 0.18 | U | 84-66-2 | Diethylphthalate | 0.18 | U |
| 88-75-5 | 2-Nitrophenol | 0.18 | U | 131-11-3 | Dimethylphthalate | 0.18 | U |
| 106-44-5 | 3&4-Methylphenol | 0.045 | U | 84-74-2 | Di-n-butylphthalate | 0.045 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.18 | U | 117-84-0 | Di-n-octylphthalate | 0.18 | U |
| 99-09-2 | 3-Nitroaniline | 0.18 | U | **206-44-0** | **Fluoranthene** | **0.18** | **1.5** |
| 59-50-7 | 4-Chloro-3-methylphenol | 0.18 | U | 86-73-7 | Fluorene | 0.18 | U |
| 106-47-8 | 4-Chloroaniline | 0.045 | U | 118-74-1 | Hexachlorobenzene | 0.18 | U |
| 100-02-7 | 4-Nitrophenol | 0.18 | U | **193-39-5** | **Indeno[1,2,3-cd]pyrene** | **0.18** | **0.62** |
| 83-32-9 | Acenaphthene | 0.18 | U | 78-59-1 | Isophorone | 0.18 | U |
| 208-96-8 | Acenaphthylene | 0.18 | U | 91-20-3 | Naphthalene | 0.045 | U |
| 62-53-3 | Aniline | 0.045 | U | 98-95-3 | Nitrobenzene | 0.18 | U |
| **120-12-7** | **Anthracene** | **0.18** | **0.24** | 87-86-5 | Pentachlorophenol | 0.91 | U |
| **56-55-3** | **Benzo[a]anthracene** | **0.18** | **0.95** | **85-01-8** | **Phenanthrene** | **0.18** | **0.61** |
| **50-32-8** | **Benzo[a]pyrene** | **0.18** | **0.94** | 108-95-2 | Phenol | 0.18 | U |
| **205-99-2** | **Benzo[b]fluoranthene** | **0.18** | **1.2** | **129-00-0** | **Pyrene** | **0.18** | **1.7** |

Worksheet #: 439254

***Total Target Concentration*** 9.9

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT Reviewed)

7092827 0079

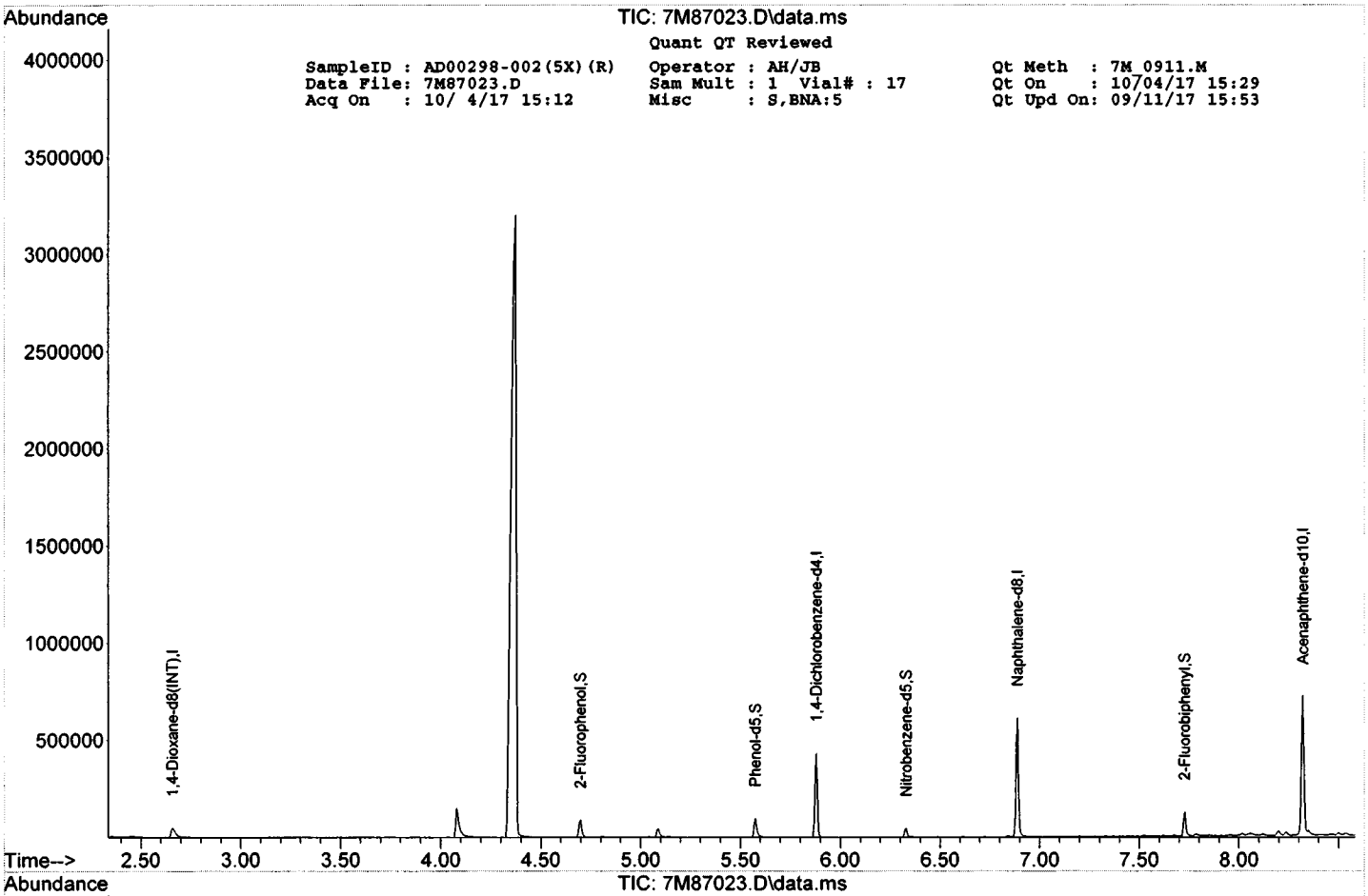
SampleID : AD00298-002(5X)(R) Operator : AH/JB Qt Meth : 7M_0911.M
Data File: 7M87023.D Sam Mult : 1 Vial# : 17 Qt On : 10/04/17 15:29
Acq On : 10/ 4/17 15:12 Misc : S,BNA:5 Qt Upd On: 09/11/17 15:53

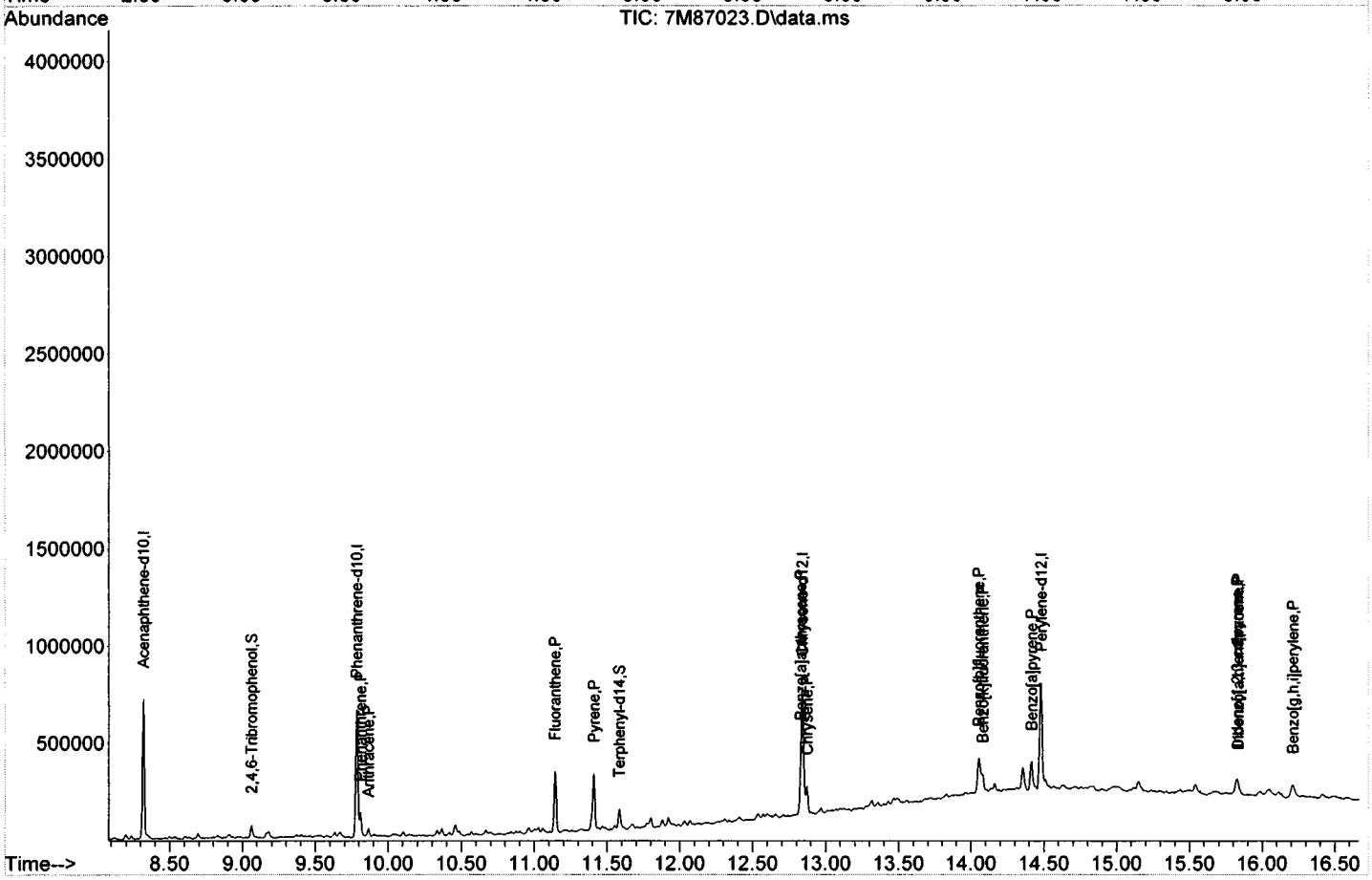
Data Path : G:\GcMsData\2017\GCMS_7\Data\10-04-17\
Qt Path : G:\GCMSDATA\2017\GCMS_7\METHODQT\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 7) 1,4-Dioxane-d8(INT) | 2.658 | 96 | 26606 | 40.00 | ng | -0.01 |
| 21) 1,4-Dichlorobenzene-d4 | 5.879 | 152 | 61959 | 40.00 | ng | 0.00 |
| 31) Naphthalene-d8 | 6.889 | 136 | 248060 | 40.00 | ng | -0.01 |
| 50) Acenaphthene-d10 | 8.321 | 164 | 158164 | 40.00 | ng | -0.02 |
| 77) Phenanthrene-d10 | 9.784 | 188 | 262066 | 40.00 | ng | -0.01 |
| 91) Chrysene-d12 | 12.840 | 240 | 251270 | 40.00 | ng | 0.00 |
| 103) Perylene-d12 | 14.480 | 264 | 253946 | 40.00 | ng | -0.01 |
| System Monitoring Compounds | | | | | | |
| 11) 2-Fluorophenol | 4.698 | 112 | 26093 | 14.90 | ng | 0.01 |
| Spiked Amount 100.000 | | | Recovery = 14.90% | | | |
| 16) Phenol-d5 | 5.575 | 99 | 36379 | 15.07 | ng | 0.00 |
| Spiked Amount 100.000 | | | Recovery = 15.07% | | | |
| 32) Nitrobenzene-d5 | 6.328 | 128 | 6631 | 6.20 | ng | 0.00 |
| Spiked Amount 50.000 | | | Recovery = 12.40% | | | |
| 55) 2-Fluorobiphenyl | 7.728 | 172 | 37403 | 7.13 | ng | -0.02 |
| Spiked Amount 50.000 | | | Recovery = 14.26% | | | |
| 80) 2,4,6-Tribromophenol | 9.063 | 330 | 8610 | 12.90 | ng | 0.00 |
| Spiked Amount 100.000 | | | Recovery = 12.90% | | | |
| 94) Terphenyl-d14 | 11.585 | 244 | 30360 | 8.14 | ng | 0.00 |
| Spiked Amount 50.000 | | | Recovery = 16.28% | | | |
| Target Compounds | | | | | | Qvalue |
| 86) Phenanthrene | 9.811 | 178 | 49209 | 6.7345 | ng | 98 |
| 87) Anthracene | 9.864 | 178 | 19070 | 2.6300 | ng | 96 |
| 90) Fluoranthene | 11.141 | 202 | 140787 | 17.0777 | ng | 93 |
| 92) Pyrene | 11.408 | 202 | 130475 | 19.1437 | ng | 88 |
| 100) Benzo[a]anthracene | 12.829 | 228 | 73885 | 10.5063 | ng | 97 |
| 101) Chrysene | 12.872 | 228 | 67599 | 10.2675 | ng | 97 |
| 105) Benzo[b]fluoranthene | 14.053 | 252 | 106150m | 13.7889 | ng | |
| 106) Benzo[k]fluoranthene | 14.079 | 252 | 28786m | 3.8884 | ng | |
| 107) Benzo[a]pyrene | 14.416 | 252 | 73612 | 10.3263 | ng | 90 |
| 108) Indeno[1,2,3-cd]pyrene | 15.826 | 276 | 49690 | 6.8006 | ng | 75 |
| 109) Dibenzo[a,h]anthracene | 15.832 | 278 | 13764 | 2.2307 | ng | 85 |
| 110) Benzo[g,h,i]perylene | 16.211 | 276 | 46107 | 7.6481 | ng | 75 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

lce


Abundance
TIC: 7M87023.D\data.ms
Quant QT Reviewed
SampleID : AD00298-002(5X)(R)
Data File: 7M87023.D
Acq On : 10/ 4/17 15:12
Operator : AH/JB
Sam Mult : 1 Vial# : 17
Misc : S,BNA:5
Qt Meth : 7M_0911.M
Qt On : 10/04/17 15:29
Qt Upd On: 09/11/17 15:53
1,4-Dioxane-d8(INT),I
2-Fluorophenol,S
Phenol-d5,S
1,4-Dichlorobenzene-d4,I
Nitrobenzene-d5,S
Naphthalene-d8,I
2-Fluorobiphenyl,S
Acenaphthene-d10,I
Time-->


Abundance
TIC: 7M87023.D\data.ms
Acenaphthene-d10,I
2,4,6-Tribromophenol,S
Phenanthrene-d10,I
Fluoranthene,P
Pyrene,P
Terphenyl-d14,S
Benzo[a]pyrene,P
Perylene-d12,I
Benzo[g,h,i]perylene,P
Time-->

# Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: SMB63067
Client Id:
Data File: 7M87029.D
Analysis Date: 10/04/17 17:58
Date Rec/Extracted: NA-10/04/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Soil
Initial Vol: 30g
Final Vol: 0.5ml
Dilution: 1
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 95-95-4 | 2,4,5-Trichlorophenol | 0.033 | U | 191-24-2 | Benzo[g,h,i]perylene | 0.033 | U |
| 120-83-2 | 2,4-Dichlorophenol | 0.0083 | U | 207-08-9 | Benzo[k]fluoranthene | 0.033 | U |
| 51-28-5 | 2,4-Dinitrophenol | 0.17 | U | 117-81-7 | bis(2-Ethylhexyl)phthalate | 0.033 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 0.033 | U | 85-68-7 | Butylbenzylphthalate | 0.033 | U |
| 95-57-8 | 2-Chlorophenol | 0.033 | U | 218-01-9 | Chrysene | 0.033 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.033 | U | 53-70-3 | Dibenzo[a,h]anthracene | 0.033 | U |
| 95-48-7 | 2-Methylphenol | 0.0083 | U | 132-64-9 | Dibenzofuran | 0.0083 | U |
| 88-74-4 | 2-Nitroaniline | 0.033 | U | 84-66-2 | Diethylphthalate | 0.033 | U |
| 88-75-5 | 2-Nitrophenol | 0.033 | U | 131-11-3 | Dimethylphthalate | 0.033 | U |
| 106-44-5 | 3&4-Methylphenol | 0.0083 | U | 84-74-2 | Di-n-butylphthalate | 0.0083 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.033 | U | 117-84-0 | Di-n-octylphthalate | 0.033 | U |
| 99-09-2 | 3-Nitroaniline | 0.033 | U | 206-44-0 | Fluoranthene | 0.033 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 0.033 | U | 86-73-7 | Fluorene | 0.033 | U |
| 106-47-8 | 4-Chloroaniline | 0.0083 | U | 118-74-1 | Hexachlorobenzene | 0.033 | U |
| 100-02-7 | 4-Nitrophenol | 0.033 | U | 193-39-5 | Indeno[1,2,3-cd]pyrene | 0.033 | U |
| 83-32-9 | Acenaphthene | 0.033 | U | 78-59-1 | Isophorone | 0.033 | U |
| 208-96-8 | Acenaphthylene | 0.033 | U | 91-20-3 | Naphthalene | 0.0083 | U |
| 62-53-3 | Aniline | 0.0083 | U | 98-95-3 | Nitrobenzene | 0.033 | U |
| 120-12-7 | Anthracene | 0.033 | U | 87-86-5 | Pentachlorophenol | 0.17 | U |
| 56-55-3 | Benzo[a]anthracene | 0.033 | U | 85-01-8 | Phenanthrene | 0.033 | U |
| 50-32-8 | Benzo[a]pyrene | 0.033 | U | 108-95-2 | Phenol | 0.033 | U |
| 205-99-2 | Benzo[b]fluoranthene | 0.033 | U | 129-00-0 | Pyrene | 0.033 | U |

Worksheet #: 439254

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT Reviewed)

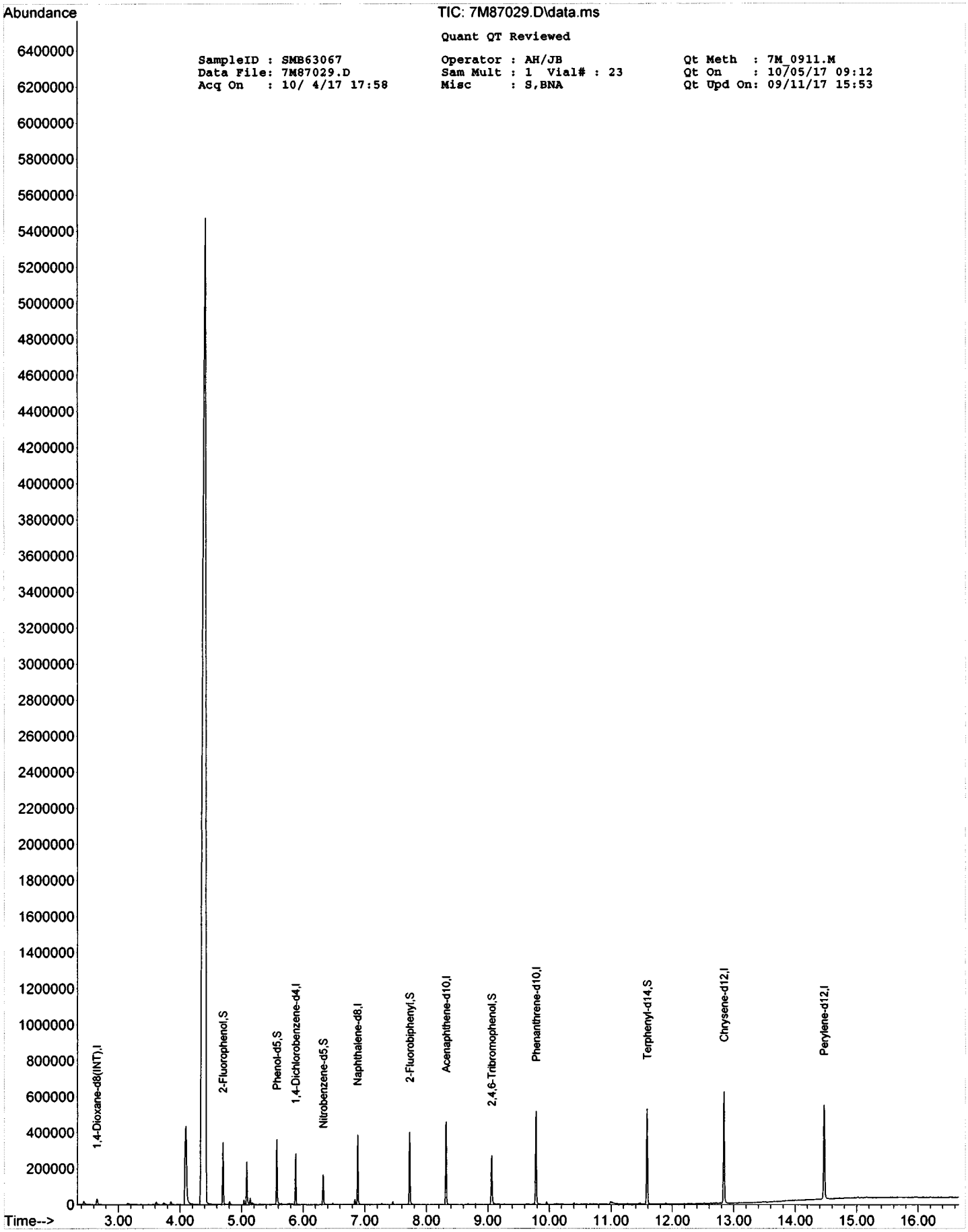
7092827 0082

SampleID : SMB63067 Operator : AH/JB Qt Meth : 7M_0911.M
Data File: 7M87029.D Sam Mult : 1 Vial# : 23 Qt On : 10/05/17 09:12
Acq On : 10/ 4/17 17:58 Misc : S,BNA Qt Upd On: 09/11/17 15:53

Data Path : G:\GcMsData\2017\GCMS_7\Data\10-0417\
Qt Path : G:\GCMSDATA\2017\GCMS_7\METHODQT\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 7) 1,4-Dioxane-d8(INT) | 2.652 | 96 | 17090 | 40.00 | ng | -0.02 |
| 21) 1,4-Dichlorobenzene-d4 | 5.879 | 152 | 40852 | 40.00 | ng | 0.00 |
| 31) Naphthalene-d8 | 6.884 | 136 | 165593 | 40.00 | ng | -0.02 |
| 50) Acenaphthene-d10 | 8.321 | 164 | 115584 | 40.00 | ng | -0.02 |
| 77) Phenanthrene-d10 | 9.784 | 188 | 218795 | 40.00 | ng | -0.01 |
| 91) Chrysene-d12 | 12.840 | 240 | 264833 | 40.00 | ng | 0.00 |
| 103) Perylene-d12 | 14.470 | 264 | 241614 | 40.00 | ng | -0.02 |
| System Monitoring Compounds | | | | | | |
| 11) 2-Fluorophenol | 4.699 | 112 | 95209 | 84.67 | ng | 0.01 |
| Spiked Amount 100.000 | | | Recovery = 84.67% | | | |
| 16) Phenol-d5 | 5.575 | 99 | 137397 | 88.61 | ng | 0.00 |
| Spiked Amount 100.000 | | | Recovery = 88.61% | | | |
| 32) Nitrobenzene-d5 | 6.328 | 128 | 25712 | 35.99 | ng | 0.00 |
| Spiked Amount 50.000 | | | Recovery = 71.98% | | | |
| 55) 2-Fluorobiphenyl | 7.728 | 172 | 131837 | 34.40 | ng | -0.02 |
| Spiked Amount 50.000 | | | Recovery = 68.80% | | | |
| 80) 2,4,6-Tribromophenol | 9.063 | 330 | 42103 | 72.35 | ng | 0.00 |
| Spiked Amount 100.000 | | | Recovery = 72.35% | | | |
| 94) Terphenyl-d14 | 11.585 | 244 | 166451 | 42.33 | ng | 0.00 |
| Spiked Amount 50.000 | | | Recovery = 84.66% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 7M87029.D\data.ms
Quant QT Reviewed
SampleID : SMB63067
Data File: 7M87029.D
Acq On : 10/ 4/17 17:58
Operator : AH/JB
Sam Mult : 1 Vial# : 23
Misc : S,BNA
Qt Meth : 7M_0911.M
Qt On : 10/05/17 09:12
Qt Upd On: 09/11/17 15:53
6400000
6200000
6000000
5800000
5600000
5400000
5200000
5000000
4800000
4600000
4400000
4200000
4000000
3800000
3600000
3400000
3200000
3000000
2800000
2600000
2400000
2200000
2000000
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
1,4-Dioxane-d8(INT),I
2-Fluorophenol,S
Phenol-d5,S
1,4-Dichlorobenzene-d4,I
Nitrobenzene-d5,S
Naphthalene-d8,I
2-Fluorobiphenyl,S
Acenaphthene-d10,I
2,4,6-Tribromophenol,S
Phenanthrene-d10,I
Terphenyl-d14,S
Chrysene-d12,I
Perylene-d12,I
Time-->
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
13.00
14.00
15.00
16.00

# FORM2

## Surrogate Recovery

Method: EPA 8270D

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column1 S2 Recov | Column1 S3 Recov | Column1 S4 Recov | Column1 S5 Recov | Column1 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M87029.D | SMB63067 | S | 10/04/17 17:58 | 1 | | 85 | 89 | 72 | 69 | 72 | 85 |
| 7M87023.D | AD00298-002(5X)(R) | S | 10/04/17 15:12 | 5 | | 75 | 75 | 62 | 71 | 64 | 81 |
| 10M65319.D | AD00192-002 | S | 10/04/17 10:14 | 1 | | 69 | 65 | 69 | 69 | 64 | 79 |
| 10M65320.D | AD00192-002(MS) | S | 10/04/17 10:36 | 1 | | 75 | 70 | 75 | 77 | 70 | 85 |
| 10M65321.D | AD00192-002(MSD) | S | 10/04/17 10:58 | 1 | | 63 | 60 | 63 | 62 | 67 | 71 |
| 7M86988.D | SMB63050(MS) | S | 10/03/17 16:42 | 1 | | 77 | 75 | 77 | 77 | 94 | 88 |
| 7M87026.D | SMB63067(MS) | S | 10/04/17 16:48 | 1 | | 96 | 99 | 80 | 80 | 101 | 91 |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8270D

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=2-Fluorophenol | 100 | 43-128 |
| S2=Phenol-d5 | 100 | 49-129 |
| S3=Nitrobenzene-d5 | 50 | 52-129 |
| S4=2-Fluorobiphenyl | 50 | 58-125 |
| S5=2,4,6-Tribromophenol | 100 | 54-145 |
| S6=Terphenyl-d14 | 50 | 58-148 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63050

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 7M86988.D | SMB63050(MS) | 10/3/2017 4:42:00 PM |
| Non Spike(If applicable): | | |
| Inst Blank(If applicable): | | |

Method: 8270D | Matrix: Soil | QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Pyridine | 1 | 21.3416 | 0 | 50 | 43 | 1 | 150 |
| N-Nitrosodimethylamine | 1 | 32.0069 | 0 | 50 | 64 | 50 | 130 |
| Benzaldehyde | 1 | 168.6354 | 0 | 50 | 337* | 20 | 150 |
| Aniline | 1 | 16.3428 | 0 | 50 | 33 | 20 | 150 |
| Pentachloroethane | 1 | 33.0758 | 0 | 50 | 66 | 50 | 130 |
| bis(2-Chloroethyl)ether | 1 | 34.0368 | 0 | 50 | 68 | 50 | 130 |
| Phenol | 1 | 67.4203 | 0 | 100 | 67 | 20 | 150 |
| 2-Chlorophenol | 1 | 79.5835 | 0 | 100 | 80 | 50 | 130 |
| N-Decane | 1 | 25.2053 | 0 | 50 | 50 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 37.0572 | 0 | 50 | 74 | 60 | 130 |
| 1,4-Dichlorobenzene | 1 | 32.921 | 0 | 50 | 66 | 60 | 130 |
| 1,2-Dichlorobenzene | 1 | 33.2569 | 0 | 50 | 67 | 50 | 130 |
| Benzyl alcohol | 1 | 35.4988 | 0 | 50 | 71 | 20 | 130 |
| bis(2-chloroisopropyl)ether | 1 | 24.2352 | 0 | 50 | 48 | 40 | 130 |
| 2-Methylphenol | 1 | 67.301 | 0 | 100 | 67 | 50 | 130 |
| Acetophenone | 1 | 33.5584 | 0 | 50 | 67 | 50 | 130 |
| Hexachloroethane | 1 | 31.0418 | 0 | 50 | 62 | 50 | 130 |
| N-Nitroso-di-n-propylamine | 1 | 30.5864 | 0 | 50 | 61 | 40 | 130 |
| 3&4-Methylphenol | 1 | 70.619 | 0 | 100 | 71 | 70 | 130 |
| Nitrobenzene | 1 | 32.9035 | 0 | 50 | 66* | 70 | 130 |
| Isophorone | 1 | 31.5424 | 0 | 50 | 63 | 60 | 130 |
| 2-Nitrophenol | 1 | 76.5438 | 0 | 100 | 77 | 70 | 130 |
| 2,4-Dimethylphenol | 1 | 69.372 | 0 | 100 | 69 | 50 | 130 |
| Benzoic Acid | 1 | 20.9231 | 0 | 100 | 21 | 20 | 130 |
| bis(2-Chloroethoxy)methane | 1 | 32.938 | 0 | 50 | 66 | 60 | 130 |
| 2,4-Dichlorophenol | 1 | 79.1435 | 0 | 100 | 79 | 70 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 38.2419 | 0 | 50 | 76 | 50 | 130 |
| Naphthalene | 1 | 36.8148 | 0 | 50 | 74 | 50 | 130 |
| 4-Chloroaniline | 1 | 14.7205 | 0 | 50 | 29 | 10 | 150 |
| Hexachlorobutadiene | 1 | 38.9587 | 0 | 50 | 78 | 60 | 130 |
| Caprolactam | 1 | 36.8607 | 0 | 50 | 74 | 50 | 130 |
| 4-Chloro-3-methylphenol | 1 | 71.0293 | 0 | 100 | 71 | 50 | 130 |
| 2-Methylnaphthalene | 1 | 37.1061 | 0 | 50 | 74 | 70 | 130 |
| 1-Methylnaphthalene | 1 | 35.608 | 0 | 50 | 71 | 70 | 130 |
| 1,1'-Biphenyl | 1 | 32.6442 | 0 | 50 | 65 | 60 | 130 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 40.2642 | 0 | 50 | 81 | 70 | 130 |
| Hexachlorocyclopentadiene | 1 | 9.335 | 0 | 50 | 19* | 20 | 160 |
| 2,4,6-Trichlorophenol | 1 | 77.1389 | 0 | 100 | 77 | 70 | 130 |
| 2,4,5-Trichlorophenol | 1 | 85.6992 | 0 | 100 | 86 | 70 | 130 |
| 2-Chloronaphthalene | 1 | 38.0423 | 0 | 50 | 76 | 70 | 130 |
| 1,4-Dimethylnaphthalene | 1 | 33.2807 | 0 | 50 | 67* | 70 | 130 |
| Diphenyl Ether | 1 | 40.382 | 0 | 50 | 81 | 70 | 130 |
| 2-Nitroaniline | 1 | 37.9763 | 0 | 50 | 76 | 50 | 130 |
| Coumarin | 1 | 30.2444 | 0 | 50 | 60* | 70 | 130 |
| Acenaphthylene | 1 | 39.8497 | 0 | 50 | 80 | 70 | 130 |
| Dimethylphthalate | 1 | 37.9734 | 0 | 50 | 76 | 70 | 130 |
| 2,6-Dinitrotoluene | 1 | 40.4598 | 0 | 50 | 81 | 70 | 130 |
| Acenaphthene | 1 | 38.6334 | 0 | 50 | 77 | 50 | 130 |
| 3-Nitroaniline | 1 | 27.3563 | 0 | 50 | 55 | 10 | 130 |
| 2,4-Dinitrophenol | 1 | 43.3121 | 0 | 100 | 43 | 20 | 150 |
| Dibenzofuran | 1 | 39.0418 | 0 | 50 | 78 | 70 | 130 |
| 2,4-Dinitrotoluene | 1 | 35.1075 | 0 | 50 | 70 | 40 | 130 |
| 4-Nitrophenol | 1 | 55.3616 | 0 | 100 | 55 | 20 | 150 |
| 2,3,4,6-Tetrachlorophenol | 1 | 67.3612 | 0 | 100 | 67* | 70 | 130 |
| Fluorene | 1 | 38.6452 | 0 | 50 | 77 | 50 | 130 |
| 4-Chlorophenyl-phenylether | 1 | 37.6722 | 0 | 50 | 75 | 70 | 130 |
| Diethylphthalate | 1 | 38.0735 | 0 | 50 | 76 | 70 | 130 |
| 4-Nitroaniline | 1 | 33.5186 | 0 | 50 | 67 | 50 | 130 |
| Atrazine | 1 | 54.4084 | 0 | 50 | 109 | 50 | 130 |
| 4,6-Dinitro-2-methylphenol | 1 | 55.5465 | 0 | 100 | 56* | 70 | 130 |
| n-Nitrosodiphenylamine | 1 | 34.7586 | 0 | 50 | 70 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3

## Recovery Data Laboratory Limits

### QC Batch: SMB63050

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 1 | 35.1154 | 0 | 50 | 70 | 70 | 130 |
| 4-Bromophenyl-phenylether | 1 | 43.5057 | 0 | 50 | 87 | 70 | 130 |
| Hexachlorobenzene | 1 | 42.8388 | 0 | 50 | 86 | 70 | 130 |
| N-Octadecane | 1 | 36.4933 | 0 | 50 | 73 | 70 | 130 |
| Pentachlorophenol | 1 | 54.0356 | 0 | 100 | 54 | 40 | 130 |
| Phenanthrene | 1 | 37.698 | 0 | 50 | 75 | 70 | 130 |
| Anthracene | 1 | 37.7846 | 0 | 50 | 76 | 70 | 130 |
| Carbazole | 1 | 36.4269 | 0 | 50 | 73 | 70 | 130 |
| Di-n-butylphthalate | 1 | 37.8923 | 0 | 50 | 76 | 70 | 130 |
| Fluoranthene | 1 | 37.1053 | 0 | 50 | 74 | 70 | 130 |
| Pyrene | 1 | 41.3455 | 0 | 50 | 83 | 50 | 130 |
| Benzidine | 1 | 4.5485 | 0 | 50 | 9.1 | 1 | 130 |
| Butylbenzylphthalate | 1 | 38.5479 | 0 | 50 | 77 | 50 | 130 |
| 3,3'-Dichlorobenzidine | 1 | 28.8804 | 0 | 50 | 58 | 10 | 130 |
| Benzo[a]anthracene | 1 | 37.7711 | 0 | 50 | 76 | 70 | 130 |
| Chrysene | 1 | 37.0367 | 0 | 50 | 74 | 60 | 130 |
| bis(2-Ethylhexyl)phthalate | 1 | 39.7979 | 0 | 50 | 80 | 70 | 130 |
| Di-n-octylphthalate | 1 | 38.5701 | 0 | 50 | 77 | 70 | 130 |
| Benzo[b]fluoranthene | 1 | 41.343 | 0 | 50 | 83 | 70 | 130 |
| Benzo[k]fluoranthene | 1 | 35.5482 | 0 | 50 | 71 | 70 | 130 |
| Benzo[a]pyrene | 1 | 34.9528 | 0 | 50 | 70 | 70 | 130 |
| Indeno[1,2,3-cd]pyrene | 1 | 45.33 | 0 | 50 | 91 | 70 | 130 |
| Dibenzo[a,h]anthracene | 1 | 44.2942 | 0 | 50 | 89 | 60 | 130 |
| Benzo[g,h,i]perylene | 1 | 43.0936 | 0 | 50 | 86 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63067

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 7M87026.D | SMB63067(MS) | 10/4/2017 4:48:00 PM |
| Non Spike(If applicable): | | |
| Inst Blank(If applicable): | | |

Method: 8270D | Matrix: Soil | QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Pyridine | 1 | 27.6852 | 0 | 50 | 55 | 1 | 150 |
| N-Nitrosodimethylamine | 1 | 36.9587 | 0 | 50 | 74 | 50 | 130 |
| Benzaldehyde | 1 | 197.0764 | 0 | 50 | 394* | 20 | 150 |
| Aniline | 1 | 25.9898 | 0 | 50 | 52 | 20 | 150 |
| Pentachloroethane | 1 | 37.1931 | 0 | 50 | 74 | 50 | 130 |
| bis(2-Chloroethyl)ether | 1 | 41.2106 | 0 | 50 | 82 | 50 | 130 |
| Phenol | 1 | 87.9877 | 0 | 100 | 88 | 20 | 150 |
| 2-Chlorophenol | 1 | 98.6432 | 0 | 100 | 99 | 50 | 130 |
| N-Decane | 1 | 28.3078 | 0 | 50 | 57 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 43.1339 | 0 | 50 | 86 | 60 | 130 |
| 1,4-Dichlorobenzene | 1 | 35.5642 | 0 | 50 | 71 | 60 | 130 |
| 1,2-Dichlorobenzene | 1 | 35.4298 | 0 | 50 | 71 | 50 | 130 |
| Benzyl alcohol | 1 | 40.6696 | 0 | 50 | 81 | 20 | 130 |
| bis(2-chloroisopropyl)ether | 1 | 26.9898 | 0 | 50 | 54 | 40 | 130 |
| 2-Methylphenol | 1 | 78.7206 | 0 | 100 | 79 | 50 | 130 |
| Acetophenone | 1 | 35.9083 | 0 | 50 | 72 | 50 | 130 |
| Hexachloroethane | 1 | 33.5739 | 0 | 50 | 67 | 50 | 130 |
| N-Nitroso-di-n-propylamine | 1 | 34.292 | 0 | 50 | 69 | 40 | 130 |
| 3&4-Methylphenol | 1 | 83.9791 | 0 | 100 | 84 | 70 | 130 |
| Nitrobenzene | 1 | 34.3119 | 0 | 50 | 69* | 70 | 130 |
| Isophorone | 1 | 33.8782 | 0 | 50 | 68 | 60 | 130 |
| 2-Nitrophenol | 1 | 79.4834 | 0 | 100 | 79 | 70 | 130 |
| 2,4-Dimethylphenol | 1 | 76.6252 | 0 | 100 | 77 | 50 | 130 |
| Benzoic Acid | 1 | 14.8411 | 0 | 100 | 15* | 20 | 130 |
| bis(2-Chloroethoxy)methane | 1 | 34.8591 | 0 | 50 | 70 | 60 | 130 |
| 2,4-Dichlorophenol | 1 | 85.7291 | 0 | 100 | 86 | 70 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 38.4001 | 0 | 50 | 77 | 50 | 130 |
| Naphthalene | 1 | 38.0644 | 0 | 50 | 76 | 50 | 130 |
| 4-Chloroaniline | 1 | 31.4522 | 0 | 50 | 63 | 10 | 150 |
| Hexachlorobutadiene | 1 | 40.3544 | 0 | 50 | 81 | 60 | 130 |
| Caprolactam | 1 | 43.78 | 0 | 50 | 88 | 50 | 130 |
| 4-Chloro-3-methylphenol | 1 | 80.659 | 0 | 100 | 81 | 50 | 130 |
| 2-Methylnaphthalene | 1 | 38.8321 | 0 | 50 | 78 | 70 | 130 |
| 1-Methylnaphthalene | 1 | 36.8443 | 0 | 50 | 74 | 70 | 130 |
| 1,1'-Biphenyl | 1 | 34.4286 | 0 | 50 | 69 | 60 | 130 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 38.6971 | 0 | 50 | 77 | 70 | 130 |
| Hexachlorocyclopentadiene | 1 | 5.9279 | 0 | 50 | 12* | 20 | 160 |
| 2,4,6-Trichlorophenol | 1 | 82.2442 | 0 | 100 | 82 | 70 | 130 |
| 2,4,5-Trichlorophenol | 1 | 90.9691 | 0 | 100 | 91 | 70 | 130 |
| 2-Chloronaphthalene | 1 | 38.0268 | 0 | 50 | 76 | 70 | 130 |
| 1,4-Dimethylnaphthalene | 1 | 32.4388 | 0 | 50 | 65* | 70 | 130 |
| Diphenyl Ether | 1 | 39.2967 | 0 | 50 | 79 | 70 | 130 |
| 2-Nitroaniline | 1 | 41.0683 | 0 | 50 | 82 | 50 | 130 |
| Coumarin | 1 | 33.0124 | 0 | 50 | 66* | 70 | 130 |
| Acenaphthylene | 1 | 41.1968 | 0 | 50 | 82 | 70 | 130 |
| Dimethylphthalate | 1 | 41.2 | 0 | 50 | 82 | 70 | 130 |
| 2,6-Dinitrotoluene | 1 | 44.0035 | 0 | 50 | 88 | 70 | 130 |
| Acenaphthene | 1 | 39.8922 | 0 | 50 | 80 | 50 | 130 |
| 3-Nitroaniline | 1 | 36.3219 | 0 | 50 | 73 | 10 | 130 |
| 2,4-Dinitrophenol | 1 | 24.2912 | 0 | 100 | 24 | 20 | 150 |
| Dibenzofuran | 1 | 41.2626 | 0 | 50 | 83 | 70 | 130 |
| 2,4-Dinitrotoluene | 1 | 39.5367 | 0 | 50 | 79 | 40 | 130 |
| 4-Nitrophenol | 1 | 65.0832 | 0 | 100 | 65 | 20 | 150 |
| 2,3,4,6-Tetrachlorophenol | 1 | 76.331 | 0 | 100 | 76 | 70 | 130 |
| Fluorene | 1 | 41.2377 | 0 | 50 | 82 | 50 | 130 |
| 4-Chlorophenyl-phenylether | 1 | 40.3431 | 0 | 50 | 81 | 70 | 130 |
| Diethylphthalate | 1 | 42.7262 | 0 | 50 | 85 | 70 | 130 |
| 4-Nitroaniline | 1 | 40.2379 | 0 | 50 | 80 | 50 | 130 |
| Atrazine | 1 | 62.0752 | 0 | 50 | 124 | 50 | 130 |
| 4,6-Dinitro-2-methylphenol | 1 | 38.5657 | 0 | 100 | 39* | 70 | 130 |
| n-Nitrosodiphenylamine | 1 | 35.7474 | 0 | 50 | 71 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3

## Recovery Data Laboratory Limits

### QC Batch: SMB63067

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 1 | 34.9725 | 0 | 50 | 70 | 70 | 130 |
| 4-Bromophenyl-phenylether | 1 | 42.3703 | 0 | 50 | 85 | 70 | 130 |
| Hexachlorobenzene | 1 | 44.1522 | 0 | 50 | 88 | 70 | 130 |
| N-Octadecane | 1 | 35.4803 | 0 | 50 | 71 | 70 | 130 |
| Pentachlorophenol | 1 | 46.7548 | 0 | 100 | 47 | 40 | 130 |
| Phenanthrene | 1 | 39.4792 | 0 | 50 | 79 | 70 | 130 |
| Anthracene | 1 | 40.3045 | 0 | 50 | 81 | 70 | 130 |
| Carbazole | 1 | 39.0425 | 0 | 50 | 78 | 70 | 130 |
| Di-n-butylphthalate | 1 | 41.4142 | 0 | 50 | 83 | 70 | 130 |
| Fluoranthene | 1 | 41.9716 | 0 | 50 | 84 | 70 | 130 |
| Pyrene | 1 | 41.9414 | 0 | 50 | 84 | 50 | 130 |
| Benzidine | 1 | 4.0945 | 0 | 50 | 8.2 | 1 | 130 |
| Butylbenzylphthalate | 1 | 40.3143 | 0 | 50 | 81 | 50 | 130 |
| 3,3'-Dichlorobenzidine | 1 | 33.44 | 0 | 50 | 67 | 10 | 130 |
| Benzo[a]anthracene | 1 | 41.1277 | 0 | 50 | 82 | 70 | 130 |
| Chrysene | 1 | 39.7914 | 0 | 50 | 80 | 60 | 130 |
| bis(2-Ethylhexyl)phthalate | 1 | 41.9914 | 0 | 50 | 84 | 70 | 130 |
| Di-n-octylphthalate | 1 | 41.0963 | 0 | 50 | 82 | 70 | 130 |
| Benzo[b]fluoranthene | 1 | 46.4548 | 0 | 50 | 93 | 70 | 130 |
| Benzo[k]fluoranthene | 1 | 48.3074 | 0 | 50 | 97 | 70 | 130 |
| Benzo[a]pyrene | 1 | 37.612 | 0 | 50 | 75 | 70 | 130 |
| Indeno[1,2,3-cd]pyrene | 1 | 46.5218 | 0 | 50 | 93 | 70 | 130 |
| Dibenzo[a,h]anthracene | 1 | 45.8085 | 0 | 50 | 92 | 60 | 130 |
| Benzo[g,h,i]perylene | 1 | 43.9976 | 0 | 50 | 88 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63050

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 10M65320.D | AD00192-002(MS) | 10/4/2017 10:36:00 AM |
| Non Spike(If applicable): | 10M65319.D | AD00192-002 | 10/4/2017 10:14:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8270D | Matrix: Soil | QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Pyridine | 1 | 23.976 | 0 | 50 | 48 | 1 | 150 |
| N-Nitrosodimethylamine | 1 | 38.8938 | 0 | 50 | 78 | 50 | 130 |
| Benzaldehyde | 1 | 196.0863 | 0 | 50 | 392* | 20 | 150 |
| Aniline | 1 | 36.8252 | 0 | 50 | 74 | 20 | 150 |
| Pentachloroethane | 1 | 33.5301 | 0 | 50 | 67 | 50 | 130 |
| bis(2-Chloroethyl)ether | 1 | 36.5408 | 0 | 50 | 73 | 50 | 130 |
| N-Decane | 1 | 29.2106 | 0 | 50 | 58 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 37.7069 | 0 | 50 | 75 | 60 | 130 |
| 1,4-Dichlorobenzene | 1 | 36.604 | 0 | 50 | 73 | 60 | 130 |
| 1,2-Dichlorobenzene | 1 | 37.116 | 0 | 50 | 74 | 50 | 130 |
| Benzyl alcohol | 1 | 22.7423 | 0 | 50 | 45 | 20 | 130 |
| bis(2-chloroisopropyl)ether | 1 | 30.614 | 0 | 50 | 61 | 40 | 130 |
| Acetophenone | 1 | 37.1195 | 0 | 50 | 74 | 50 | 130 |
| Hexachloroethane | 1 | 36.8005 | 0 | 50 | 74 | 50 | 130 |
| N-Nitroso-di-n-propylamine | 1 | 35.9766 | 0 | 50 | 72 | 40 | 130 |
| Nitrobenzene | 1 | 38.2174 | 0 | 50 | 76 | 70 | 130 |
| Isophorone | 1 | 36.2956 | 0 | 50 | 73 | 60 | 130 |
| Benzoic Acid | 1 | 33.7762 | 0 | 100 | 34 | 20 | 130 |
| bis(2-Chloroethoxy)methane | 1 | 37.4913 | 0 | 50 | 75 | 60 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 37.2483 | 0 | 50 | 74 | 50 | 130 |
| Naphthalene | 1 | 37.6562 | 0 | 50 | 75 | 50 | 130 |
| 4-Chloroaniline | 1 | 20.8207 | 0 | 50 | 42 | 10 | 150 |
| Hexachlorobutadiene | 1 | 37.4395 | 0 | 50 | 75 | 60 | 130 |
| Caprolactam | 1 | 34.7538 | 0 | 50 | 70 | 50 | 130 |
| 2-Methylnaphthalene | 1 | 39.8049 | 0 | 50 | 80 | 70 | 130 |
| 1-Methylnaphthalene | 1 | 36.159 | 0 | 50 | 72 | 70 | 130 |
| 1,1'-Biphenyl | 1 | 32.3346 | 0 | 50 | 65 | 60 | 130 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 38.6796 | 0 | 50 | 77 | 70 | 130 |
| Hexachlorocyclopentadiene | 1 | 22.6568 | 0 | 50 | 45 | 20 | 160 |
| 2-Chloronaphthalene | 1 | 40.7661 | 0 | 50 | 82 | 70 | 130 |
| 1,4-Dimethylnaphthalene | 1 | 33.3417 | 0 | 50 | 67* | 70 | 130 |
| Diphenyl Ether | 1 | 40.0665 | 0 | 50 | 80 | 70 | 130 |
| 2-Nitroaniline | 1 | 41.9534 | 0 | 50 | 84 | 50 | 130 |
| Coumarin | 1 | 29.9343 | 0 | 50 | 60* | 70 | 130 |
| Acenaphthylene | 1 | 40.5689 | 0 | 50 | 81 | 70 | 130 |
| Dimethylphthalate | 1 | 37.7649 | 0 | 50 | 76 | 70 | 130 |
| 2,6-Dinitrotoluene | 1 | 38.7303 | 0 | 50 | 77 | 70 | 130 |
| Acenaphthene | 1 | 39.9672 | 0 | 50 | 80 | 50 | 130 |
| 3-Nitroaniline | 1 | 37.581 | 0 | 50 | 75 | 10 | 130 |
| Dibenzofuran | 1 | 39.9336 | 0 | 50 | 80 | 70 | 130 |
| 2,4-Dinitrotoluene | 1 | 37.1099 | 0 | 50 | 74 | 40 | 130 |
| Fluorene | 1 | 38.2987 | 0 | 50 | 77 | 50 | 130 |
| 4-Chlorophenyl-phenylether | 1 | 36.7266 | 0 | 50 | 73 | 70 | 130 |
| Diethylphthalate | 1 | 39.1037 | 0 | 50 | 78 | 70 | 130 |
| 4-Nitroaniline | 1 | 36.2324 | 0 | 50 | 72 | 50 | 130 |
| Atrazine | 1 | 50.1497 | 0 | 50 | 100 | 50 | 130 |
| n-Nitrosodiphenylamine | 1 | 35.3882 | 0 | 50 | 71 | 50 | 130 |
| 1,2-Diphenylhydrazine | 1 | 42.008 | 0 | 50 | 84 | 70 | 130 |
| 4-Bromophenyl-phenylether | 1 | 39.0838 | 0 | 50 | 78 | 70 | 130 |
| Hexachlorobenzene | 1 | 37.9735 | 0 | 50 | 76 | 70 | 130 |
| N-Octadecane | 1 | 41.1796 | 0 | 50 | 82 | 70 | 130 |
| Phenanthrene | 1 | 37.4295 | 0 | 50 | 75 | 70 | 130 |
| Anthracene | 1 | 38.3569 | 0 | 50 | 77 | 70 | 130 |
| Carbazole | 1 | 35.6751 | 0 | 50 | 71 | 70 | 130 |
| Di-n-butylphthalate | 1 | 39.6897 | 0 | 50 | 79 | 70 | 130 |
| Fluoranthene | 1 | 36.1979 | 0 | 50 | 72 | 70 | 130 |
| Pyrene | 1 | 43.5488 | 0 | 50 | 87 | 50 | 130 |
| Benzidine | 1 | 2.8332 | 0 | 50 | 5.7 | 1 | 130 |
| Butylbenzylphthalate | 1 | 44.0485 | 0 | 50 | 88 | 50 | 130 |
| 3,3'-Dichlorobenzidine | 1 | 36.9177 | 0 | 50 | 74 | 10 | 130 |
| Benzo[a]anthracene | 1 | 39.5341 | 0 | 50 | 79 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3

## Recovery Data Laboratory Limits

### QC Batch: SMB63050

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chrysene | 1 | 40.7117 | 0 | 50 | 81 | 60 | 130 |
| bis(2-Ethylhexyl)phthalate | 1 | 51.6863 | 0 | 50 | 103 | 70 | 130 |
| Di-n-octylphthalate | 1 | 45.6219 | 0 | 50 | 91 | 70 | 130 |
| Benzo[b]fluoranthene | 1 | 43.8019 | 0 | 50 | 88 | 70 | 130 |
| Benzo[k]fluoranthene | 1 | 39.6632 | 0 | 50 | 79 | 70 | 130 |
| Benzo[a]pyrene | 1 | 37.8062 | 0 | 50 | 76 | 70 | 130 |
| Indeno[1,2,3-cd]pyrene | 1 | 45.0624 | 0 | 50 | 90 | 70 | 130 |
| Dibenzo[a,h]anthracene | 1 | 43.711 | 0 | 50 | 87 | 60 | 130 |
| Benzo[g,h,i]perylene | 1 | 40.6352 | 0 | 50 | 81 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63050

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 10M65321.D | AD00192-002(MSD) | 10/4/2017 10:58:00 AM |
| Non Spike(If applicable): | 10M65319.D | AD00192-002 | 10/4/2017 10:14:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8270D | Matrix: Soil | QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Pyridine | 1 | 16.9002 | 0 | 50 | 34 | 1 | 150 |
| N-Nitrosodimethylamine | 1 | 30.2766 | 0 | 50 | 61 | 50 | 130 |
| Benzaldehyde | 1 | 154.6572 | 0 | 50 | 309* | 20 | 150 |
| Aniline | 1 | 25.5507 | 0 | 50 | 51 | 20 | 150 |
| Pentachloroethane | 1 | 26.6588 | 0 | 50 | 53 | 50 | 130 |
| bis(2-Chloroethyl)ether | 1 | 29.2281 | 0 | 50 | 58 | 50 | 130 |
| N-Decane | 1 | 21.9958 | 0 | 50 | 44 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 29.8352 | 0 | 50 | 60 | 60 | 130 |
| 1,4-Dichlorobenzene | 1 | 28.5361 | 0 | 50 | 57* | 60 | 130 |
| 1,2-Dichlorobenzene | 1 | 30.019 | 0 | 50 | 60 | 50 | 130 |
| Benzyl alcohol | 1 | 18.4885 | 0 | 50 | 37 | 20 | 130 |
| bis(2-chloroisopropyl)ether | 1 | 25.9249 | 0 | 50 | 52 | 40 | 130 |
| Acetophenone | 1 | 32.3165 | 0 | 50 | 65 | 50 | 130 |
| Hexachloroethane | 1 | 29.5268 | 0 | 50 | 59 | 50 | 130 |
| N-Nitroso-di-n-propylamine | 1 | 31.5149 | 0 | 50 | 63 | 40 | 130 |
| Nitrobenzene | 1 | 32.4802 | 0 | 50 | 65* | 70 | 130 |
| Isophorone | 1 | 31.3054 | 0 | 50 | 63 | 60 | 130 |
| Benzoic Acid | 1 | 31.6089 | 0 | 100 | 32 | 20 | 130 |
| bis(2-Chloroethoxy)methane | 1 | 32.3697 | 0 | 50 | 65 | 60 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 31.7084 | 0 | 50 | 63 | 50 | 130 |
| Naphthalene | 1 | 31.5364 | 0 | 50 | 63 | 50 | 130 |
| 4-Chloroaniline | 1 | 17.7385 | 0 | 50 | 35 | 10 | 150 |
| Hexachlorobutadiene | 1 | 31.0968 | 0 | 50 | 62 | 60 | 130 |
| Caprolactam | 1 | 31.7415 | 0 | 50 | 63 | 50 | 130 |
| 2-Methylnaphthalene | 1 | 33.4525 | 0 | 50 | 67* | 70 | 130 |
| 1-Methylnaphthalene | 1 | 29.991 | 0 | 50 | 60* | 70 | 130 |
| 1,1'-Biphenyl | 1 | 27.8371 | 0 | 50 | 56* | 60 | 130 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 32.3682 | 0 | 50 | 65* | 70 | 130 |
| Hexachlorocyclopentadiene | 1 | 16.7664 | 0 | 50 | 34 | 20 | 160 |
| 2-Chloronaphthalene | 1 | 32.5325 | 0 | 50 | 65* | 70 | 130 |
| 1,4-Dimethylnaphthalene | 1 | 27.7725 | 0 | 50 | 56* | 70 | 130 |
| Diphenyl Ether | 1 | 32.432 | 0 | 50 | 65* | 70 | 130 |
| 2-Nitroaniline | 1 | 35.0531 | 0 | 50 | 70 | 50 | 130 |
| Coumarin | 1 | 25.8098 | 0 | 50 | 52* | 70 | 130 |
| Acenaphthylene | 1 | 34.7987 | 0 | 50 | 70 | 70 | 130 |
| Dimethylphthalate | 1 | 32.6059 | 0 | 50 | 65* | 70 | 130 |
| 2,6-Dinitrotoluene | 1 | 32.9958 | 0 | 50 | 66* | 70 | 130 |
| Acenaphthene | 1 | 33.2576 | 0 | 50 | 67 | 50 | 130 |
| 3-Nitroaniline | 1 | 31.5136 | 0 | 50 | 63* | 70 | 130 |
| Dibenzofuran | 1 | 34.2244 | 0 | 50 | 68* | 70 | 130 |
| 2,4-Dinitrotoluene | 1 | 32.4474 | 0 | 50 | 65 | 40 | 130 |
| Fluorene | 1 | 33.4713 | 0 | 50 | 67 | 50 | 130 |
| 4-Chlorophenyl-phenylether | 1 | 32.4091 | 0 | 50 | 65* | 70 | 130 |
| Diethylphthalate | 1 | 33.2411 | 0 | 50 | 66* | 70 | 130 |
| 4-Nitroaniline | 1 | 31.0631 | 0 | 50 | 62 | 50 | 130 |
| Atrazine | 1 | 44.3305 | 0 | 50 | 89 | 50 | 130 |
| n-Nitrosodiphenylamine | 1 | 31.9087 | 0 | 50 | 64 | 50 | 130 |
| 1,2-Diphenylhydrazine | 1 | 38.2866 | 0 | 50 | 77 | 70 | 130 |
| 4-Bromophenyl-phenylether | 1 | 34.494 | 0 | 50 | 69* | 70 | 130 |
| Hexachlorobenzene | 1 | 35.3516 | 0 | 50 | 71 | 70 | 130 |
| N-Octadecane | 1 | 37.9436 | 0 | 50 | 76 | 70 | 130 |
| Phenanthrene | 1 | 33.7033 | 0 | 50 | 67* | 70 | 130 |
| Anthracene | 1 | 32.975 | 0 | 50 | 66* | 70 | 130 |
| Carbazole | 1 | 32.1721 | 0 | 50 | 64* | 70 | 130 |
| Di-n-butylphthalate | 1 | 36.4139 | 0 | 50 | 73 | 70 | 130 |
| Fluoranthene | 1 | 34.5143 | 0 | 50 | 69* | 70 | 130 |
| Pyrene | 1 | 41.5287 | 0 | 50 | 83 | 50 | 130 |
| Benzidine | 1 | 0 | 0 | 50 | 0* | 1 | 130 |
| Butylbenzylphthalate | 1 | 38.9847 | 0 | 50 | 78 | 50 | 130 |
| 3,3'-Dichlorobenzidine | 1 | 31.5403 | 0 | 50 | 63 | 10 | 130 |
| Benzo[a]anthracene | 1 | 35.2053 | 0 | 50 | 70 | 70 | 130 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3

## Recovery Data Laboratory Limits

### QC Batch: SMB63050

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chrysene | 1 | 34.5529 | 0 | 50 | 69 | 60 | 130 |
| bis(2-Ethylhexyl)phthalate | 1 | 43.4302 | 0 | 50 | 87 | 70 | 130 |
| Di-n-octylphthalate | 1 | 38.3515 | 0 | 50 | 77 | 70 | 130 |
| Benzo[b]fluoranthene | 1 | 39.6434 | 0 | 50 | 79 | 70 | 130 |
| Benzo[k]fluoranthene | 1 | 34.212 | 0 | 50 | 68* | 70 | 130 |
| Benzo[a]pyrene | 1 | 31.5291 | 0 | 50 | 63* | 70 | 130 |
| Indeno[1,2,3-cd]pyrene | 1 | 40.6191 | 0 | 50 | 81 | 70 | 130 |
| Dibenzo[a,h]anthracene | 1 | 37.9492 | 0 | 50 | 76 | 60 | 130 |
| Benzo[g,h,i]perylene | 1 | 35.1535 | 0 | 50 | 70 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
# RPD Data Laboratory Limits
## QC Batch: SMB63050

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 10M65321.D | AD00192-002(MSD) | 10/4/2017 10:58:00 AM |
| Duplicate(If applicable): | 10M65320.D | AD00192-002(MS) | 10/4/2017 10:36:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8270D  Matrix: Soil  QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Pyridine | 1 | 16.9002 | 23.976 | 35* | 30 |
| N-Nitrosodimethylamine | 1 | 30.2766 | 38.8938 | 25 | 30 |
| Benzaldehyde | 1 | 154.6572 | 196.0863 | 24 | 30 |
| Aniline | 1 | 25.5507 | 36.8252 | 36* | 30 |
| Pentachloroethane | 1 | 26.6588 | 33.5301 | 23 | 30 |
| bis(2-Chloroethyl)ether | 1 | 29.2281 | 36.5408 | 22 | 30 |
| N-Decane | 1 | 21.9958 | 29.2106 | 28 | 30 |
| 1,3-Dichlorobenzene | 1 | 29.8352 | 37.7069 | 23 | 30 |
| 1,4-Dichlorobenzene | 1 | 28.5361 | 36.604 | 25 | 40 |
| 1,2-Dichlorobenzene | 1 | 30.019 | 37.116 | 21 | 30 |
| Benzyl alcohol | 1 | 18.4885 | 22.7423 | 21 | 30 |
| bis(2-chloroisopropyl)ether | 1 | 25.9249 | 30.614 | 17 | 30 |
| Acetophenone | 1 | 32.3165 | 37.1195 | 14 | 30 |
| Hexachloroethane | 1 | 29.5268 | 36.8005 | 22 | 30 |
| N-Nitroso-di-n-propylamine | 1 | 31.5149 | 35.9766 | 13 | 40 |
| Nitrobenzene | 1 | 32.4802 | 38.2174 | 16 | 30 |
| Isophorone | 1 | 31.3054 | 36.2956 | 15 | 30 |
| Benzoic Acid | 1 | 31.6089 | 33.7762 | 6.6 | 30 |
| bis(2-Chloroethoxy)methane | 1 | 32.3697 | 37.4913 | 15 | 30 |
| 1,2,4-Trichlorobenzene | 1 | 31.7084 | 37.2483 | 16 | 40 |
| Naphthalene | 1 | 31.5364 | 37.6562 | 18 | 40 |
| 4-Chloroaniline | 1 | 17.7385 | 20.8207 | 16 | 30 |
| Hexachlorobutadiene | 1 | 31.0968 | 37.4395 | 19 | 30 |
| Caprolactam | 1 | 31.7415 | 34.7538 | 9.1 | 30 |
| 2-Methylnaphthalene | 1 | 33.4525 | 39.8049 | 17 | 30 |
| 1-Methylnaphthalene | 1 | 29.991 | 36.159 | 19 | 30 |
| 1,1'-Biphenyl | 1 | 27.8371 | 32.3346 | 15 | 30 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 32.3682 | 38.6796 | 18 | 30 |
| Hexachlorocyclopentadiene | 1 | 16.7664 | 22.6568 | 30 | 30 |
| 2-Chloronaphthalene | 1 | 32.5325 | 40.7661 | 22 | 30 |
| 1,4-Dimethylnaphthalene | 1 | 27.7725 | 33.3417 | 18 | 30 |
| Diphenyl Ether | 1 | 32.432 | 40.0665 | 21 | 30 |
| 2-Nitroaniline | 1 | 35.0531 | 41.9534 | 18 | 30 |
| Coumarin | 1 | 25.8098 | 29.9343 | 15 | 30 |
| Acenaphthylene | 1 | 34.7987 | 40.5689 | 15 | 30 |
| Dimethylphthalate | 1 | 32.6059 | 37.7649 | 15 | 30 |
| 2,6-Dinitrotoluene | 1 | 32.9958 | 38.7303 | 16 | 30 |
| Acenaphthene | 1 | 33.2576 | 39.9672 | 18 | 40 |
| 3-Nitroaniline | 1 | 31.5136 | 37.581 | 18 | 30 |
| Dibenzofuran | 1 | 34.2244 | 39.9336 | 15 | 30 |
| 2,4-Dinitrotoluene | 1 | 32.4474 | 37.1099 | 13 | 40 |
| Fluorene | 1 | 33.4713 | 38.2987 | 13 | 40 |
| 4-Chlorophenyl-phenylether | 1 | 32.4091 | 36.7266 | 12 | 30 |
| Diethylphthalate | 1 | 33.2411 | 39.1037 | 16 | 30 |
| 4-Nitroaniline | 1 | 31.0631 | 36.2324 | 15 | 30 |
| Atrazine | 1 | 44.3305 | 50.1497 | 12 | 30 |
| n-Nitrosodiphenylamine | 1 | 31.9087 | 35.3882 | 10 | 30 |
| 1,2-Diphenylhydrazine | 1 | 38.2866 | 42.008 | 9.3 | 30 |
| 4-Bromophenyl-phenylether | 1 | 34.494 | 39.0838 | 12 | 30 |
| Hexachlorobenzene | 1 | 35.3516 | 37.9735 | 7.2 | 30 |
| N-Octadecane | 1 | 37.9436 | 41.1796 | 8.2 | 30 |
| Phenanthrene | 1 | 33.7033 | 37.4295 | 10 | 30 |
| Anthracene | 1 | 32.975 | 38.3569 | 15 | 30 |
| Carbazole | 1 | 32.1721 | 35.6751 | 10 | 30 |
| Di-n-butylphthalate | 1 | 36.4139 | 39.6897 | 8.6 | 30 |
| Fluoranthene | 1 | 34.5143 | 36.1979 | 4.8 | 30 |
| Pyrene | 1 | 41.5287 | 43.5488 | 4.7 | 40 |
| Benzidine | 1 | 0 | 2.8332 | 200* | 30 |
| Butylbenzylphthalate | 1 | 38.9847 | 44.0485 | 12 | 40 |
| 3,3'-Dichlorobenzidine | 1 | 31.5403 | 36.9177 | 16 | 30 |
| Benzo[a]anthracene | 1 | 35.2053 | 39.5341 | 12 | 30 |
| Chrysene | 1 | 34.5529 | 40.7117 | 16 | 30 |
| bis(2-Ethylhexyl)phthalate | 1 | 43.4302 | 51.6863 | 17 | 30 |

# Form3
## RPD Data Laboratory Limits
### QC Batch: SMB63050

| | | | | | |
|---|---|---|---|---|---|
| Di-n-octylphthalate | 1 | 38.3515 | 45.6219 | 17 | 30 |
| Benzo[b]fluoranthene | 1 | 39.6434 | 43.8019 | 10 | 30 |
| Benzo[k]fluoranthene | 1 | 34.212 | 39.6632 | 15 | 30 |
| Benzo[a]pyrene | 1 | 31.5291 | 37.8062 | 18 | 30 |
| Indeno[1,2,3-cd]pyrene | 1 | 40.6191 | 45.0624 | 10 | 30 |
| Dibenzo[a,h]anthracene | 1 | 37.9492 | 43.711 | 14 | 30 |
| Benzo[g,h,i]perylene | 1 | 35.1535 | 40.6352 | 14 | 30 |

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: SMB63050
Blank Data File: 10M65317.D
Matrix: Soil

Blank Analysis Date: 10/04/17 09:29
Blank Extraction Date: NA
(If Applicable)
Method: EPA 8270D

| Sample Number | Data File | Analysis Date |
|---|---|---|
| SMB63050(MS) | 7M86988.D | 10/03/17 16:42 |
| AD00192-002(MSD | 10M65321.D | 10/04/17 10:58 |
| AD00192-002(MS) | 10M65320.D | 10/04/17 10:36 |
| AD00192-002 | 10M65319.D | 10/04/17 10:14 |

# FORM 4
Blank Summary

Blank Number: SMB63067
Blank Data File: 7M87029.D
Matrix: Soil

Blank Analysis Date: 10/04/17 17:58
Blank Extraction Date: 10/04/17
(If Applicable)
Method: EPA 8270D

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD00298-002(5X)( | 7M87023.D | 10/04/17 15:12 |
| SMB63067(MS) | 7M87026.D | 10/04/17 16:48 |

# Form 5

**Tune Name:** CAL DFTPP
**Instrument:** GCMS 10
**Data File:** 10M64974.D
**Analysis Date:** 09/11/17 08:41
**Method:** EPA 8270D

**Tune Scan/Time Range:** Scan 1444

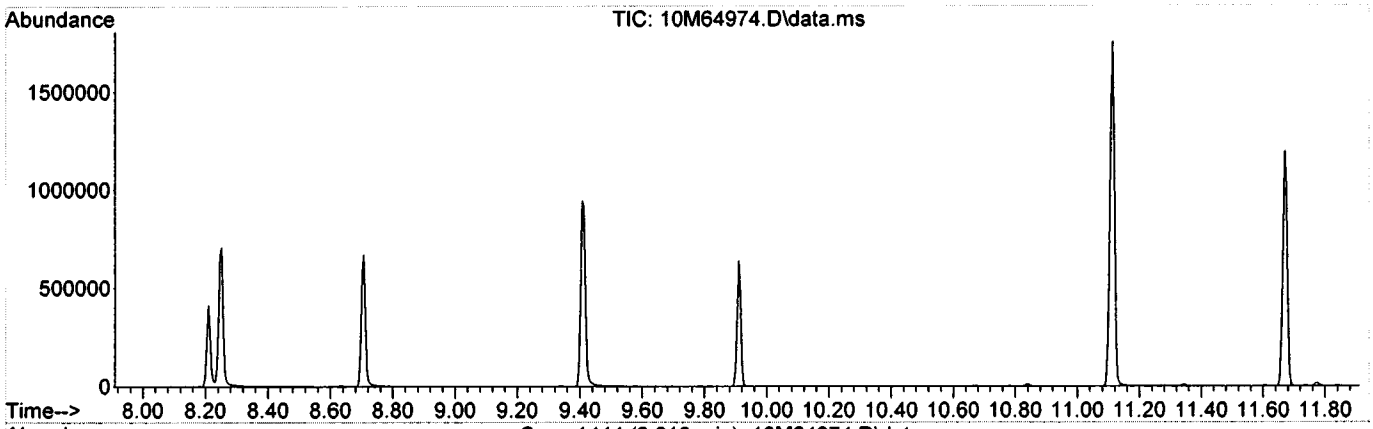
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 31.8 | 25200 | PASS |
| 68 | 69 | 0.00 | 2 | 1.7 | 488 | PASS |
| 69 | 198 | 0.00 | 100 | 36.5 | 28856 | PASS |
| 70 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 127 | 198 | 40 | 60 | 47.0 | 37192 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 79128 | PASS |
| 199 | 198 | 5 | 9 | 7.1 | 5647 | PASS |
| 275 | 198 | 10 | 30 | 26.4 | 20928 | PASS |
| 365 | 198 | 1 | 100 | 3.3 | 2636 | PASS |
| 441 | 443 | 0.01 | 100 | 73.4 | 7335 | PASS |
| 442 | 198 | 40 | 100 | 59.3 | 46936 | PASS |
| 443 | 442 | 17 | 23 | 21.3 | 9998 | PASS |

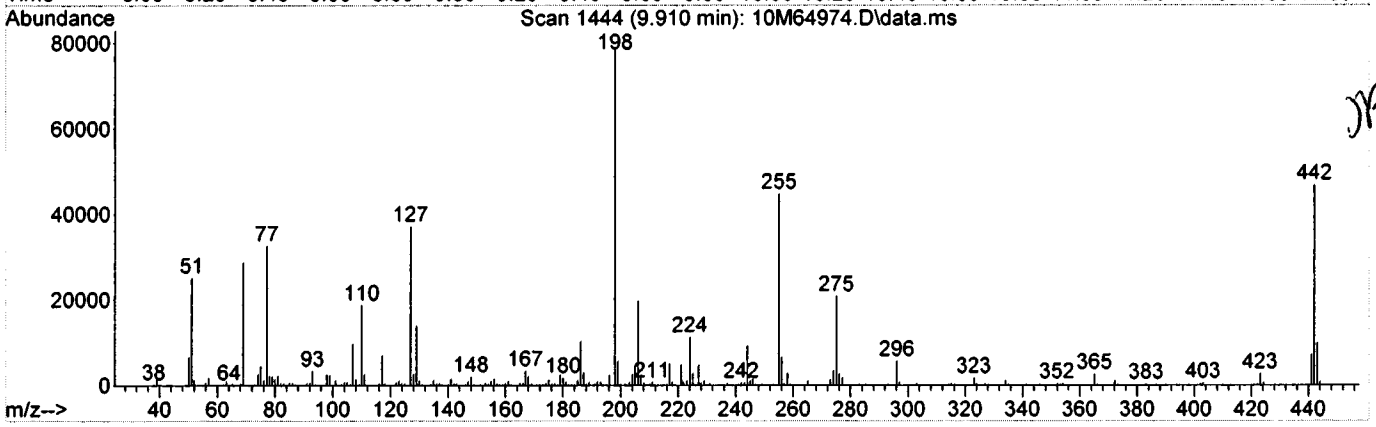
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 10M64975.D | CAL BNA@10PPM | 09/11/17 09:07 |
| 10M64976.D | CAL BNA@196PP | 09/11/17 09:32 |
| 10M64977.D | CAL BNA@160PP | 09/11/17 09:55 |
| 10M64978.D | CAL BNA@120PP | 09/11/17 10:17 |
| 10M64979.D | CAL BNA@80PPM | 09/11/17 10:39 |
| 10M64980.D | CAL BNA@50PPM | 09/11/17 11:01 |
| 10M64981.D | CAL BNA@20PPM | 09/11/17 11:23 |
| 10M64982.D | CAL BNA@2PPM | 09/11/17 11:46 |
| 10M64983.D | CAL BNA@.5PPM | 09/11/17 12:08 |
| 10M64984.D | CAL BNA@.25PP | 09/11/17 12:30 |
| 10M64985.D | CAL BNA@50PPM | 09/11/17 12:53 |
| 10M64986.D | ICV BNA@50PPM | 09/11/17 13:15 |
| 10M64987.D | EXT MIX#1 | 09/11/17 14:09 |
| 10M64988.D | EXT MIX#1(2ND) | 09/11/17 14:31 |

Data Path : G:\GcMsData\2017\GCMS_10\Data\09-11-17\
Data File : 10M64974.D
Acq On : 11 Sep 2017 8:41
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2017\GCMS_10\METHODQT\10M_0808.M
Title : @GCMS_10,mg,625,8270
Last Update : Mon Sep 11 13:08:39 2017




Spectrum Information: Scan 1444

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 31.8 | 25200 | PASS |
| 68 | 69 | 0.00 | 2 | 1.7 | 488 | PASS |
| 69 | 198 | 0.00 | 100 | 36.5 | 28856 | PASS |
| 70 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 127 | 198 | 40 | 60 | 47.0 | 37192 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 79128 | PASS |
| 199 | 198 | 5 | 9 | 7.1 | 5647 | PASS |
| 275 | 198 | 10 | 30 | 26.4 | 20928 | PASS |
| 365 | 198 | 1 | 100 | 3.3 | 2636 | PASS |
| 441 | 443 | 0.01 | 100 | 73.4 | 7335 | PASS |
| 442 | 198 | 40 | 100 | 59.3 | 46936 | PASS |
| 443 | 442 | 17 | 23 | 21.3 | 9998 | PASS |

# Form 5

**Tune Name:** CAL DFTPP
**Instrument:** GCMS 7
**Data File:** 7M86401.D
**Analysis Date:** 09/11/17 08:45
**Method:** EPA 8270D

**Tune Scan/Time Range:** Scan 1452

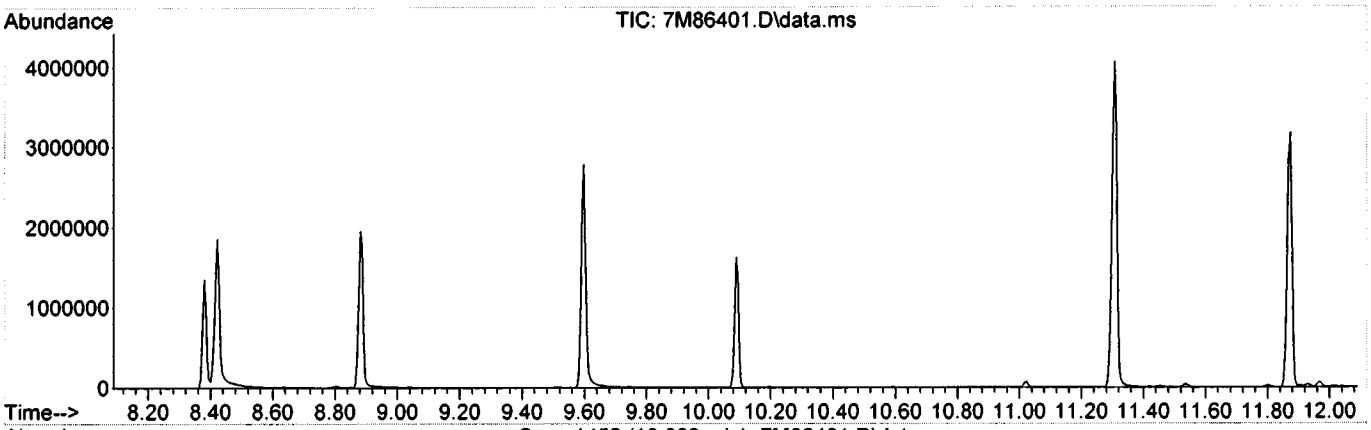
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 35.7 | 69000 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 43.8 | 84784 | PASS |
| 70 | 69 | 0.00 | 2 | 0.7 | 582 | PASS |
| 127 | 198 | 40 | 60 | 49.3 | 95416 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 193472 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 13323 | PASS |
| 275 | 198 | 10 | 30 | 25.7 | 49744 | PASS |
| 365 | 198 | 1 | 100 | 3.0 | 5758 | PASS |
| 441 | 443 | 0.01 | 100 | 78.3 | 17192 | PASS |
| 442 | 198 | 40 | 100 | 60.0 | 116064 | PASS |
| 443 | 442 | 17 | 23 | 18.9 | 21968 | PASS |

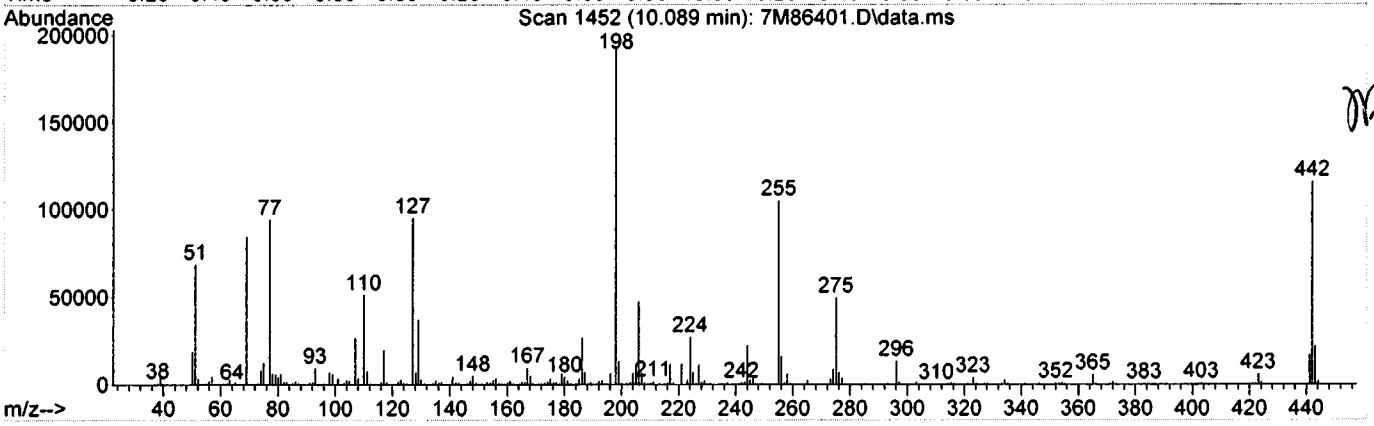
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 7M86402.D | CAL BNA@10PPM | 09/11/17 09:11 |
| 7M86403.D | CAL BNA@10PPM | 09/11/17 11:02 |
| 7M86404.D | CAL BNA@196PP | 09/11/17 11:25 |
| 7M86405.D | CAL BNA@160PP | 09/11/17 11:49 |
| 7M86406.D | CAL BNA@120PP | 09/11/17 12:12 |
| 7M86407.D | CAL BNA@80PPM | 09/11/17 12:35 |
| 7M86408.D | CAL BNA@10PPM | 09/11/17 12:59 |
| 7M86409.D | CAL BNA@50PPM | 09/11/17 13:22 |
| 7M86410.D | CAL BNA@20PPM | 09/11/17 13:46 |
| 7M86411.D | CAL BNA@2PPM | 09/11/17 14:09 |
| 7M86412.D | CAL BNA@.25PP | 09/11/17 14:41 |
| 7M86413.D | CAL BNA@.5PPM | 09/11/17 15:05 |
| 7M86414.D | ICV BNA@50PPM | 09/11/17 15:30 |

Data Path : G:\GcMsData\2017\GCMS_7\Data\09-11-17\
Data File : 7M86401.D
Acq On : 11 Sep 2017 8:45
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2017\GCMS_7\METHODQT\7M_0807.M
Title : @GCMS_7,mg,625,8270
Last Update : Mon Aug 14 13:34:47 2017




Spectrum Information: Scan 1452

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 35.7 | 69000 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 43.8 | 84784 | PASS |
| 70 | 69 | 0.00 | 2 | 0.7 | 582 | PASS |
| 127 | 198 | 40 | 60 | 49.3 | 95416 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 193472 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 13323 | PASS |
| 275 | 198 | 10 | 30 | 25.7 | 49744 | PASS |
| 365 | 198 | 1 | 100 | 3.0 | 5758 | PASS |
| 441 | 443 | 0.01 | 100 | 78.3 | 17192 | PASS |
| 442 | 198 | 40 | 100 | 60.0 | 116064 | PASS |
| 443 | 442 | 17 | 23 | 18.9 | 21968 | PASS |

# Form 5

**Tune Name:** CAL DFTPP
**Instrument:** GCMS 7
**Data File:** 7M86985.D
**Analysis Date:** 10/03/17 15:07
**Method:** EPA 8270D

**Tune Scan/Time Range:** Average of 10.073 to 10.073 min

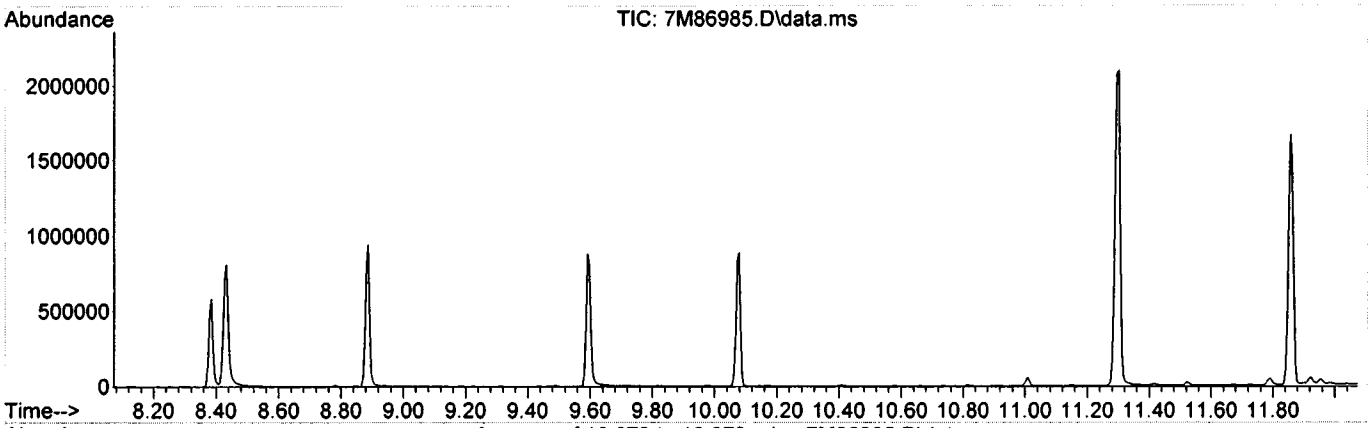
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 33.6 | 33664 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 40.4 | 40568 | PASS |
| 70 | 69 | 0.00 | 2 | 0.9 | 372 | PASS |
| 127 | 198 | 40 | 60 | 46.8 | 46936 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 100336 | PASS |
| 199 | 198 | 5 | 9 | 6.7 | 6715 | PASS |
| 275 | 198 | 10 | 30 | 26.5 | 26616 | PASS |
| 365 | 198 | 1 | 100 | 2.7 | 2728 | PASS |
| 441 | 443 | 0.01 | 100 | 68.4 | 11067 | PASS |
| 442 | 198 | 40 | 100 | 75.2 | 75432 | PASS |
| 443 | 442 | 17 | 23 | 21.4 | 16179 | PASS |

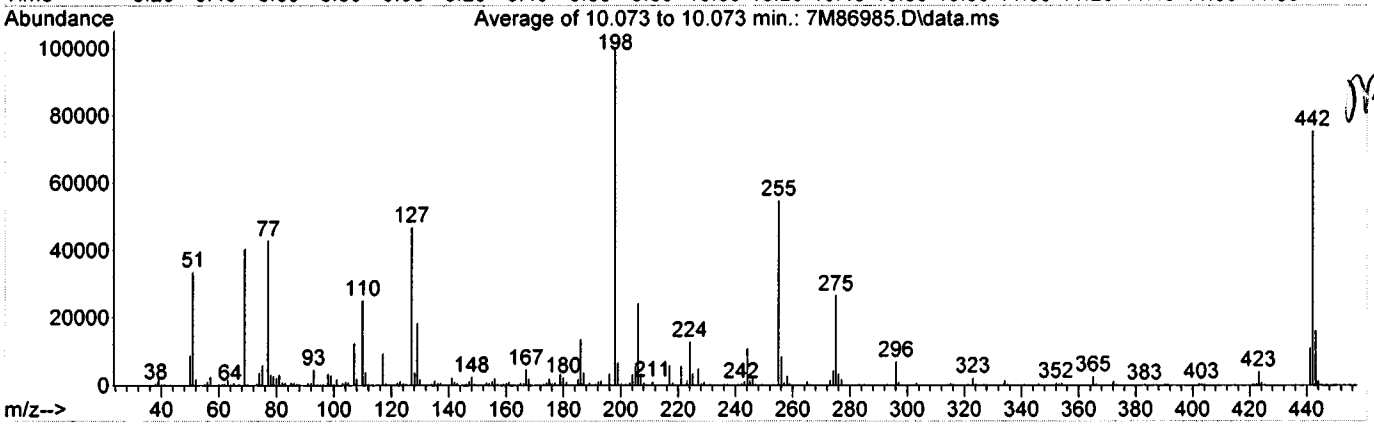
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 7M86986.D | CAL BNA@50PPM | 10/03/17 15:31 |
| 7M86987.D | AD00319-002(3X) | 10/03/17 16:19 |
| 7M86988.D | SMB63050(MS) | 10/03/17 16:42 |
| 7M86989.D | SMB63051(MS) | 10/03/17 17:06 |
| 7M86990.D | SMB63050 | 10/03/17 17:29 |
| 7M86991.D | SMB63051 | 10/03/17 17:53 |
| 7M86992.D | AD00275-021(R) | 10/03/17 18:16 |
| 7M86993.D | AD00298-002(5X) | 10/03/17 18:39 |
| 7M86994.D | AD00316-026(3X) | 10/03/17 19:03 |
| 7M86995.D | AD00275-006(3X) | 10/03/17 19:26 |
| 7M86996.D | AD00275-015(3X) | 10/03/17 19:50 |
| 7M86997.D | AD00275-025(3X) | 10/03/17 20:13 |
| 7M86998.D | AD00275-016 | 10/03/17 20:36 |
| 7M86999.D | AD00275-017 | 10/03/17 21:00 |
| 7M87000.D | AD00275-018 | 10/03/17 21:23 |
| 7M87001.D | AD00275-019 | 10/03/17 21:46 |
| 7M87002.D | AD00275-020 | 10/03/17 22:09 |
| 7M87003.D | AD00275-022 | 10/03/17 22:33 |
| 7M87004.D | AD00275-023 | 10/03/17 22:56 |
| 7M87005.D | AD00275-024 | 10/03/17 23:19 |
| 7M87006.D | AD00275-026 | 10/03/17 23:42 |

Data Path : G:\GcMsData\2017\GCMS_7\Data\10-0317\
Data File : 7M86985.D
Acq On : 3 Oct 2017 15:07
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2017\GCMS_7\METHODQT\7M_0911.M
Title : @GCMS_7,mg,625,8270
Last Update : Mon Sep 11 15:43:33 2017




Spectrum Information: Average of 10.073 to 10.073 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 33.6 | 33664 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 40.4 | 40568 | PASS |
| 70 | 69 | 0.00 | 2 | 0.9 | 372 | PASS |
| 127 | 198 | 40 | 60 | 46.8 | 46936 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 100336 | PASS |
| 199 | 198 | 5 | 9 | 6.7 | 6715 | PASS |
| 275 | 198 | 10 | 30 | 26.5 | 26616 | PASS |
| 365 | 198 | 1 | 100 | 2.7 | 2728 | PASS |
| 441 | 443 | 0.01 | 100 | 68.4 | 11067 | PASS |
| 442 | 198 | 40 | 100 | 75.2 | 75432 | PASS |
| 443 | 442 | 17 | 23 | 21.4 | 16179 | PASS |

# Form 5

**Tune Name:** CAL DFTPP
**Instrument:** GCMS 10
**Data File:** 10M65315.D
**Analysis Date:** 10/04/17 08:26
Method: EPA 8270D

Tune Scan/Time Range: Average of 9.894 to 9.905 min

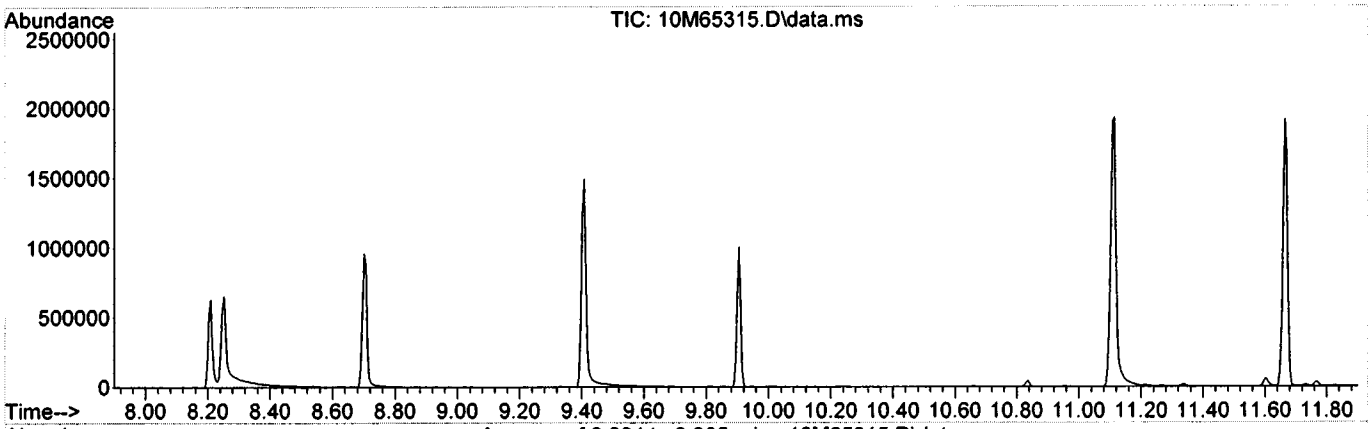
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 37.2 | 27936 | PASS |
| 68 | 69 | 0.00 | 2 | 1.0 | 314 | PASS |
| 69 | 198 | 0.00 | 100 | 40.4 | 30369 | PASS |
| 70 | 69 | 0.00 | 2 | 0.2 | 61 | PASS |
| 127 | 198 | 40 | 60 | 50.1 | 37684 | PASS |
| 197 | 198 | 0.00 | 1 | 0.3 | 257 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 75181 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 5223 | PASS |
| 275 | 198 | 10 | 30 | 24.8 | 18661 | PASS |
| 365 | 198 | 1 | 100 | 3.2 | 2372 | PASS |
| 441 | 443 | 0.01 | 100 | 73.8 | 5998 | PASS |
| 442 | 198 | 40 | 100 | 53.9 | 40543 | PASS |
| 443 | 442 | 17 | 23 | 20.1 | 8130 | PASS |

| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 10M65316.D | CAL BNA@50PPM | 10/04/17 08:55 |
| 10M65317.D | SMB63050 | 10/04/17 09:29 |
| 10M65318.D | TEST63051 | 10/04/17 09:52 |
| 10M65319.D | AD00192-002 | 10/04/17 10:14 |
| 10M65320.D | AD00192-002(MS) | 10/04/17 10:36 |
| 10M65321.D | AD00192-002(MSD | 10/04/17 10:58 |
| 10M65322.D | AD00192-005 | 10/04/17 11:20 |
| 10M65323.D | AD00290-002 | 10/04/17 11:43 |
| 10M65324.D | AD00290-004 | 10/04/17 12:05 |
| 10M65325.D | AD00290-006 | 10/04/17 12:27 |
| 10M65326.D | AD00290-008 | 10/04/17 12:49 |
| 10M65327.D | AD00290-010 | 10/04/17 13:11 |
| 10M65328.D | AD00290-012 | 10/04/17 13:34 |
| 10M65329.D | AD00290-014 | 10/04/17 13:56 |
| 10M65330.D | SMB63051 | 10/04/17 14:18 |
| 10M65331.D | WMB63064 | 10/04/17 14:41 |
| 10M65332.D | AD00333-001 | 10/04/17 15:44 |
| 10M65333.D | AD00333-003 | 10/04/17 16:06 |
| 10M65334.D | AD00346-025 | 10/04/17 16:29 |
| 10M65335.D | AD00354-001 | 10/04/17 16:51 |
| 10M65336.D | AD00354-002 | 10/04/17 17:13 |
| 10M65337.D | AD00354-003 | 10/04/17 17:35 |
| 10M65338.D | AD00354-004 | 10/04/17 17:57 |
| 10M65339.D | AD00354-005 | 10/04/17 18:20 |

Data Path : G:\GcMsData\2017\GCMS_10\Data\10-04-17\
Data File : 10M65315.D
Acq On : 4 Oct 2017 8:26
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2017\GCMS_10\METHODQT\10M_0911.M
Title : @GCMS_10,mg,625,8270
Last Update : Mon Sep 11 13:11:29 2017




Spectrum Information: Average of 9.894 to 9.905 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 37.2 | 27936 | PASS |
| 68 | 69 | 0.00 | 2 | 1.0 | 314 | PASS |
| 69 | 198 | 0.00 | 100 | 40.4 | 30369 | PASS |
| 70 | 69 | 0.00 | 2 | 0.2 | 61 | PASS |
| 127 | 198 | 40 | 60 | 50.1 | 37684 | PASS |
| 197 | 198 | 0.00 | 1 | 0.3 | 257 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 75181 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 5223 | PASS |
| 275 | 198 | 10 | 30 | 24.8 | 18661 | PASS |
| 365 | 198 | 1 | 100 | 3.2 | 2372 | PASS |
| 441 | 443 | 0.01 | 100 | 73.8 | 5998 | PASS |
| 442 | 198 | 40 | 100 | 53.9 | 40543 | PASS |
| 443 | 442 | 17 | 23 | 20.1 | 8130 | PASS |

# Form 5

**Tune Name:** CAL DFTPP **Data File:** 7M87007.D
**Instrument:** GCMS 7 **Analysis Date:** 10/04/17 08:28
**Method:** EPA 8270D

**Tune Scan/Time Range:** Average of 10.057 to 10.067 min

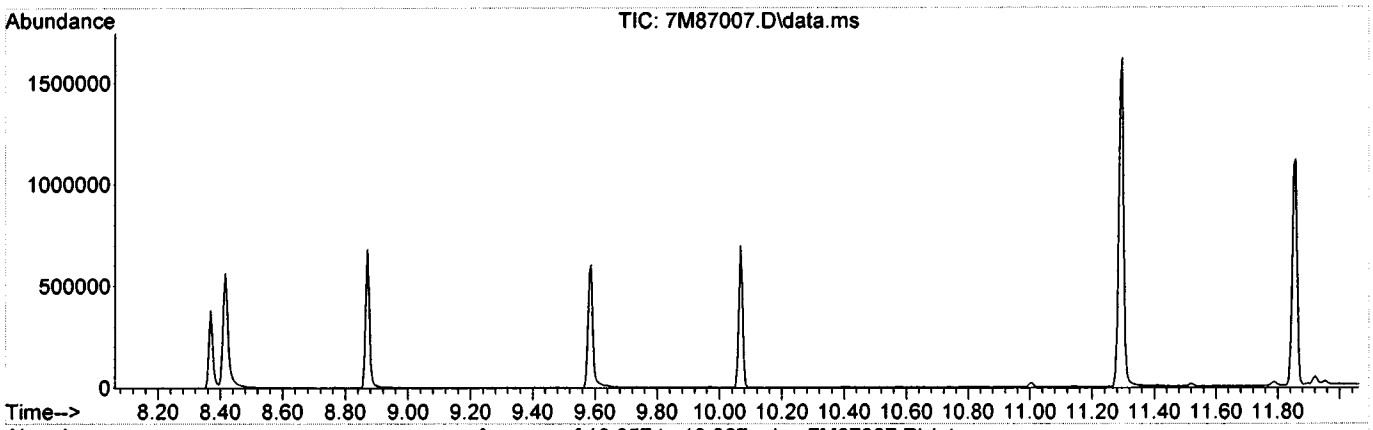
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 37.5 | 17679 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 43.7 | 20608 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 131 | PASS |
| 127 | 198 | 40 | 60 | 48.9 | 23063 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 47194 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 3262 | PASS |
| 275 | 198 | 10 | 30 | 27.1 | 12776 | PASS |
| 365 | 198 | 1 | 100 | 2.7 | 1289 | PASS |
| 441 | 443 | 0.01 | 100 | 79.0 | 5233 | PASS |
| 442 | 198 | 40 | 100 | 71.0 | 33524 | PASS |
| 443 | 442 | 17 | 23 | 19.8 | 6625 | PASS |

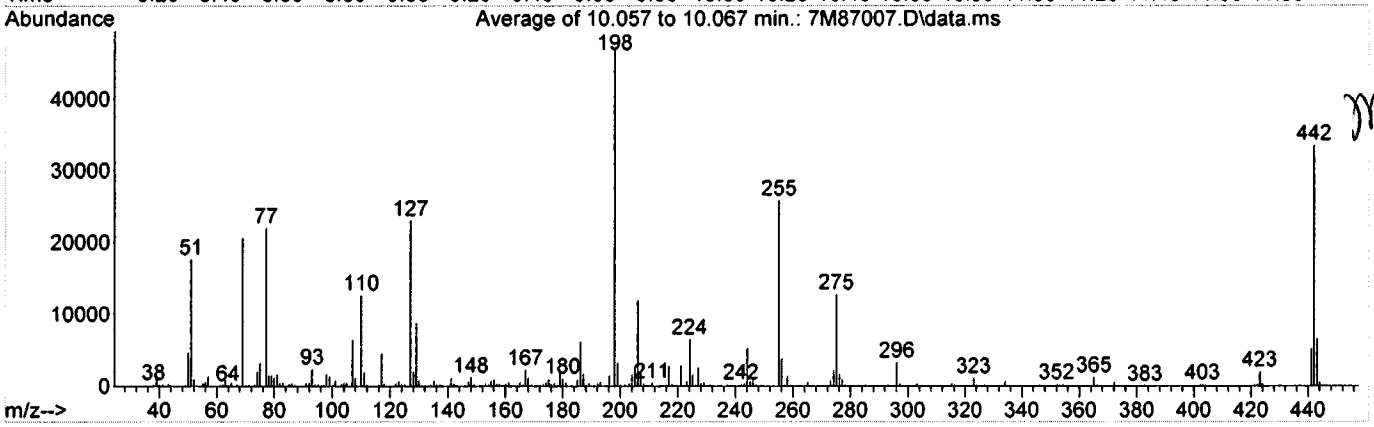
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 7M87008.D | CAL BNA@50PPM | 10/04/17 08:55 |
| 7M87009.D | AD00361-027 | 10/04/17 09:46 |
| 7M87010.D | AD00361-029 | 10/04/17 10:09 |
| 7M87011.D | AD00356-001(5X)( | 10/04/17 10:33 |
| 7M87012.D | AD00350-001 | 10/04/17 10:56 |
| 7M87013.D | AD00275-035 | 10/04/17 11:19 |
| 7M87014.D | AD00286-001(5X) | 10/04/17 11:43 |
| 7M87015.D | AD00356-001(5X) | 10/04/17 12:06 |
| 7M87016.D | AD00356-001(5X)( | 10/04/17 12:29 |
| 7M87017.D | AD00361-020(5X) | 10/04/17 12:52 |
| 7M87018.D | AD00361-021(5X) | 10/04/17 13:16 |
| 7M87019.D | AD00361-022(5X) | 10/04/17 13:39 |
| 7M87020.D | AD00361-023(5X) | 10/04/17 14:02 |
| 7M87021.D | AD00361-024(5X) | 10/04/17 14:25 |
| 7M87022.D | AD00361-025(5X) | 10/04/17 14:49 |
| 7M87023.D | AD00298-002(5X)( | 10/04/17 15:12 |

Data Path : G:\GcMsData\2017\GCMS_7\Data\10-04-17\
Data File : 7M87007.D
Acq On : 4 Oct 2017 8:28
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2017\GCMS_7\METHODQT\7M_0911.M
Title : @GCMS_7,mg,625,8270
Last Update : Mon Sep 11 15:43:33 2017




Spectrum Information: Average of 10.057 to 10.067 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 37.5 | 17679 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 43.7 | 20608 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 131 | PASS |
| 127 | 198 | 40 | 60 | 48.9 | 23063 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 47194 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 3262 | PASS |
| 275 | 198 | 10 | 30 | 27.1 | 12776 | PASS |
| 365 | 198 | 1 | 100 | 2.7 | 1289 | PASS |
| 441 | 443 | 0.01 | 100 | 79.0 | 5233 | PASS |
| 442 | 198 | 40 | 100 | 71.0 | 33524 | PASS |
| 443 | 442 | 17 | 23 | 19.8 | 6625 | PASS |

# Form 5

**Tune Name:** CAL DFTPP **Data File:** 7M87024.D
**Instrument:** GCMS 7 **Analysis Date:** 10/04/17 15:50
**Method:** EPA 8270D

**Tune Scan/Time Range:** Average of 10.062 to 10.068 min

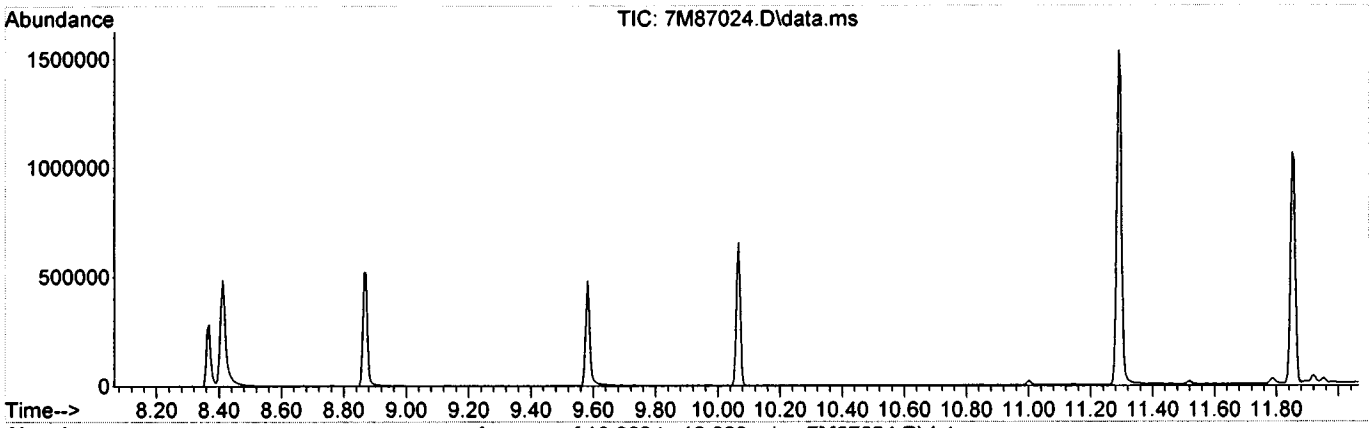
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 33.1 | 22476 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 39.1 | 26524 | PASS |
| 70 | 69 | 0.00 | 2 | 0.5 | 125 | PASS |
| 127 | 198 | 40 | 60 | 47.2 | 31996 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 67828 | PASS |
| 199 | 198 | 5 | 9 | 6.6 | 4478 | PASS |
| 275 | 198 | 10 | 30 | 29.0 | 19644 | PASS |
| 365 | 198 | 1 | 100 | 3.4 | 2288 | PASS |
| 441 | 443 | 0.01 | 100 | 80.7 | 9113 | PASS |
| 442 | 198 | 40 | 100 | 87.0 | 58984 | PASS |
| 443 | 442 | 17 | 23 | 19.1 | 11290 | PASS |

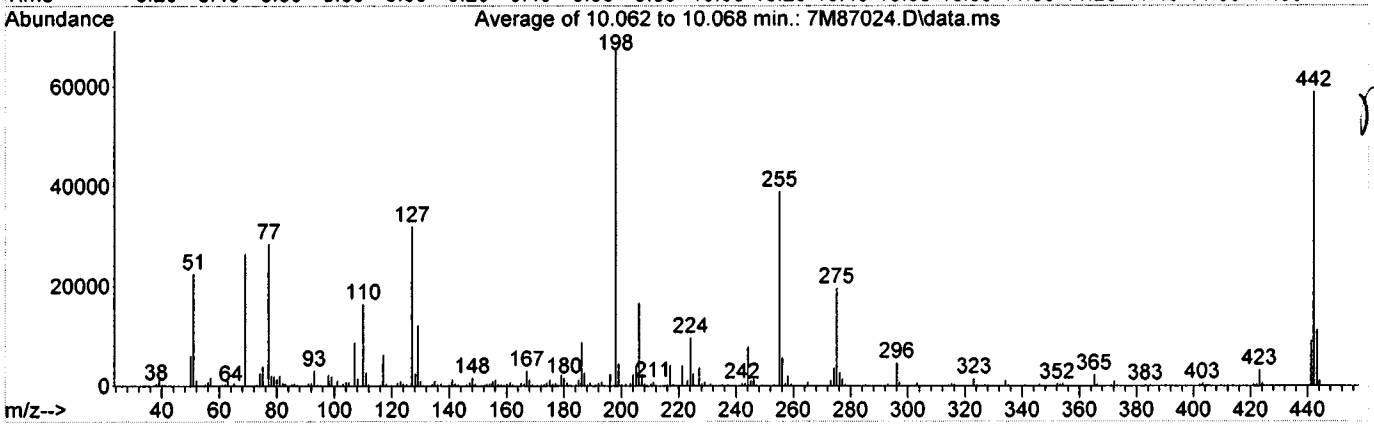
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 7M87025.D | CAL BNA@50PPM | 10/04/17 16:13 |
| 7M87026.D | SMB63067(MS) | 10/04/17 16:48 |
| 7M87027.D | SMB63071(MS) | 10/04/17 17:11 |
| 7M87028.D | SMB63071 | 10/04/17 17:35 |
| 7M87029.D | SMB63067 | 10/04/17 17:58 |
| 7M87030.D | AD00346-004 | 10/04/17 18:22 |
| 7M87031.D | AD00346-004(MS) | 10/04/17 18:45 |
| 7M87032.D | AD00346-004(MSD | 10/04/17 19:09 |
| 7M87033.D | AD00172-001 | 10/04/17 19:32 |
| 7M87034.D | AD00172-001(MS) | 10/04/17 19:55 |
| 7M87035.D | AD00172-001(MSD | 10/04/17 20:19 |
| 7M87036.D | AD00374-002 | 10/04/17 20:42 |
| 7M87037.D | AD00361-026(5X) | 10/04/17 21:05 |
| 7M87038.D | AD00361-028(5X) | 10/04/17 21:29 |
| 7M87039.D | AD00361-023(3X) | 10/04/17 21:52 |
| 7M87040.D | AD00275-030(3X) | 10/04/17 22:15 |
| 7M87041.D | AD00275-027(3X) | 10/04/17 22:38 |
| 7M87042.D | AD00275-028 | 10/04/17 23:01 |
| 7M87043.D | AD00275-029 | 10/04/17 23:25 |
| 7M87044.D | AD00275-031 | 10/04/17 23:48 |
| 7M87045.D | AD00275-032 | 10/05/17 00:11 |
| 7M87046.D | AD00275-033 | 10/05/17 00:35 |
| 7M87047.D | AD00275-034 | 10/05/17 00:58 |
| 7M87048.D | AD00286-001(3X) | 10/05/17 01:21 |

Data Path : G:\GcMsData\2017\GCMS_7\Data\10-0417\
Data File : 7M87024.D
Acq On : 4 Oct 2017 15:50
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2017\GCMS_7\METHODQT\7M_0911.M
Title : @GCMS_7,mg,625,8270
Last Update : Mon Sep 11 15:43:33 2017




Spectrum Information: Average of 10.062 to 10.068 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 33.1 | 22476 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 39.1 | 26524 | PASS |
| 70 | 69 | 0.00 | 2 | 0.5 | 125 | PASS |
| 127 | 198 | 40 | 60 | 47.2 | 31996 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 67828 | PASS |
| 199 | 198 | 5 | 9 | 6.6 | 4478 | PASS |
| 275 | 198 | 10 | 30 | 29.0 | 19644 | PASS |
| 365 | 198 | 1 | 100 | 3.4 | 2288 | PASS |
| 441 | 443 | 0.01 | 100 | 80.7 | 9113 | PASS |
| 442 | 198 | 40 | 100 | 87.0 | 58984 | PASS |
| 443 | 442 | 17 | 23 | 19.1 | 11290 | PASS |

Method: EPA 8270D

# Form 6
## Initial Calibration

Instrument: GCMS_10

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 10M64985.D | CAL BNA@50PPM | 09/11/17 12:53 | 2 | 10M64982.D | CAL BNA@2PPM | 09/11/17 11:46 |
| 3 | 10M64975.D | CAL BNA@10PPM | 09/11/17 09:07 | 4 | 10M64981.D | CAL BNA@20PPM | 09/11/17 11:23 |
| 5 | 10M64979.D | CAL BNA@80PPM | 09/11/17 10:39 | 6 | 10M64978.D | CAL BNA@120PPM | 09/11/17 10:17 |
| 7 | 10M64977.D | CAL BNA@160PPM | 09/11/17 09:55 | 8 | 10M64976.D | CAL BNA@196PPM | 09/11/17 09:32 |
| 9 | 10M64983.D | CAL BNA@.5PPM | 09/11/17 12:08 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 1 | 0 | Qua | 1.0601 | 1.4241 | 1.0861 | 1.0124 | 1.0517 | 0.9868 | 1.0213 | 1.0228 | 1.0994 | 1.09 | 2.53 | 0.999 | 0.999 | 12 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Pyridine | 1 | 0 | Avg | 2.8158 | 2.2933 | 2.3681 | 2.4254 | 2.9464 | 2.6773 | 2.8615 | 2.9264 | ----- | 2.66 | 3.00 | 0.998 | 0.998 | 10 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Nitrosodimethylamin | 1 | 0 | Qua | 1.5473 | 0.8309 | 1.2596 | 1.3839 | 1.5797 | 1.5628 | 1.6303 | 1.6459 | ----- | 1.43 | 2.91 | 0.999 | 1.00 | 19 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Fluorophenol | 1 | 0 | Avg | 2.6004 | 2.4060 | 2.4238 | 2.4521 | 2.7507 | 2.5765 | 2.6999 | 2.6699 | ----- | 2.57 | 4.55 | 0.999 | 0.999 | 5.1 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzaldehyde | 1 | 0 | Avg | 0.4650 | 0.4192 | 0.4131 | 0.4595 | 0.4710 | 0.4712 | 0.4789 | 0.4812 | ----- | 0.457 | 5.37 | 1.00 | 1.00 | 5.8 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Aniline | 1 | 0 | Avg | 4.1946 | 3.2044 | 3.3610 | 3.6873 | 4.2588 | 4.0569 | 4.1284 | 4.0212 | 2.7386 | 3.74 | 5.47 | 0.999 | 1.00 | 14 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Pentachloroethane | 1 | 0 | Avg | 1.0256 | 1.1971 | 1.0060 | 0.9903 | 1.0462 | 0.9841 | 0.9951 | 0.9940 | ----- | 1.03 | 5.51 | 1.00 | 1.00 | 6.9 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Chloroethyl)ether | 1 | 0 | Avg | 2.8719 | 3.3501 | 2.8392 | 2.8350 | 2.7805 | 2.6441 | 2.7274 | 2.5257 | 3.1043 | 2.85 | 5.53 | 0.997 | 0.999 | 8.6 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Phenol-d5 | 1 | 0 | Avg | 3.5295 | 3.6054 | 3.2599 | 3.3396 | 3.5386 | 3.3201 | 3.4968 | 3.3792 | ----- | 3.43 | 5.44 | 0.999 | 0.999 | 3.6 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Phenol | 1 | 0 | Avg | 3.9098 | 4.3703 | 3.6466 | 3.7395 | 3.9522 | 3.6327 | 3.8294 | 3.6268 | ----- | 3.84 | 5.45 | 0.998 | 0.998 | 6.5 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Chlorophenol | 1 | 0 | Avg | 3.1156 | 3.2917 | 2.9405 | 2.9842 | 3.1097 | 2.9409 | 3.0510 | 3.0170 | ----- | 3.06 | 5.57 | 0.999 | 0.999 | 3.8 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Decane | 1 | 0 | Avg | 2.9645 | 3.5512 | 2.9447 | 2.9673 | 2.8107 | 2.6240 | 2.6223 | 2.5794 | ----- | 2.88 | 5.63 | 0.999 | 0.999 | 11 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,3-Dichlorobenzene | 1 | 0 | Avg | 3.3095 | 4.0112 | 3.3374 | 3.3114 | 3.3808 | 3.1679 | 3.2855 | 3.2006 | ----- | 3.38 | 5.71 | 0.999 | 0.999 | 7.9 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,4-Dichlorobenzene | 1 | 0 | Avg | 1.6327 | 2.0319 | 1.6478 | 1.6164 | 1.5478 | 1.5055 | 1.5355 | 1.4760 | ----- | 1.62 | 5.76 | 0.999 | 0.999 | 11 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2-Dichlorobenzene | 1 | 0 | Avg | 1.5257 | 1.8481 | 1.5788 | 1.5523 | 1.4688 | 1.4316 | 1.4335 | 1.3917 | ----- | 1.53 | 5.89 | 0.999 | 1.00 | 9.4 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzyl alcohol | 1 | 0 | Avg | 0.9286 | 0.8977 | 0.8187 | 0.9072 | 0.9213 | 0.8701 | 0.9128 | 0.8910 | ----- | 0.893 | 5.87 | 0.999 | 0.999 | 4.0 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-chloroisopropyl)e | 1 | 0 | Avg | 1.7675 | 2.2017 | 1.7590 | 1.7280 | 1.6487 | 1.5653 | 1.6136 | 1.5229 | ----- | 1.73 | 5.98 | 0.998 | 0.999 | 12 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Methylphenol | 1 | 0 | Qua | 1.3150 | 1.4851 | 1.2953 | 1.2763 | 1.2882 | 1.2351 | 1.2753 | 1.2236 | 1.2995 | 1.30 | 5.96 | 0.999 | 0.999 | 5.8 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Acetophenone | 1 | 0 | Avg | 1.8185 | 2.0244 | 1.7877 | 1.8420 | 1.7587 | 1.6027 | 1.6442 | 1.5205 | ----- | 1.75 | 6.08 | 0.996 | 0.999 | 9.0 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Hexachloroethane | 1 | 0 | Avg | 0.5931 | 0.6858 | 0.5618 | 0.5730 | 0.5731 | 0.5421 | 0.5592 | 0.5387 | ----- | 0.578 | 6.17 | 0.999 | 0.999 | 8.1 | 0.30 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Nitroso-di-n-propyla | 1 | 0 | Avg | 0.9257 | 0.9942 | 0.8902 | 0.9485 | 0.8951 | 0.8089 | 0.8282 | 0.7706 | 0.9103 | 0.886 | 6.08 | 0.996 | 0.999 | 8.0 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 3&4-Methylphenol | 1 | 0 | Avg | 1.3321 | 1.5286 | 1.3154 | 1.3860 | 1.3071 | 1.1715 | 1.2116 | 1.0960 | 1.2577 | 1.29 | 6.08 | 0.993 | 0.998 | 9.8 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Nitrobenzene-d5 | 1 | 0 | Avg | 0.1749 | 0.1765 | 0.1535 | 0.1647 | 0.1773 | 0.1758 | 0.1780 | 0.1719 | ----- | 0.172 | 6.20 | 0.999 | 1.00 | 4.9 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 98.00 | |
| Nitrobenzene | 1 | 0 | Avg | 0.3561 | 0.3771 | 0.3389 | 0.3466 | 0.3426 | 0.3289 | 0.3378 | 0.3302 | ----- | 0.345 | 6.21 | 0.999 | 1.00 | 4.6 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Isophorone | 1 | 0 | Avg | 0.6437 | 0.6806 | 0.5904 | 0.6293 | 0.6352 | 0.5985 | 0.6159 | 0.6028 | ----- | 0.625 | 6.40 | 0.999 | 0.999 | 4.7 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Nitrophenol | 1 | 0 | Avg | 0.1968 | 0.1751 | 0.1664 | 0.1835 | 0.2057 | 0.1960 | 0.2011 | 0.1977 | ----- | 0.190 | 6.47 | 0.999 | 0.999 | 7.2 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dimethylphenol | 1 | 0 | Qua | 0.3593 | 0.3845 | 0.3415 | 0.3490 | 0.3550 | 0.3333 | 0.3451 | 0.3305 | 0.3341 | 0.348 | 6.49 | 0.999 | 0.999 | 4.9 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Benzoic Acid | 1 | 0 | Qua | 0.3373 | ----- | 0.0563 | 0.2124 | 0.4304 | 0.4464 | 0.4841 | 0.4605 | ----- | 0.347 | 6.59 | 0.997 | 0.997 | 46 | | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Chloroethoxy)me | 1 | 0 | Avg | 0.4155 | 0.4646 | 0.4060 | 0.4032 | 0.4027 | 0.3696 | 0.3866 | 0.3648 | ----- | 0.402 | 6.57 | 0.997 | 0.998 | 7.7 | 0.30 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dichlorophenol | 1 | 0 | Qua | 0.3176 | 0.3141 | 0.2888 | 0.3079 | 0.3237 | 0.3025 | 0.3103 | 0.2905 | 0.2238 | 0.298 | 6.65 | 0.997 | 0.999 | 10 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 1,2,4-Trichlorobenzen | 1 | 0 | Avg | 0.3417 | 0.4175 | 0.3351 | 0.3325 | 0.3392 | 0.3146 | 0.3229 | 0.3170 | ----- | 0.340 | 6.72 | 0.999 | 0.999 | 9.7 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Naphthalene | 1 | 0 | Qua | 1.1548 | 1.4265 | 1.1039 | 1.0909 | 1.0834 | 1.0003 | 1.0180 | 0.9688 | 1.3895 | 1.14 | 6.78 | 0.997 | 0.999 | 14 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 4-Chloroaniline | 1 | 0 | Qua | 0.4126 | 0.3984 | 0.3527 | 0.3730 | 0.3771 | 0.3415 | 0.3075 | 0.2623 | 0.3386 | 0.352 | 6.81 | 0.965 | 0.999 | 13 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Hexachlorobutadiene | 1 | 0 | Avg | 0.1911 | 0.2262 | 0.1889 | 0.1892 | 0.1941 | 0.1840 | 0.1904 | 0.1876 | ----- | 0.194 | 6.87 | 1.00 | 1.00 | 6.9 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Caprolactam | 1 | 0 | Qua | 0.1169 | 0.0796 | 0.0842 | 0.1100 | 0.1201 | 0.1117 | 0.1306 | 0.1226 | ----- | 0.109 | 7.09 | 0.995 | 0.995 | 17 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Chloro-3-methylphe | 1 | 0 | Avg | 0.3192 | 0.3095 | 0.2919 | 0.2998 | 0.3173 | 0.2952 | 0.3091 | 0.2911 | ----- | 0.304 | 7.17 | 0.998 | 0.999 | 3.7 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Methylnaphthalene | 1 | 0 | Avg | 0.7718 | 0.9317 | 0.7760 | 0.7665 | 0.7501 | 0.6888 | 0.7168 | 0.6614 | ----- | 0.758 | 7.31 | 0.996 | 0.998 | 11 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1-Methylnaphthalene | 1 | 0 | Avg | 0.7503 | 0.9068 | 0.7604 | 0.7280 | 0.7170 | 0.6581 | 0.6895 | 0.6474 | ----- | 0.732 | 7.39 | 0.997 | 0.998 | 11 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Methylnaphthalenes ( | 1 | 0 | Avg | 0.7606 | 0.9171 | 0.7648 | 0.7520 | 0.7299 | 0.6734 | 0.6993 | 0.6513 | ----- | 0.744 | 7.31 | 0.997 | 0.998 | 11 | | 100.0 | 4.00 | 20.00 | 40.00 | 160.0 | 240.0 | 320.0 | 392.0 | |
| 1,1'-Biphenyl | 1 | 0 | Avg | 1.0068 | 1.2421 | 1.0208 | 0.9880 | 0.9803 | 0.9112 | 0.9236 | 0.8729 | ----- | 0.993 | 7.67 | 0.997 | 0.999 | 11 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2,4,5-Tetrachloroben | 1 | 0 | Avg | 0.5551 | 0.6764 | 0.5389 | 0.5473 | 0.5291 | 0.5119 | 0.5214 | 0.5082 | ----- | 0.549 | 7.44 | 0.999 | 1.00 | 9.9 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |

Avg Rsd: 9.45

***Flags***

***a - failed the min rf criteria***

***c - failed the minimum correlation coeff criteria(if applicable)***

***Note:***

***Corr 1 = Correlation Coefficient for linear Eq.***

***Corr 2 = Correlation Coefficient for quad Eq.***

***Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.***

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Method: EPA 8270D

# Form 6
## Initial Calibration

Instrument: GCMS_10

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 10M64985.D | CAL BNA@50PPM | 09/11/17 12:53 | 2 | 10M64982.D | CAL BNA@2PPM | 09/11/17 11:46 |
| 3 | 10M64975.D | CAL BNA@10PPM | 09/11/17 09:07 | 4 | 10M64981.D | CAL BNA@20PPM | 09/11/17 11:23 |
| 5 | 10M64979.D | CAL BNA@80PPM | 09/11/17 10:39 | 6 | 10M64978.D | CAL BNA@120PPM | 09/11/17 10:17 |
| 7 | 10M64977.D | CAL BNA@160PPM | 09/11/17 09:55 | 8 | 10M64976.D | CAL BNA@196PPM | 09/11/17 09:32 |
| 9 | 10M64983.D | CAL BNA@.5PPM | 09/11/17 12:08 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopenta | 1 | 0 | Qua | 0.3169 | 0.1786 | 0.2137 | 0.2746 | 0.3327 | 0.3349 | 0.3397 | 0.3403 | ---- | 0.291 | 7.43 | 1.00 | 1.00 | 22 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,6-Trichlorophenol | 1 | 0 | Avg | 0.4023 | 0.3348 | 0.3222 | 0.3518 | 0.3695 | 0.3742 | 0.3621 | 0.3583 | ---- | 0.359 | 7.52 | 0.999 | 1.00 | 6.8 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,5-Trichlorophenol | 1 | 0 | Avg | 0.3748 | 0.3509 | 0.3618 | 0.3822 | 0.4076 | 0.3630 | 0.3928 | 0.3871 | ---- | 0.378 | 7.56 | 0.999 | 0.999 | 4.9 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Fluorobiphenyl | 1 | 0 | Avg | 1.3840 | 1.6338 | 1.3148 | 1.3350 | 1.3505 | 1.2815 | 1.3232 | 1.2869 | ---- | 1.36 | 7.59 | 0.999 | 1.00 | 8.4 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 98.00 | |
| 2-Chloronaphthalene | 1 | 0 | Avg | 1.1345 | 1.4336 | 1.1200 | 1.1150 | 1.1211 | 1.0523 | 1.0635 | 1.0298 | ---- | 1.13 | 7.70 | 0.999 | 1.00 | 11 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,4-Dimethylnaphthale | 1 | 0 | Avg | 0.9966 | 1.2432 | 0.9897 | 0.9934 | 0.9537 | 0.8827 | 0.8778 | 0.8178 | ---- | 0.969 | 7.97 | 0.996 | 1.00 | 13 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dimethylnaphthalenes | 1 | 0 | Avg | 0.9966 | 1.2432 | 0.9897 | 0.9934 | 0.9537 | 0.8827 | 0.8778 | 0.8178 | ---- | 0.969 | 7.97 | 0.996 | 1.00 | 13 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Diphenyl Ether | 1 | 0 | Avg | 0.8185 | 1.0169 | 0.7924 | 0.8081 | 0.7899 | 0.7441 | 0.7464 | 0.7076 | ---- | 0.803 | 7.76 | 0.997 | 1.00 | 12 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Nitroaniline | 1 | 0 | Avg | 0.3705 | 0.3434 | 0.3158 | 0.3543 | 0.3635 | 0.3416 | 0.3528 | 0.3327 | ---- | 0.347 | 7.77 | 0.998 | 0.999 | 5.0 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Coumarin | 1 | 0 | Avg | 0.5320 | 0.5921 | 0.5163 | 0.5280 | 0.5122 | 0.4783 | 0.4918 | 0.4548 | ---- | 0.513 | 7.96 | 0.996 | 0.999 | 8.0 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Acenaphthylene | 1 | 0 | Avg | 1.8223 | 2.0202 | 1.7326 | 1.7443 | 1.7724 | 1.6492 | 1.6747 | 1.6048 | ---- | 1.75 | 8.05 | 0.998 | 0.999 | 7.3 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dimethylphthalate | 1 | 0 | Avg | 1.3423 | 1.5052 | 1.2785 | 1.2958 | 1.2957 | 1.2240 | 1.2390 | 1.2181 | ---- | 1.30 | 7.92 | 0.999 | 1.00 | 7.2 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,6-Dinitrotoluene | 1 | 0 | Avg | 0.3057 | 0.2874 | 0.2830 | 0.2924 | 0.2953 | 0.2750 | 0.2729 | 0.2522 | ---- | 0.283 | 7.97 | 0.996 | 0.999 | 5.8 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Acenaphthene | 1 | 0 | Avg | 1.1528 | 1.4734 | 1.1475 | 1.1404 | 1.1088 | 1.0430 | 1.0533 | 1.0084 | ---- | 1.14 | 8.20 | 0.998 | 1.00 | 13 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 3-Nitroaniline | 1 | 0 | Avg | 0.3307 | 0.2819 | 0.2837 | 0.3191 | 0.2996 | 0.2687 | 0.2623 | 0.2404 | ---- | 0.286 | 8.12 | 0.988 | 0.999 | 10 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dinitrophenol | 1 | 0 | Qua | 0.1306 | ---- | 0.0200 | 0.0754 | 0.1635 | 0.1745 | 0.1937 | 0.1849 | ---- | 0.135 | 8.21 | 0.996 | 0.997 | 48 | 0.01 | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dibenzofuran | 1 | 0 | Qua | 1.6995 | 2.0874 | 1.6507 | 1.6477 | 1.6446 | 1.5310 | 1.5765 | 1.5220 | 2.0824 | 1.72 | 8.35 | 0.999 | 0.999 | 13 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 2,4-Dinitrotoluene | 1 | 0 | Avg | 0.4205 | 0.3332 | 0.3442 | 0.3973 | 0.4201 | 0.3945 | 0.4245 | 0.4015 | ---- | 0.392 | 8.33 | 0.999 | 0.999 | 8.9 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Nitrophenol | 1 | 0 | Qua | 0.2458 | 0.1516 | 0.1818 | 0.2149 | 0.2361 | 0.2268 | 0.2381 | 0.2282 | ---- | 0.215 | 8.25 | 0.999 | 0.999 | 15 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,3,4,6-Tetrachlorophe | 1 | 0 | Avg | 0.3519 | 0.3085 | 0.3092 | 0.3207 | 0.3612 | 0.3364 | 0.3591 | 0.3514 | ---- | 0.337 | 8.46 | 0.999 | 0.999 | 6.5 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Fluorene | 1 | 0 | Avg | 1.3611 | 1.6409 | 1.3348 | 1.3287 | 1.3033 | 1.2027 | 1.2426 | 1.1614 | ---- | 1.32 | 8.67 | 0.997 | 0.999 | 11 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Chlorophenyl-phenyl | 1 | 0 | Avg | 0.6580 | 0.7461 | 0.6362 | 0.6538 | 0.6525 | 0.5974 | 0.6318 | 0.6018 | ---- | 0.647 | 8.66 | 0.998 | 0.998 | 7.1 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Diethylphthalate | 1 | 0 | Avg | 1.2988 | 1.4701 | 1.2244 | 1.2473 | 1.3046 | 1.2115 | 1.2728 | 1.2082 | ---- | 1.28 | 8.55 | 0.998 | 0.999 | 6.7 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Nitroaniline | 1 | 0 | Avg | 0.3883 | 0.3314 | 0.3161 | 0.3661 | 0.3795 | 0.3588 | 0.3905 | 0.3623 | ---- | 0.362 | 8.67 | 0.998 | 0.998 | 7.3 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Atrazine | 1 | 0 | Avg | 0.2774 | 0.2526 | 0.2219 | 0.2541 | 0.2817 | 0.2535 | 0.2816 | 0.2600 | ---- | 0.260 | 9.30 | 0.996 | 0.996 | 7.7 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,6-Dinitro-2-methylph | 1 | 0 | Qua | 0.1287 | ---- | 0.0602 | 0.0967 | 0.1430 | 0.1413 | 0.1508 | 0.1538 | ---- | 0.125 | 8.71 | 0.999 | 1.00 | 28 | 0.01 | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| n-Nitrosodiphenylamin | 1 | 0 | Avg | 0.6800 | 0.7467 | 0.6592 | 0.6429 | 0.6427 | 0.6143 | 0.6231 | 0.6178 | ---- | 0.653 | 8.77 | 0.999 | 1.00 | 6.7 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,6-Tribromophenol | 1 | 0 | Qua | 0.1188 | 0.0928 | 0.0950 | 0.1037 | 0.1190 | 0.1173 | 0.1225 | 0.1263 | ---- | 0.112 | 8.90 | 0.999 | 1.00 | 12 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2-Diphenylhydrazine | 1 | 0 | Avg | 0.7209 | 0.7381 | 0.6709 | 0.6597 | 0.6680 | 0.6424 | 0.6384 | 0.7047 | ---- | 0.680 | 8.81 | 0.997 | 0.998 | 5.4 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Bromophenyl-phenyl | 1 | 0 | Avg | 0.2335 | 0.2346 | 0.2167 | 0.2166 | 0.2289 | 0.2213 | 0.2260 | 0.2276 | ---- | 0.226 | 9.15 | 1.00 | 1.00 | 3.1 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Hexachlorobenzene | 1 | 0 | Avg | 0.2472 | 0.2937 | 0.2326 | 0.2304 | 0.2412 | 0.2352 | 0.2438 | 0.2446 | ---- | 0.246 | 9.21 | 0.998 | 0.999 | 8.2 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Octadecane | 1 | 0 | Avg | 0.4609 | 0.4198 | 0.4175 | 0.4267 | 0.4241 | 0.3986 | 0.3939 | 0.3780 | ---- | 0.415 | 9.49 | 0.997 | 0.999 | 6.1 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Pentachlorophenol | 1 | 0 | Qua | 0.1327 | ---- | 0.0634 | 0.0935 | 0.1449 | 0.1475 | 0.1555 | 0.1591 | ---- | 0.128 | 9.41 | 0.999 | 1.00 | 28 | 0.05 | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Phenanthrene | 1 | 0 | Avg | 1.1755 | 1.4418 | 1.1589 | 1.1476 | 1.1145 | 1.0470 | 1.0745 | 1.0391 | ---- | 1.15 | 9.64 | 0.999 | 0.999 | 11 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Anthracene | 1 | 0 | Avg | 1.1826 | 1.3522 | 1.1454 | 1.1359 | 1.1420 | 1.0855 | 1.0955 | 1.0654 | ---- | 1.15 | 9.70 | 0.999 | 1.00 | 7.8 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Carbazole | 1 | 0 | Avg | 1.1167 | 1.2016 | 1.0846 | 1.0783 | 1.0793 | 1.0072 | 1.0476 | 0.9986 | ---- | 1.08 | 9.86 | 0.998 | 0.999 | 6.0 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Di-n-butylphthalate | 1 | 0 | Qua | 1.2786 | 1.0950 | 1.0500 | 1.1718 | 1.2526 | 1.1956 | 1.2143 | 1.1779 | 1.0069 | 1.16 | 10.24 | 0.999 | 1.00 | 7.9 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Fluoranthene | 1 | 0 | Avg | 1.3030 | 1.3564 | 1.2143 | 1.2290 | 1.2383 | 1.1591 | 1.2105 | 1.1811 | ---- | 1.24 | 10.96 | 0.999 | 0.999 | 5.2 | 0.60 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Pyrene | 1 | 0 | Avg | 1.2157 | 1.2944 | 1.1433 | 1.1157 | 1.1728 | 1.0654 | 1.0790 | 1.0783 | ---- | 1.15 | 11.22 | 0.998 | 0.999 | 6.9 | 0.60 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzidine | 1 | 0 | Qua | 0.6028 | 0.2147 | 0.2860 | 0.4457 | 0.5716 | 0.5320 | 0.4952 | 0.4772 | ---- | 0.453 | 11.11 | 0.990 | 0.999 | 30 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Terphenyl-d14 | 1 | 0 | Avg | 0.6331 | 0.6402 | 0.5793 | 0.5758 | 0.6442 | 0.5962 | 0.6191 | 0.6366 | ---- | 0.616 | 11.41 | 0.999 | 0.999 | 4.5 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 96.00 | |

| *Flags* | *Note:* Avg Rsd: 9.45 |
|---|---|
| *a - failed the min rf criteria* | *Corr 1 = Correlation Coefficient for linear Eq.* |
| *c - failed the minimum correlation coeff criteria(if applicable)* | *Corr 2 = Correlation Coefficient for quad Eq.* |
| | *Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.* |

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Method: EPA 8270D

# Form 6
## Initial Calibration

Instrument: GCMS_10

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 10M64985.D | CAL BNA@50PPM | 09/11/17 12:53 | 2 | 10M64982.D | CAL BNA@2PPM | 09/11/17 11:46 |
| 3 | 10M64975.D | CAL BNA@10PPM | 09/11/17 09:07 | 4 | 10M64981.D | CAL BNA@20PPM | 09/11/17 11:23 |
| 5 | 10M64979.D | CAL BNA@80PPM | 09/11/17 10:39 | 6 | 10M64978.D | CAL BNA@120PPM | 09/11/17 10:17 |
| 7 | 10M64977.D | CAL BNA@160PPM | 09/11/17 09:55 | 8 | 10M64976.D | CAL BNA@196PPM | 09/11/17 09:32 |
| 9 | 10M64983.D | CAL BNA@.5PPM | 09/11/17 12:08 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 1 | 0 | Avg | 0.2675 | 0.2626 | 0.2320 | 0.2338 | 0.2708 | 0.2492 | 0.2627 | 0.2633 | ----- | 0.255 | 11.34 | 0.999 | 0.999 | 5.9 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,4'-DDD | 1 | 0 | Avg | 0.4939 | 0.4360 | 0.4286 | 0.4478 | 0.4981 | 0.4670 | 0.4873 | 0.4749 | ----- | 0.467 | 11.74 | 0.999 | 0.999 | 5.7 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Butylbenzylphthalate | 1 | 0 | Qua | 0.5170 | 0.3779 | 0.3797 | 0.4469 | 0.5229 | 0.4856 | 0.5064 | 0.4932 | ----- | 0.466 | 11.99 | 0.999 | 0.999 | 13 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,4'-DDT | 1 | 0 | Avg | 0.4307 | 0.3343 | 0.3620 | 0.3791 | 0.4378 | 0.4076 | 0.4252 | 0.4153 | ----- | 0.399 | 12.09 | 0.999 | 0.999 | 9.2 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 3,3'-Dichlorobenzidine | 1 | 0 | Qua | 0.3446 | 0.3131 | 0.3185 | 0.3142 | 0.3170 | 0.3104 | 0.2921 | 0.2742 | ----- | 0.311 | 12.61 | 0.993 | 1.00 | 6.6 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[a]anthracene | 1 | 0 | Avg | 1.1220 | 1.2411 | 1.0420 | 1.0490 | 1.0988 | 1.0490 | 1.0776 | 1.0655 | ----- | 1.09 | 12.63 | 1.00 | 1.00 | 6.0 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Chrysene | 1 | 0 | Avg | 1.0865 | 1.3022 | 1.0475 | 1.0389 | 1.0540 | 0.9951 | 1.0266 | 0.9732 | ----- | 1.07 | 12.68 | 0.999 | 0.999 | 9.6 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Ethylhexyl)phthal | 1 | 0 | Avg | 0.7123 | 0.4982 | 0.5454 | 0.6422 | 0.7132 | 0.6651 | 0.6677 | 0.6472 | ----- | 0.636 | 12.69 | 0.998 | 0.999 | 12 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Di-n-octylphthalate | 1 | 0 | Qua | 1.2986 | 0.8085 | 0.8517 | 1.1209 | 1.3242 | 1.2542 | 1.2821 | 1.2592 | ----- | 1.15 | 13.43 | 0.999 | 0.999 | 18 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[b]fluoranthene | 1 | 0 | Avg | 1.1509 | 1.3112 | 1.1196 | 1.1035 | 1.0958 | 1.0661 | 1.1702 | 1.2210 | ----- | 1.15 | 13.84 | 0.997 | 0.999 | 6.9 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[k]fluoranthene | 1 | 0 | Avg | 1.1195 | 1.2649 | 1.1197 | 1.1011 | 1.1515 | 1.0525 | 1.1256 | 1.1797 | ----- | 1.14 | 13.87 | 0.997 | 0.998 | 5.5 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[a]pyrene | 1 | 0 | Avg | 1.1533 | 1.1851 | 1.0326 | 1.0758 | 1.1462 | 1.0993 | 1.1317 | 1.1143 | ----- | 1.12 | 14.18 | 1.00 | 1.00 | 4.3 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Indeno[1,2,3-cd]pyren | 1 | 0 | Avg | 1.3004 | 1.3209 | 1.1994 | 1.1920 | 1.2929 | 1.2225 | 1.3468 | 1.3039 | ----- | 1.27 | 15.50 | 0.999 | 0.999 | 4.6 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dibenzo[a,h]anthracen | 1 | 0 | Avg | 1.1028 | 1.1541 | 1.0048 | 1.0038 | 1.0925 | 1.0420 | 1.1390 | 1.1102 | ----- | 1.08 | 15.52 | 0.998 | 0.998 | 5.4 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[g,h,i]perylene | 1 | 0 | Avg | 1.0875 | 1.2182 | 1.0414 | 1.0348 | 1.0840 | 1.0144 | 1.1246 | 1.1031 | ----- | 1.09 | 15.86 | 0.997 | 0.998 | 5.9 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |

*Flags*
*a - failed the min rf criteria*
*c - failed the minimum correlation coeff criteria(if applicable)*

*Note:* Avg Rsd: 9.45
*Corr 1 = Correlation Coefficient for linear Eq.*
*Corr 2 = Correlation Coefficient for quad Eq.*
*Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.*

7092827 0112

# Form 6
## Initial Calibration

Method: EPA 8270D

Instrument: GCMS_7

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 7M86409.D | CAL BNA@50PPM | 09/11/17 13:22 | 2 | 7M86411.D | CAL BNA@2PPM | 09/11/17 14:09 |
| 3 | 7M86403.D | CAL BNA@10PPM | 09/11/17 11:02 | 4 | 7M86410.D | CAL BNA@20PPM | 09/11/17 13:46 |
| 5 | 7M86407.D | CAL BNA@80PPM | 09/11/17 12:35 | 6 | 7M86406.D | CAL BNA@120PPM | 09/11/17 12:12 |
| 7 | 7M86405.D | CAL BNA@160PPM | 09/11/17 11:49 | 8 | 7M86404.D | CAL BNA@196PPM | 09/11/17 11:25 |
| 9 | 7M86413.D | CAL BNA@.5PPM | 09/11/17 15:05 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 1 | 0 | Qua | 1.0569 | 1.7276 | 1.2302 | 1.1017 | 1.0647 | 1.0295 | 1.0602 | 1.0125 | 0.4239 | 1.08 | 2.71 | 0.999 | 0.999 | 31 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Pyridine | 1 | 0 | Qua | 3.2878 | 2.9063 | 3.1981 | 3.1833 | 3.1918 | 3.1680 | 3.2757 | 3.4070 | ----- | 3.20 | 3.19 | 0.998 | 1.00 | 4.5 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Nitrosodimethylamin | 1 | 0 | Qua | 1.8639 | 1.4640 | 1.6667 | 1.6920 | 1.8879 | 1.9515 | 1.9631 | 1.9935 | ----- | 1.81 | 3.10 | 1.00 | 1.00 | 10 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Fluorophenol | 1 | 0 | Avg | 2.6190 | 2.3063 | 2.3331 | 2.4168 | 2.7055 | 2.8077 | 2.9298 | 2.9371 | ----- | 2.63 | 4.69 | 0.994 | 1.00 | 9.7 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzaldehyde | 1 | 0 | Avg | 0.5451 | 0.5814 | 0.5647 | 0.5725 | 0.5419 | 0.5192 | 0.5011 | 0.4768 | ----- | 0.538 | 5.51 | 0.997 | 1.00 | 6.8 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Aniline | 1 | 0 | Qua | 4.5737 | 3.3974 | 3.6271 | 4.0988 | 4.5567 | 4.6557 | 4.6932 | 4.6896 | 2.7945 | 4.12 | 5.60 | 1.00 | 1.00 | 17 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Pentachloroethane | 1 | 0 | Avg | 0.9143 | 1.0557 | 0.8934 | 0.9095 | 0.9118 | 0.9028 | 0.9308 | 0.9082 | ----- | 0.928 | 5.64 | 1.00 | 1.00 | 5.7 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Chloroethyl)ether | 1 | 0 | Qua | 2.8584 | 3.2662 | 2.9370 | 2.9766 | 2.7998 | 2.8107 | 2.8505 | 2.7884 | 3.1942 | 2.94 | 5.65 | 1.00 | 1.00 | 6.0 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Phenol-d5 | 1 | 0 | Avg | 3.6727 | 2.9597 | 3.2880 | 3.4887 | 3.7442 | 3.8553 | 3.9837 | 4.0427 | ----- | 3.63 | 5.57 | 0.999 | 1.00 | 10 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Phenol | 1 | 0 | Avg | 4.2285 | 3.7372 | 3.8210 | 4.0792 | 4.2048 | 4.3130 | 4.4020 | 4.4230 | ----- | 4.15 | 5.58 | 1.00 | 1.00 | 6.2 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Chlorophenol | 1 | 0 | Avg | 2.8003 | 2.5786 | 2.6268 | 2.7793 | 2.8375 | 2.9035 | 2.9783 | 2.9558 | ----- | 2.81 | 5.70 | 1.00 | 1.00 | 5.2 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Decane | 1 | 0 | Avg | 2.6209 | 3.3517 | 2.7773 | 2.7059 | 2.5578 | 2.4582 | 2.4418 | 2.2988 | ----- | 2.65 | 5.76 | 0.997 | 1.00 | 12 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,3-Dichlorobenzene | 1 | 0 | Avg | 2.9343 | 3.4856 | 3.0098 | 3.0052 | 2.9011 | 2.9044 | 2.9310 | 2.8597 | ----- | 3.00 | 5.84 | 1.00 | 1.00 | 6.7 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,4-Dichlorobenzene | 1 | 0 | Avg | 1.6368 | 2.0341 | 1.6261 | 1.5822 | 1.5787 | 1.5016 | 1.5238 | 1.4973 | ----- | 1.62 | 5.90 | 0.999 | 1.00 | 11 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2-Dichlorobenzene | 1 | 0 | Avg | 1.5532 | 1.9323 | 1.5559 | 1.5379 | 1.5129 | 1.4374 | 1.4608 | 1.4319 | ----- | 1.55 | 6.02 | 0.999 | 1.00 | 10 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzyl alcohol | 1 | 0 | Avg | 1.0640 | 0.8225 | 0.9793 | 0.9714 | 1.0622 | 1.0454 | 1.0645 | 1.0828 | ----- | 1.01 | 6.00 | 1.00 | 1.00 | 8.6 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-chloroisopropyl)e | 1 | 0 | Avg | 1.8832 | 2.2754 | 1.8928 | 1.8761 | 1.8026 | 1.7062 | 1.7045 | 1.6993 | ----- | 1.86 | 6.11 | 0.999 | 1.00 | 10 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Methylphenol | 1 | 0 | Qua | 1.5099 | 1.2841 | 1.3758 | 1.4443 | 1.4800 | 1.4437 | 1.4723 | 1.4896 | 1.1138 | 1.40 | 6.09 | 1.00 | 1.00 | 9.1 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Acetophenone | 1 | 0 | Avg | 2.1802 | 2.3715 | 2.1986 | 2.1997 | 2.0749 | 1.9370 | 1.8907 | 1.8463 | ----- | 2.09 | 6.21 | 0.997 | 1.00 | 8.8 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Hexachloroethane | 1 | 0 | Avg | 0.5909 | 0.7210 | 0.5835 | 0.5652 | 0.5829 | 0.5569 | 0.5713 | 0.5600 | ----- | 0.592 | 6.30 | 1.00 | 1.00 | 9.1 | 0.30 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Nitroso-di-n-propyla | 1 | 0 | Avg | 1.1875 | 1.2152 | 1.2006 | 1.2134 | 1.1220 | 1.0403 | 1.0093 | 0.9828 | 1.0408 | 1.11 | 6.21 | 0.995 | 1.00 | 8.5 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 3&4-Methylphenol | 1 | 0 | Qua | 1.5537 | 1.4489 | 1.4986 | 1.4981 | 1.4910 | 1.4059 | 1.3855 | 1.3639 | 0.9316 | 1.40 | 6.21 | 0.998 | 1.00 | 13 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Nitrobenzene-d5 | 1 | 0 | Avg | 0.1808 | 0.1687 | 0.1603 | 0.1633 | 0.1781 | 0.1742 | 0.1794 | 0.1754 | ----- | 0.173 | 6.33 | 1.00 | 1.00 | 4.4 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 98.00 | |
| Nitrobenzene | 1 | 0 | Avg | 0.4224 | 0.4736 | 0.4125 | 0.3965 | 0.4100 | 0.3891 | 0.3934 | 0.3851 | ----- | 0.410 | 6.34 | 0.999 | 1.00 | 7.0 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Isophorone | 1 | 0 | Avg | 0.8012 | 0.7702 | 0.7564 | 0.7507 | 0.7837 | 0.7476 | 0.7561 | 0.7460 | ----- | 0.764 | 6.54 | 0.999 | 1.00 | 2.6 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Nitrophenol | 1 | 0 | Qua | 0.2074 | 0.1553 | 0.1810 | 0.1793 | 0.2074 | 0.2031 | 0.2087 | 0.2062 | ----- | 0.194 | 6.60 | 1.00 | 1.00 | 10 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dimethylphenol | 1 | 0 | Qua | 0.3984 | 0.3569 | 0.3742 | 0.3747 | 0.3875 | 0.3729 | 0.3794 | 0.3704 | 0.2577 | 0.364 | 6.63 | 0.999 | 1.00 | 11 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Benzoic Acid | 1 | 0 | Qua | 0.2758 | ----- | 0.0087 | 0.0597 | 0.3846 | 0.4587 | 0.5015 | 0.5366 | ----- | 0.318 | 6.71 | 0.992 | 0.999 | 67 | | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Chloroethoxy)me | 1 | 0 | Avg | 0.4745 | 0.5103 | 0.4630 | 0.4533 | 0.4582 | 0.4345 | 0.4365 | 0.4278 | ----- | 0.457 | 6.70 | 0.999 | 1.00 | 5.8 | 0.30 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dichlorophenol | 1 | 0 | Qua | 0.3195 | 0.2359 | 0.2745 | 0.2891 | 0.3151 | 0.3071 | 0.3126 | 0.3043 | 0.1719 | 0.281 | 6.79 | 1.00 | 1.00 | 17 | 0.20 a | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 1,2,4-Trichlorobenzen | 1 | 0 | Avg | 0.3371 | 0.4113 | 0.3348 | 0.3255 | 0.3256 | 0.3126 | 0.3198 | 0.3102 | ----- | 0.335 | 6.85 | 0.999 | 1.00 | 9.7 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Naphthalene | 1 | 0 | Qua | 1.1200 | 1.4644 | 1.1372 | 1.0920 | 1.0769 | 1.0166 | 1.0202 | 0.9886 | 1.4970 | 1.16 | 6.92 | 0.999 | 1.00 | 16 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 4-Chloroaniline | 1 | 0 | Avg | 0.4080 | 0.3592 | 0.3710 | 0.3812 | 0.3758 | 0.4690 | 0.3988 | ----- | 0.2782 | 0.380 | 6.95 | 0.987 | 0.987 | 14 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | | 0.50 |
| Hexachlorobutadiene | 1 | 0 | Avg | 0.1862 | 0.2124 | 0.1797 | 0.1733 | 0.1794 | 0.1725 | 0.1770 | 0.1716 | ----- | 0.182 | 7.01 | 0.999 | 0.999 | 7.4 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Caprolactam | 1 | 0 | Qua | 0.1384 | 0.0763 | 0.1207 | 0.1242 | 0.1427 | 0.1417 | 0.1467 | 0.1618 | ----- | 0.132 | 7.22 | 0.994 | 0.998 | 20 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Chloro-3-methylphe | 1 | 0 | Qua | 0.3675 | 0.3174 | 0.3321 | 0.3311 | 0.3631 | 0.3545 | 0.3612 | 0.3615 | ----- | 0.349 | 7.32 | 1.00 | 1.00 | 5.4 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Methylnaphthalene | 1 | 0 | Avg | 0.8052 | 0.9515 | 0.8052 | 0.7761 | 0.7783 | 0.7444 | 0.7380 | 0.7121 | ----- | 0.789 | 7.46 | 0.998 | 1.00 | 9.3 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1-Methylnaphthalene | 1 | 0 | Avg | 0.7774 | 0.9143 | 0.7711 | 0.7461 | 0.7402 | 0.7069 | 0.7128 | 0.6891 | ----- | 0.757 | 7.54 | 0.999 | 1.00 | 9.3 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Methylnaphthalenes ( | 1 | 0 | Avg | 0.7904 | 0.9328 | 0.7873 | 0.7616 | 0.7582 | 0.7259 | 0.7250 | 0.7004 | ----- | 0.773 | 7.46 | 0.999 | 1.00 | 9.3 | | 100.0 | 4.00 | 20.00 | 40.00 | 160.0 | 240.0 | 320.0 | 392.0 | |
| 1,1'-Biphenyl | 1 | 0 | Avg | 1.0401 | 1.2568 | 1.0536 | 1.0102 | 0.9946 | 0.9579 | 0.9549 | 0.9317 | ----- | 1.03 | 7.83 | 0.999 | 1.00 | 10 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2,4,5-Tetrachloroben | 1 | 0 | Avg | 0.5442 | 0.6401 | 0.5074 | 0.5124 | 0.5177 | 0.4829 | 0.4927 | 0.4779 | ----- | 0.522 | 7.59 | 0.998 | 0.999 | 10 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |

***Flags***

***a - failed the min rf criteria***

***c - failed the minimum correlation coeff criteria(if applicable)***

***Note:*** Avg Rsd: 10.7

***Corr 1 = Correlation Coefficient for linear Eq.***

***Corr 2 = Correlation Coefficient for quad Eq.***

***Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.***

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Method: EPA 8270D

# Form 6
## Initial Calibration

Instrument: GCMS_7

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 7M86409.D | CAL BNA@50PPM | 09/11/17 13:22 | 2 | 7M86411.D | CAL BNA@2PPM | 09/11/17 14:09 |
| 3 | 7M86403.D | CAL BNA@10PPM | 09/11/17 11:02 | 4 | 7M86410.D | CAL BNA@20PPM | 09/11/17 13:46 |
| 5 | 7M86407.D | CAL BNA@80PPM | 09/11/17 12:35 | 6 | 7M86406.D | CAL BNA@120PPM | 09/11/17 12:12 |
| 7 | 7M86405.D | CAL BNA@160PPM | 09/11/17 11:49 | 8 | 7M86404.D | CAL BNA@196PPM | 09/11/17 11:25 |
| 9 | 7M86413.D | CAL BNA@.5PPM | 09/11/17 15:05 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopenta | 1 | 0 | Qua | 0.3114 | 0.1344 | 0.2053 | 0.2377 | 0.3163 | 0.3054 | 0.3207 | 0.3104 | ----- | 0.268 | 7.58 | 0.999 | 0.999 | 26 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,6-Trichlorophenol | 1 | 0 | Qua | 0.3809 | 0.2829 | 0.3097 | 0.3290 | 0.3801 | 0.3693 | 0.3645 | 0.3531 | ----- | 0.346 | 7.67 | 0.998 | 1.00 | 10 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,5-Trichlorophenol | 1 | 0 | Qua | 0.3899 | 0.3047 | 0.3681 | 0.3721 | 0.3814 | 0.3678 | 0.3927 | 0.3897 | ----- | 0.371 | 7.71 | 0.999 | 0.999 | 7.7 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Fluorobiphenyl | 1 | 0 | Avg | 1.3632 | 1.5825 | 1.3119 | 1.3073 | 1.3272 | 1.2405 | 1.2584 | 1.2185 | ----- | 1.33 | 7.74 | 0.999 | 1.00 | 8.6 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 98.00 | |
| 2-Chloronaphthalene | 1 | 0 | Qua | 1.1476 | 1.3218 | 1.0959 | 1.0862 | 1.0894 | 1.0192 | 1.0224 | 0.9866 | ----- | 1.10 | 7.85 | 0.998 | 0.999 | 9.6 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,4-Dimethylnaphthale | 1 | 0 | Avg | 1.0132 | 1.1686 | 1.0071 | 0.9897 | 0.9578 | 0.8828 | 0.8711 | 0.8101 | ----- | 0.963 | 8.13 | 0.995 | 1.00 | 11 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dimethylnaphthalenes | 1 | 0 | Avg | 1.0132 | 1.1686 | 1.0071 | 0.9897 | 0.9578 | 0.8828 | 0.8711 | 0.8101 | ----- | 0.963 | 8.13 | 0.995 | 1.00 | 11 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Diphenyl Ether | 1 | 0 | Avg | 0.8007 | 0.9205 | 0.7889 | 0.7735 | 0.7664 | 0.7171 | 0.7150 | 0.6845 | ----- | 0.771 | 7.91 | 0.997 | 1.00 | 9.4 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Nitroaniline | 1 | 0 | Avg | 0.4406 | 0.3650 | 0.4008 | 0.4078 | 0.4240 | 0.3970 | 0.3954 | 0.3818 | ----- | 0.402 | 7.93 | 0.998 | 1.00 | 5.8 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Coumarin | 1 | 0 | Avg | 0.5583 | 0.5743 | 0.5450 | 0.5400 | 0.5412 | 0.5101 | 0.5097 | 0.4885 | ----- | 0.533 | 8.11 | 0.998 | 1.00 | 5.3 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Acenaphthylene | 1 | 0 | Avg | 1.8267 | 1.9410 | 1.7376 | 1.7398 | 1.7476 | 1.6343 | 1.6372 | 1.5881 | ----- | 1.73 | 8.21 | 0.998 | 1.00 | 6.6 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dimethylphthalate | 1 | 0 | Avg | 1.3940 | 1.5062 | 1.3589 | 1.3316 | 1.3617 | 1.2812 | 1.2858 | 1.2561 | ----- | 1.35 | 8.07 | 0.999 | 1.00 | 5.9 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,6-Dinitrotoluene | 1 | 0 | Avg | 0.3213 | 0.2703 | 0.2946 | 0.3078 | 0.3114 | 0.2918 | 0.2851 | 0.2669 | ----- | 0.294 | 8.13 | 0.995 | 1.00 | 6.6 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Acenaphthene | 1 | 0 | Avg | 1.1834 | 1.3863 | 1.1575 | 1.1296 | 1.1341 | 1.0487 | 1.0433 | 1.0071 | ----- | 1.14 | 8.36 | 0.997 | 0.999 | 10 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 3-Nitroaniline | 1 | 0 | Qua | 0.3477 | 0.2591 | 0.3199 | 0.3270 | 0.3409 | 0.3161 | 0.3002 | 0.2879 | ----- | 0.312 | 8.28 | 0.994 | 1.00 | 9.3 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dinitrophenol | 1 | 0 | Qua | 0.1251 | ----- | 0.0201 | 0.0486 | 0.1647 | 0.1715 | 0.1893 | 0.1898 | ----- | 0.130 | 8.37 | 0.997 | 0.998 | 53 | 0.01 | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dibenzofuran | 1 | 0 | Qua | 1.7181 | 2.1102 | 1.7063 | 1.6642 | 1.6620 | 1.5520 | 1.5464 | 1.4992 | 2.1149 | 1.73 | 8.52 | 0.998 | 1.00 | 13 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 2,4-Dinitrotoluene | 1 | 0 | Qua | 0.4499 | 0.3098 | 0.3909 | 0.4035 | 0.4500 | 0.4352 | 0.4410 | 0.4390 | ----- | 0.415 | 8.49 | 1.00 | 1.00 | 11 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Nitrophenol | 1 | 0 | Qua | 0.2678 | 0.1064 | 0.1833 | 0.2272 | 0.2784 | 0.2808 | 0.2856 | 0.2928 | ----- | 0.240 | 8.41 | 0.999 | 1.00 | 27 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,3,4,6-Tetrachlorophe | 1 | 0 | Qua | 0.3547 | 0.2158 | 0.3115 | 0.3107 | 0.3724 | 0.3631 | 0.3664 | 0.3614 | ----- | 0.332 | 8.63 | 1.00 | 1.00 | 16 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Fluorene | 1 | 0 | Avg | 1.3871 | 1.5767 | 1.3733 | 1.3429 | 1.3385 | 1.2466 | 1.2354 | 1.1928 | ----- | 1.34 | 8.84 | 0.998 | 1.00 | 9.0 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Chlorophenyl-phenyl | 1 | 0 | Avg | 0.6822 | 0.7906 | 0.6586 | 0.6436 | 0.6632 | 0.6342 | 0.6473 | 0.6299 | ----- | 0.669 | 8.83 | 0.999 | 1.00 | 7.8 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Diethylphthalate | 1 | 0 | Avg | 1.3893 | 1.3782 | 1.3233 | 1.3223 | 1.3738 | 1.3138 | 1.3144 | 1.2861 | ----- | 1.34 | 8.71 | 0.999 | 1.00 | 2.8 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Nitroaniline | 1 | 0 | Qua | 0.4071 | 0.2895 | 0.3768 | 0.3682 | 0.4058 | 0.3878 | 0.3919 | 0.3887 | ----- | 0.377 | 8.84 | 1.00 | 1.00 | 10 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Atrazine | 1 | 0 | Qua | 0.2893 | 0.2327 | 0.2526 | 0.2622 | 0.2942 | 0.2894 | 0.2934 | 0.2907 | ----- | 0.276 | 9.46 | 1.00 | 1.00 | 8.5 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,6-Dinitro-2-methylph | 1 | 0 | Qua | 0.1206 | ----- | 0.0493 | 0.0743 | 0.1333 | 0.1352 | 0.1441 | 0.1442 | ----- | 0.114 | 8.87 | 0.999 | 0.999 | 33 | 0.01 | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| n-Nitrosodiphenylamin | 1 | 0 | Avg | 0.6456 | 0.6645 | 0.6202 | 0.6184 | 0.6244 | 0.5865 | 0.5934 | 0.5810 | ----- | 0.617 | 8.94 | 0.999 | 1.00 | 4.7 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,6-Tribromophenol | 1 | 0 | Qua | 0.1046 | 0.0601 | 0.0841 | 0.0930 | 0.1096 | 0.1081 | 0.1141 | 0.1153 | ----- | 0.0987 | 9.07 | 0.999 | 1.00 | 19 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2-Diphenylhydrazine | 1 | 0 | Avg | 0.7945 | 0.7795 | 0.7536 | 0.7626 | 0.7560 | 0.7011 | 0.7019 | 0.6713 | ----- | 0.740 | 8.98 | 0.997 | 1.00 | 5.9 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Bromophenyl-phenyl | 1 | 0 | Avg | 0.2204 | 0.2281 | 0.2030 | 0.2075 | 0.2207 | 0.2158 | 0.2210 | 0.2208 | ----- | 0.217 | 9.31 | 1.00 | 1.00 | 3.8 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Hexachlorobenzene | 1 | 0 | Avg | 0.2404 | 0.2720 | 0.2249 | 0.2273 | 0.2376 | 0.2321 | 0.2389 | 0.2364 | ----- | 0.239 | 9.39 | 0.999 | 0.999 | 6.1 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Octadecane | 1 | 0 | Avg | 0.4542 | 0.4015 | 0.4146 | 0.4297 | 0.4288 | 0.3851 | 0.3813 | 0.3497 | ----- | 0.406 | 9.66 | 0.991 | 0.999 | 8.2 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Pentachlorophenol | 1 | 0 | Qua | 0.1132 | ----- | 0.0547 | 0.0669 | 0.1336 | 0.1409 | 0.1497 | 0.1532 | ----- | 0.116 | 9.59 | 0.998 | 1.00 | 35 | 0.05 | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Phenanthrene | 1 | 0 | Avg | 1.1356 | 1.3962 | 1.1331 | 1.1027 | 1.0966 | 1.0266 | 1.0277 | 1.0034 | ----- | 1.12 | 9.82 | 0.998 | 1.00 | 11 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Anthracene | 1 | 0 | Avg | 1.1544 | 1.2164 | 1.1237 | 1.1108 | 1.1206 | 1.0514 | 1.0574 | 1.0187 | ----- | 1.11 | 9.88 | 0.998 | 1.00 | 5.7 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Carbazole | 1 | 0 | Avg | 1.1165 | 1.1463 | 1.0944 | 1.0685 | 1.0898 | 1.0369 | 1.0306 | 1.0114 | ----- | 1.07 | 10.04 | 0.999 | 1.00 | 4.3 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Di-n-butylphthalate | 1 | 0 | Qua | 1.2994 | 0.9796 | 1.1302 | 1.1783 | 1.2849 | 1.2380 | 1.2320 | 1.1992 | 0.7501 | 1.14 | 10.42 | 0.999 | 1.00 | 15 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Fluoranthene | 1 | 0 | Avg | 1.2958 | 1.3448 | 1.2405 | 1.2340 | 1.2908 | 1.2338 | 1.2236 | 1.2027 | ----- | 1.26 | 11.15 | 0.999 | 1.00 | 3.8 | 0.60 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Pyrene | 1 | 0 | Avg | 1.1463 | 1.1185 | 1.0327 | 1.0654 | 1.1137 | 1.0672 | 1.0823 | 1.0533 | ----- | 1.08 | 11.41 | 0.999 | 1.00 | 3.5 | 0.60 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzidine | 1 | 0 | Qua | 0.5749 | 0.1828 | 0.3492 | 0.4147 | 0.5808 | 0.5470 | 0.5042 | 0.4748 | ----- | 0.454 | 11.30 | 0.988 | 0.999 | 30 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Terphenyl-d14 | 1 | 0 | Avg | 0.6063 | 0.5887 | 0.5356 | 0.5524 | 0.6119 | 0.6009 | 0.6220 | 0.6334 | ----- | 0.594 | 11.59 | 0.999 | 1.00 | 5.7 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 96.00 | |

***Flags***

***a - failed the min rf criteria***

***c - failed the minimum correlation coeff criteria(if applicable)***

***Note:*** Avg Rsd: 10.7

***Corr 1 = Correlation Coefficient for linear Eq.***

***Corr 2 = Correlation Coefficient for quad Eq.***

***Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.***

7092827 0114

Method: EPA 8270D

# Form 6
## Initial Calibration

Instrument: GCMS_7

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 7M86409.D | CAL BNA@50PPM | 09/11/17 13:22 | 2 | 7M86411.D | CAL BNA@2PPM | 09/11/17 14:09 |
| 3 | 7M86403.D | CAL BNA@10PPM | 09/11/17 11:02 | 4 | 7M86410.D | CAL BNA@20PPM | 09/11/17 13:46 |
| 5 | 7M86407.D | CAL BNA@80PPM | 09/11/17 12:35 | 6 | 7M86406.D | CAL BNA@120PPM | 09/11/17 12:12 |
| 7 | 7M86405.D | CAL BNA@160PPM | 09/11/17 11:49 | 8 | 7M86404.D | CAL BNA@196PPM | 09/11/17 11:25 |
| 9 | 7M86413.D | CAL BNA@.5PPM | 09/11/17 15:05 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 1 | 0 | Avg | 0.2491 | 0.2314 | 0.2154 | 0.2259 | 0.2500 | 0.2502 | 0.2570 | 0.2556 | ----- | 0.242 | 11.53 | 1.00 | 1.00 | 6.4 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,4'-DDD | 1 | 0 | Avg | 0.4932 | 0.3884 | 0.4124 | 0.4352 | 0.4965 | 0.4864 | 0.5021 | 0.4922 | ----- | 0.463 | 11.93 | 0.999 | 0.999 | 9.6 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Butylbenzylphthalate | 1 | 0 | Qua | 0.5238 | 0.3139 | 0.4132 | 0.4464 | 0.5280 | 0.5138 | 0.5252 | 0.5156 | ----- | 0.473 | 12.18 | 1.00 | 1.00 | 16 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,4'-DDT | 1 | 0 | Avg | 0.4200 | 0.2380 | 0.3282 | 0.3566 | 0.4266 | 0.4132 | 0.4258 | 0.4104 | ----- | 0.377 | 12.28 | 0.999 | 0.999 | 18 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 3,3'-Dichlorobenzidine | 1 | 0 | Qua | 0.3786 | 0.2498 | 0.3294 | 0.3260 | 0.3830 | 0.3651 | 0.3341 | 0.3180 | ----- | 0.336 | 12.80 | 0.991 | 0.999 | 13 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[a]anthracene | 1 | 0 | Avg | 1.1504 | 1.2133 | 1.0945 | 1.0751 | 1.1423 | 1.0972 | 1.1018 | 1.0812 | ----- | 1.12 | 12.83 | 0.999 | 1.00 | 4.2 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Chrysene | 1 | 0 | Avg | 1.0585 | 1.2638 | 1.0406 | 1.0279 | 1.0493 | 0.9917 | 0.9954 | 0.9572 | ----- | 1.05 | 12.87 | 0.999 | 1.00 | 8.9 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Ethylhexyl)phthal | 1 | 0 | Qua | 0.7134 | 0.4678 | 0.6044 | 0.6299 | 0.6972 | 0.6497 | 0.6410 | 0.6131 | ----- | 0.627 | 12.87 | 0.996 | 1.00 | 12 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Di-n-octylphthalate | 1 | 0 | Qua | 1.3528 | 0.6832 | 1.0555 | 1.0930 | 1.3747 | 1.3346 | 1.3539 | 1.2875 | ----- | 1.19 | 13.63 | 0.998 | 0.999 | 20 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[b]fluoranthene | 1 | 0 | Avg | 1.3013 | 1.2146 | 1.1738 | 1.1429 | 1.2726 | 1.1706 | 1.2074 | 1.2169 | ----- | 1.21 | 14.07 | 0.999 | 0.999 | 4.4 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[k]fluoranthene | 1 | 0 | Avg | 1.2503 | 1.3108 | 1.0829 | 1.1410 | 1.2341 | 1.0462 | 1.1616 | 1.1014 | ----- | 1.17 | 14.10 | 0.995 | 0.995 | 7.9 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[a]pyrene | 1 | 0 | Avg | 1.1784 | 1.1015 | 1.0550 | 1.0510 | 1.1703 | 1.1367 | 1.1552 | 1.1344 | ----- | 1.12 | 14.43 | 1.00 | 1.00 | 4.4 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Indeno[1,2,3-cd]pyren | 1 | 0 | Avg | 1.1836 | 1.1540 | 1.0734 | 1.0760 | 1.2041 | 1.1535 | 1.1925 | 1.1697 | ----- | 1.15 | 15.83 | 0.999 | 0.999 | 4.4 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dibenzo[a,h]anthracen | 1 | 0 | Avg | 1.0018 | 0.9772 | 0.9137 | 0.9199 | 1.0225 | 0.9669 | 0.9972 | 0.9756 | ----- | 0.972 | 15.85 | 0.999 | 0.999 | 3.9 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[g,h,i]perylene | 1 | 0 | Avg | 0.9632 | 1.0359 | 0.9052 | 0.8931 | 0.9783 | 0.9275 | 0.9570 | 0.9361 | ----- | 0.950 | 16.21 | 0.999 | 0.999 | 4.8 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |

| *Flags* | *Note:* Avg Rsd: 10.7 |
|---|---|
| *a - failed the min rf criteria* | *Corr 1 = Correlation Coefficient for linear Eq.* |
| *c - failed the minimum correlation coeff criteria(if applicable)* | *Corr 2 = Correlation Coefficient for quad Eq.* |
| | *Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.* |

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M86986.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/3/2017 3:31:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8(INT) | 1 | 0 | I | 2.66 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dioxane | 1 | 0 | | 2.70 | 41.50 | 50 | ** | | 1.079 | 0.895 | 17.00 | |
| Pyridine | 1 | 0 | | 3.18 | 51.33 | 50 | ** | | 3.202 | 3.188 | 2.67 | |
| N-Nitrosodimethylamine | 1 | 0 | | 3.10 | 49.25 | 50 | ** | | 1.810 | 1.841 | 1.50 | |
| 2-Fluorophenol | 1 | 0 | S | 4.69 | 56.03 | 50 | ** | | 2.632 | 2.949 | 12.06 | |
| Benzaldehyde | 1 | 0 | | 5.51 | 32.57 | 50 | 20 | 0.01 | 0.538 | 0.350 | 34.85 | C1 |
| Aniline | 1 | 0 | | 5.60 | 51.85 | 50 | ** | | 4.121 | 4.719 | 3.70 | |
| Pentachloroethane | 1 | 0 | | 5.64 | 56.04 | 50 | ** | 0.05 | 0.928 | 1.041 | 12.09 | |
| bis(2-Chloroethyl)ether | 1 | 0 | | 5.65 | 52.82 | 50 | 20 | 0.7 | 2.942 | 3.009 | 5.64 | |
| Phenol-d5 | 1 | 0 | S | 5.57 | 55.43 | 50 | ** | | 3.629 | 4.024 | 10.86 | |
| Phenol | 1 | 0 | | 5.59 | 53.44 | 50 | 20 | 0.8 | 4.151 | 4.436 | 6.87 | |
| 2-Chlorophenol | 1 | 0 | | 5.70 | 59.15 | 50 | 20 | 0.8 | 2.808 | 3.321 | 18.30 | |
| N-Decane | 1 | 0 | | 5.75 | 51.07 | 50 | ** | 0.05 | 2.652 | 2.708 | 2.13 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 5.83 | 58.33 | 50 | ** | | 3.004 | 3.505 | 16.67 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 5.88 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 5.90 | 53.21 | 50 | 20 | | 1.623 | 1.727 | 6.41 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 6.02 | 52.51 | 50 | ** | | 1.553 | 1.631 | 5.02 | |
| Benzyl alcohol | 1 | 0 | | 5.99 | 50.88 | 50 | ** | | 1.012 | 1.029 | 1.75 | |
| bis(2-chloroisopropyl)ether | 1 | 0 | | 6.10 | 44.75 | 50 | 20 | 0.01 | 1.855 | 1.660 | 10.50 | |
| 2-Methylphenol | 1 | 0 | | 6.09 | 52.27 | 50 | 20 | 0.7 | 1.402 | 1.522 | 4.54 | |
| Acetophenone | 1 | 0 | | 6.21 | 45.97 | 50 | 20 | 0.01 | 2.087 | 1.919 | 8.06 | |
| Hexachloroethane | 1 | 0 | | 6.29 | 51.14 | 50 | 20 | 0.3 | 0.592 | 0.605 | 2.28 | |
| N-Nitroso-di-n-propylamine | 1 | 0 | | 6.21 | 50.90 | 50 | 20 | 0.5 | 1.112 | 1.133 | 1.81 | |
| 3&4-Methylphenol | 1 | 0 | | 6.21 | 52.51 | 50 | 20 | | 1.398 | 1.571 | 5.02 | |
| Naphthalene-d8 | 1 | 0 | I | 6.89 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Nitrobenzene-d5 | 1 | 0 | S | 6.33 | 28.61 | 25 | ** | | 0.173 | 0.197 | 14.43 | |
| Nitrobenzene | 1 | 0 | | 6.34 | 48.39 | 50 | 20 | 0.2 | 0.410 | 0.397 | 3.21 | |
| Isophorone | 1 | 0 | | 6.53 | 49.39 | 50 | 20 | 0.4 | 0.764 | 0.755 | 1.23 | |
| 2-Nitrophenol | 1 | 0 | | 6.59 | 55.86 | 50 | 20 | 0.1 | 0.194 | 0.229 | 11.72 | |
| 2,4-Dimethylphenol | 1 | 0 | | 6.62 | 52.49 | 50 | 20 | 0.2 | 0.364 | 0.407 | 4.98 | |
| Benzoic Acid | 1 | 0 | | 6.70 | 20.02 | 50 | ** | | 0.318 | 0.045 | 59.96 | |
| bis(2-Chloroethoxy)methane | 1 | 0 | | 6.69 | 49.97 | 50 | 20 | 0.3 | 0.457 | 0.457 | 0.05 | |
| 2,4-Dichlorophenol | 1 | 0 | | 6.78 | 56.81 | 50 | 20 | 0.2 | 0.281 | 0.358 | 13.62 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 6.85 | 55.14 | 50 | ** | | 0.335 | 0.369 | 10.27 | |
| Naphthalene | 1 | 0 | | 6.90 | 53.99 | 50 | 20 | 0.7 | 1.157 | 1.171 | 7.99 | |
| 4-Chloroaniline | 1 | 0 | | 6.94 | 62.72 | 50 | 20 | 0.01 | 0.380 | 0.477 | 25.44 | C1 |
| Hexachlorobutadiene | 1 | 0 | | 7.00 | 59.21 | 50 | 20 | 0.01 | 0.182 | 0.215 | 18.43 | |
| Caprolactam | 1 | 0 | | 7.21 | 47.06 | 50 | 20 | 0.01 | 0.132 | 0.122 | 5.89 | |
| 4-Chloro-3-methylphenol | 1 | 0 | | 7.31 | 51.94 | 50 | 20 | 0.2 | 0.349 | 0.372 | 3.88 | |
| 2-Methylnaphthalene | 1 | 0 | | 7.44 | 54.81 | 50 | ** | 0.4 | 0.789 | 0.865 | 9.63 | |
| 1-Methylnaphthalene | 1 | 0 | | 7.52 | 54.20 | 50 | ** | 0.4 | 0.757 | 0.821 | 8.40 | |
| Methylnaphthalenes | 1 | 0 | | 7.44 | 109.13 | 100 | ** | | | 0.843 | 9.13 | |
| 1,1'-Biphenyl | 1 | 0 | | 7.81 | 54.60 | 50 | 20 | 0.01 | 1.025 | 1.119 | 9.21 | |
| Acenaphthene-d10 | 1 | 0 | I | 8.32 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,2,4,5-Tetrachlorobenzene | 1 | 0 | | 7.58 | 49.76 | 50 | 20 | 0.01 | 0.522 | 0.519 | 0.48 | |
| Hexachlorocyclopentadiene | 1 | 0 | | 7.57 | 17.40 | 50 | 20 | 0.05 | 0.268 | 0.107 | 65.20 | C1 |
| 2,4,6-Trichlorophenol | 1 | 0 | | 7.67 | 53.74 | 50 | 20 | 0.2 | 0.346 | 0.410 | 7.48 | |
| 2,4,5-Trichlorophenol | 1 | 0 | | 7.71 | 57.63 | 50 | 20 | 0.2 | 0.371 | 0.432 | 15.26 | |
| 2-Fluorobiphenyl | 1 | 0 | S | 7.73 | 27.49 | 25 | ** | | 1.326 | 1.459 | 9.98 | |
| 2-Chloronaphthalene | 1 | 0 | | 7.84 | 54.01 | 50 | 20 | 0.8 | 1.096 | 1.186 | 8.01 | |
| 1,4-Dimethylnaphthalene | 1 | 0 | | 8.12 | 55.58 | 50 | ** | | 0.963 | 1.070 | 11.16 | |
| Dimethylnaphthalenes | 1 | 0 | | 8.12 | 55.58 | 50 | 20 | | | 1.070 | 11.16 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M86986.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/3/2017 3:31:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diphenyl Ether | 1 | 0 | | 7.90 | 49.22 | 50 | ** | | 0.771 | 0.759 | 1.55 | |
| 2-Nitroaniline | 1 | 0 | | 7.91 | 49.55 | 50 | 20 | 0.01 | 0.402 | 0.398 | 0.89 | |
| Coumarin | 1 | 0 | | 8.10 | 51.95 | | ** | | 0.533 | | | |
| Acenaphthylene | 1 | 0 | | 8.20 | 54.19 | 50 | 20 | 0.9 | 1.732 | 1.877 | 8.37 | |
| Dimethylphthalate | 1 | 0 | | 8.06 | 53.89 | 50 | 20 | 0.01 | 1.347 | 1.452 | 7.77 | |
| 2,6-Dinitrotoluene | 1 | 0 | | 8.12 | 57.69 | 50 | 20 | 0.2 | 0.294 | 0.339 | 15.38 | |
| Acenaphthene | 1 | 0 | | 8.35 | 53.64 | 50 | 20 | 0.9 | 1.136 | 1.219 | 7.27 | |
| 3-Nitroaniline | 1 | 0 | | 8.27 | 53.80 | 50 | 20 | 0.01 | 0.312 | 0.370 | 7.59 | |
| 2,4-Dinitrophenol | 1 | 0 | | 8.37 | 41.26 | 50 | 20 | 0.01 | 0.130 | 0.106 | 17.48 | |
| Dibenzofuran | 1 | 0 | | 8.51 | 53.95 | 50 | 20 | 0.8 | 1.730 | 1.799 | 7.91 | |
| 2,4-Dinitrotoluene | 1 | 0 | | 8.48 | 52.77 | 50 | 20 | 0.2 | 0.415 | 0.467 | 5.53 | |
| 4-Nitrophenol | 1 | 0 | | 8.41 | 38.35 | 50 | 20 | 0.01 | 0.240 | 0.204 | 23.29 | C1 |
| 2,3,4,6-Tetrachlorophenol | 1 | 0 | | 8.62 | 49.17 | 50 | 20 | 0.01 | 0.332 | 0.358 | 1.67 | |
| Fluorene | 1 | 0 | | 8.83 | 54.84 | 50 | 20 | 0.9 | 1.337 | 1.466 | 9.69 | |
| 4-Chlorophenyl-phenylether | 1 | 0 | | 8.82 | 54.89 | 50 | 20 | 0.4 | 0.669 | 0.734 | 9.77 | |
| Diethylphthalate | 1 | 0 | | 8.69 | 53.53 | 50 | 20 | 0.01 | 1.338 | 1.432 | 7.05 | |
| 4-Nitroaniline | 1 | 0 | | 8.83 | 51.02 | 50 | 20 | 0.01 | 0.377 | 0.408 | 2.05 | |
| Atrazine | 1 | 0 | | 9.45 | 47.82 | 50 | 20 | 0.01 | 0.276 | 0.278 | 4.36 | |
| Phenanthrene-d10 | 1 | 0 | I | 9.78 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 4,6-Dinitro-2-methylphenol | 1 | 0 | | 8.87 | 45.83 | 50 | 20 | 0.01 | 0.114 | 0.114 | 8.35 | |
| n-Nitrosodiphenylamine | 1 | 0 | | 8.92 | 56.14 | 50 | 20 | 0.01 | 0.617 | 0.693 | 12.29 | |
| 2,4,6-Tribromophenol | 1 | 0 | S | 9.06 | 64.92 | 50 | ** | | 0.099 | 0.137 | 29.83 | |
| 1,2-Diphenylhydrazine | 1 | 0 | | 8.97 | 53.23 | 50 | ** | | 0.740 | 0.788 | 6.47 | |
| 4-Bromophenyl-phenylether | 1 | 0 | | 9.30 | 59.74 | 50 | 20 | 0.1 | 0.217 | 0.260 | 19.48 | |
| Hexachlorobenzene | 1 | 0 | | 9.38 | 60.68 | 50 | 20 | 0.1 | 0.239 | 0.290 | 21.36 | C1 |
| N-Octadecane | 1 | 0 | | 9.63 | 53.09 | 50 | ** | 0.05 | 0.406 | 0.431 | 6.19 | |
| Pentachlorophenol | 1 | 0 | | 9.58 | 29.90 | 50 | 20 | 0.05 | 0.116 | 0.071 | 40.21 | C1 |
| Phenanthrene | 1 | 0 | | 9.81 | 53.31 | 50 | 20 | 0.7 | 1.115 | 1.189 | 6.62 | |
| Anthracene | 1 | 0 | | 9.86 | 55.59 | 50 | 20 | 0.7 | 1.107 | 1.230 | 11.18 | |
| Carbazole | 1 | 0 | | 10.04 | 52.73 | 50 | 20 | 0.01 | 1.074 | 1.133 | 5.46 | |
| Di-n-butylphthalate | 1 | 0 | | 10.40 | 53.10 | 50 | 20 | 0.01 | 1.144 | 1.366 | 6.20 | |
| Fluoranthene | 1 | 0 | | 11.14 | 54.28 | 50 | 20 | 0.6 | 1.258 | 1.366 | 8.55 | |
| Chrysene-d12 | 1 | 0 | I | 12.84 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Pyrene | 1 | 0 | | 11.41 | 56.00 | 50 | 20 | 0.6 | 1.085 | 1.215 | 12.01 | |
| Benzidine | 1 | 0 | | 11.29 | 52.07 | 50 | ** | | 0.454 | 0.611 | 4.13 | |
| Terphenyl-d14 | 1 | 0 | S | 11.58 | 28.89 | 25 | ** | | 0.594 | 0.686 | 15.56 | |
| 4,4'-DDE | 1 | 0 | | 11.52 | 58.24 | | ** | | 0.242 | | | |
| 4,4'-DDD | 1 | 0 | | 11.92 | 59.15 | | ** | | 0.463 | | | |
| Butylbenzylphthalate | 1 | 0 | | 12.17 | 52.07 | 50 | 20 | 0.01 | 0.473 | 0.542 | 4.14 | |
| 4,4'-DDT | 1 | 0 | | 12.27 | 56.43 | | ** | | 0.377 | | | |
| 3,3'-Dichlorobenzidine | 1 | 0 | | 12.79 | 63.53 | 50 | 20 | 0.01 | 0.336 | 0.489 | 27.06 | C1 |
| Benzo[a]anthracene | 1 | 0 | | 12.83 | 53.48 | 50 | 20 | 0.8 | 1.120 | 1.197 | 6.95 | |
| Chrysene | 1 | 0 | | 12.87 | 50.19 | 50 | 20 | 0.7 | 1.048 | 1.052 | 0.37 | |
| bis(2-Ethylhexyl)phthalate | 1 | 0 | | 12.86 | 52.97 | 50 | 20 | 0.01 | 0.627 | 0.741 | 5.94 | |
| Perylene-d12 | 1 | 0 | I | 14.47 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Di-n-octylphthalate | 1 | 0 | | 13.60 | 52.25 | 50 | 20 | 0.01 | 1.192 | 1.434 | 4.50 | |
| Benzo[b]fluoranthene | 1 | 0 | | 14.05 | 55.68 | 50 | 20 | 0.7 | 1.213 | 1.350 | 11.35 | |
| Benzo[k]fluoranthene | 1 | 0 | | 14.08 | 50.27 | 50 | 20 | 0.7 | 1.166 | 1.172 | 0.54 | |
| Benzo[a]pyrene | 1 | 0 | | 14.42 | 53.96 | 50 | 20 | 0.7 | 1.123 | 1.212 | 7.92 | |
| Indeno[1,2,3-cd]pyrene | 1 | 0 | | 15.82 | 56.09 | 50 | 20 | 0.5 | 1.151 | 1.291 | 12.18 | |
| Dibenzo[a,h]anthracene | 1 | 0 | | 15.84 | 56.31 | 50 | 20 | 0.4 | 0.972 | 1.095 | 12.62 | |
| Benzo[g,h,i]perylene | 1 | 0 | | 16.21 | 56.88 | 50 | 20 | 0.5 | 0.950 | 1.080 | 13.75 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M86986.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/3/2017 3:31:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8 | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| Toluene Diisocyanate | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 2,2'-oxybis-(1-Chloropropane) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 1,4-Dioxane-d8-Surro | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| 2,4 Diaminotoluene | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| Methylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.773 | 0.000 | 100.00 | |
| Methoxychlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Heptachlor epoxide | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Heptachlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| gamma-BHC | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Dimethylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.963 | 0.000 | 100.00 | |
| Diaminotoluene Dihydrochloride | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 4-Methylphenol | 1 | 100 | | 0.00 | 0.00 | 50 | ** | 0.6 | | 0.000 | 100.00 | |
| Endrin | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |

S-Surrogate Compound
N/O or N/Q - Not applicable for this run

I-Internal Standard Compound
C1-Compound %Diff exceeds limits

** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F.**
**624 limits are compared against the concentration found.**
**625 limits are compared against the %DIFF.**
**524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 10M65316.D **Instrument:** GCMS 10

**Cont Calibration Date/Time** 10/4/2017 8:55:00 A Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8(INT) | 1 | 0 | I | 2.49 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dioxane | 1 | 0 | | 2.52 | 47.91 | 50 | ** | | 1.085 | 0.981 | 4.17 | |
| Pyridine | 1 | 0 | | 3.01 | 43.06 | 50 | ** | | 2.664 | 2.294 | 13.89 | |
| N-Nitrosodimethylamine | 1 | 0 | | 2.90 | 50.19 | 50 | ** | | 1.430 | 1.533 | 0.39 | |
| 2-Fluorophenol | 1 | 0 | S | 4.55 | 48.23 | 50 | ** | | 2.572 | 2.481 | 3.54 | |
| Benzaldehyde | 1 | 0 | | 5.37 | 39.94 | 50 | 20 | 0.01 | 0.457 | 0.365 | 20.12 | |
| Aniline | 1 | 0 | | 5.47 | 55.01 | 50 | ** | | 3.739 | 4.114 | 10.03 | |
| Pentachloroethane | 1 | 0 | | 5.51 | 49.18 | 50 | ** | 0.05 | 1.030 | 1.013 | 1.64 | |
| bis(2-Chloroethyl)ether | 1 | 0 | | 5.52 | 48.59 | 50 | 20 | 0.7 | 2.853 | 2.773 | 2.82 | |
| Phenol-d5 | 1 | 0 | S | 5.43 | 46.19 | 50 | ** | | 3.434 | 3.172 | 7.63 | |
| Phenol | 1 | 0 | | 5.44 | 45.76 | 50 | 20 | 0.8 | 3.838 | 3.513 | 8.47 | |
| 2-Chlorophenol | 1 | 0 | | 5.57 | 48.79 | 50 | 20 | 0.8 | 3.056 | 2.982 | 2.43 | |
| N-Decane | 1 | 0 | | 5.62 | 49.28 | 50 | ** | 0.05 | 2.883 | 2.842 | 1.43 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 5.70 | 49.37 | 50 | ** | | 3.376 | 3.333 | 1.27 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 5.75 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 5.76 | 48.71 | 50 | 20 | | 1.624 | 1.582 | 2.58 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 5.89 | 48.94 | 50 | ** | | 1.529 | 1.497 | 2.11 | |
| Benzyl alcohol | 1 | 0 | | 5.87 | 31.95 | 50 | ** | | 0.893 | 0.571 | 36.11 | |
| bis(2-chloroisopropyl)ether | 1 | 0 | | 5.97 | 47.89 | 50 | 20 | 0.01 | 1.726 | 1.653 | 4.23 | |
| 2-Methylphenol | 1 | 0 | | 5.96 | 48.69 | 50 | 20 | 0.7 | 1.299 | 1.263 | 2.63 | |
| Acetophenone | 1 | 0 | | 6.08 | 49.90 | 50 | 20 | 0.01 | 1.750 | 1.746 | 0.20 | |
| Hexachloroethane | 1 | 0 | | 6.17 | 48.21 | 50 | 20 | 0.3 | 0.578 | 0.558 | 3.57 | |
| N-Nitroso-di-n-propylamine | 1 | 0 | | 6.08 | 52.30 | 50 | 20 | 0.5 | 0.886 | 0.927 | 4.61 | |
| 3&4-Methylphenol | 1 | 0 | | 6.08 | 47.63 | 50 | 20 | | 1.290 | 1.228 | 4.75 | |
| Naphthalene-d8 | 1 | 0 | I | 6.75 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Nitrobenzene-d5 | 1 | 0 | S | 6.20 | 25.64 | 25 | ** | | 0.172 | 0.176 | 2.55 | |
| Nitrobenzene | 1 | 0 | | 6.21 | 49.86 | 50 | 20 | 0.2 | 0.345 | 0.344 | 0.27 | |
| Isophorone | 1 | 0 | | 6.40 | 49.85 | 50 | 20 | 0.4 | 0.625 | 0.623 | 0.30 | |
| 2-Nitrophenol | 1 | 0 | | 6.46 | 51.04 | 50 | 20 | 0.1 | 0.190 | 0.194 | 2.08 | |
| 2,4-Dimethylphenol | 1 | 0 | | 6.49 | 48.25 | 50 | 20 | 0.2 | 0.348 | 0.342 | 3.50 | |
| Benzoic Acid | 1 | 0 | | 6.58 | 47.85 | 50 | ** | | 0.347 | 0.385 | 4.29 | |
| bis(2-Chloroethoxy)methane | 1 | 0 | | 6.56 | 49.89 | 50 | 20 | 0.3 | 0.402 | 0.401 | 0.22 | |
| 2,4-Dichlorophenol | 1 | 0 | | 6.65 | 46.17 | 50 | 20 | 0.2 | 0.298 | 0.300 | 7.66 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 6.71 | 49.08 | 50 | ** | | 0.340 | 0.334 | 1.84 | |
| Naphthalene | 1 | 0 | | 6.77 | 49.52 | 50 | 20 | 0.7 | 1.137 | 1.089 | 0.95 | |
| 4-Chloroaniline | 1 | 0 | | 6.81 | 54.21 | 50 | 20 | 0.01 | 0.352 | 0.439 | 8.42 | |
| Hexachlorobutadiene | 1 | 0 | | 6.87 | 50.32 | 50 | 20 | 0.01 | 0.194 | 0.195 | 0.64 | |
| Caprolactam | 1 | 0 | | 7.08 | 48.30 | 50 | 20 | 0.01 | 0.109 | 0.111 | 3.39 | |
| 4-Chloro-3-methylphenol | 1 | 0 | | 7.17 | 46.80 | 50 | 20 | 0.2 | 0.304 | 0.285 | 6.40 | |
| 2-Methylnaphthalene | 1 | 0 | | 7.30 | 51.33 | 50 | ** | 0.4 | 0.758 | 0.778 | 2.65 | |
| 1-Methylnaphthalene | 1 | 0 | | 7.38 | 51.20 | 50 | ** | 0.4 | 0.732 | 0.750 | 2.40 | |
| Methylnaphthalenes | 1 | 0 | | 7.38 | 101.78 | 100 | ** | | | 0.757 | 1.78 | |
| 1,1'-Biphenyl | 1 | 0 | | 7.67 | 50.19 | 50 | 20 | 0.01 | 0.993 | 0.997 | 0.38 | |
| Acenaphthene-d10 | 1 | 0 | I | 8.17 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,2,4,5-Tetrachlorobenzene | 1 | 0 | | 7.43 | 47.21 | 50 | 20 | 0.01 | 0.549 | 0.518 | 5.59 | |
| Hexachlorocyclopentadiene | 1 | 0 | | 7.43 | 29.90 | 50 | 20 | 0.05 | 0.291 | 0.192 | 40.20 | C1 |
| 2,4,6-Trichlorophenol | 1 | 0 | | 7.52 | 48.21 | 50 | 20 | 0.2 | 0.359 | 0.347 | 3.57 | |
| 2,4,5-Trichlorophenol | 1 | 0 | | 7.56 | 47.46 | 50 | 20 | 0.2 | 0.378 | 0.358 | 5.09 | |
| 2-Fluorobiphenyl | 1 | 0 | S | 7.59 | 24.74 | 25 | ** | | 1.364 | 1.349 | 1.05 | |
| 2-Chloronaphthalene | 1 | 0 | | 7.70 | 49.16 | 50 | 20 | 0.8 | 1.134 | 1.115 | 1.68 | |
| 1,4-Dimethylnaphthalene | 1 | 0 | | 7.97 | 51.51 | 50 | ** | | 0.969 | 0.999 | 3.02 | |
| Dimethylnaphthalenes | 1 | 0 | | 7.97 | 51.51 | 50 | 20 | | | 0.999 | 3.02 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 10M65316.D **Instrument:** GCMS 10

**Cont Calibration Date/Time** 10/4/2017 8:55:00 A Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diphenyl Ether | 1 | 0 | | 7.75 | 47.69 | 50 | ** | | 0.803 | 0.766 | 4.62 | |
| 2-Nitroaniline | 1 | 0 | | 7.77 | 50.87 | 50 | 20 | 0.01 | 0.347 | 0.353 | 1.74 | |
| Coumarin | 1 | 0 | | 7.95 | 50.18 | | ** | | 0.513 | | | |
| Acenaphthylene | 1 | 0 | | 8.05 | 50.72 | 50 | 20 | 0.9 | 1.753 | 1.778 | 1.45 | |
| Dimethylphthalate | 1 | 0 | | 7.92 | 50.62 | 50 | 20 | 0.01 | 1.300 | 1.316 | 1.25 | |
| 2,6-Dinitrotoluene | 1 | 0 | | 7.97 | 52.72 | 50 | 20 | 0.2 | 0.283 | 0.298 | 5.44 | |
| Acenaphthene | 1 | 0 | | 8.20 | 50.29 | 50 | 20 | 0.9 | 1.141 | 1.148 | 0.59 | |
| 3-Nitroaniline | 1 | 0 | | 8.12 | 58.14 | 50 | 20 | 0.01 | 0.286 | 0.332 | 16.29 | |
| 2,4-Dinitrophenol | 1 | 0 | | 8.21 | 36.41 | 50 | 20 | 0.01 | 0.135 | 0.109 | 27.17 | C1 |
| Dibenzofuran | 1 | 0 | | 8.35 | 50.98 | 50 | 20 | 0.8 | 1.716 | 1.674 | 1.96 | |
| 2,4-Dinitrotoluene | 1 | 0 | | 8.32 | 52.11 | 50 | 20 | 0.2 | 0.392 | 0.409 | 4.23 | |
| 4-Nitrophenol | 1 | 0 | | 8.25 | 26.65 | 50 | 20 | 0.01 | 0.215 | 0.127 | 46.70 | C1 |
| 2,3,4,6-Tetrachlorophenol | 1 | 0 | | 8.46 | 48.41 | 50 | 20 | 0.01 | 0.337 | 0.327 | 3.18 | |
| Fluorene | 1 | 0 | | 8.67 | 50.60 | 50 | 20 | 0.9 | 1.322 | 1.338 | 1.20 | |
| 4-Chlorophenyl-phenylether | 1 | 0 | | 8.66 | 49.42 | 50 | 20 | 0.4 | 0.647 | 0.640 | 1.15 | |
| Diethylphthalate | 1 | 0 | | 8.54 | 50.70 | 50 | 20 | 0.01 | 1.280 | 1.298 | 1.40 | |
| 4-Nitroaniline | 1 | 0 | | 8.67 | 51.25 | 50 | 20 | 0.01 | 0.362 | 0.371 | 2.50 | |
| Atrazine | 1 | 0 | | 9.29 | 50.14 | 50 | 20 | 0.01 | 0.260 | 0.261 | 0.27 | |
| Phenanthrene-d10 | 1 | 0 | I | 9.61 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 4,6-Dinitro-2-methylphenol | 1 | 0 | | 8.71 | 45.65 | 50 | 20 | 0.01 | 0.125 | 0.120 | 8.71 | |
| n-Nitrosodiphenylamine | 1 | 0 | | 8.77 | 51.37 | 50 | 20 | 0.01 | 0.653 | 0.671 | 2.74 | |
| 2,4,6-Tribromophenol | 1 | 0 | S | 8.90 | 48.48 | 50 | ** | | 0.112 | 0.110 | 3.05 | |
| 1,2-Diphenylhydrazine | 1 | 0 | | 8.81 | 51.20 | 50 | ** | | 0.680 | 0.697 | 2.40 | |
| 4-Bromophenyl-phenylether | 1 | 0 | | 9.14 | 50.04 | 50 | 20 | 0.1 | 0.226 | 0.226 | 0.07 | |
| Hexachlorobenzene | 1 | 0 | | 9.22 | 48.73 | 50 | 20 | 0.1 | 0.246 | 0.240 | 2.54 | |
| N-Octadecane | 1 | 0 | | 9.48 | 54.70 | 50 | ** | 0.05 | 0.415 | 0.454 | 9.40 | |
| Pentachlorophenol | 1 | 0 | | 9.41 | 44.98 | 50 | 20 | 0.05 | 0.128 | 0.121 | 10.04 | |
| Phenanthrene | 1 | 0 | | 9.64 | 49.86 | 50 | 20 | 0.7 | 1.150 | 1.147 | 0.27 | |
| Anthracene | 1 | 0 | | 9.69 | 51.05 | 50 | 20 | 0.7 | 1.151 | 1.175 | 2.11 | |
| Carbazole | 1 | 0 | | 9.86 | 51.14 | 50 | 20 | 0.01 | 1.077 | 1.101 | 2.28 | |
| Di-n-butylphthalate | 1 | 0 | | 10.24 | 51.45 | 50 | 20 | 0.01 | 1.160 | 1.287 | 2.91 | |
| Fluoranthene | 1 | 0 | | 10.95 | 52.10 | 50 | 20 | 0.6 | 1.237 | 1.288 | 4.20 | |
| Chrysene-d12 | 1 | 0 | I | 12.64 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Pyrene | 1 | 0 | | 11.22 | 50.58 | 50 | 20 | 0.6 | 1.146 | 1.159 | 1.16 | |
| Benzidine | 1 | 0 | | 11.11 | 45.57 | 50 | ** | | 0.453 | 0.530 | 8.87 | |
| Terphenyl-d14 | 1 | 0 | S | 11.40 | 24.42 | 25 | ** | | 0.616 | 0.601 | 2.32 | |
| 4,4'-DDE | 1 | 0 | | 11.34 | 49.67 | | ** | | 0.255 | | | |
| 4,4'-DDD | 1 | 0 | | 11.73 | 51.56 | | ** | | 0.467 | | | |
| Butylbenzylphthalate | 1 | 0 | | 11.99 | 51.12 | 50 | 20 | 0.01 | 0.466 | 0.519 | 2.24 | |
| 4,4'-DDT | 1 | 0 | | 12.09 | 49.91 | | ** | | 0.399 | | | |
| 3,3'-Dichlorobenzidine | 1 | 0 | | 12.60 | 63.46 | 50 | 20 | 0.01 | 0.311 | 0.420 | 26.92 | C1 |
| Benzo[a]anthracene | 1 | 0 | | 12.63 | 49.59 | 50 | 20 | 0.8 | 1.093 | 1.084 | 0.83 | |
| Chrysene | 1 | 0 | | 12.67 | 49.70 | 50 | 20 | 0.7 | 1.066 | 1.059 | 0.60 | |
| bis(2-Ethylhexyl)phthalate | 1 | 0 | | 12.68 | 56.02 | 50 | 20 | 0.01 | 0.636 | 0.713 | 12.03 | |
| Perylene-d12 | 1 | 0 | I | 14.24 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Di-n-octylphthalate | 1 | 0 | | 13.42 | 51.37 | 50 | 20 | 0.01 | 1.150 | 1.324 | 2.75 | |
| Benzo[b]fluoranthene | 1 | 0 | | 13.84 | 51.15 | 50 | 20 | 0.7 | 1.155 | 1.181 | 2.31 | |
| Benzo[k]fluoranthene | 1 | 0 | | 13.87 | 50.11 | 50 | 20 | 0.7 | 1.139 | 1.142 | 0.21 | |
| Benzo[a]pyrene | 1 | 0 | | 14.18 | 51.23 | 50 | 20 | 0.7 | 1.117 | 1.145 | 2.46 | |
| Indeno[1,2,3-cd]pyrene | 1 | 0 | | 15.50 | 51.38 | 50 | 20 | 0.5 | 1.272 | 1.307 | 2.76 | |
| Dibenzo[a,h]anthracene | 1 | 0 | | 15.52 | 51.43 | 50 | 20 | 0.4 | 1.081 | 1.112 | 2.86 | |
| Benzo[g,h,i]perylene | 1 | 0 | | 15.85 | 50.22 | 50 | 20 | 0.5 | 1.089 | 1.093 | 0.44 | |

S-Surrogate Compound
N/O or N/Q - Not applicable for this run

I-Internal Standard Compound
C1-Compound %Diff exceeds limits

** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F.**
**624 limits are compared against the concentration found.**
**625 limits are compared against the %DIFF.**
**524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 10M65316.D **Instrument:** GCMS 10

**Cont Calibration Date/Time** 10/4/2017 8:55:00 A Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methoxychlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Methylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.744 | 0.000 | 100.00 | |
| Toluene Diisocyanate | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 2,2'-oxybis-(1-Chloropropane) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 2,4 Diaminotoluene | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 1,4-Dioxane-d8-Surro | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| 1,4-Dioxane-d8 | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| Heptachlor epoxide | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Heptachlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| gamma-BHC | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Dimethylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.969 | 0.000 | 100.00 | |
| Diaminotoluene Dihydrochloride | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 4-Methylphenol | 1 | 100 | | 0.00 | 0.00 | 50 | ** | 0.6 | | 0.000 | 100.00 | |
| Endrin | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |

S-Surrogate Compound
N/O or N/Q - Not applicable for this run
I-Internal Standard Compound
C1-Compound %Diff exceeds limits
** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F.**
**624 limits are compared against the concentration found.**
**625 limits are compared against the %DIFF.**
**524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M87008.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/4/2017 8:55:00 A Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8(INT) | 1 | 0 | I | 2.65 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dioxane | 1 | 0 | | 2.69 | 42.84 | 50 | ** | | 1.079 | 0.923 | 14.33 | |
| Pyridine | 1 | 0 | | 3.17 | 52.81 | 50 | ** | | 3.202 | 3.282 | 5.62 | |
| N-Nitrosodimethylamine | 1 | 0 | | 3.09 | 47.68 | 50 | ** | | 1.810 | 1.781 | 4.64 | |
| 2-Fluorophenol | 1 | 0 | S | 4.69 | 54.26 | 50 | ** | | 2.632 | 2.856 | 8.51 | |
| Benzaldehyde | 1 | 0 | | 5.50 | 30.98 | 50 | 20 | 0.01 | 0.538 | 0.333 | 38.04 | C1 |
| Aniline | 1 | 0 | | 5.60 | 50.57 | 50 | ** | | 4.121 | 4.601 | 1.14 | |
| Pentachloroethane | 1 | 0 | | 5.64 | 56.18 | 50 | ** | 0.05 | 0.928 | 1.043 | 12.36 | |
| bis(2-Chloroethyl)ether | 1 | 0 | | 5.65 | 51.39 | 50 | 20 | 0.7 | 2.942 | 2.928 | 2.79 | |
| Phenol-d5 | 1 | 0 | S | 5.57 | 53.43 | 50 | ** | | 3.629 | 3.879 | 6.86 | |
| Phenol | 1 | 0 | | 5.59 | 50.96 | 50 | 20 | 0.8 | 4.151 | 4.231 | 1.92 | |
| 2-Chlorophenol | 1 | 0 | | 5.70 | 57.42 | 50 | 20 | 0.8 | 2.808 | 3.224 | 14.83 | |
| N-Decane | 1 | 0 | | 5.74 | 51.95 | 50 | ** | 0.05 | 2.652 | 2.755 | 3.90 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 5.83 | 56.48 | 50 | ** | | 3.004 | 3.394 | 12.97 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 5.88 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 5.89 | 52.96 | 50 | 20 | | 1.623 | 1.719 | 5.91 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 6.02 | 52.87 | 50 | ** | | 1.553 | 1.642 | 5.75 | |
| Benzyl alcohol | 1 | 0 | | 5.99 | 49.06 | 50 | ** | | 1.012 | 0.992 | 1.89 | |
| bis(2-chloroisopropyl)ether | 1 | 0 | | 6.10 | 44.85 | 50 | 20 | 0.01 | 1.855 | 1.664 | 10.30 | |
| 2-Methylphenol | 1 | 0 | | 6.09 | 51.14 | 50 | 20 | 0.7 | 1.402 | 1.489 | 2.27 | |
| Acetophenone | 1 | 0 | | 6.21 | 44.10 | 50 | 20 | 0.01 | 2.087 | 1.841 | 11.80 | |
| Hexachloroethane | 1 | 0 | | 6.29 | 50.75 | 50 | 20 | 0.3 | 0.592 | 0.600 | 1.50 | |
| N-Nitroso-di-n-propylamine | 1 | 0 | | 6.20 | 49.19 | 50 | 20 | 0.5 | 1.112 | 1.094 | 1.63 | |
| 3&4-Methylphenol | 1 | 0 | | 6.21 | 50.44 | 50 | 20 | | 1.398 | 1.512 | 0.89 | |
| Naphthalene-d8 | 1 | 0 | I | 6.89 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Nitrobenzene-d5 | 1 | 0 | S | 6.33 | 28.11 | 25 | ** | | 0.173 | 0.194 | 12.44 | |
| Nitrobenzene | 1 | 0 | | 6.34 | 49.19 | 50 | 20 | 0.2 | 0.410 | 0.404 | 1.62 | |
| Isophorone | 1 | 0 | | 6.53 | 48.74 | 50 | 20 | 0.4 | 0.764 | 0.745 | 2.53 | |
| 2-Nitrophenol | 1 | 0 | | 6.60 | 55.59 | 50 | 20 | 0.1 | 0.194 | 0.227 | 11.18 | |
| 2,4-Dimethylphenol | 1 | 0 | | 6.62 | 52.54 | 50 | 20 | 0.2 | 0.364 | 0.408 | 5.08 | |
| Benzoic Acid | 1 | 0 | | 6.71 | 26.15 | 50 | ** | | 0.318 | 0.097 | 47.70 | |
| bis(2-Chloroethoxy)methane | 1 | 0 | | 6.69 | 49.66 | 50 | 20 | 0.3 | 0.457 | 0.454 | 0.68 | |
| 2,4-Dichlorophenol | 1 | 0 | | 6.79 | 56.03 | 50 | 20 | 0.2 | 0.281 | 0.353 | 12.07 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 6.85 | 55.41 | 50 | ** | | 0.335 | 0.371 | 10.83 | |
| Naphthalene | 1 | 0 | | 6.91 | 56.11 | 50 | 20 | 0.7 | 1.157 | 1.216 | 12.22 | |
| 4-Chloroaniline | 1 | 0 | | 6.94 | 61.52 | 50 | 20 | 0.01 | 0.380 | 0.468 | 23.04 | C1 |
| Hexachlorobutadiene | 1 | 0 | | 7.00 | 59.71 | 50 | 20 | 0.01 | 0.182 | 0.217 | 19.42 | |
| Caprolactam | 1 | 0 | | 7.21 | 46.48 | 50 | 20 | 0.01 | 0.132 | 0.121 | 7.04 | |
| 4-Chloro-3-methylphenol | 1 | 0 | | 7.32 | 50.60 | 50 | 20 | 0.2 | 0.349 | 0.362 | 1.20 | |
| 2-Methylnaphthalene | 1 | 0 | | 7.44 | 53.54 | 50 | ** | 0.4 | 0.789 | 0.845 | 7.07 | |
| 1-Methylnaphthalene | 1 | 0 | | 7.52 | 52.88 | 50 | ** | 0.4 | 0.757 | 0.801 | 5.76 | |
| Methylnaphthalenes | 1 | 0 | | 7.44 | 106.45 | 100 | ** | | | 0.823 | 6.45 | |
| 1,1'-Biphenyl | 1 | 0 | | 7.82 | 53.29 | 50 | 20 | 0.01 | 1.025 | 1.093 | 6.58 | |
| Acenaphthene-d10 | 1 | 0 | I | 8.33 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,2,4,5-Tetrachlorobenzene | 1 | 0 | | 7.58 | 50.66 | 50 | 20 | 0.01 | 0.522 | 0.529 | 1.31 | |
| Hexachlorocyclopentadiene | 1 | 0 | | 7.57 | 13.59 | 50 | 20 | 0.05 | 0.268 | 0.084 | 72.81 | C1 |
| 2,4,6-Trichlorophenol | 1 | 0 | | 7.67 | 54.42 | 50 | 20 | 0.2 | 0.346 | 0.415 | 8.85 | |
| 2,4,5-Trichlorophenol | 1 | 0 | | 7.71 | 56.35 | 50 | 20 | 0.2 | 0.371 | 0.422 | 12.69 | |
| 2-Fluorobiphenyl | 1 | 0 | S | 7.73 | 27.70 | 25 | ** | | 1.326 | 1.470 | 10.81 | |
| 2-Chloronaphthalene | 1 | 0 | | 7.85 | 54.50 | 50 | 20 | 0.8 | 1.096 | 1.197 | 9.01 | |
| 1,4-Dimethylnaphthalene | 1 | 0 | | 8.13 | 55.07 | 50 | ** | | 0.963 | 1.060 | 10.14 | |
| Dimethylnaphthalenes | 1 | 0 | | 8.13 | 55.07 | 50 | 20 | | | 1.060 | 10.14 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M87008.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/4/2017 8:55:00 A Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diphenyl Ether | 1 | 0 | | 7.90 | 49.54 | 50 | ** | | 0.771 | 0.764 | 0.92 | |
| 2-Nitroaniline | 1 | 0 | | 7.92 | 50.05 | 50 | 20 | 0.01 | 0.402 | 0.402 | 0.11 | |
| Coumarin | 1 | 0 | | 8.11 | 51.11 | | ** | | 0.533 | | | |
| Acenaphthylene | 1 | 0 | | 8.20 | 54.44 | 50 | 20 | 0.9 | 1.732 | 1.885 | 8.88 | |
| Dimethylphthalate | 1 | 0 | | 8.06 | 53.05 | 50 | 20 | 0.01 | 1.347 | 1.429 | 6.10 | |
| 2,6-Dinitrotoluene | 1 | 0 | | 8.12 | 57.13 | 50 | 20 | 0.2 | 0.294 | 0.336 | 14.26 | |
| Acenaphthene | 1 | 0 | | 8.36 | 53.94 | 50 | 20 | 0.9 | 1.136 | 1.226 | 7.87 | |
| 3-Nitroaniline | 1 | 0 | | 8.27 | 52.56 | 50 | 20 | 0.01 | 0.312 | 0.362 | 5.12 | |
| 2,4-Dinitrophenol | 1 | 0 | | 8.37 | 43.03 | 50 | 20 | 0.01 | 0.130 | 0.112 | 13.95 | |
| Dibenzofuran | 1 | 0 | | 8.51 | 53.41 | 50 | 20 | 0.8 | 1.730 | 1.781 | 6.83 | |
| 2,4-Dinitrotoluene | 1 | 0 | | 8.49 | 52.26 | 50 | 20 | 0.2 | 0.415 | 0.462 | 4.52 | |
| 4-Nitrophenol | 1 | 0 | | 8.42 | 39.89 | 50 | 20 | 0.01 | 0.240 | 0.212 | 20.22 | |
| 2,3,4,6-Tetrachlorophenol | 1 | 0 | | 8.63 | 49.06 | 50 | 20 | 0.01 | 0.332 | 0.357 | 1.87 | |
| Fluorene | 1 | 0 | | 8.83 | 54.10 | 50 | 20 | 0.9 | 1.337 | 1.446 | 8.20 | |
| 4-Chlorophenyl-phenylether | 1 | 0 | | 8.82 | 54.42 | 50 | 20 | 0.4 | 0.669 | 0.728 | 8.85 | |
| Diethylphthalate | 1 | 0 | | 8.69 | 52.46 | 50 | 20 | 0.01 | 1.338 | 1.404 | 4.93 | |
| 4-Nitroaniline | 1 | 0 | | 8.84 | 50.55 | 50 | 20 | 0.01 | 0.377 | 0.404 | 1.10 | |
| Atrazine | 1 | 0 | | 9.46 | 47.17 | 50 | 20 | 0.01 | 0.276 | 0.274 | 5.67 | |
| Phenanthrene-d10 | 1 | 0 | I | 9.79 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 4,6-Dinitro-2-methylphenol | 1 | 0 | | 8.88 | 47.29 | 50 | 20 | 0.01 | 0.114 | 0.118 | 5.41 | |
| n-Nitrosodiphenylamine | 1 | 0 | | 8.93 | 56.46 | 50 | 20 | 0.01 | 0.617 | 0.697 | 12.93 | |
| 2,4,6-Tribromophenol | 1 | 0 | S | 9.07 | 62.85 | 50 | ** | | 0.099 | 0.133 | 25.70 | |
| 1,2-Diphenylhydrazine | 1 | 0 | | 8.98 | 54.08 | 50 | ** | | 0.740 | 0.801 | 8.16 | |
| 4-Bromophenyl-phenylether | 1 | 0 | | 9.31 | 58.19 | 50 | 20 | 0.1 | 0.217 | 0.253 | 16.39 | |
| Hexachlorobenzene | 1 | 0 | | 9.39 | 59.06 | 50 | 20 | 0.1 | 0.239 | 0.282 | 18.13 | |
| N-Octadecane | 1 | 0 | | 9.64 | 56.04 | 50 | ** | 0.05 | 0.406 | 0.455 | 12.07 | |
| Pentachlorophenol | 1 | 0 | | 9.59 | 34.10 | 50 | 20 | 0.05 | 0.116 | 0.081 | 31.81 | C1 |
| Phenanthrene | 1 | 0 | | 9.82 | 53.85 | 50 | 20 | 0.7 | 1.115 | 1.201 | 7.70 | |
| Anthracene | 1 | 0 | | 9.87 | 55.84 | 50 | 20 | 0.7 | 1.107 | 1.236 | 11.68 | |
| Carbazole | 1 | 0 | | 10.04 | 53.25 | 50 | 20 | 0.01 | 1.074 | 1.144 | 6.50 | |
| Di-n-butylphthalate | 1 | 0 | | 10.40 | 53.07 | 50 | 20 | 0.01 | 1.144 | 1.365 | 6.15 | |
| Fluoranthene | 1 | 0 | | 11.15 | 54.21 | 50 | 20 | 0.6 | 1.258 | 1.364 | 8.42 | |
| Chrysene-d12 | 1 | 0 | I | 12.85 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Pyrene | 1 | 0 | | 11.41 | 54.81 | 50 | 20 | 0.6 | 1.085 | 1.189 | 9.62 | |
| Benzidine | 1 | 0 | | 11.29 | 51.26 | 50 | ** | | 0.454 | 0.602 | 2.53 | |
| Terphenyl-d14 | 1 | 0 | S | 11.58 | 27.90 | 25 | ** | | 0.594 | 0.663 | 11.58 | |
| 4,4'-DDE | 1 | 0 | | 11.52 | 56.05 | | ** | | 0.242 | | | |
| 4,4'-DDD | 1 | 0 | | 11.92 | 57.74 | | ** | | 0.463 | | | |
| Butylbenzylphthalate | 1 | 0 | | 12.17 | 50.91 | 50 | 20 | 0.01 | 0.473 | 0.530 | 1.83 | |
| 4,4'-DDT | 1 | 0 | | 12.28 | 54.49 | | ** | | 0.377 | | | |
| 3,3'-Dichlorobenzidine | 1 | 0 | | 12.80 | 63.67 | 50 | 20 | 0.01 | 0.336 | 0.490 | 27.34 | C1 |
| Benzo[a]anthracene | 1 | 0 | | 12.83 | 52.36 | 50 | 20 | 0.8 | 1.120 | 1.172 | 4.72 | |
| Chrysene | 1 | 0 | | 12.87 | 50.86 | 50 | 20 | 0.7 | 1.048 | 1.066 | 1.72 | |
| bis(2-Ethylhexyl)phthalate | 1 | 0 | | 12.86 | 52.79 | 50 | 20 | 0.01 | 0.627 | 0.738 | 5.58 | |
| Perylene-d12 | 1 | 0 | I | 14.47 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Di-n-octylphthalate | 1 | 0 | | 13.61 | 50.74 | 50 | 20 | 0.01 | 1.192 | 1.394 | 1.48 | |
| Benzo[b]fluoranthene | 1 | 0 | | 14.05 | 53.30 | 50 | 20 | 0.7 | 1.213 | 1.293 | 6.60 | |
| Benzo[k]fluoranthene | 1 | 0 | | 14.08 | 51.66 | 50 | 20 | 0.7 | 1.166 | 1.205 | 3.31 | |
| Benzo[a]pyrene | 1 | 0 | | 14.42 | 54.05 | 50 | 20 | 0.7 | 1.123 | 1.214 | 8.11 | |
| Indeno[1,2,3-cd]pyrene | 1 | 0 | | 15.83 | 58.31 | 50 | 20 | 0.5 | 1.151 | 1.342 | 16.61 | |
| Dibenzo[a,h]anthracene | 1 | 0 | | 15.84 | 58.61 | 50 | 20 | 0.4 | 0.972 | 1.139 | 17.23 | |
| Benzo[g,h,i]perylene | 1 | 0 | | 16.21 | 59.14 | 50 | 20 | 0.5 | 0.950 | 1.123 | 18.29 | |

S-Surrogate Compound
N/O or N/Q - Not applicable for this run

I-Internal Standard Compound
C1-Compound %Diff exceeds limits

** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F.**
**624 limits are compared against the concentration found.**
**625 limits are compared against the %DIFF.**
**524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M87008.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/4/2017 8:55:00 A Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8 | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| Toluene Diisocyanate | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 2,2'-oxybis-(1-Chloropropane) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 1,4-Dioxane-d8-Surro | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| 2,4 Diaminotoluene | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| Methylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.773 | 0.000 | 100.00 | |
| Methoxychlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Heptachlor epoxide | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Heptachlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| gamma-BHC | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Dimethylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.963 | 0.000 | 100.00 | |
| Diaminotoluene Dihydrochloride | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 4-Methylphenol | 1 | 100 | | 0.00 | 0.00 | 50 | ** | 0.6 | | 0.000 | 100.00 | |
| Endrin | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M87025.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/4/2017 4:13:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8(INT) | 1 | 0 | I | 2.66 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dioxane | 1 | 0 | | 2.70 | 42.09 | 50 | ** | | 1.079 | 0.907 | 15.81 | |
| Pyridine | 1 | 0 | | 3.18 | 52.36 | 50 | ** | | 3.202 | 3.254 | 4.73 | |
| N-Nitrosodimethylamine | 1 | 0 | | 3.10 | 50.23 | 50 | ** | | 1.810 | 1.878 | 0.47 | |
| 2-Fluorophenol | 1 | 0 | S | 4.69 | 57.07 | 50 | ** | | 2.632 | 3.004 | 14.15 | |
| Benzaldehyde | 1 | 0 | | 5.51 | 33.93 | 50 | 20 | 0.01 | 0.538 | 0.365 | 32.14 | C1 |
| Aniline | 1 | 0 | | 5.60 | 52.97 | 50 | ** | | 4.121 | 4.823 | 5.95 | |
| Pentachloroethane | 1 | 0 | | 5.64 | 58.51 | 50 | ** | 0.05 | 0.928 | 1.086 | 17.02 | |
| bis(2-Chloroethyl)ether | 1 | 0 | | 5.65 | 54.40 | 50 | 20 | 0.7 | 2.942 | 3.098 | 8.80 | |
| Phenol-d5 | 1 | 0 | S | 5.57 | 56.19 | 50 | ** | | 3.629 | 4.079 | 12.39 | |
| Phenol | 1 | 0 | | 5.59 | 53.92 | 50 | 20 | 0.8 | 4.151 | 4.477 | 7.85 | |
| 2-Chlorophenol | 1 | 0 | | 5.70 | 60.81 | 50 | 20 | 0.8 | 2.808 | 3.415 | 21.62 | C1 |
| N-Decane | 1 | 0 | | 5.75 | 54.39 | 50 | ** | 0.05 | 2.652 | 2.884 | 8.78 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 5.83 | 60.04 | 50 | ** | | 3.004 | 3.607 | 20.08 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 5.88 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 5.90 | 52.97 | 50 | 20 | | 1.623 | 1.719 | 5.94 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 6.02 | 52.33 | 50 | ** | | 1.553 | 1.625 | 4.66 | |
| Benzyl alcohol | 1 | 0 | | 5.99 | 48.45 | 50 | ** | | 1.012 | 0.980 | 3.10 | |
| bis(2-chloroisopropyl)ether | 1 | 0 | | 6.10 | 44.47 | 50 | 20 | 0.01 | 1.855 | 1.650 | 11.06 | |
| 2-Methylphenol | 1 | 0 | | 6.09 | 51.69 | 50 | 20 | 0.7 | 1.402 | 1.505 | 3.39 | |
| Acetophenone | 1 | 0 | | 6.21 | 44.20 | 50 | 20 | 0.01 | 2.087 | 1.845 | 11.59 | |
| Hexachloroethane | 1 | 0 | | 6.29 | 50.66 | 50 | 20 | 0.3 | 0.592 | 0.599 | 1.32 | |
| N-Nitroso-di-n-propylamine | 1 | 0 | | 6.21 | 49.98 | 50 | 20 | 0.5 | 1.112 | 1.112 | 0.04 | |
| 3&4-Methylphenol | 1 | 0 | | 6.21 | 52.33 | 50 | 20 | | 1.398 | 1.566 | 4.66 | |
| Naphthalene-d8 | 1 | 0 | I | 6.89 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Nitrobenzene-d5 | 1 | 0 | S | 6.33 | 28.03 | 25 | ** | | 0.173 | 0.193 | 12.13 | |
| Nitrobenzene | 1 | 0 | | 6.34 | 48.22 | 50 | 20 | 0.2 | 0.410 | 0.396 | 3.55 | |
| Isophorone | 1 | 0 | | 6.53 | 48.88 | 50 | 20 | 0.4 | 0.764 | 0.747 | 2.24 | |
| 2-Nitrophenol | 1 | 0 | | 6.59 | 54.41 | 50 | 20 | 0.1 | 0.194 | 0.223 | 8.82 | |
| 2,4-Dimethylphenol | 1 | 0 | | 6.62 | 52.08 | 50 | 20 | 0.2 | 0.364 | 0.404 | 4.17 | |
| Benzoic Acid | 1 | 0 | | 6.71 | 18.85 | 50 | ** | | 0.318 | 0.036 | 62.30 | |
| bis(2-Chloroethoxy)methane | 1 | 0 | | 6.69 | 49.48 | 50 | 20 | 0.3 | 0.457 | 0.453 | 1.05 | |
| 2,4-Dichlorophenol | 1 | 0 | | 6.78 | 55.90 | 50 | 20 | 0.2 | 0.281 | 0.352 | 11.80 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 6.85 | 55.66 | 50 | ** | | 0.335 | 0.373 | 11.32 | |
| Naphthalene | 1 | 0 | | 6.91 | 53.79 | 50 | 20 | 0.7 | 1.157 | 1.167 | 7.58 | |
| 4-Chloroaniline | 1 | 0 | | 6.94 | 61.79 | 50 | 20 | 0.01 | 0.380 | 0.470 | 23.59 | C1 |
| Hexachlorobutadiene | 1 | 0 | | 7.00 | 58.72 | 50 | 20 | 0.01 | 0.182 | 0.213 | 17.44 | |
| Caprolactam | 1 | 0 | | 7.21 | 48.28 | 50 | 20 | 0.01 | 0.132 | 0.126 | 3.44 | |
| 4-Chloro-3-methylphenol | 1 | 0 | | 7.31 | 51.18 | 50 | 20 | 0.2 | 0.349 | 0.366 | 2.37 | |
| 2-Methylnaphthalene | 1 | 0 | | 7.44 | 53.83 | 50 | ** | 0.4 | 0.789 | 0.849 | 7.65 | |
| 1-Methylnaphthalene | 1 | 0 | | 7.52 | 53.13 | 50 | ** | 0.4 | 0.757 | 0.805 | 6.26 | |
| Methylnaphthalenes | 1 | 0 | | 7.44 | 106.90 | 100 | ** | | | 0.826 | 6.90 | |
| 1,1'-Biphenyl | 1 | 0 | | 7.81 | 54.26 | 50 | 20 | 0.01 | 1.025 | 1.112 | 8.53 | |
| Acenaphthene-d10 | 1 | 0 | I | 8.32 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,2,4,5-Tetrachlorobenzene | 1 | 0 | | 7.58 | 50.66 | 50 | 20 | 0.01 | 0.522 | 0.529 | 1.33 | |
| Hexachlorocyclopentadiene | 1 | 0 | | 7.57 | 12.62 | 50 | 20 | 0.05 | 0.268 | 0.078 | 74.75 | C1 |
| 2,4,6-Trichlorophenol | 1 | 0 | | 7.67 | 53.06 | 50 | 20 | 0.2 | 0.346 | 0.405 | 6.13 | |
| 2,4,5-Trichlorophenol | 1 | 0 | | 7.71 | 57.05 | 50 | 20 | 0.2 | 0.371 | 0.427 | 14.09 | |
| 2-Fluorobiphenyl | 1 | 0 | S | 7.73 | 27.28 | 25 | ** | | 1.326 | 1.447 | 9.11 | |
| 2-Chloronaphthalene | 1 | 0 | | 7.84 | 54.15 | 50 | 20 | 0.8 | 1.096 | 1.189 | 8.31 | |
| 1,4-Dimethylnaphthalene | 1 | 0 | | 8.12 | 55.26 | 50 | ** | | 0.963 | 1.064 | 10.52 | |
| Dimethylnaphthalenes | 1 | 0 | | 8.12 | 55.26 | 50 | 20 | | | 1.064 | 10.52 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M87025.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/4/2017 4:13:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diphenyl Ether | 1 | 0 | | 7.90 | 49.40 | 50 | ** | | 0.771 | 0.762 | 1.20 | |
| 2-Nitroaniline | 1 | 0 | | 7.91 | 50.78 | 50 | 20 | 0.01 | 0.402 | 0.408 | 1.56 | |
| Coumarin | 1 | 0 | | 8.10 | 52.94 | | ** | | 0.533 | | | |
| Acenaphthylene | 1 | 0 | | 8.20 | 54.49 | 50 | 20 | 0.9 | 1.732 | 1.887 | 8.97 | |
| Dimethylphthalate | 1 | 0 | | 8.06 | 54.10 | 50 | 20 | 0.01 | 1.347 | 1.457 | 8.19 | |
| 2,6-Dinitrotoluene | 1 | 0 | | 8.12 | 57.41 | 50 | 20 | 0.2 | 0.294 | 0.337 | 14.82 | |
| Acenaphthene | 1 | 0 | | 8.35 | 54.20 | 50 | 20 | 0.9 | 1.136 | 1.232 | 8.41 | |
| 3-Nitroaniline | 1 | 0 | | 8.27 | 54.27 | 50 | 20 | 0.01 | 0.312 | 0.373 | 8.55 | |
| 2,4-Dinitrophenol | 1 | 0 | | 8.37 | 41.12 | 50 | 20 | 0.01 | 0.130 | 0.105 | 17.75 | |
| Dibenzofuran | 1 | 0 | | 8.51 | 54.03 | 50 | 20 | 0.8 | 1.730 | 1.801 | 8.06 | |
| 2,4-Dinitrotoluene | 1 | 0 | | 8.48 | 52.68 | 50 | 20 | 0.2 | 0.415 | 0.466 | 5.37 | |
| 4-Nitrophenol | 1 | 0 | | 8.41 | 38.97 | 50 | 20 | 0.01 | 0.240 | 0.207 | 22.06 | C1 |
| 2,3,4,6-Tetrachlorophenol | 1 | 0 | | 8.62 | 50.21 | 50 | 20 | 0.01 | 0.332 | 0.366 | 0.41 | |
| Fluorene | 1 | 0 | | 8.83 | 55.25 | 50 | 20 | 0.9 | 1.337 | 1.477 | 10.51 | |
| 4-Chlorophenyl-phenylether | 1 | 0 | | 8.82 | 55.06 | 50 | 20 | 0.4 | 0.669 | 0.736 | 10.12 | |
| Diethylphthalate | 1 | 0 | | 8.69 | 54.03 | 50 | 20 | 0.01 | 1.338 | 1.446 | 8.07 | |
| 4-Nitroaniline | 1 | 0 | | 8.83 | 51.10 | 50 | 20 | 0.01 | 0.377 | 0.408 | 2.20 | |
| Atrazine | 1 | 0 | | 9.45 | 47.86 | 50 | 20 | 0.01 | 0.276 | 0.278 | 4.29 | |
| Phenanthrene-d10 | 1 | 0 | I | 9.78 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 4,6-Dinitro-2-methylphenol | 1 | 0 | | 8.87 | 45.29 | 50 | 20 | 0.01 | 0.114 | 0.113 | 9.41 | |
| n-Nitrosodiphenylamine | 1 | 0 | | 8.93 | 55.90 | 50 | 20 | 0.01 | 0.617 | 0.690 | 11.79 | |
| 2,4,6-Tribromophenol | 1 | 0 | S | 9.07 | 63.49 | 50 | ** | | 0.099 | 0.134 | 26.97 | |
| 1,2-Diphenylhydrazine | 1 | 0 | | 8.97 | 48.36 | 50 | ** | | 0.740 | 0.716 | 3.29 | |
| 4-Bromophenyl-phenylether | 1 | 0 | | 9.30 | 58.83 | 50 | 20 | 0.1 | 0.217 | 0.256 | 17.66 | |
| Hexachlorobenzene | 1 | 0 | | 9.38 | 59.28 | 50 | 20 | 0.1 | 0.239 | 0.283 | 18.55 | |
| N-Octadecane | 1 | 0 | | 9.63 | 54.29 | 50 | ** | 0.05 | 0.406 | 0.440 | 8.57 | |
| Pentachlorophenol | 1 | 0 | | 9.59 | 29.83 | 50 | 20 | 0.05 | 0.116 | 0.071 | 40.33 | C1 |
| Phenanthrene | 1 | 0 | | 9.81 | 53.43 | 50 | 20 | 0.7 | 1.115 | 1.192 | 6.85 | |
| Anthracene | 1 | 0 | | 9.86 | 55.34 | 50 | 20 | 0.7 | 1.107 | 1.225 | 10.68 | |
| Carbazole | 1 | 0 | | 10.04 | 53.58 | 50 | 20 | 0.01 | 1.074 | 1.151 | 7.17 | |
| Di-n-butylphthalate | 1 | 0 | | 10.40 | 53.60 | 50 | 20 | 0.01 | 1.144 | 1.378 | 7.19 | |
| Fluoranthene | 1 | 0 | | 11.15 | 54.08 | 50 | 20 | 0.6 | 1.258 | 1.361 | 8.17 | |
| Chrysene-d12 | 1 | 0 | I | 12.85 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Pyrene | 1 | 0 | | 11.41 | 55.89 | 50 | 20 | 0.6 | 1.085 | 1.213 | 11.79 | |
| Benzidine | 1 | 0 | | 11.29 | 52.95 | 50 | ** | | 0.454 | 0.620 | 5.90 | |
| Terphenyl-d14 | 1 | 0 | S | 11.58 | 28.84 | 25 | ** | | 0.594 | 0.685 | 15.36 | |
| 4,4'-DDE | 1 | 0 | | 11.52 | 58.02 | | ** | | 0.242 | | | |
| 4,4'-DDD | 1 | 0 | | 11.92 | 59.11 | | ** | | 0.463 | | | |
| Butylbenzylphthalate | 1 | 0 | | 12.17 | 53.23 | 50 | 20 | 0.01 | 0.473 | 0.554 | 6.46 | |
| 4,4'-DDT | 1 | 0 | | 12.27 | 57.41 | | ** | | 0.377 | | | |
| 3,3'-Dichlorobenzidine | 1 | 0 | | 12.80 | 64.99 | 50 | 20 | 0.01 | 0.336 | 0.499 | 29.99 | C1 |
| Benzo[a]anthracene | 1 | 0 | | 12.83 | 53.17 | 50 | 20 | 0.8 | 1.120 | 1.191 | 6.35 | |
| Chrysene | 1 | 0 | | 12.87 | 51.43 | 50 | 20 | 0.7 | 1.048 | 1.078 | 2.86 | |
| bis(2-Ethylhexyl)phthalate | 1 | 0 | | 12.86 | 53.71 | 50 | 20 | 0.01 | 0.627 | 0.751 | 7.42 | |
| Perylene-d12 | 1 | 0 | I | 14.47 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Di-n-octylphthalate | 1 | 0 | | 13.60 | 51.61 | 50 | 20 | 0.01 | 1.192 | 1.417 | 3.23 | |
| Benzo[b]fluoranthene | 1 | 0 | | 14.05 | 56.33 | 50 | 20 | 0.7 | 1.213 | 1.366 | 12.66 | |
| Benzo[k]fluoranthene | 1 | 0 | | 14.08 | 48.73 | 50 | 20 | 0.7 | 1.166 | 1.136 | 2.54 | |
| Benzo[a]pyrene | 1 | 0 | | 14.41 | 53.51 | 50 | 20 | 0.7 | 1.123 | 1.202 | 7.03 | |
| Indeno[1,2,3-cd]pyrene | 1 | 0 | | 15.82 | 57.43 | 50 | 20 | 0.5 | 1.151 | 1.322 | 14.86 | |
| Dibenzo[a,h]anthracene | 1 | 0 | | 15.84 | 57.18 | 50 | 20 | 0.4 | 0.972 | 1.112 | 14.37 | |
| Benzo[g,h,i]perylene | 1 | 0 | | 16.21 | 57.20 | 50 | 20 | 0.5 | 0.950 | 1.086 | 14.41 | |

S-Surrogate Compound
N/O or N/Q - Not applicable for this run

I-Internal Standard Compound
C1-Compound %Diff exceeds limits

** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F.**
**624 limits are compared against the concentration found.**
**625 limits are compared against the %DIFF.**
**524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M87025.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 10/4/2017 4:13:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methoxychlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| 4-Methylphenol | 1 | 100 | | 0.00 | 0.00 | 50 | ** | 0.6 | | 0.000 | 100.00 | |
| 2,2'-oxybis-(1-Chloropropane) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| Toluene Diisocyanate | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 1,4-Dioxane-d8-Surro | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| Dimethylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.963 | 0.000 | 100.00 | |
| Methylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.773 | 0.000 | 100.00 | |
| Diaminotoluene Dihydrochloride | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| Heptachlor epoxide | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| 2,4 Diaminotoluene | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| Heptachlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| gamma-BHC | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Endrin | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 1,4-Dioxane-d8 | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

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# FORM8

## Internal Standard Areas

Evaluation Std Data File: 10M64985.D  Method: EPA 8270D

Analysis Date/Time: 09/11/17 12:53

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 35265 | 2.50 | 75383 | 5.75 | 289381 | 6.76 | 181964 | 8.17 | 315451 | 9.62 | 354383 | 12.64 | 329776 | 14.24 |
| Eval File Area Limit: | 17632-70530 | | 37692-150766 | | 144690-578762 | | 90982-363928 | | 157726-630902 | | 177192-708766 | | 164888-659552 | |
| Eval File Rt Limit: | 2-3 | | 5.25-6.25 | | 6.26-7.26 | | 7.67-8.67 | | 9.12-10.12 | | 12.14-13.14 | | 13.74-14.74 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10M64975.D | CAL BNA@10PPM | 32208 | 2.50 | 68334 | 5.75 | 268864 | 6.76 | 171388 | 8.17 | 292677 | 9.61 | 338284 | 12.64 | 311911 | 14.24 |
| 10M64976.D | CAL BNA@196PPM | 32571 | 2.50 | 72234 | 5.75 | 280842 | 6.77 | 177681 | 8.18 | 300829 | 9.62 | 337898 | 12.65 | 308802 | 14.25 |
| 10M64977.D | CAL BNA@160PPM | 27541 | 2.50 | 60515 | 5.75 | 238187 | 6.76 | 154215 | 8.17 | 276473 | 9.62 | 320557 | 12.65 | 299384 | 14.25 |
| 10M64978.D | CAL BNA@120PPM | 34615 | 2.50 | 74837 | 5.75 | 292395 | 6.76 | 186508 | 8.18 | 323232 | 9.62 | 362088 | 12.65 | 337174 | 14.25 |
| 10M64979.D | CAL BNA@80PPM | 31993 | 2.50 | 71282 | 5.75 | 276755 | 6.76 | 178149 | 8.17 | 315241 | 9.62 | 345890 | 12.65 | 321889 | 14.24 |
| 10M64981.D | CAL BNA@20PPM | 33868 | 2.50 | 71905 | 5.75 | 283028 | 6.76 | 178213 | 8.17 | 315136 | 9.62 | 366732 | 12.64 | 342612 | 14.24 |
| 10M64982.D | CAL BNA@2PPM | 33915 | 2.50 | 71735 | 5.75 | 281829 | 6.76 | 176962 | 8.17 | 318752 | 9.61 | 366364 | 12.64 | 341565 | 14.24 |
| 10M64983.D | CAL BNA@.5PPM | 36310 | 2.50 | 76457 | 5.75 | 299549 | 6.76 | 188660 | 8.17 | 329396 | 9.61 | 392746 | 12.64 | 367922 | 14.24 |
| 10M64984.D | CAL BNA@.25PPM | 31693 | 2.50 | 66518 | 5.75 | 259327 | 6.76 | 161586 | 8.17 | 288281 | 9.61 | 323988 | 12.64 | 302006 | 14.24 |
| 10M64985.D | CAL BNA@50PPM | 35265 | 2.50 | 75383 | 5.75 | 289381 | 6.76 | 181964 | 8.17 | 315451 | 9.62 | 354383 | 12.64 | 329776 | 14.24 |
| 10M64986.D | ICV BNA@50PPM | 35339 | 2.50 | 74232 | 5.75 | 285410 | 6.76 | 181175 | 8.17 | 317546 | 9.62 | 350852 | 12.64 | 322097 | 14.24 |
| 10M64987.D | EXT MIX#1 | 34412 | 2.50 | 72975 | 5.75 | 284416 | 6.76 | 179882 | 8.17 | 318593 | 9.62 | 361962 | 12.64 | 339291 | 14.24 |
| 10M64988.D | EXT MIX#1(2ND) | 35118 | 2.50 | 72552 | 5.75 | 292736 | 6.76 | 186676 | 8.17 | 327627 | 9.61 | 376144 | 12.64 | 348626 | 14.24 |

| | | | | | |
|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | |

**625/8270 Internal Standard concentration = 40 mg/L (in final extract)**
**624/8260 Internal Standard concentration = 30ug/L**
**524 Internal Standard concentration =5ug/L**

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

## Internal Standard Areas

Evaluation Std Data File: 7M86409.D  Method: EPA 8270D

Analysis Date/Time: 09/11/17 13:22

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 44513 | 2.67 | 81341 | 5.88 | 333846 | 6.90 | 216185 | 8.34 | 407318 | 9.79 | 481166 | 12.85 | 436287 | 14.49 |
| Eval File Area Limit: | 22256-89026 | | 40670-162682 | | 166923-667692 | | 108092-432370 | | 203659-814636 | | 240583-962332 | | 218144-872574 | |
| Eval File Rt Limit: | 2.17-3.17 | | 5.38-6.38 | | 6.4-7.4 | | 7.84-8.84 | | 9.29-10.29 | | 12.35-13.35 | | 13.99-14.99 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M86403.D | CAL BNA@10PPM | 36744 | 2.67 | 69500 | 5.88 | 291390 | 6.90 | 197241 | 8.34 | 382882 | 9.80 | 502748 | 12.84 | 473995 | 14.47 |
| 7M86404.D | CAL BNA@196PPM | 36644 | 2.67 | 71365 | 5.88 | 312983 | 6.90 | 220438 | 8.34 | 422789 | 9.80 | 490801 | 12.85 | 460132 | 14.48 |
| 7M86405.D | CAL BNA@160PPM | 37494 | 2.67 | 73689 | 5.88 | 311629 | 6.90 | 213898 | 8.34 | 408480 | 9.80 | 472636 | 12.85 | 433207 | 14.47 |
| 7M86406.D | CAL BNA@120PPM | 39940 | 2.67 | 78143 | 5.88 | 329897 | 6.90 | 226107 | 8.34 | 434083 | 9.80 | 514554 | 12.85 | 478323 | 14.47 |
| 7M86407.D | CAL BNA@80PPM | 41904 | 2.67 | 77920 | 5.88 | 323618 | 6.90 | 213313 | 8.34 | 408041 | 9.79 | 486212 | 12.85 | 451475 | 14.47 |
| 7M86409.D | CAL BNA@50PPM | 44513 | 2.67 | 81341 | 5.88 | 333846 | 6.90 | 216185 | 8.34 | 407318 | 9.79 | 481166 | 12.85 | 436287 | 14.49 |
| 7M86410.D | CAL BNA@20PPM | 39352 | 2.67 | 75725 | 5.88 | 321177 | 6.90 | 210445 | 8.34 | 396180 | 9.80 | 491773 | 12.84 | 452925 | 14.47 |
| 7M86411.D | CAL BNA@2PPM | 36733 | 2.67 | 66985 | 5.88 | 272600 | 6.89 | 183277 | 8.33 | 355503 | 9.79 | 469676 | 12.84 | 434780 | 14.47 |
| 7M86412.D | CAL BNA@.25PPM | 42687 | 2.67 | 69978 | 5.88 | 275839 | 6.90 | 179986 | 8.33 | 343013 | 9.80 | 418646 | 12.85 | 385512 | 14.51 |
| 7M86413.D | CAL BNA@.5PPM | 46233 | 2.67 | 84320 | 5.88 | 338640 | 6.89 | 219575 | 8.33 | 410815 | 9.79 | 494741 | 12.84 | 455189 | 14.48 |
| 7M86414.D | ICV BNA@50PPM | 45954 | 2.67 | 71832 | 5.88 | 282544 | 6.90 | 180658 | 8.34 | 340042 | 9.80 | 447040 | 12.85 | 432302 | 14.47 |

| | | | | | |
|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | |

**625/8270 Internal Standard concentration = 40 mg/L (in final extract)**
**624/8260 Internal Standard concentration = 30ug/L**
**524 Internal Standard concentration =5ug/L**

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

## Internal Standard Areas

Evaluation Std Data File: 7M86986.D  Method: EPA 8270D

Analysis Date/Time: 10/03/17 15:31

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 25616 | 2.66 | 52859 | 5.88 | 213322 | 6.89 | 141694 | 8.32 | 263152 | 9.78 | 303745 | 12.84 | 269184 | 14.47 |
| Eval File Area Limit: | 12808-51232 | | 26430-105718 | | 106661-426644 | | 70847-283388 | | 131576-526304 | | 151872-607490 | | 134592-538368 | |
| Eval File Rt Limit: | 2.16-3.16 | | 5.38-6.38 | | 6.39-7.39 | | 7.82-8.82 | | 9.28-10.28 | | 12.34-13.34 | | 13.97-14.97 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M86987.D | AD00319-002(3X) | 25980 | 2.66 | 56242 | 5.88 | 222103 | 6.89 | 144451 | 8.32 | 255419 | 9.78 | 264475 | 12.84 | 237699 | 14.47 |
| 7M86988.D | SMB63050(MS) | 26095 | 2.66 | 55585 | 5.88 | 211307 | 6.89 | 133545 | 8.32 | 237116 | 9.78 | 248184 | 12.84 | 222447 | 14.47 |
| 7M86989.D | SMB63051(MS) | 26393 | 2.66 | 57227 | 5.88 | 216383 | 6.89 | 136845 | 8.32 | 238333 | 9.78 | 243618 | 12.84 | 219889 | 14.47 |
| 7M86990.D | SMB63050 | 28185 | 2.66 | 58611 | 5.88 | 225972 | 6.89 | 142420 | 8.32 | 249508 | 9.78 | 256794 | 12.83 | 225468 | 14.47 |
| 7M86991.D | SMB63051 | 23886 | 2.66 | 50240 | 5.88 | 196061 | 6.89 | 123943 | 8.32 | 220347 | 9.78 | 228791 | 12.83 | 202169 | 14.47 |
| 7M86992.D | AD00275-021(R) | 27209 | 2.66 | 57679 | 5.88 | 222254 | 6.88 | 138810 | 8.32 | 239313 | 9.78 | 241301 | 12.84 | 215365 | 14.47 |
| 7M86993.D | AD00298-002(5X) | 26586 | 2.66 | 57292 | 5.88 | 220122 | 6.88 | 144445 | 8.32 | 257515 | 9.78 | 258554 | 12.84 | 240885 | 14.47 |
| 7M86994.D | AD00316-026(3X) | 27834 | 2.66 | 58712 | 5.88 | 227238 | 6.89 | 145992 | 8.32 | 255399 | 9.78 | 249236 | 12.84 | 231785 | 14.47 |
| 7M86995.D | AD00275-006(3X) | 26685 | 2.66 | 57210 | 5.88 | 221159 | 6.89 | 144119 | 8.32 | 254470 | 9.78 | 253675 | 12.84 | 240553 | 14.47 |
| 7M86996.D | AD00275-015(3X) | 27687 | 2.66 | 58049 | 5.88 | 220919 | 6.89 | 143363 | 8.32 | 253640 | 9.78 | 250733 | 12.84 | 232680 | 14.47 |
| 7M86997.D | AD00275-025(3X) | 28925 | 2.66 | 62322 | 5.88 | 243974 | 6.89 | 157587 | 8.32 | 274740 | 9.78 | 263825 | 12.84 | 251209 | 14.47 |
| 7M86998.D | AD00275-016 | 28561 | 2.66 | 58915 | 5.88 | 227259 | 6.89 | 144108 | 8.32 | 252040 | 9.78 | 249137 | 12.84 | 236400 | 14.47 |
| 7M86999.D | AD00275-017 | 30291 | 2.66 | 64057 | 5.88 | 244280 | 6.89 | 156993 | 8.32 | 267612 | 9.78 | 269718 | 12.84 | 269742 | 14.47 |
| 7M87000.D | AD00275-018 | 25506 | 2.66 | 53874 | 5.88 | 206795 | 6.89 | 133818 | 8.32 | 230988 | 9.78 | 230293 | 12.84 | 220353 | 14.47 |
| 7M87001.D | AD00275-019 | 28018 | 2.66 | 58801 | 5.88 | 227087 | 6.89 | 143386 | 8.32 | 249891 | 9.78 | 254887 | 12.83 | 238439 | 14.47 |
| 7M87002.D | AD00275-020 | 28136 | 2.66 | 60034 | 5.88 | 230257 | 6.89 | 147901 | 8.32 | 253890 | 9.78 | 258405 | 12.84 | 249075 | 14.47 |
| 7M87003.D | AD00275-022 | 27538 | 2.66 | 58600 | 5.88 | 223963 | 6.89 | 141496 | 8.32 | 243770 | 9.78 | 245591 | 12.84 | 239973 | 14.47 |
| 7M87004.D | AD00275-023 | 27602 | 2.66 | 59273 | 5.88 | 227261 | 6.89 | 145570 | 8.32 | 254580 | 9.78 | 253437 | 12.84 | 239437 | 14.47 |
| 7M87005.D | AD00275-024 | 28048 | 2.66 | 59577 | 5.88 | 229935 | 6.89 | 146789 | 8.32 | 253619 | 9.78 | 253325 | 12.84 | 240039 | 14.47 |
| 7M87006.D | AD00275-026 | 24662 | 2.66 | 51266 | 5.88 | 200985 | 6.89 | 130876 | 8.32 | 228661 | 9.78 | 228377 | 12.84 | 218659 | 14.47 |

| | | | | | |
|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | |

**625/8270 Internal Standard concentration = 40 mg/L (in final extract)**
**624/8260 Internal Standard concentration = 30ug/L**
**524 Internal Standard concentration =5ug/L**

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

## Internal Standard Areas

Evaluation Std Data File: 10M65316.D  Method: EPA 8270D

Analysis Date/Time: 10/04/17 08:55

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 24874 | 2.49 | 53031 | 5.75 | 204317 | 6.75 | 129314 | 8.17 | 222634 | 9.61 | 257094 | 12.64 | 241376 | 14.24 |
| Eval File Area Limit: | 12437-49748 | | 26516-106062 | | 102158-408634 | | 64657-258628 | | 111317-445268 | | 128547-514188 | | 120688-482752 | |
| Eval File Rt Limit: | 1.99-2.99 | | 5.25-6.25 | | 6.25-7.25 | | 7.67-8.67 | | 9.11-10.11 | | 12.14-13.14 | | 13.74-14.74 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10M65317.D | SMB63050 | 37140 | 2.50 | 77220 | 5.75 | 299445 | 6.75 | 179670 | 8.17 | 301901 | 9.61 | 307964 | 12.64 | 250691 | 14.24 |
| 10M65318.D | TEST63051 | 33368 | 2.50 | 68964 | 5.75 | 263685 | 6.75 | 158078 | 8.17 | 258943 | 9.61 | 256358 | 12.64 | 215658 | 14.24 |
| 10M65319.D | AD00192-002 | 35240 | 2.50 | 73551 | 5.75 | 272709 | 6.75 | 167898 | 8.17 | 276762 | 9.61 | 262695 | 12.64 | 229293 | 14.24 |
| 10M65320.D | AD00192-002(MS) | 36464 | 2.50 | 79422 | 5.75 | 304925 | 6.75 | 177766 | 8.17 | 282055 | 9.61 | 251890 | 12.64 | 223051 | 14.24 |
| 10M65321.D | AD00192-002(MSD) | 36216 | 2.50 | 80060 | 5.75 | 301004 | 6.75 | 181376 | 8.17 | 276660 | 9.61 | 258894 | 12.64 | 238932 | 14.24 |
| 10M65322.D | AD00192-005 | 32369 | 2.50 | 66560 | 5.75 | 245688 | 6.75 | 145915 | 8.17 | 241863 | 9.61 | 261228 | 12.64 | 241236 | 14.24 |
| 10M65323.D | AD00290-002 | 32721 | 2.50 | 71662 | 5.75 | 265785 | 6.75 | 159891 | 8.17 | 253788 | 9.61 | 257389 | 12.64 | 237576 | 14.24 |
| 10M65324.D | AD00290-004 | 29756 | 2.50 | 65621 | 5.75 | 240523 | 6.75 | 144152 | 8.17 | 231718 | 9.61 | 227498 | 12.64 | 219284 | 14.24 |
| 10M65325.D | AD00290-006 | 32231 | 2.50 | 70808 | 5.75 | 262070 | 6.75 | 154134 | 8.17 | 249427 | 9.61 | 230419 | 12.64 | 219589 | 14.24 |
| 10M65326.D | AD00290-008 | 35644 | 2.50 | 77427 | 5.75 | 287670 | 6.75 | 168335 | 8.17 | 270181 | 9.61 | 251835 | 12.64 | 238484 | 14.24 |
| 10M65327.D | AD00290-010 | 28613 | 2.50 | 63844 | 5.75 | 248942 | 6.75 | 149228 | 8.17 | 243796 | 9.61 | 234173 | 12.64 | 231196 | 14.24 |
| 10M65328.D | AD00290-012 | 31053 | 2.50 | 69072 | 5.75 | 261462 | 6.75 | 159633 | 8.17 | 259442 | 9.61 | 244244 | 12.64 | 238751 | 14.24 |
| 10M65329.D | AD00290-014 | 34310 | 2.50 | 68423 | 5.75 | 256750 | 6.75 | 153657 | 8.17 | 247024 | 9.61 | 233344 | 12.64 | 226548 | 14.24 |
| 10M65330.D | SMB63051 | 31312 | 2.50 | 67093 | 5.75 | 254024 | 6.75 | 147840 | 8.17 | 237039 | 9.61 | 221177 | 12.64 | 211698 | 14.24 |
| 10M65331.D | WMB63064 | 23985 | 2.50 | 51941 | 5.75 | 206276 | 6.75 | 134951 | 8.17 | 242320 | 9.61 | 265256 | 12.64 | 246404 | 14.24 |
| 10M65332.D | AD00333-001 | 23250 | 2.49 | 46838 | 5.75 | 184139 | 6.75 | 114597 | 8.17 | 200305 | 9.61 | 225840 | 12.64 | 208934 | 14.24 |
| 10M65333.D | AD00333-003 | 23481 | 2.50 | 47638 | 5.75 | 183903 | 6.75 | 114390 | 8.17 | 199988 | 9.61 | 224793 | 12.64 | 207159 | 14.24 |
| 10M65334.D | AD00346-025 | 25196 | 2.49 | 52275 | 5.75 | 206673 | 6.75 | 133104 | 8.17 | 232703 | 9.61 | 245977 | 12.64 | 222374 | 14.24 |
| 10M65335.D | AD00354-001 | 29183 | 2.49 | 61007 | 5.75 | 242217 | 6.75 | 152697 | 8.17 | 263279 | 9.61 | 286229 | 12.64 | 254528 | 14.24 |
| 10M65336.D | AD00354-002 | 28365 | 2.50 | 58745 | 5.75 | 230525 | 6.75 | 147009 | 8.17 | 254042 | 9.61 | 277411 | 12.64 | 253069 | 14.24 |
| 10M65337.D | AD00354-003 | 25082 | 2.50 | 52481 | 5.75 | 206414 | 6.75 | 128103 | 8.17 | 225692 | 9.61 | 247175 | 12.64 | 214220 | 14.24 |
| 10M65338.D | AD00354-004 | 31084 | 2.50 | 64497 | 5.75 | 251620 | 6.75 | 159974 | 8.17 | 272510 | 9.61 | 295583 | 12.64 | 268902 | 14.24 |
| 10M65339.D | AD00354-005 | 27629 | 2.50 | 57557 | 5.75 | 223105 | 6.75 | 141046 | 8.17 | 253816 | 9.61 | 269823 | 12.64 | 246067 | 14.24 |

| | | | | | | |
|---|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 | **625/8270 Internal Standard concentration = 40 mg/L (in final extract)** |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | | **624/8260 Internal Standard concentration = 30ug/L** |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | | **524 Internal Standard concentration =5ug/L** |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

## Internal Standard Areas

Evaluation Std Data File: 7M87008.D  Method: EPA 8270D

Analysis Date/Time: 10/04/17 08:55

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 24726 | 2.65 | 49934 | 5.88 | 195904 | 6.89 | 126546 | 8.33 | 229824 | 9.79 | 273089 | 12.85 | 253383 | 14.47 |
| Eval File Area Limit: | 12363-49452 | | 24967-99868 | | 97952-391808 | | 63273-253092 | | 114912-459648 | | 136544-546178 | | 126692-506766 | |
| Eval File Rt Limit: | 2.15-3.15 | | 5.38-6.38 | | 6.39-7.39 | | 7.83-8.83 | | 9.29-10.29 | | 12.35-13.35 | | 13.97-14.97 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M87009.D | AD00361-027 | 26082 | 2.66 | 58080 | 5.88 | 221275 | 6.89 | 140802 | 8.32 | 240678 | 9.78 | 243759 | 12.84 | 224396 | 14.47 |
| 7M87010.D | AD00361-029 | 24364 | 2.66 | 54103 | 5.88 | 204060 | 6.89 | 129893 | 8.33 | 225022 | 9.79 | 224328 | 12.84 | 215785 | 14.48 |
| 7M87011.D | AD00356-001(5X)(MS) | 25751 | 2.66 | 57213 | 5.88 | 225935 | 6.89 | 147181 | 8.33 | 256564 | 9.79 | 248290 | 12.84 | 244431 | 14.48 |
| 7M87012.D | AD00350-001 | 24290 | 2.66 | 51327 | 5.88 | 200969 | 6.89 | 129012 | 8.33 | 217336 | 9.79 | 203604 | 12.84 | 200209 | 14.49 |
| 7M87013.D | AD00275-035 | 29051 | 2.66 | 62072 | 5.88 | 230513 | 6.89 | 140106 | 8.33 | 236427 | 9.79 | 218866 | 12.84 | 211203 | 14.48 |
| 7M87014.D | AD00286-001(5X) | 26839 | 2.66 | 59304 | 5.88 | 232172 | 6.89 | 150330 | 8.33 | 240109 | 9.79 | 254479 | 12.85 | 263043 | 14.51 |
| 7M87015.D | AD00356-001(5X) | 26353 | 2.66 | 57945 | 5.88 | 228932 | 6.89 | 148693 | 8.33 | 250991 | 9.79 | 242614 | 12.85 | 245296 | 14.49 |
| 7M87016.D | AD00356-001(5X)(MS | 26484 | 2.66 | 57217 | 5.88 | 231021 | 6.89 | 148818 | 8.33 | 254579 | 9.79 | 242709 | 12.84 | 245117 | 14.49 |
| 7M87017.D | AD00361-020(5X) | 27993 | 2.66 | 61646 | 5.88 | 244301 | 6.89 | 166534 | 8.33 | 288053 | 9.79 | 284228 | 12.84 | 274387 | 14.48 |
| 7M87018.D | AD00361-021(5X) | 28486 | 2.66 | 62633 | 5.88 | 244666 | 6.89 | 158548 | 8.33 | 266910 | 9.78 | 256272 | 12.84 | 250892 | 14.49 |
| 7M87019.D | AD00361-022(5X) | 27538 | 2.66 | 61349 | 5.88 | 238065 | 6.89 | 153390 | 8.32 | 265841 | 9.78 | 259111 | 12.84 | 248682 | 14.49 |
| 7M87020.D | AD00361-023(5X) | 30870 | 2.66 | 62553 | 5.88 | 233668 | 6.89 | 148855 | 8.32 | 252395 | 9.78 | 261785 | 12.84 | 258230 | 14.47 |
| 7M87021.D | AD00361-024(5X) | 26717 | 2.66 | 56921 | 5.88 | 223009 | 6.89 | 142392 | 8.32 | 241553 | 9.78 | 239736 | 12.84 | 229777 | 14.51 |
| 7M87022.D | AD00361-025(5X) | 30881 | 2.66 | 62967 | 5.88 | 239110 | 6.89 | 148439 | 8.33 | 246554 | 9.78 | 242226 | 12.84 | 235651 | 14.48 |
| 7M87023.D | AD00298-002(5X)(R) | 26606 | 2.66 | 61959 | 5.88 | 248060 | 6.89 | 158164 | 8.32 | 262066 | 9.78 | 251270 | 12.84 | 253946 | 14.48 |

| | | | | | | |
|---|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 | **625/8270 Internal Standard concentration = 40 mg/L (in final extract)** |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | | **624/8260 Internal Standard concentration = 30ug/L** |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | | **524 Internal Standard concentration =5ug/L** |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

## Internal Standard Areas

Evaluation Std Data File: 7M87025.D  Method: EPA 8270D

Analysis Date/Time: 10/04/17 16:13

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 23890 | 2.66 | 51374 | 5.88 | 204664 | 6.89 | 133354 | 8.32 | 250122 | 9.78 | 288807 | 12.85 | 264566 | 14.47 |
| Eval File Area Limit: | 11945-47780 | | 25687-102748 | | 102332-409328 | | 66677-266708 | | 125061-500244 | | 144404-577614 | | 132283-529132 | |
| Eval File Rt Limit: | 2.16-3.16 | | 5.38-6.38 | | 6.39-7.39 | | 7.82-8.82 | | 9.28-10.28 | | 12.35-13.35 | | 13.97-14.97 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M87026.D | SMB63067(MS) | 18935 | 2.65 | 44297 | 5.88 | 182833 | 6.89 | 123304 | 8.33 | 237641 | 9.79 | 282796 | 12.84 | 263683 | 14.47 |
| 7M87027.D | SMB63071(MS) | 20133 | 2.65 | 48104 | 5.88 | 187992 | 6.89 | 121098 | 8.32 | 217378 | 9.78 | 242532 | 12.84 | 222717 | 14.47 |
| 7M87028.D | SMB63071 | 18086 | 2.65 | 43333 | 5.88 | 174844 | 6.88 | 116788 | 8.32 | 217996 | 9.78 | 246076 | 12.84 | 225290 | 14.47 |
| 7M87029.D | SMB63067 | 17090 | 2.65 | 40852 | 5.88 | 165593 | 6.88 | 115584 | 8.32 | 218795 | 9.78 | 264833 | 12.84 | 241614 | 14.47 |
| 7M87030.D | AD00346-004 | 18669 | 2.66 | 42687 | 5.88 | 175306 | 6.89 | 116895 | 8.32 | 218436 | 9.78 | 249520 | 12.84 | 231087 | 14.47 |
| 7M87031.D | AD00346-004(MS) | 17072 | 2.65 | 41643 | 5.88 | 170994 | 6.89 | 116162 | 8.32 | 224403 | 9.78 | 265331 | 12.84 | 240350 | 14.47 |
| 7M87032.D | AD00346-004(MSD) | 17747 | 2.65 | 43894 | 5.88 | 184916 | 6.89 | 126128 | 8.32 | 244032 | 9.78 | 291319 | 12.84 | 267836 | 14.47 |
| 7M87033.D | AD00172-001 | 16965 | 2.65 | 39795 | 5.88 | 167113 | 6.89 | 115368 | 8.32 | 222500 | 9.78 | 264823 | 12.84 | 241282 | 14.47 |
| 7M87034.D | AD00172-001(MS) | 17965 | 2.65 | 42360 | 5.88 | 172509 | 6.89 | 115183 | 8.32 | 215614 | 9.78 | 253888 | 12.84 | 226551 | 14.47 |
| 7M87035.D | AD00172-001(MSD) | 17880 | 2.65 | 43993 | 5.88 | 184390 | 6.89 | 122845 | 8.32 | 231976 | 9.78 | 273526 | 12.84 | 254238 | 14.47 |
| 7M87036.D | AD00374-002 | 21739 | 2.65 | 54449 | 5.88 | 215150 | 6.88 | 136843 | 8.32 | 241770 | 9.78 | 236647 | 12.84 | 220917 | 14.47 |
| 7M87037.D | AD00361-026(5X) | 23334 | 2.65 | 54604 | 5.88 | 221151 | 6.88 | 148662 | 8.32 | 264669 | 9.78 | 252864 | 12.84 | 228408 | 14.47 |
| 7M87038.D | AD00361-028(5X) | 22747 | 2.65 | 55025 | 5.88 | 228734 | 6.88 | 156857 | 8.32 | 282440 | 9.78 | 269699 | 12.84 | 247133 | 14.47 |
| 7M87039.D | AD00361-023(3X) | 24391 | 2.65 | 56790 | 5.88 | 233953 | 6.88 | 155134 | 8.32 | 274439 | 9.78 | 260474 | 12.84 | 243641 | 14.47 |
| 7M87040.D | AD00275-030(3X) | 22774 | 2.65 | 55481 | 5.88 | 227218 | 6.88 | 151686 | 8.32 | 272285 | 9.78 | 257843 | 12.84 | 240387 | 14.47 |
| 7M87041.D | AD00275-027(3X) | 24605 | 2.65 | 58707 | 5.88 | 239208 | 6.88 | 158749 | 8.32 | 275716 | 9.78 | 258826 | 12.84 | 240503 | 14.47 |
| 7M87042.D | AD00275-028 | 20381 | 2.65 | 48078 | 5.88 | 194365 | 6.88 | 129027 | 8.32 | 225009 | 9.78 | 216634 | 12.84 | 206683 | 14.47 |
| 7M87043.D | AD00275-029 | 21759 | 2.65 | 55321 | 5.88 | 225300 | 6.89 | 148243 | 8.32 | 260038 | 9.78 | 255006 | 12.84 | 250697 | 14.47 |
| 7M87044.D | AD00275-031 | 22372 | 2.65 | 52750 | 5.88 | 216141 | 6.89 | 141422 | 8.32 | 245497 | 9.78 | 236417 | 12.84 | 227687 | 14.47 |
| 7M87045.D | AD00275-032 | 21337 | 2.65 | 52752 | 5.88 | 214287 | 6.89 | 138698 | 8.32 | 240484 | 9.78 | 232534 | 12.84 | 223053 | 14.47 |
| 7M87046.D | AD00275-033 | 20621 | 2.65 | 51251 | 5.88 | 206448 | 6.89 | 135832 | 8.32 | 236447 | 9.78 | 229181 | 12.84 | 220350 | 14.47 |
| 7M87047.D | AD00275-034 | 21936 | 2.65 | 52833 | 5.88 | 219549 | 6.88 | 147337 | 8.32 | 260928 | 9.78 | 248842 | 12.84 | 235910 | 14.47 |
| 7M87048.D | AD00286-001(3X) | 23981 | 2.66 | 56603 | 5.88 | 230092 | 6.89 | 148104 | 8.32 | 238339 | 9.78 | 255902 | 12.86 | 268635 | 14.51 |

| | | | | | |
|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | |

**625/8270 Internal Standard concentration = 40 mg/L (in final extract)**
**624/8260 Internal Standard concentration = 30ug/L**
**524 Internal Standard concentration =5ug/L**

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

# PCB Data

# Form1

ORGANICS PCB REPORT

Sample Number: AD00298-002
Client Id: 475 EXTERIOR NYRECYC
Data File: 3G103989.D
Analysis Date: 10/03/17 21:37
Date Rec/Extracted: 09/28/17-10/03/17
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8082A
Matrix: Soil
Initial Vol: 20g
Final Vol: 10ml
Dilution: 1
Solids: 92

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 0.027 | U | 11097-69-1 | Aroclor-1254 | 0.027 | U |
| 11104-28-2 | Aroclor-1221 | 0.027 | U | 11096-82-5 | Aroclor-1260 | 0.027 | U |
| 11141-16-5 | Aroclor-1232 | 0.027 | U | 37324-23-5 | Aroclor-1262 | 0.027 | U |
| 53469-21-9 | Aroclor-1242 | 0.027 | U | 11100-14-4 | Aroclor-1268 | 0.027 | U |
| 12672-29-6 | Aroclor-1248 | 0.027 | U | 1336-36-3 | Aroclor (Total) | 0.027 | U |

Worksheet #: 439171

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2017\GC_3\Data\10-03-17\
Data File : 3G103989.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 3 Oct 2017 21:37
Operator : MS/MLC/ZM
Sample : AD00298-002
Misc : S,PCB
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 04 12:36:03 2017
Quant Method : G:\GCDATA\2017\GC_3\METHODQT\3G_C0911.M
Quant Title : @GC_3,ug,608,8082
QLast Update : Tue Sep 12 09:39:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

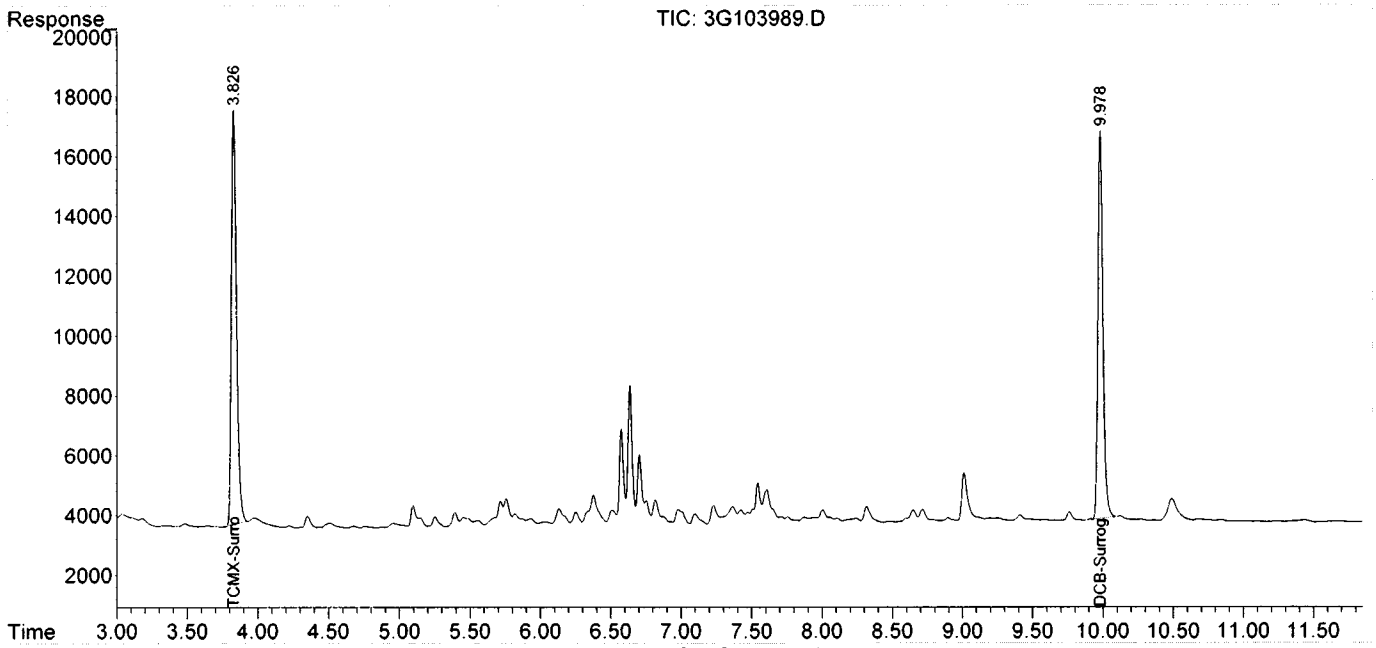
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | pg#1 | pg#2 |
|---|---|---|---|---|---|---|---|
| | Target Compounds | | | | | | |
| 1) | TCMX-Surrogate | 3.827 | 3.865 | 351085 | 579830 | 70.384 | 70.601 |
| 45) | DCB-Surrogate | 9.979 | 10.655 | 318236 | 558327 | 61.801 | 64.608 |

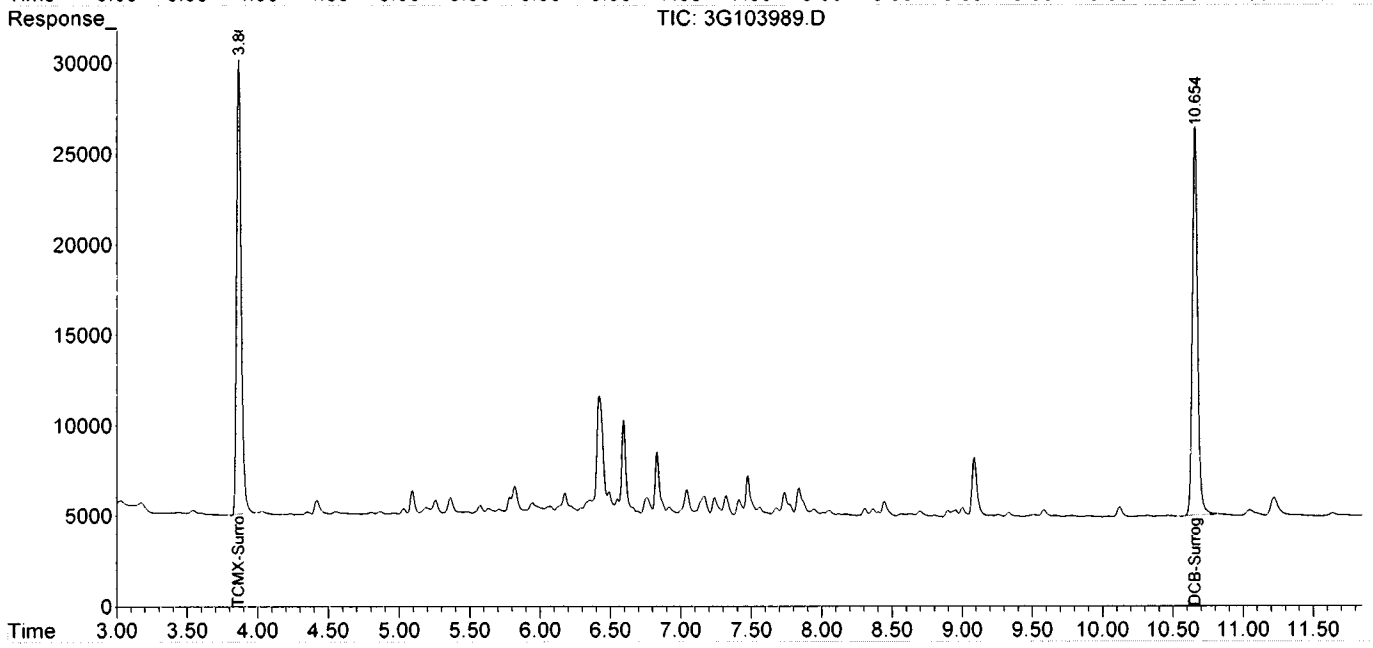
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2017\GC_3\Data\10-03-17\
Data File : 3G103989.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 3 Oct 2017 21:37
Operator : MS/MLC/ZM
Sample : AD00298-002
Misc : S,PCB
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 04 12:36:03 2017
Quant Method : G:\GCDATA\2017\GC_3\METHODQT\3G_C0911.M
Quant Title : @GC_3,ug,608,8082
QLast Update : Tue Sep 12 09:39:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# Form1

ORGANICS PCB REPORT

Sample Number: SMB63044
Client Id:
Data File: 3G103966.D
Analysis Date: 10/03/17 14:47
Date Rec/Extracted: NA-10/03/17
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8082A
Matrix: Soil
Initial Vol: 20g
Final Vol: 10ml
Dilution: 1
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 0.025 | U | 11097-69-1 | Aroclor-1254 | 0.025 | U |
| 11104-28-2 | Aroclor-1221 | 0.025 | U | 11096-82-5 | Aroclor-1260 | 0.025 | U |
| 11141-16-5 | Aroclor-1232 | 0.025 | U | 37324-23-5 | Aroclor-1262 | 0.025 | U |
| 53469-21-9 | Aroclor-1242 | 0.025 | U | 11100-14-4 | Aroclor-1268 | 0.025 | U |
| 12672-29-6 | Aroclor-1248 | 0.025 | U | | | | |

Worksheet #: 439171

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

7092827 0138

Data Path : G:\Gcdata\2017\GC_3\Data\10-03-17\
Data File : 3G103966.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 3 Oct 2017 14:47
Operator : MS/MLC/ZM
Sample : SMB63044
Misc : S,PCB
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 03 16:25:12 2017
Quant Method : G:\GCDATA\2017\GC_3\METHODQT\3G_C0911.M
Quant Title : @GC_3,ug,608,8082
QLast Update : Tue Sep 12 09:39:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

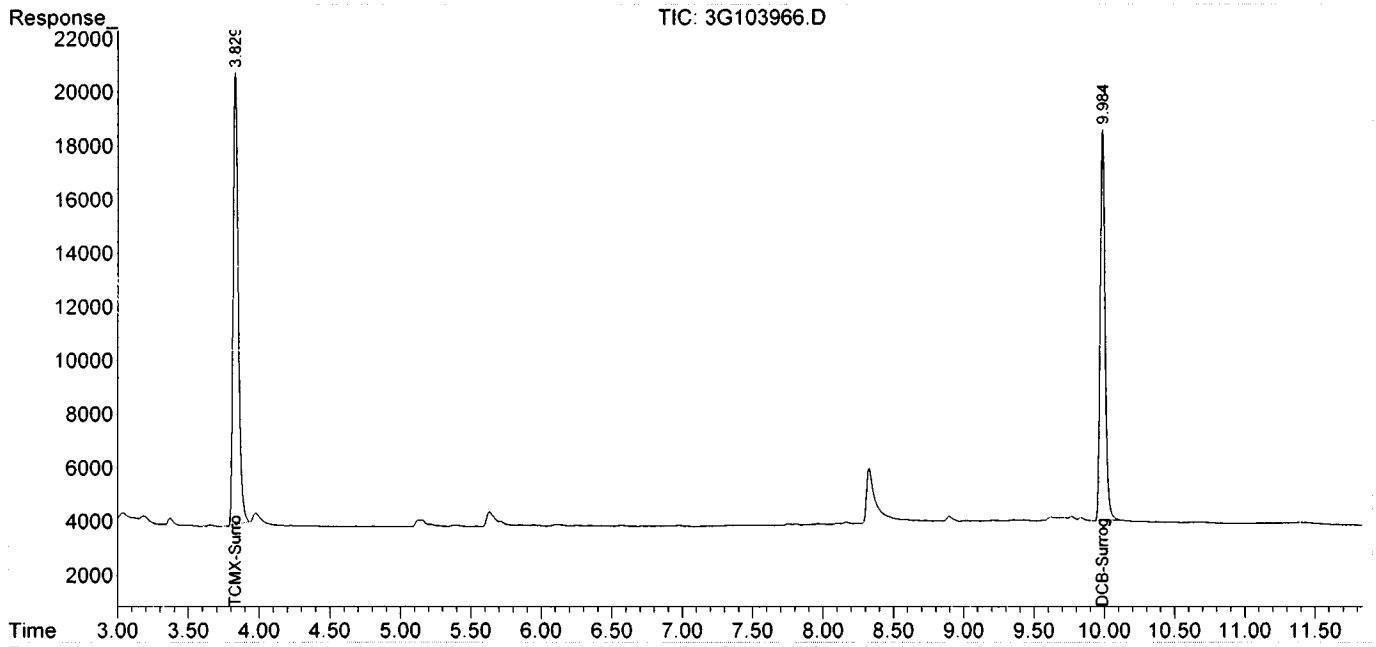
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | pg#1 | pg#2 |
|---|---|---|---|---|---|---|
| Target Compounds | | | | | | |
| 1)TCMX-Surrogate | 3.829 | 3.863 | 429523 | 702966 | 86.109 | 85.594 |
| 45)DCB-Surrogate | 9.984 | 10.654 | 352237 | 662667 | 68.483 | 76.916m |

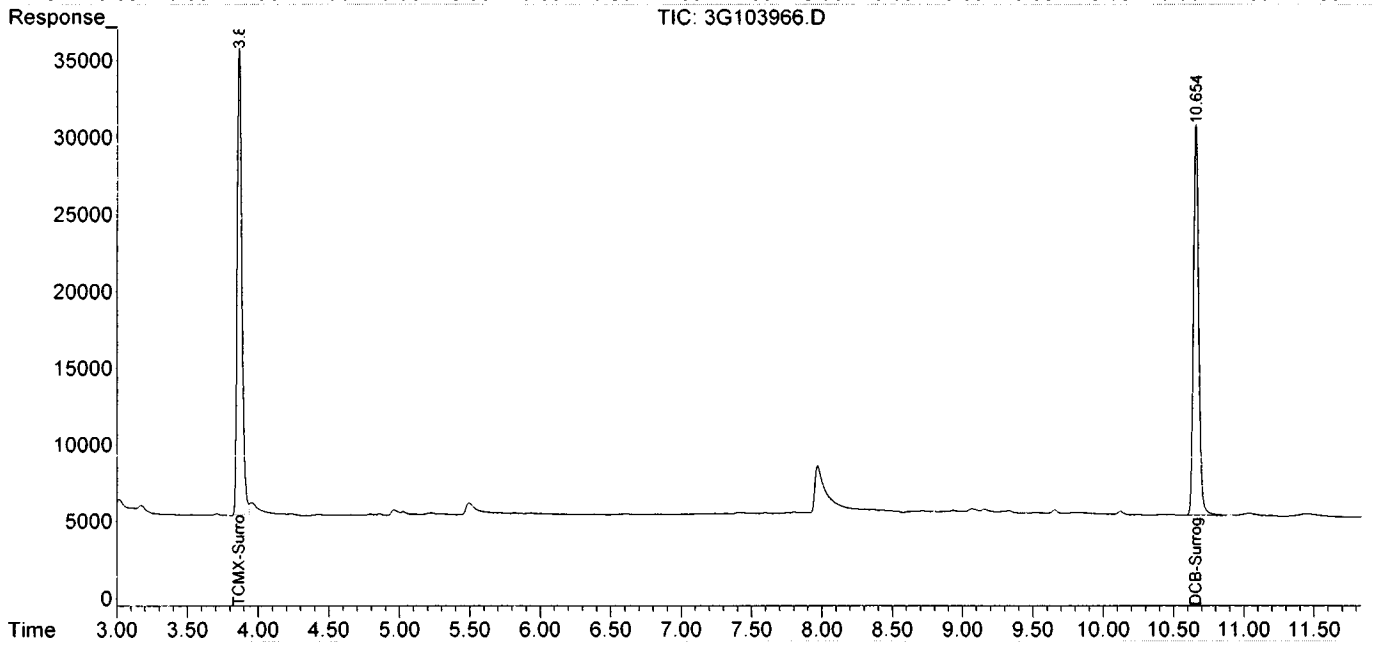
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2017\GC_3\Data\10-03-17\
Data File : 3G103966.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 3 Oct 2017 14:47
Operator : MS/MLC/ZM
Sample : SMB63044
Misc : S,PCB
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 03 16:25:12 2017
Quant Method : G:\GCDATA\2017\GC_3\METHODQT\3G_C0911.M
Quant Title : @GC_3,ug,608,8082
QLast Update : Tue Sep 12 09:39:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# FORM2

## Surrogate Recovery

Method: EPA 8082A

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column2 S2 Recov | Column1 S3 Recov | Column2 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3G103966.D | SMB63044 | S | 10/03/17 14:47 | 1 | | 86 | 86 | 68 | 77 | | |
| 3G103989.D | AD00298-002 | S | 10/03/17 21:37 | 1 | | 70 | 71 | 62 | 65 | | |
| 3G103967.D | SMB63044(MS) | S | 10/03/17 15:02 | 1 | | 85 | 84 | 70 | 77 | | |
| 3G103984.D | AD00316-027(MS) | S | 10/03/17 20:22 | 1 | | 91 | 84 | 87 | 89 | | |
| 3G103985.D | AD00316-027(MSD) | S | 10/03/17 20:37 | 1 | | 84 | 80 | 74 | 82 | | |
| 3G103986.D | AD00316-027 | S | 10/03/17 20:52 | 1 | | 90 | 86 | 79 | 85 | | |

**Flags:** SD=Surrogate diluted out

*=Surrogate out

**Method:** EPA 8082A

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=TCMX-Surrogate | 100 | 37-141 |
| S2=TCMX-Surrogate | 100 | 37-141 |
| S3=DCB-Surrogate | 100 | 34-146 |
| S4=DCB-Surrogate | 100 | 34-146 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63044

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 3G103967.D | SMB63044(MS) | 10/3/2017 3:02:00 PM |
| Non Spike(If applicable): | | |
| Inst Blank(If applicable): | | |

Method: 8082 | Matrix: Soil | QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 -Total | 1 | 904.983 | 0 | 1000 | 90 | 30 | 163 |
| Aroclor-1260 -Total | 1 | 939.611 | 0 | 1000 | 94 | 25 | 166 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63044

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3G103984.D | AD00316-027(MS) | 10/3/2017 8:22:00 PM |
| Non Spike(If applicable): | 3G103986.D | AD00316-027 | 10/3/2017 8:52:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8082 | Matrix: Soil | QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 -Total | 1 | 938.805 | 0 | 1000 | 94 | 30 | 163 |
| Aroclor-1260 -Total | 1 | 1101.776 | 0 | 1000 | 110 | 25 | 166 |

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3G103985.D | AD00316-027(MSD) | 10/3/2017 8:37:00 PM |
| Non Spike(If applicable): | 3G103986.D | AD00316-027 | 10/3/2017 8:52:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8082 | Matrix: Soil | QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 -Total | 1 | 909.366 | 0 | 1000 | 91 | 30 | 163 |
| Aroclor-1260 -Total | 1 | 1057.785 | 0 | 1000 | 106 | 25 | 166 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
# RPD Data Laboratory Limits
## QC Batch: SMB63044

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3G103985.D | AD00316-027(MSD) | 10/3/2017 8:37:00 PM |
| Duplicate(If applicable): | 3G103984.D | AD00316-027(MS) | 10/3/2017 8:22:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8082 Matrix: Soil QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Aroclor-1016 -Total | 1 | 909.366 | 938.805 | 3.2 | 40 |
| Aroclor-1260 -Total | 1 | 1057.785 | 1101.776 | 4.1 | 37 |

* - Indicates outside of limits NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: SMB63044
Blank Data File: 3G103966.D
Matrix: Soil

Blank Analysis Date: 10/03/17 14:47
Blank Extraction Date: 10/03/17
(If Applicable)
Method: EPA 8082A

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD00298-002 | 3G103989.D | 10/03/17 21:37 |
| AD00316-027 | 3G103986.D | 10/03/17 20:52 |
| AD00316-027(MSD | 3G103985.D | 10/03/17 20:37 |
| AD00316-027(MS) | 3G103984.D | 10/03/17 20:22 |
| SMB63044(MS) | 3G103967.D | 10/03/17 15:02 |

# Form 5

Method: EPA 8082A

Instrument: GC_3 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 3G103438.D | 1000 | 09/11/17 12:16 | Soil | | | | | |
| 3G103442.D | CAL 3268@500PPB | 09/11/17 13:55 | Soil | 3G10345 | 9.9848 | 0.007 | 10.6554 | 0.0131 |
| 3G103443.D | CAL 1242@500PPB | 09/11/17 14:10 | Soil | 3G10345 | 9.9856 | 0.015 | 10.6559 | 0.0178 |
| 3G103444.D | CAL 1248@500PPB | 09/11/17 14:28 | Soil | 3G10345 | 9.9886 | 0.0451 | 10.6574 | 0.0319 |
| 3G103445.D | CAL 2154@500PPB | 09/11/17 14:43 | Soil | 3G10345 | 9.9847 | 0.006 | 10.6534 | 0.0056 |
| 3G103446.D | CAL 1262@500PPB | 09/11/17 14:58 | Soil | 3G10345 | 9.9849 | 0.008 | 10.6548 | 0.0075 |
| 3G103447.D | 50PPB | 09/11/17 15:13 | Soil | 3G10345 | 9.9859 | 0.018 | 10.6562 | 0.0206 |
| 3G103448.D | CAL 1660@200PPB | 09/11/17 15:28 | Soil | 3G10345 | 9.9849 | 0.008 | 10.6558 | 0.0169 |
| 3G103449.D | 50PPB | 09/11/17 16:04 | Soil | 3G10345 | 9.9963 | 0.1221 | 10.6614 | 0.0694 |
| 3G103450.D | 4000PPB | 09/11/17 17:18 | Soil | 3G10345 | 9.9875 | 0.034 | 10.6542 | 0.0019 |
| 3G103451.D | CAL 1660@500PPB | 09/11/17 17:33 | Soil | 3G10345 | 9.9847 | 0.006 | 10.6537 | 0.0028 |
| 3G103452.D | CAL 1660@1000PPB | 09/11/17 17:48 | Soil | 3G10345 | 9.9831 | 0.01 | 10.6530 | 0.0094 |
| 3G103453.D | CAL 1660@2000PPB | 09/11/17 18:03 | Soil | 3G10345 | 9.9827 | 0.014 | 10.6526 | 0.0131 |
| 3G103454.D | CAL 1660@50PPB | 09/11/17 18:18 | Soil | 3G10345 | 9.9841 | 0 | 10.6540 | 0 |
| 3G103455.D | CAL 1660@4000PPB | 09/11/17 18:33 | Soil | 3G10345 | 9.9825 | 0.016 | 10.6528 | 0.0113 |
| 3G103456.D | ICV | 09/11/17 18:48 | Soil | 3G10345 | 9.9822 | 0.019 | 10.6531 | 0.0085 |
| 3G103457.D | PEST WS | 09/11/17 19:03 | Soil | 3G10345 | 0.0000 | 200 * | 0.0000 | 200 * |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8082A

Instrument: GC_3 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 3G103962.D | CAL 1660@500PPB | 10/03/17 10:53 | Soil | 3G10396 | 9.9827 | 0 | 10.6515 | 0 |
| 3G103963.D | 271-001 | 10/03/17 13:05 | Soil | 3G10396 | 9.9856 | 0.029 | 10.6544 | 0.0272 |
| 3G103964.D | AD00271-001 | 10/03/17 13:45 | Soil | 3G10396 | 9.9865 | 0.0381 | 10.6556 | 0.0385 |
| 3G103965.D | CAL 1660@500PPB | 10/03/17 14:26 | Soil | 3G10396 | 9.9860 | 0.033 | 10.6550 | 0.0329 |
| 3G103966.D | SMB63044 | 10/03/17 14:47 | Soil | 3G10396 | 9.9843 | 0.017 | 10.6541 | 0.0084 |
| 3G103967.D | SMB63044(MS) | 10/03/17 15:02 | Soil | 3G10396 | 9.9790 | 0.0701 | 10.6533 | 0.016 |
| 3G103968.D | SMB63045 | 10/03/17 15:17 | Soil | 3G10396 | 9.9793 | 0.0671 | 10.6544 | 0.0056 |
| 3G103969.D | SMB63045(MS) | 10/03/17 15:32 | Soil | 3G10396 | 9.9780 | 0.0801 | 10.6538 | 0.0113 |
| 3G103970.D | WMB63055(MS) | 10/03/17 15:46 | Aqueous | 3G10396 | 9.9787 | 0.0731 | 10.6549 | 0.0009 |
| 3G103971.D | WMB63055 | 10/03/17 16:21 | Aqueous | 3G10396 | 9.9854 | 0.006 | 10.6544 | 0.0056 |
| 3G103972.D | AD00301-015 | 10/03/17 17:12 | Aqueous | 3G10396 | 9.9861 | 0.001 | 10.6551 | 0.0009 |
| 3G103973.D | AD00358-011 | 10/03/17 17:27 | Aqueous | 3G10396 | 9.9793 | 0.0671 | 10.6548 | 0.0019 |
| 3G103974.D | AD00317-011 | 10/03/17 17:41 | Aqueous | 3G10396 | 9.9783 | 0.0771 | 10.6540 | 0.0094 |
| 3G103975.D | AD00309-007 | 10/03/17 17:56 | Aqueous | 3G10396 | 9.9772 | 0.0882 | 10.6533 | 0.016 |
| 3G103976.D | TEST(PCB SPK) | 10/03/17 18:11 | Aqueous | 3G10396 | 9.9777 | 0.0831 | 10.6539 | 0.0103 |
| 3G103977.D | AD00301-001 | 10/03/17 18:38 | Soil | 3G10396 | 9.9852 | 0.008 | 10.6559 | 0.0084 |
| 3G103978.D | AD00301-002 | 10/03/17 18:53 | Soil | 3G10396 | 9.9802 | 0.0581 | 10.6539 | 0.0103 |
| 3G103979.D | AD00301-003 | 10/03/17 19:08 | Soil | 3G10396 | 9.9795 | 0.0651 | 10.6537 | 0.0122 |
| 3G103980.D | AD00301-004 | 10/03/17 19:23 | Soil | 3G10396 | 9.9787 | 0.0731 | 10.6535 | 0.0141 |
| 3G103981.D | AD00301-005 | 10/03/17 19:38 | Soil | 3G10396 | 9.9792 | 0.0681 | 10.6538 | 0.0113 |
| 3G103982.D | 1000PPB | 10/03/17 19:53 | Soil | 3G10396 | 9.9795 | 0.0651 | 10.6556 | 0.0056 |
| 3G103983.D | CAL 1660@2000PPB | 10/03/17 20:07 | Soil | 3G10396 | 9.9794 | 0.0661 | 10.6554 | 0.0038 |
| 3G103984.D | AD00316-027(MS) | 10/03/17 20:22 | Soil | 3G10398 | 9.9793 | 0.001 | 10.6550 | 0.0038 |
| 3G103985.D | AD00316-027(MSD) | 10/03/17 20:37 | Soil | 3G10398 | 9.9787 | 0.007 | 10.6545 | 0.0084 |
| 3G103986.D | AD00316-027 | 10/03/17 20:52 | Soil | 3G10398 | 9.9790 | 0.004 | 10.6551 | 0.0028 |
| 3G103987.D | AD00316-026 | 10/03/17 21:07 | Soil | 3G10398 | 9.9788 | 0.006 | 10.6537 | 0.016 |
| 3G103988.D | AD00316-028 | 10/03/17 21:22 | Soil | 3G10398 | 9.9800 | 0.006 | 10.6559 | 0.0047 |
| 3G103989.D | AD00298-002 | 10/03/17 21:37 | Soil | 3G10398 | 9.9793 | 0.001 | 10.6548 | 0.0056 |
| 3G103990.D | AD00301-006 | 10/03/17 21:51 | Soil | 3G10398 | 9.9802 | 0.008 | 10.6557 | 0.0028 |
| 3G103991.D | AD00301-007 | 10/03/17 22:06 | Soil | 3G10398 | 9.9794 | 0 | 10.6561 | 0.0066 |
| 3G103992.D | AD00301-008 | 10/03/17 22:21 | Soil | 3G10398 | 9.9797 | 0.003 | 10.6561 | 0.0066 |
| 3G103993.D | AD00301-009 | 10/03/17 22:36 | Soil | 3G10398 | 9.9812 | 0.018 | 10.6565 | 0.0103 |
| 3G103994.D | AD00301-010 | 10/03/17 22:52 | Soil | 3G10398 | 9.9804 | 0.01 | 10.6556 | 0.0019 |
| 3G103995.D | AD00301-011 | 10/03/17 23:06 | Soil | 3G10398 | 9.9793 | 0.001 | 10.6551 | 0.0028 |
| 3G103996.D | AD00301-012 | 10/03/17 23:21 | Soil | 3G10398 | 9.9798 | 0.004 | 10.6556 | 0.0019 |
| 3G103997.D | AD00301-013 | 10/03/17 23:36 | Soil | 3G10398 | 9.9810 | 0.016 | 10.6568 | 0.0131 |
| 3G103998.D | AD00301-014 | 10/03/17 23:52 | Soil | 3G10398 | 9.9800 | 0.006 | 10.6560 | 0.0056 |
| 3G103999.D | 1000PPB | 10/04/17 00:06 | Soil | 3G10398 | 9.9798 | 0.004 | 10.6567 | 0.0122 |
| 3G104000.D | CAL 1660@2000PPB | 10/04/17 00:21 | Soil | 3G10398 | 9.9805 | 0.011 | 10.6562 | 0.0075 |
| 3G104001.D | AD00309-001(MS) | 10/04/17 00:37 | Soil | 3G10400 | 9.9794 | 0.011 | 10.6537 | 0.0235 |
| 3G104002.D | AD00309-001(MSD) | 10/04/17 00:52 | Soil | 3G10400 | 9.9808 | 0.003 | 10.6559 | 0.0028 |
| 3G104003.D | AD00309-001 | 10/04/17 01:07 | Soil | 3G10400 | 9.9814 | 0.009 | 10.6571 | 0.0084 |
| 3G104004.D | AD00309-006 | 10/04/17 01:22 | Soil | 3G10400 | 9.9827 | 0.022 | 10.6584 | 0.0206 |
| 3G104005.D | AD00309-004 | 10/04/17 01:37 | Soil | 3G10400 | 9.9834 | 0.0291 | 10.6587 | 0.0235 |
| 3G104006.D | AD00309-005 | 10/04/17 01:52 | Soil | 3G10400 | 9.9828 | 0.023 | 10.6578 | 0.015 |
| 3G104007.D | AD00296-012 | 10/04/17 02:07 | Soil | 3G10400 | 9.9829 | 0.024 | 10.6579 | 0.0159 |
| 3G104008.D | BLK | 10/04/17 02:22 | Soil | 3G10400 | 9.9831 | 0.026 | 10.6580 | 0.0169 |
| 3G104009.D | 1000PPB | 10/04/17 02:37 | Soil | 3G10400 | 9.9820 | 0.015 | 10.6584 | 0.0206 |
| 3G104010.D | CAL 1660@2000PPB | 10/04/17 02:53 | Soil | 3G10400 | 9.9831 | 0.026 | 10.6585 | 0.0216 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 6
## Initial Calibration

Method: EPA 8082A

Instrument: GC_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3G103454.D | CAL 1660@50PPB | 09/11/17 18:18 | 2 | 3G103448.D | CAL 1660@200PPB | 09/11/17 15:28 |
| 3 | 3G103451.D | CAL 1660@500PPB | 09/11/17 17:33 | 4 | 3G103452.D | CAL 1660@1000PPB | 09/11/17 17:48 |
| 5 | 3G103453.D | CAL 1660@2000PPB | 09/11/17 18:03 | 6 | 3G103455.D | CAL 1660@4000PPB | 09/11/17 18:33 |
| 7 | 3G103442.D | CAL 3268@500PPB | 09/11/17 13:55 | 8 | 3G103443.D | CAL 1242@500PPB | 09/11/17 14:10 |
| 9 | 3G103444.D | CAL 1248@500PPB | 09/11/17 14:28 | 10 | 3G103445.D | CAL 2154@500PPB | 09/11/17 14:43 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMX-Surrogate | 1 | 0 | Avg | 0.5051 | 0.4680 | 0.4982 | 0.5036 | 0.5073 | 0.5105 | ---- | ---- | 0.499 | 3.83 | 1.00 | 1.00 | 3.1 | 5.00 | 20.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Aroclor-1016 | 1 | 1 | Qua | 0.0183 | 0.0150 | 0.0143 | 0.0136 | 0.0125 | 0.0120 | ---- | ---- | 0.0143 | 4.32 | 0.999 | 1.00 | 16 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 1 | 2 | Qua | 0.0338 | 0.0298 | 0.0274 | 0.0259 | 0.0237 | 0.0218 | ---- | ---- | 0.0271 | 4.68 | 0.997 | 1.00 | 16 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 1 | 3 | Qua | 0.0637 | 0.0539 | 0.0518 | 0.0498 | 0.0463 | 0.0432 | ---- | ---- | 0.0515 | 5.13 | 0.998 | 1.00 | 14 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 1 | 4 | Avg | 0.0178 | 0.0160 | 0.0160 | 0.0158 | 0.0151 | 0.0145 | ---- | ---- | 0.0159 | 5.37 | 0.999 | 1.00 | 7.0 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 1 | 5 | Qua | 0.0427 | 0.0380 | 0.0357 | 0.0350 | 0.0322 | 0.0301 | ---- | ---- | 0.0357 | 5.49 | 0.998 | 1.00 | 13 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 1 | Qua | 0.0361 | 0.0383 | 0.0301 | 0.0290 | 0.0266 | 0.0255 | ---- | ---- | 0.0310 | 6.98 | 0.999 | 1.00 | 17 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 2 | Qua | 0.0420 | 0.0484 | 0.0359 | 0.0335 | 0.0309 | 0.0294 | ---- | ---- | 0.0367 | 7.23 | 0.999 | 0.999 | 20 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 3 | Avg | 0.0196 | 0.0212 | 0.0172 | 0.0171 | 0.0166 | 0.0169 | ---- | ---- | 0.0182 | 7.42 | 1.00 | 1.00 | 10 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 4 | Qua | 0.0263 | 0.0224 | 0.0221 | 0.0217 | 0.0203 | 0.0200 | ---- | ---- | 0.0222 | 8.00 | 1.00 | 1.00 | 10 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 5 | Avg | 0.0366 | 0.0336 | 0.0345 | 0.0357 | 0.0322 | 0.0334 | ---- | ---- | 0.0344 | 8.72 | 0.999 | 0.999 | 4.7 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1221 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00675 | 4.12 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1221 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00420 | 4.26 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1221 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0204 | 4.32 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0144 | 4.32 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0124 | 4.68 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0215 | 5.14 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0101 | 5.27 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00994 | 5.73 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0124 | 4.32 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0220 | 4.68 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0405 | 5.14 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0272 | 5.49 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0168 | 5.73 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0106 | 4.68 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0239 | 5.14 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0411 | 5.48 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0209 | 5.83 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0239 | 6.42 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0107 | 6.62 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0353 | 6.82 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0240 | 6.98 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0376 | 7.10 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0150 | 7.48 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1262 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0365 | 7.65 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0208 | 8.65 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |

Avg Rsd Col 1: 11.78  Avg Rsd Col 2: 18.49

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte..>0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 : Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

7092827 0147

# Form 6
## Initial Calibration

Method: EPA 8082A

Instrument: GC_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3G103454.D | CAL 1660@50PPB | 09/11/17 18:18 | 2 | 3G103448.D | CAL 1660@200PPB | 09/11/17 15:28 |
| 3 | 3G103451.D | CAL 1660@500PPB | 09/11/17 17:33 | 4 | 3G103452.D | CAL 1660@1000PPB | 09/11/17 17:48 |
| 5 | 3G103453.D | CAL 1660@2000PPB | 09/11/17 18:03 | 6 | 3G103455.D | CAL 1660@4000PPB | 09/11/17 18:33 |
| 7 | 3G103442.D | CAL 3268@500PPB | 09/11/17 13:55 | 8 | 3G103443.D | CAL 1242@500PPB | 09/11/17 14:10 |
| 9 | 3G103444.D | CAL 1248@500PPB | 09/11/17 14:28 | 10 | 3G103445.D | CAL 2154@500PPB | 09/11/17 14:43 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1262 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0416 | 8.71 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0203 | 9.42 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00670 | 9.77 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00524 | 8.00 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00569 | 8.32 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0505 | 8.89 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0140 | 8.99 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.168 | 9.77 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| DCB-Surrogate | 1 | 0 | Qua | 0.6581 | 0.5317 | 0.5356 | 0.5222 | 0.4959 | 0.4851 | ---- | ---- | 0.538 | 9.98 | 1.00 | 1.00 | 12 | 5.00 | 20.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| TCMX-Surrogate | 2 | 0 | Avg | 0.9085 | 0.8043 | 0.8058 | 0.8086 | 0.8021 | 0.7981 | ---- | ---- | 0.821 | 3.86 | 1.00 | 1.00 | 5.2 | 5.00 | 20.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Aroclor-1016 | 2 | 1 | Qua | 0.0332 | 0.0246 | 0.0210 | 0.0196 | 0.0180 | 0.0162 | ---- | ---- | 0.0221 | 4.45 | 0.997 | 1.00 | 28 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 2 | 2 | Qua | 0.0591 | 0.0499 | 0.0421 | 0.0390 | 0.0352 | 0.0322 | ---- | ---- | 0.0430 | 4.87 | 0.997 | 1.00 | 23 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 2 | 3 | Qua | 0.1143 | 0.0955 | 0.0835 | 0.0790 | 0.0732 | 0.0687 | ---- | ---- | 0.0858 | 5.25 | 0.999 | 1.00 | 20 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 2 | 4 | Qua | 0.0503 | 0.0424 | 0.0371 | 0.0353 | 0.0324 | 0.0302 | ---- | ---- | 0.0380 | 5.57 | 0.998 | 1.00 | 19 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 2 | 5 | Qua | 0.0361 | 0.0293 | 0.0267 | 0.0253 | 0.0235 | 0.0219 | ---- | ---- | 0.0272 | 5.94 | 0.998 | 1.00 | 19 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 1 | Qua | 0.0722 | 0.0587 | 0.0513 | 0.0483 | 0.0438 | 0.0413 | ---- | ---- | 0.0526 | 7.23 | 0.999 | 1.00 | 22 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 2 | Qua | 0.0771 | 0.0616 | 0.0550 | 0.0512 | 0.0471 | 0.0446 | ---- | ---- | 0.0562 | 7.32 | 0.999 | 1.00 | 21 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 3 | Qua | 0.0379 | 0.0245 | 0.0263 | 0.0219 | 0.0201 | 0.0190 | ---- | ---- | 0.0250 | 7.94 | 0.998 | 0.999 | 28 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 4 | Qua | 0.0563 | 0.0508 | 0.0489 | 0.0441 | 0.0424 | 0.0425 | ---- | ---- | 0.0476 | 8.30 | 1.00 | 1.00 | 12 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 5 | Qua | 0.0528 | 0.0427 | 0.0399 | 0.0401 | 0.0376 | 0.0382 | ---- | ---- | 0.0419 | 9.00 | 1.00 | 1.00 | 13 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1221 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0118 | 4.24 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1221 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00783 | 4.38 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1221 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0260 | 4.45 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0193 | 4.45 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0208 | 4.87 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0362 | 5.25 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0149 | 5.94 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0123 | 6.08 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0187 | 4.45 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0350 | 4.87 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0671 | 5.24 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0294 | 5.57 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0248 | 5.94 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1248 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0166 | 4.87 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0407 | 5.24 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0318 | 5.57 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |

Avg Rsd Col 1: 11.78 Avg Rsd Col 2: 18.49

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte..>0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 : Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

7092827 0148

# Form 6
## Initial Calibration

Method: EPA 8082A

Instrument: GC_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3G103454.D | CAL 1660@50PPB | 09/11/17 18:18 | 2 | 3G103448.D | CAL 1660@200PPB | 09/11/17 15:28 |
| 3 | 3G103451.D | CAL 1660@500PPB | 09/11/17 17:33 | 4 | 3G103452.D | CAL 1660@1000PPB | 09/11/17 17:48 |
| 5 | 3G103453.D | CAL 1660@2000PPB | 09/11/17 18:03 | 6 | 3G103455.D | CAL 1660@4000PPB | 09/11/17 18:33 |
| 7 | 3G103442.D | CAL 3268@500PPB | 09/11/17 13:55 | 8 | 3G103443.D | CAL 1242@500PPB | 09/11/17 14:10 |
| 9 | 3G103444.D | CAL 1248@500PPB | 09/11/17 14:28 | 10 | 3G103445.D | CAL 2154@500PPB | 09/11/17 14:43 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1248 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0293 | 6.08 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0392 | 6.21 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0554 | 6.43 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0183 | 6.77 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0457 | 7.16 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0216 | 7.67 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0194 | 8.36 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0465 | 7.74 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0362 | 8.89 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0391 | 9.00 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0449 | 9.58 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0124 | 10.12 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00908 | 8.40 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0148 | 8.44 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0818 | 9.33 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0213 | 9.48 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.274 | 10.12 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| DCB-Surrogate | 2 | 0 | Qua | 1.1135 | 0.9019 | 0.9228 | 0.8717 | 0.8227 | 0.7938 | ---- | ---- | 0.904 | 10.65 | 0.999 | 1.00 | 13 | 5.00 | 20.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |

Avg Rsd Col 1: 11.78 Avg Rsd Col 2: 18.49

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte..>0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whehter Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 : Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

7092827 0149

# Form7
Continuing Calibration

Method: EPA 8082A

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | | 3G103965.D | | | 3G103983.D | | | 3G104000.D | | | | | | | | | |
| **Method:** | | | | 8082 | | | 8082 | | | 8082 | | | | | | | | | |
| **Calibration Name:** | | | | CAL 1660@500PP | | | CAL 1660@2000PP | | | CAL 1660@2000PP | | | | | | | | | |
| **Calibration Date/Time** | | | | 10/03/17 14:26 | | | 10/03/17 20:07 | | | 10/04/17 00:21 | | | | | | | | | |
| | | | | | Conc | | | Conc | | | Conc | | | Conc | | | Conc | | |
| Compound | Limit | Col | Mr | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff |
| TCMX-Surrogate | 20 | 1 | 0 | 47.75 | 50 | 4.5 | 202.8 | 200 | 1.4 | 213.8 | 200 | 6.9 | | | | | | |
| Aroclor-1016 | 20 | 1 | 1 | 561.4 | 500 | 12.3 | 2100 | 2000 | 5.0 | 2212 | 2000 | 10.6 | | | | | | |
| Aroclor-1016 | 20 | 1 | 2 | 541.7 | 500 | 8.3 | 2010 | 2000 | 0.5 | 2117 | 2000 | 5.9 | | | | | | |
| Aroclor-1016 | 20 | 1 | 3 | 513.2 | 500 | 2.6 | 2006 | 2000 | 0.3 | 2219 | 2000 | 11.0 | | | | | | |
| Aroclor-1016 | 20 | 1 | 4 | 492.5 | 500 | 1.5 | 1937 | 2000 | 3.1 | 2031 | 2000 | 1.6 | | | | | | |
| Aroclor-1016 | 20 | 1 | 5 | 505.3 | 500 | 1.1 | 2085 | 2000 | 4.3 | 2208 | 2000 | 10.4 | | | | | | |
| Aroclor-1260 | 20 | 1 | 1 | 536.8 | 500 | 7.4 | 2110 | 2000 | 5.5 | 2226 | 2000 | 11.3 | | | | | | |
| Aroclor-1260 | 20 | 1 | 2 | 521 | 500 | 4.2 | 2103 | 2000 | 5.2 | 2227 | 2000 | 11.3 | | | | | | |
| Aroclor-1260 | 20 | 1 | 3 | 487.6 | 500 | 2.5 | 2013 | 2000 | 0.6 | 2140 | 2000 | 7.0 | | | | | | |
| Aroclor-1260 | 20 | 1 | 4 | 528.4 | 500 | 5.7 | 2143 | 2000 | 7.1 | 2258 | 2000 | 12.9 | | | | | | |
| Aroclor-1260 | 20 | 1 | 5 | 464.8 | 500 | 7.0 | 2032 | 2000 | 1.6 | 2132 | 2000 | 6.6 | | | | | | |
| DCB-Surrogate | 20 | 1 | 0 | 39.88 | 50 | 20.2 | 170.6 | 200 | 14.7 | 166.7 | 200 | 16.7 | | | | | | |
| Average Difference | 20 | 1 | 0 | | | 6.4 | | | 4.1 | | | 9.3 | | | | | | |
| TCMX-Surrogate | 20 | 2 | 0 | 48.12 | 50 | 3.8 | 199.4 | 200 | 0.3 | 211.5 | 200 | 5.8 | | | | | | |
| Aroclor-1016 | 20 | 2 | 1 | 575.5 | 500 | 15.1 | 2106 | 2000 | 5.3 | 2218 | 2000 | 10.9 | | | | | | |
| Aroclor-1016 | 20 | 2 | 2 | 571.7 | 500 | 14.3 | 2059 | 2000 | 2.9 | 2178 | 2000 | 8.9 | | | | | | |
| Aroclor-1016 | 20 | 2 | 3 | 552.1 | 500 | 10.4 | 2100 | 2000 | 5.0 | 2226 | 2000 | 11.3 | | | | | | |
| Aroclor-1016 | 20 | 2 | 4 | 556.1 | 500 | 11.2 | 2082 | 2000 | 4.1 | 2200 | 2000 | 10.0 | | | | | | |
| Aroclor-1016 | 20 | 2 | 5 | 546.3 | 500 | 9.3 | 2072 | 2000 | 3.6 | 2196 | 2000 | 9.8 | | | | | | |
| Aroclor-1260 | 20 | 2 | 1 | 571.2 | 500 | 14.2 | 2203 | 2000 | 10.1 | 2316 | 2000 | 15.8 | | | | | | |
| Aroclor-1260 | 20 | 2 | 2 | 567.2 | 500 | 13.4 | 2222 | 2000 | 11.1 | 2332 | 2000 | 16.6 | | | | | | |
| Aroclor-1260 | 20 | 2 | 3 | 532.7 | 500 | 6.5 | 2172 | 2000 | 8.6 | 2275 | 2000 | 13.8 | | | | | | |
| Aroclor-1260 | 20 | 2 | 4 | 547.9 | 500 | 9.6 | 2126 | 2000 | 6.3 | 2212 | 2000 | 10.6 | | | | | | |
| Aroclor-1260 | 20 | 2 | 5 | 531.5 | 500 | 6.3 | 2158 | 2000 | 7.9 | 2221 | 2000 | 11.1 | | | | | | |
| DCB-Surrogate | 20 | 2 | 0 | 47.17 | 50 | 5.7 | 176.3 | 200 | 11.8 | 168.3 | 200 | 15.9 | | | | | | |
| Average Difference | 20 | 2 | 0 | | | 10.0 | | | 6.4 | | | 11.7 | | | | | | |

***Flags/Notes:*** **** - Values outside of limits for this column/run***

# Form7
RtWindow Summary

Method: EPA 8082A

| | | | Data File: | 3G103454.D | | 3G103965.D | | 3G103983.D | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Calibration Name: | CAL 1660@50PPB | | CAL 1660@500PPB | | CAL 1660@2000PPB | | | | | |
| | | | Calibration Date/Time | 9/11/2017 6:18:00 PM | | 10/3/2017 2:26:00 PM | | 10/3/2017 8:07:00 PM | | | | | |
| Compound | Col | Mr | | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit |
| TCMX-Surrogate | 1 | 0 | | 3.82 | (3.76 - 3.88) | 3.83 | (3.77 - 3.89) | 3.83 | (3.77 - 3.89) | | | | |
| Aroclor-1016 | 1 | 1 | | 4.32 | (4.28 - 4.36) | 4.32 | (4.28 - 4.36) | 4.32 | (4.28 - 4.36) | | | | |
| Aroclor-1016 | 1 | 2 | | 4.67 | (4.63 - 4.71) | 4.68 | (4.64 - 4.72) | 4.67 | (4.63 - 4.71) | | | | |
| Aroclor-1016 | 1 | 3 | | 5.13 | (5.09 - 5.17) | 5.14 | (5.10 - 5.18) | 5.13 | (5.09 - 5.17) | | | | |
| Aroclor-1016 | 1 | 4 | | 5.37 | (5.33 - 5.41) | 5.38 | (5.34 - 5.42) | 5.37 | (5.33 - 5.41) | | | | |
| Aroclor-1016 | 1 | 5 | | 5.49 | (5.45 - 5.53) | 5.49 | (5.45 - 5.53) | 5.49 | (5.45 - 5.53) | | | | |
| Aroclor-1260 | 1 | 1 | | 6.98 | (6.94 - 7.02) | 6.98 | (6.94 - 7.02) | 6.97 | (6.93 - 7.01) | | | | |
| Aroclor-1260 | 1 | 2 | | 7.23 | (7.19 - 7.27) | 7.23 | (7.19 - 7.27) | 7.22 | (7.18 - 7.26) | | | | |
| Aroclor-1260 | 1 | 3 | | 7.42 | (7.38 - 7.46) | 7.43 | (7.39 - 7.47) | 7.42 | (7.38 - 7.46) | | | | |
| Aroclor-1260 | 1 | 4 | | 8.00 | (7.96 - 8.04) | 8.01 | (7.97 - 8.05) | 8.00 | (7.96 - 8.04) | | | | |
| Aroclor-1260 | 1 | 5 | | 8.72 | (8.68 - 8.76) | 8.72 | (8.68 - 8.76) | 8.71 | (8.67 - 8.75) | | | | |
| Aroclor-1221 | 1 | 1 | | 4.12 | (4.08 - 4.16) | | | | | | | | |
| Aroclor-1221 | 1 | 2 | | 4.26 | (4.22 - 4.30) | | | | | | | | |
| Aroclor-1221 | 1 | 3 | | 4.32 | (4.28 - 4.36) | | | | | | | | |
| Aroclor-1232 | 1 | 1 | | 4.32 | (4.28 - 4.36) | | | | | | | | |
| Aroclor-1232 | 1 | 2 | | 4.67 | (4.63 - 4.71) | | | | | | | | |
| Aroclor-1232 | 1 | 3 | | 5.14 | (5.10 - 5.18) | | | | | | | | |
| Aroclor-1232 | 1 | 4 | | 5.27 | (5.23 - 5.31) | | | | | | | | |
| Aroclor-1232 | 1 | 5 | | 5.72 | (5.68 - 5.76) | | | | | | | | |
| Aroclor-1242 | 1 | 1 | | 4.32 | (4.28 - 4.36) | | | | | | | | |
| Aroclor-1242 | 1 | 2 | | 4.68 | (4.64 - 4.72) | | | | | | | | |
| Aroclor-1242 | 1 | 3 | | 5.14 | (5.10 - 5.18) | | | | | | | | |
| Aroclor-1242 | 1 | 4 | | 5.49 | (5.45 - 5.53) | | | | | | | | |
| Aroclor-1242 | 1 | 5 | | 5.73 | (5.69 - 5.77) | | | | | | | | |
| Aroclor-1248 | 1 | 1 | | 4.68 | (4.64 - 4.72) | | | | | | | | |
| Aroclor-1248 | 1 | 2 | | 5.14 | (5.10 - 5.18) | | | | | | | | |
| Aroclor-1248 | 1 | 3 | | 5.48 | (5.44 - 5.52) | | | | | | | | |
| Aroclor-1248 | 1 | 4 | | 5.83 | (5.79 - 5.87) | | | | | | | | |
| Aroclor-1248 | 1 | 5 | | 6.42 | (6.38 - 6.46) | | | | | | | | |
| Aroclor-1254 | 1 | 1 | | 6.62 | (6.58 - 6.66) | | | | | | | | |
| Aroclor-1254 | 1 | 2 | | 6.82 | (6.78 - 6.86) | | | | | | | | |
| Aroclor-1254 | 1 | 3 | | 6.98 | (6.94 - 7.02) | | | | | | | | |
| Aroclor-1254 | 1 | 4 | | 7.10 | (7.06 - 7.14) | | | | | | | | |
| Aroclor-1254 | 1 | 5 | | 7.48 | (7.44 - 7.52) | | | | | | | | |
| Aroclor-1262 | 1 | 1 | | 7.65 | (7.61 - 7.69) | | | | | | | | |
| Aroclor-1262 | 1 | 2 | | 8.65 | (8.61 - 8.69) | | | | | | | | |
| Aroclor-1262 | 1 | 3 | | 8.71 | (8.67 - 8.75) | | | | | | | | |
| Aroclor-1262 | 1 | 4 | | 9.42 | (9.38 - 9.46) | | | | | | | | |
| Aroclor-1262 | 1 | 5 | | 9.77 | (9.73 - 9.81) | | | | | | | | |
| Aroclor-1268 | 1 | 1 | | 8.01 | (7.97 - 8.05) | | | | | | | | |
| Aroclor-1268 | 1 | 2 | | 8.32 | (8.28 - 8.36) | | | | | | | | |
| Aroclor-1268 | 1 | 3 | | 8.89 | (8.85 - 8.93) | | | | | | | | |
| Aroclor-1268 | 1 | 4 | | 8.99 | (8.95 - 9.03) | | | | | | | | |
| Aroclor-1268 | 1 | 5 | | 9.77 | (9.73 - 9.81) | | | | | | | | |
| DCB-Surrogate | 1 | 0 | | 9.98 | (9.92 - 10.04) | 9.99 | (9.93 - 10.05) | 9.98 | (9.92 - 10.04) | | | | |
| TCMX-Surrogate | 2 | 0 | | 3.86 | (3.80 - 3.92) | 3.86 | (3.80 - 3.92) | 3.86 | (3.80 - 3.92) | | | | |
| Aroclor-1016 | 2 | 1 | | 4.45 | (4.41 - 4.49) | 4.45 | (4.41 - 4.49) | 4.45 | (4.41 - 4.49) | | | | |
| Aroclor-1016 | 2 | 2 | | 4.87 | (4.83 - 4.91) | 4.87 | (4.83 - 4.91) | 4.87 | (4.83 - 4.91) | | | | |
| Aroclor-1016 | 2 | 3 | | 5.24 | (5.20 - 5.28) | 5.25 | (5.21 - 5.29) | 5.25 | (5.21 - 5.29) | | | | |
| Aroclor-1016 | 2 | 4 | | 5.57 | (5.53 - 5.61) | 5.57 | (5.53 - 5.61) | 5.57 | (5.53 - 5.61) | | | | |
| Aroclor-1016 | 2 | 5 | | 5.94 | (5.90 - 5.98) | 5.94 | (5.90 - 5.98) | 5.94 | (5.90 - 5.98) | | | | |
| Aroclor-1260 | 2 | 1 | | 7.23 | (7.19 - 7.27) | 7.24 | (7.20 - 7.28) | 7.24 | (7.20 - 7.28) | | | | |
| Aroclor-1260 | 2 | 2 | | 7.32 | (7.28 - 7.36) | 7.32 | (7.28 - 7.36) | 7.32 | (7.28 - 7.36) | | | | |
| Aroclor-1260 | 2 | 3 | | 7.94 | (7.90 - 7.98) | 7.95 | (7.91 - 7.99) | 7.95 | (7.91 - 7.99) | | | | |
| Aroclor-1260 | 2 | 4 | | 8.30 | (8.26 - 8.34) | 8.30 | (8.26 - 8.34) | 8.30 | (8.26 - 8.34) | | | | |
| Aroclor-1260 | 2 | 5 | | 9.00 | (8.96 - 9.04) | 9.00 | (8.96 - 9.04) | 9.00 | (8.96 - 9.04) | | | | |
| Aroclor-1221 | 2 | 1 | | 4.24 | (4.20 - 4.28) | | | | | | | | |
| Aroclor-1221 | 2 | 2 | | 4.38 | (4.34 - 4.42) | | | | | | | | |
| Aroclor-1221 | 2 | 3 | | 4.45 | (4.41 - 4.49) | | | | | | | | |
| Aroclor-1232 | 2 | 1 | | 4.45 | (4.41 - 4.49) | | | | | | | | |
| Aroclor-1232 | 2 | 2 | | 4.87 | (4.83 - 4.91) | | | | | | | | |
| Aroclor-1232 | 2 | 3 | | 5.25 | (5.21 - 5.29) | | | | | | | | |
| Aroclor-1232 | 2 | 4 | | 5.94 | (5.90 - 5.98) | | | | | | | | |
| Aroclor-1232 | 2 | 5 | | 6.08 | (6.04 - 6.12) | | | | | | | | |
| Aroclor-1242 | 2 | 1 | | 4.45 | (4.41 - 4.49) | | | | | | | | |
| Aroclor-1242 | 2 | 2 | | 4.87 | (4.83 - 4.91) | | | | | | | | |
| Aroclor-1242 | 2 | 3 | | 5.24 | (5.20 - 5.28) | | | | | | | | |
| Aroclor-1242 | 2 | 4 | | 5.57 | (5.53 - 5.61) | | | | | | | | |
| Aroclor-1242 | 2 | 5 | | 5.94 | (5.90 - 5.98) | | | | | | | | |
| Aroclor-1248 | 2 | 1 | | 4.86 | (4.82 - 4.90) | | | | | | | | |
| Aroclor-1248 | 2 | 2 | | 5.24 | (5.20 - 5.28) | | | | | | | | |
| Aroclor-1248 | 2 | 3 | | 5.57 | (5.53 - 5.61) | | | | | | | | |
| Aroclor-1248 | 2 | 4 | | 6.08 | (6.04 - 6.12) | | | | | | | | |
| Aroclor-1248 | 2 | 5 | | 6.21 | (6.17 - 6.25) | | | | | | | | |
| Aroclor-1254 | 2 | 1 | | 6.43 | (6.39 - 6.47) | | | | | | | | |
| Aroclor-1254 | 2 | 2 | | 6.77 | (6.73 - 6.81) | | | | | | | | |
| Aroclor-1254 | 2 | 3 | | 7.16 | (7.12 - 7.20) | | | | | | | | |
| Aroclor-1254 | 2 | 4 | | 7.67 | (7.63 - 7.71) | | | | | | | | |
| Aroclor-1254 | 2 | 5 | | 8.36 | (8.32 - 8.40) | | | | | | | | |
| Aroclor-1262 | 2 | 1 | | 7.74 | (7.70 - 7.78) | | | | | | | | |
| Aroclor-1262 | 2 | 2 | | 8.89 | (8.85 - 8.93) | | | | | | | | |
| Aroclor-1262 | 2 | 3 | | 9.00 | (8.96 - 9.04) | | | | | | | | |
| Aroclor-1262 | 2 | 4 | | 9.58 | (9.54 - 9.62) | | | | | | | | |
| Aroclor-1262 | 2 | 5 | | 10.12 | (10.08 - 10.16) | | | | | | | | |
| Aroclor-1268 | 2 | 1 | | 8.40 | (8.36 - 8.44) | | | | | | | | |
| Aroclor-1268 | 2 | 2 | | 8.44 | (8.40 - 8.48) | | | | | | | | |
| Aroclor-1268 | 2 | 3 | | 9.33 | (9.29 - 9.37) | | | | | | | | |
| Aroclor-1268 | 2 | 4 | | 9.48 | (9.44 - 9.52) | | | | | | | | |
| Aroclor-1268 | 2 | 5 | | 10.12 | (10.08 - 10.16) | | | | | | | | |
| DCB-Surrogate | 2 | 0 | | 10.65 | (10.59 - 10.71) | 10.66 | (10.59 - 10.71) | 10.66 | (10.60 - 10.72) | | | | |

# Pesticide Data

# Form1

ORGANICS PESTICIDE REPORT

Sample Number: AD00298-002
Client Id: 475 EXTERIOR NYRECYC
Data File: 6G81158.D
Analysis Date: 10/04/17 03:39
Date Rec/Extracted: 09/28/17-10/03/17
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8081B
Matrix: Soil
Initial Vol: 20g
Final Vol: 10ml
Dilution: 1
Solids: 92

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| **5103-71-9** | **a-chlordane** | **0.0054** | **0.0082** | 7421-93-4 | Endrin Aldehyde | 0.0054 | U |
| 309-00-2 | Aldrin | 0.0054 | U | 53494-70-5 | Endrin Ketone | 0.0054 | U |
| 319-84-6 | alpha-BHC | 0.0011 | U | 58-89-9 | gamma-BHC | 0.0011 | U |
| 319-85-7 | beta-BHC | 0.0011 | U | 76-44-8 | Heptachlor | 0.0054 | U |
| **12789-03-6** | **(^)Chlordane (Technical)** | **0.027** | **0.055** | 1024-57-3 | Heptachlor Epoxide | 0.0054 | U |
| 319-86-8 | delta-BHC | 0.0054 | U | 72-43-5 | Methoxychlor | 0.0054 | U |
| 60-57-1 | Dieldrin | 0.0011 | U | 72-54-8 | p,p'-DDD | 0.0027 | U |
| 959-98-8 | Endosulfan I | 0.0054 | U | **72-55-9** | **(^)p,p'-DDE** | **0.0027** | **0.0052** |
| 33213-65-9 | Endosulfan II | 0.0054 | U | **50-29-3** | **(^)p,p'-DDT** | **0.0027** | **0.0091** |
| 1031-07-8 | Endosulfan Sulfate | 0.0054 | U | 8001-35-2 | Toxaphene | 0.027 | U |
| 72-20-8 | Endrin | 0.0054 | U | **5103-74-2** | **(^)y-chlordane** | **0.0054** | **0.0076** |
| **57-74-9** | **Chlordane (Total)** | **0.0054** | **0.016** | | | | |

Worksheet #: 439173

***Total Target Concentration*** 0.0082

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2017\GC_6\Data\10-04-17\
Data File : 6G81158.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 4 Oct 2017 3:39
Operator : MS/MLC/ZM
Sample : AD00298-002
Misc : S,PEST
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 04 16:24:57 2017
Quant Method : G:\GCDATA\2017\GC_6\METHODQT\6G_P0919AA.M
Quant Title : @GC_6,ug,608,8081
QLast Update : Tue Sep 19 10:00:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

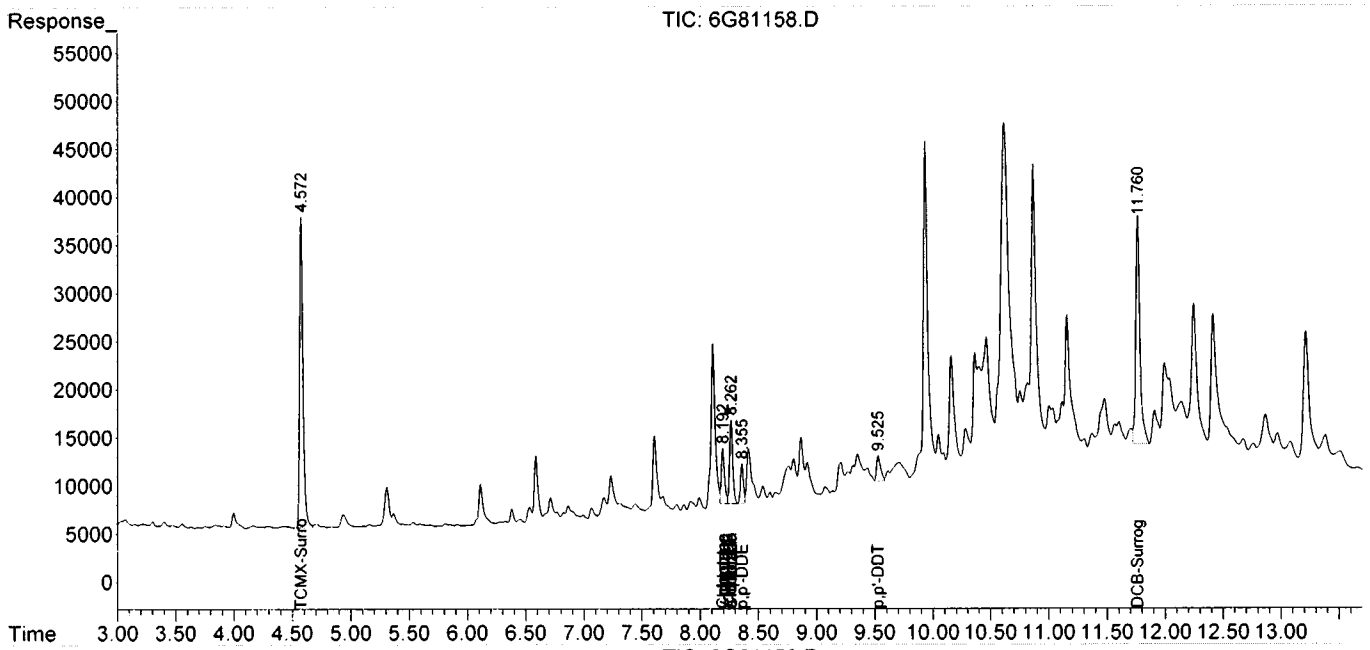
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | pg#1 | pg#2 |
|---|---|---|---|---|---|---|
| Target Compounds | | | | | | |
| 1)TCMX-Surrogate | 4.573 | 4.649 | 655862 | 332993 | 68.821 | 75.925 |
| 9)y-chlordane | 8.192 | 7.960 | 113780 | 64009 | 10.220m | 13.972m# |
| 10)a-chlordane | 8.262 | 8.167 | 163166 | 52418 | 15.158m | 12.281m |
| 12)p,p'-DDE | 8.355 | 8.465 | 73918 | 42797 | 7.808m | 9.523m |
| 17)p,p'-DDT | 9.525 | 9.551 | 64499 | 41584 | 13.087m | 16.781m# |
| 22)DCB-Surrogate | 11.760 | 12.386 | 596473 | 431243 | 66.669m | 93.101m# |
| 24)Chlordane (Techni | 8.192 | 7.960 | 113657 | 91398 | 91.300m | 101.453m |
| 25)Chlordane (Techni | 8.262 | 8.167 | 163132 | 52503 | 84.663m | 101.972m |

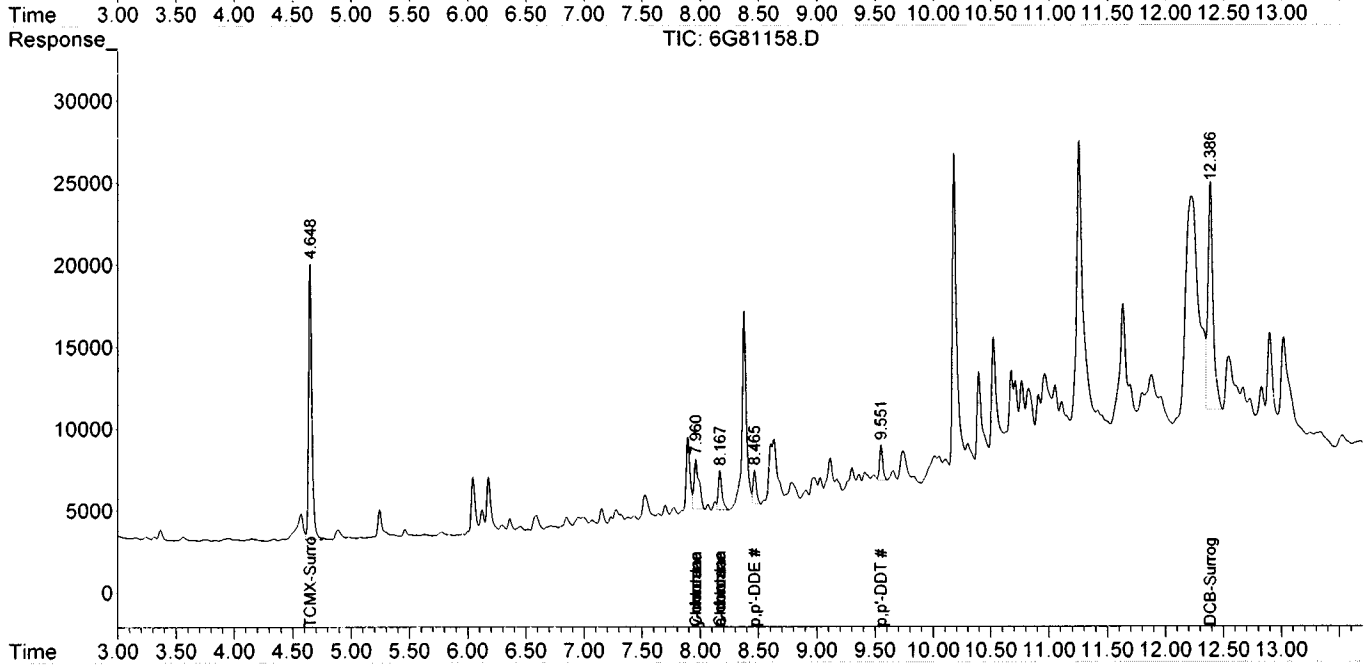
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2017\GC_6\Data\10-04-17\
Data File : 6G81158.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 4 Oct 2017 3:39
Operator : MS/MLC/ZM
Sample : AD00298-002
Misc : S,PEST
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 04 16:24:57 2017
Quant Method : G:\GCDATA\2017\GC_6\METHODQT\6G_P0919AA.M
Quant Title : @GC_6,ug,608,8081
QLast Update : Tue Sep 19 10:00:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# Form1

ORGANICS PESTICIDE REPORT

Sample Number: SMB63043
Client Id:
Data File: 6G81145.D
Analysis Date: 10/03/17 15:07
Date Rec/Extracted: NA-10/03/17
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8081B
Matrix: Soil
Initial Vol: 20g
Final Vol: 10ml
Dilution: 1
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 5103-71-9 | a-chlordane | 0.0050 | U | 7421-93-4 | Endrin Aldehyde | 0.0050 | U |
| 309-00-2 | Aldrin | 0.0050 | U | 53494-70-5 | Endrin Ketone | 0.0050 | U |
| 319-84-6 | alpha-BHC | 0.0010 | U | 58-89-9 | gamma-BHC | 0.0010 | U |
| 319-85-7 | beta-BHC | 0.0010 | U | 76-44-8 | Heptachlor | 0.0050 | U |
| 12789-03-6 | Chlordane (Technical) | 0.025 | U | 1024-57-3 | Heptachlor Epoxide | 0.0050 | U |
| 319-86-8 | delta-BHC | 0.0050 | U | 72-43-5 | Methoxychlor | 0.0050 | U |
| 60-57-1 | Dieldrin | 0.0010 | U | 72-54-8 | p,p'-DDD | 0.0025 | U |
| 959-98-8 | Endosulfan I | 0.0050 | U | 72-55-9 | p,p'-DDE | 0.0025 | U |
| 33213-65-9 | Endosulfan II | 0.0050 | U | 50-29-3 | p,p'-DDT | 0.0025 | U |
| 1031-07-8 | Endosulfan Sulfate | 0.0050 | U | 8001-35-2 | Toxaphene | 0.025 | U |
| 72-20-8 | Endrin | 0.0050 | U | 5103-74-2 | y-chlordane | 0.0050 | U |

Worksheet #: 439173

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2017\GC_6\Data\10-03-17\
Data File : 6G81145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 3 Oct 2017 15:07
Operator : MS/MLC/ZM
Sample : SMB63043
Misc : S,PEST
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 03 17:06:12 2017
Quant Method : G:\GCDATA\2017\GC_6\METHODQT\6G_P0919AA.M
Quant Title : @GC_6,ug,608,8081
QLast Update : Tue Sep 19 10:00:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

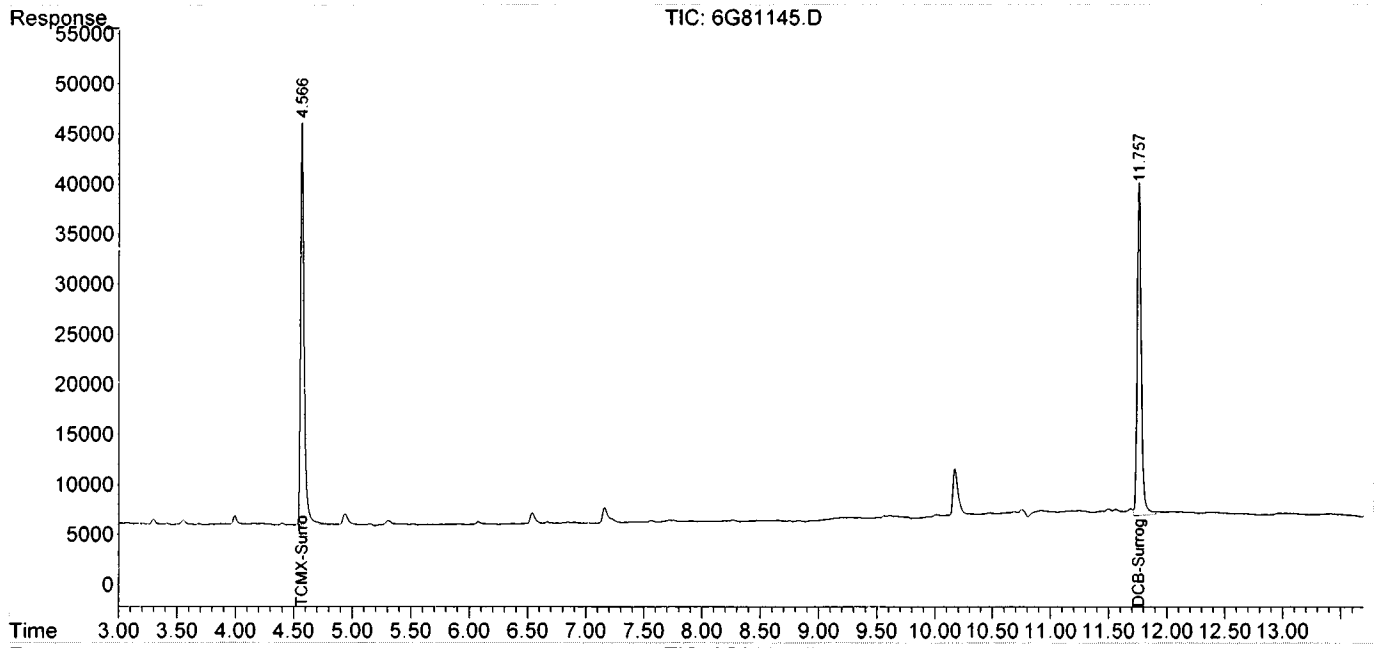
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | pg#1 | pg#2 |
|---|---|---|---|---|---|---|---|
| | Target Compounds | | | | | | |
| 1) | TCMX-Surrogate | 4.567 | 4.643 | 857816 | 398337 | 91.022 | 90.824 |
| 22) | DCB-Surrogate | 11.758 | 12.384 | 814924 | 427625 | 92.341 | 92.278 |

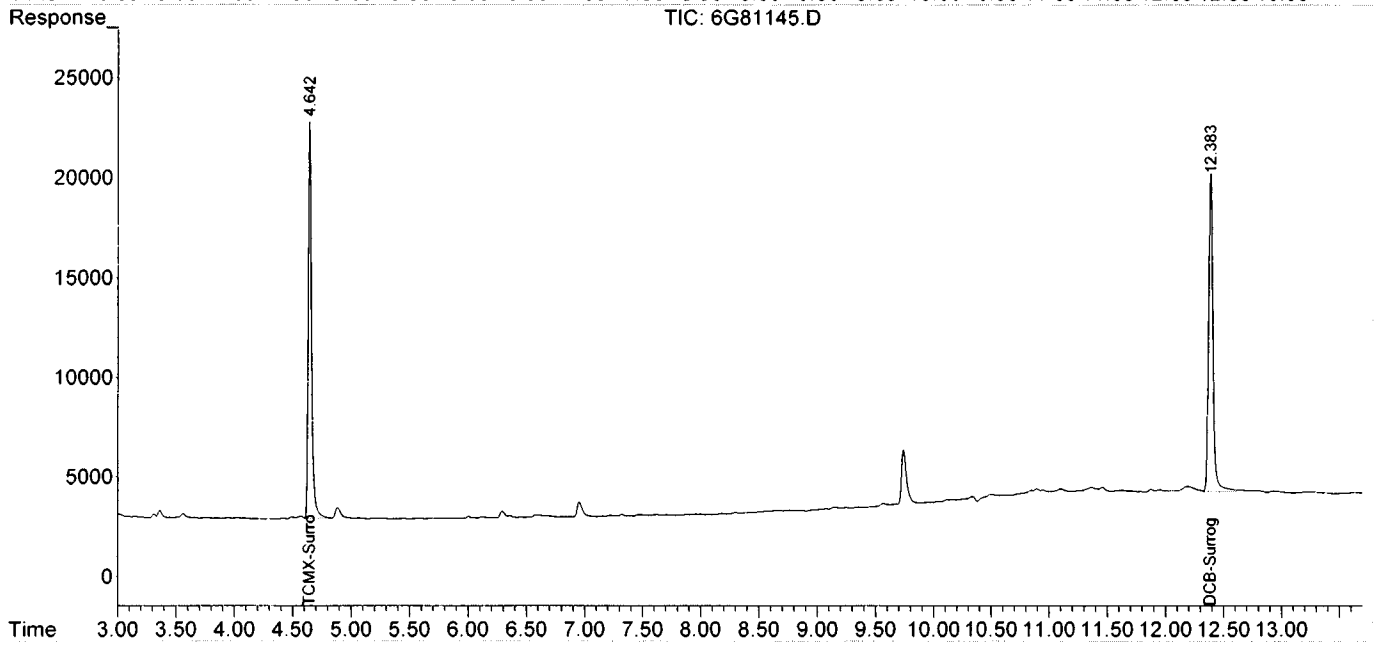
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2017\GC_6\Data\10-03-17\
Data File : 6G81145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 3 Oct 2017 15:07
Operator : MS/MLC/ZM
Sample : SMB63043
Misc : S,PEST
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 03 17:06:12 2017
Quant Method : G:\GCDATA\2017\GC_6\METHODQT\6G_P0919AA.M
Quant Title : @GC_6,ug,608,8081
QLast Update : Tue Sep 19 10:00:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# FORM2

## Surrogate Recovery

Method: EPA 8081B

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column2 S2 Recov | Column1 S3 Recov | Column2 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6G81145.D | SMB63043 | S | 10/03/17 15:07 | 1 | | 91 | 91 | 92 | 92 | | |
| 6G81158.D | AD00298-002 | S | 10/04/17 03:39 | 1 | | 69 | 76 | 67 | 93 | | |
| 6G81144.D | SMB63043(MS) | S | 10/03/17 14:49 | 1 | | 92 | 94 | 95 | 90 | | |
| 6G81153.D | AD00316-027(MS) | S | 10/04/17 02:12 | 1 | | 83 | 83 | 95 | 90 | | |
| 6G81154.D | AD00316-027(MSD) | S | 10/04/17 02:29 | 1 | | 77 | 78 | 109 | 138 | | |
| 6G81155.D | AD00316-027 | S | 10/04/17 02:47 | 1 | | 88 | 92 | 87 | 119 | | |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8081B

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=TCMX-Surrogate | 100 | 37-141 |
| S2=TCMX-Surrogate | 100 | 37-141 |
| S3=DCB-Surrogate | 100 | 33-146 |
| S4=DCB-Surrogate | 100 | 33-146 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63043

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 6G81144.D | SMB63043(MS) | 10/3/2017 2:49:00 PM |
| Non Spike(If applicable): | | |
| Inst Blank(If applicable): | | |

Method: 8081 | Matrix: Soil | QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| alpha-BHC | 1 | 82.92 | 0 | 100 | 83 | 60 | 130 |
| gamma-BHC | 1 | 89.17 | 0 | 100 | 89 | 60 | 130 |
| beta-BHC | 1 | 91.58 | 0 | 100 | 92 | 60 | 130 |
| Heptachlor | 1 | 94.97 | 0 | 100 | 95 | 60 | 130 |
| delta-BHC | 1 | 84.68 | 0 | 100 | 85 | 60 | 130 |
| Aldrin | 1 | 89.25 | 0 | 100 | 89 | 70 | 130 |
| Heptachlor Epoxide | 1 | 87.3 | 0 | 100 | 87 | 70 | 130 |
| y-chlordane | 1 | 86.78 | 0 | 100 | 87 | 70 | 130 |
| a-chlordane | 1 | 86.26 | 0 | 100 | 86 | 70 | 130 |
| Endosulfan I | 1 | 83.71 | 0 | 100 | 84 | 70 | 130 |
| p,p'-DDE | 1 | 88.28 | 0 | 100 | 88 | 70 | 130 |
| Dieldrin | 1 | 88.7 | 0 | 100 | 89 | 70 | 130 |
| Endrin | 1 | 91.92 | 0 | 100 | 92 | 70 | 130 |
| p,p'-DDD | 1 | 80.84 | 0 | 100 | 81 | 70 | 130 |
| Endosulfan II | 1 | 83.43 | 0 | 100 | 83 | 70 | 130 |
| p,p'-DDT | 1 | 97.7 | 0 | 100 | 98 | 70 | 130 |
| Endrin Aldehyde | 1 | 60.82 | 0 | 100 | 61 | 10 | 130 |
| Endosulfan Sulfate | 1 | 89.84 | 0 | 100 | 90 | 70 | 130 |
| Methoxychlor | 1 | 108.13 | 0 | 100 | 108 | 60 | 130 |
| Endrin Ketone | 1 | 100.46 | 0 | 100 | 100 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63043

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 6G81153.D | AD00316-027(MS) | 10/4/2017 2:12:00 AM |
| Non Spike(If applicable): | 6G81155.D | AD00316-027 | 10/4/2017 2:47:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8081 | Matrix: Soil | QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| alpha-BHC | 1 | 73.84 | 0 | 100 | 74 | 60 | 130 |
| gamma-BHC | 1 | 72.57 | 0 | 100 | 73 | 60 | 130 |
| beta-BHC | 1 | 90.75 | 0 | 100 | 91 | 60 | 130 |
| Heptachlor | 1 | 81.29 | 0 | 100 | 81 | 60 | 130 |
| delta-BHC | 1 | 74 | 0 | 100 | 74 | 60 | 130 |
| Aldrin | 1 | 80.31 | 0 | 100 | 80 | 70 | 130 |
| Heptachlor Epoxide | 1 | 80.54 | 0 | 100 | 81 | 70 | 130 |
| y-chlordane | 1 | 103.45 | 0 | 100 | 103 | 70 | 130 |
| a-chlordane | 1 | 86.84 | 0 | 100 | 87 | 70 | 130 |
| Endosulfan I | 1 | 90.13 | 0 | 100 | 90 | 70 | 130 |
| p,p'-DDE | 1 | 227.33 | 150.3 | 100 | 77 | 70 | 130 |
| Dieldrin | 1 | 88.89 | 0 | 100 | 89 | 70 | 130 |
| Endrin | 1 | 153.2 | 0 | 100 | 153* | 70 | 130 |
| p,p'-DDD | 1 | 193.07 | 97.33 | 100 | 96 | 70 | 130 |
| Endosulfan II | 1 | 86.69 | 0 | 100 | 87 | 70 | 130 |
| p,p'-DDT | 1 | 237.69 | 140.64 | 100 | 97 | 70 | 130 |
| Endrin Aldehyde | 1 | 279.35 | 0 | 100 | 279* | 10 | 130 |
| Endosulfan Sulfate | 1 | 89.12 | 0 | 100 | 89 | 70 | 130 |
| Methoxychlor | 1 | 124.67 | 0 | 100 | 125 | 60 | 130 |
| Endrin Ketone | 1 | 108.85 | 0 | 100 | 109 | 70 | 130 |

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 6G81154.D | AD00316-027(MSD) | 10/4/2017 2:29:00 AM |
| Non Spike(If applicable): | 6G81155.D | AD00316-027 | 10/4/2017 2:47:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8081 | Matrix: Soil | QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| alpha-BHC | 1 | 66.47 | 0 | 100 | 66 | 60 | 130 |
| gamma-BHC | 1 | 64.85 | 0 | 100 | 65 | 60 | 130 |
| beta-BHC | 1 | 86.91 | 0 | 100 | 87 | 60 | 130 |
| Heptachlor | 1 | 78.02 | 0 | 100 | 78 | 60 | 130 |
| delta-BHC | 1 | 62.35 | 0 | 100 | 62 | 60 | 130 |
| Aldrin | 1 | 67.61 | 0 | 100 | 68* | 70 | 130 |
| Heptachlor Epoxide | 1 | 66.51 | 0 | 100 | 67* | 70 | 130 |
| y-chlordane | 1 | 81.65 | 0 | 100 | 82 | 70 | 130 |
| a-chlordane | 1 | 77.03 | 0 | 100 | 77 | 70 | 130 |
| Endosulfan I | 1 | 79.92 | 0 | 100 | 80 | 70 | 130 |
| p,p'-DDE | 1 | 209.88 | 150.3 | 100 | 60* | 70 | 130 |
| Dieldrin | 1 | 79.46 | 0 | 100 | 79 | 70 | 130 |
| Endrin | 1 | 170.78 | 0 | 100 | 171* | 70 | 130 |
| p,p'-DDD | 1 | 188.97 | 97.33 | 100 | 92 | 70 | 130 |
| Endosulfan II | 1 | 77.64 | 0 | 100 | 78 | 70 | 130 |
| p,p'-DDT | 1 | 203.75 | 140.64 | 100 | 63* | 70 | 130 |
| Endrin Aldehyde | 1 | 308.45 | 0 | 100 | 308* | 10 | 130 |
| Endosulfan Sulfate | 1 | 94.95 | 0 | 100 | 95 | 70 | 130 |
| Methoxychlor | 1 | 118.38 | 0 | 100 | 118 | 60 | 130 |
| Endrin Ketone | 1 | 133.31 | 0 | 100 | 133* | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
# RPD Data Laboratory Limits
## QC Batch: SMB63043

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 6G81154.D | AD00316-027(MSD) | 10/4/2017 2:29:00 AM |
| Duplicate(If applicable): | 6G81153.D | AD00316-027(MS) | 10/4/2017 2:12:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8081 Matrix: Soil QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| alpha-BHC | 1 | 66.47 | 73.84 | 11 | 40 |
| gamma-BHC | 1 | 64.85 | 72.57 | 11 | 40 |
| beta-BHC | 1 | 86.91 | 90.75 | 4.3 | 40 |
| Heptachlor | 1 | 78.02 | 81.29 | 4.1 | 40 |
| delta-BHC | 1 | 62.35 | 74 | 17 | 40 |
| Aldrin | 1 | 67.61 | 80.31 | 17 | 40 |
| Heptachlor Epoxide | 1 | 66.51 | 80.54 | 19 | 40 |
| y-chlordane | 1 | 81.65 | 103.45 | 24 | 40 |
| a-chlordane | 1 | 77.03 | 86.84 | 12 | 40 |
| Endosulfan I | 1 | 79.92 | 90.13 | 12 | 40 |
| p,p'-DDE | 1 | 209.88 | 227.33 | 8 | 40 |
| Dieldrin | 1 | 79.46 | 88.89 | 11 | 40 |
| Endrin | 1 | 170.78 | 153.2 | 11 | 40 |
| p,p'-DDD | 1 | 188.97 | 193.07 | 2.1 | 40 |
| Endosulfan II | 1 | 77.64 | 86.69 | 11 | 40 |
| p,p'-DDT | 1 | 203.75 | 237.69 | 15 | 40 |
| Endrin Aldehyde | 1 | 308.45 | 279.35 | 9.9 | 40 |
| Endosulfan Sulfate | 1 | 94.95 | 89.12 | 6.3 | 40 |
| Methoxychlor | 1 | 118.38 | 124.67 | 5.2 | 40 |
| Endrin Ketone | 1 | 133.31 | 108.85 | 20 | 40 |

* - Indicates outside of limits NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: SMB63043
Blank Data File: 6G81145.D
Matrix: Soil

Blank Analysis Date: 10/03/17 15:07
Blank Extraction Date: 10/03/17
(If Applicable)
Method: EPA 8081B

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD00298-002 | 6G81158.D | 10/04/17 03:39 |
| AD00316-027 | 6G81155.D | 10/04/17 02:47 |
| AD00316-027(MSD | 6G81154.D | 10/04/17 02:29 |
| AD00316-027(MS) | 6G81153.D | 10/04/17 02:12 |
| SMB63043(MS) | 6G81144.D | 10/03/17 14:49 |

# Form 5

Method: EPA 8081B

Instrument: GC_6 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 6G80609.D | CAL EVAL | 09/18/17 22:31 | Soil | | | | | |
| 6G80610.D | EVAL | 09/18/17 22:49 | Soil | | | | | |
| 6G80611.D | CAL PEST@100PPB | 09/18/17 23:07 | Soil | 6G80613. | 11.7612 | 0.0145 | 12.3903 | 0.0153 |
| 6G80612.D | CAL PEST@50PPB | 09/18/17 23:24 | Soil | 6G80613. | 11.7630 | 0.0008 | 12.3919 | 0.0024 |
| 6G80613.D | CAL PEST@2PPB | 09/18/17 23:42 | Soil | 6G80613. | 11.7629 | 0 | 12.3922 | 0 |
| 6G80614.D | 2PPB | 09/18/17 23:59 | Soil | 6G80613. | 11.7643 | 0.0119 | 12.3932 | 0.0081 |
| 6G80615.D | CAL PEST@10PPB | 09/19/17 00:17 | Soil | 6G80613. | 11.7634 | 0.0042 | 12.3928 | 0.0048 |
| 6G80616.D | CAL PEST@200PPB | 09/19/17 00:34 | Soil | 6G80613. | 11.7621 | 0.0068 | 12.3904 | 0.0145 |
| 6G80617.D | CAL PEST@400PPB | 09/19/17 00:52 | Soil | 6G80613. | 11.7627 | 0.0017 | 12.3920 | 0.0016 |
| 6G80618.D | CAL CHLOR@100PPB | 09/19/17 01:10 | Soil | 6G80613. | 11.7634 | 0.0042 | 12.3925 | 0.0024 |
| 6G80619.D | CAL TOX@500PPB | 09/19/17 01:27 | Soil | 6G80613. | 11.7625 | 0.0034 | 12.3917 | 0.004 |
| 6G80620.D | ICV | 09/19/17 01:45 | Soil | 6G80613. | 11.7628 | 0.0009 | 12.3919 | 0.0024 |
| 6G80621.D | WMB62248(MS) | 09/19/17 02:02 | Aqueous | 6G80613. | 11.7637 | 0.0068 | 12.3930 | 0.0064 |
| 6G80622.D | WMB62248 | 09/19/17 02:20 | Aqueous | 6G80613. | 11.7622 | 0.006 | 12.3923 | 0.0008 |
| 6G80623.D | AD00032-002(T)(MS) | 09/19/17 02:38 | Aqueous | 6G80613. | 11.7629 | 0 | 12.3917 | 0.004 |
| 6G80624.D | AD00032-002(T)(MSD) | 09/19/17 02:55 | Aqueous | 6G80613. | 11.7630 | 0.0008 | 12.3924 | 0.0016 |
| 6G80625.D | AD00052-003(T)(MS) | 09/19/17 03:13 | Aqueous | 6G80613. | 11.7623 | 0.0051 | 12.3914 | 0.0065 |
| 6G80626.D | AD00052-003(T)(MSD) | 09/19/17 03:30 | Aqueous | 6G80613. | 11.7637 | 0.0068 | 12.3924 | 0.0016 |
| 6G80627.D | AD00052-003(T) | 09/19/17 03:48 | Aqueous | 6G80613. | 11.7635 | 0.0051 | 12.3925 | 0.0024 |
| 6G80628.D | AD00021-001 | 09/19/17 04:06 | Aqueous | 6G80613. | 11.7633 | 0.0034 | 12.3925 | 0.0024 |
| 6G80629.D | AC99991-002 | 09/19/17 04:23 | Soil | 6G80613. | 11.7629 | 0 | 12.3913 | 0.0073 |
| 6G80630.D | AD00068-009 | 09/19/17 04:41 | Soil | 6G80613. | 11.7624 | 0.0043 | 12.3922 | 0 |
| 6G80631.D | AD00044-001 | 09/19/17 04:58 | Soil | 6G80613. | 11.7619 | 0.0085 | 12.3909 | 0.0105 |
| 6G80632.D | AD00009-001 | 09/19/17 05:16 | Soil | 6G80613. | 11.7626 | 0.0026 | 12.3927 | 0.004 |
| 6G80633.D | AD00009-003 | 09/19/17 05:33 | Soil | 6G80613. | 11.7629 | 0 | 12.3903 | 0.0153 |
| 6G80634.D | AD00068-006 | 09/19/17 05:51 | Soil | 6G80613. | 11.7622 | 0.006 | 12.3919 | 0.0024 |
| 6G80635.D | AD00068-007 | 09/19/17 06:09 | Soil | 6G80613. | 11.7628 | 0.0009 | 12.3911 | 0.0089 |
| 6G80636.D | AD00071-001 | 09/19/17 06:26 | Soil | 6G80613. | 11.7632 | 0.0025 | 12.3923 | 0.0008 |
| 6G80637.D | AD00009-005(5X) | 09/19/17 06:44 | Soil | 6G80613. | 11.7640 | 0.0093 | 12.3902 | 0.0161 |
| 6G80638.D | CAL EVAL | 09/19/17 10:01 | Soil | | | | | |
| 6G80639.D | CAL PEST@100PPB | 09/19/17 10:19 | Soil | 6G80613. | 11.7640 | 0.0093 | 12.3918 | 0.0032 |
| 6G80640.D | AC99876-005 | 09/19/17 10:39 | Aqueous | 6G80639. | 11.7654 | 0.0119 | 12.3926 | 0.0065 |
| 6G80641.D | AC99876-006 | 09/19/17 10:56 | Aqueous | 6G80639. | 11.7647 | 0.006 | 12.3928 | 0.0081 |
| 6G80642.D | 62244(MS) | 09/19/17 11:14 | Soil | 6G80639. | 11.7647 | 0.006 | 12.3935 | 0.0137 |
| 6G80643.D | 62262(MS) | 09/19/17 16:04 | Aqueous | 6G80639. | 11.7686 | 0.0391 | 12.3915 | 0.0024 |
| 6G80644.D | WMB62262 | 09/19/17 16:22 | Aqueous | 6G80639. | 11.7648 | 0.0068 | 12.3914 | 0.0032 |
| 6G80645.D | CAL PEST@200PPB | 09/19/17 16:39 | Aqueous | 6G80639. | 11.7647 | 0.006 | 12.3919 | 0.0008 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8081B

Instrument: GC_6 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 6G81112.D | CAL EVAL | 10/03/17 01:01 | Soil | | | | | |
| 6G81113.D | EVAL | 10/03/17 01:19 | Soil | | | | | |
| 6G81114.D | CAL PEST@100PPB | 10/03/17 01:36 | Soil | 6G81114. | 11.7562 | 0 | 12.3824 | 0 |
| 6G81115.D | 200PPB | 10/03/17 01:54 | Soil | 6G81114. | 11.7570 | 0.0068 | 12.3827 | 0.0024 |
| 6G81116.D | SMB63038(MS) | 10/03/17 02:12 | Soil | 6G81114. | 11.7571 | 0.0077 | 12.3839 | 0.0121 |
| 6G81117.D | SMB63039(MS) | 10/03/17 02:29 | Soil | 6G81114. | 11.7584 | 0.0187 | 12.3843 | 0.0153 |
| 6G81118.D | SMB63038 | 10/03/17 02:47 | Soil | 6G81114. | 11.7579 | 0.0145 | 12.3839 | 0.0121 |
| 6G81119.D | SMB63039 | 10/03/17 03:04 | Soil | 6G81114. | 11.7574 | 0.0102 | 12.3831 | 0.0057 |
| 6G81120.D | AD00282-001 | 10/03/17 03:22 | Soil | 6G81114. | 11.7578 | 0.0136 | 12.3837 | 0.0105 |
| 6G81121.D | AD00282-027 | 10/03/17 03:40 | Soil | 6G81114. | 11.7586 | 0.0204 | 12.3841 | 0.0137 |
| 6G81122.D | AD00282-019 | 10/03/17 03:57 | Soil | 6G81114. | 11.7582 | 0.017 | 12.3837 | 0.0105 |
| 6G81123.D | AD00282-023 | 10/03/17 04:15 | Soil | 6G81114. | 11.7585 | 0.0196 | 12.3848 | 0.0194 |
| 6G81124.D | AD00282-025 | 10/03/17 04:32 | Soil | 6G81114. | 11.7590 | 0.0238 | 12.3847 | 0.0186 |
| 6G81125.D | AD00282-029 | 10/03/17 04:50 | Soil | 6G81114. | 11.7583 | 0.0179 | 12.3837 | 0.0105 |
| 6G81126.D | AD00283-045 | 10/03/17 05:07 | Soil | 6G81114. | 11.7593 | 0.0264 | 12.3842 | 0.0145 |
| 6G81127.D | AD00283-017 | 10/03/17 05:25 | Soil | 6G81114. | 11.7585 | 0.0196 | 12.3842 | 0.0145 |
| 6G81128.D | AD00283-019 | 10/03/17 05:43 | Soil | 6G81114. | 11.7579 | 0.0145 | 12.3843 | 0.0153 |
| 6G81129.D | AD00283-021 | 10/03/17 06:00 | Soil | 6G81114. | 11.7587 | 0.0213 | 12.3842 | 0.0145 |
| 6G81130.D | AD00283-037 | 10/03/17 06:18 | Soil | 6G81114. | 11.7604 | 0.0357 | 12.3851 | 0.0218 |
| 6G81131.D | AD00283-003 | 10/03/17 06:35 | Soil | 6G81114. | 11.7602 | 0.034 | 12.3795 | 0.0234 |
| 6G81132.D | AD00283-039 | 10/03/17 06:53 | Soil | 6G81114. | 11.7589 | 0.023 | 12.3845 | 0.017 |
| 6G81133.D | AD00283-025 | 10/03/17 07:10 | Soil | 6G81114. | 11.7582 | 0.017 | 12.3837 | 0.0105 |
| 6G81134.D | AD00283-043 | 10/03/17 07:28 | Soil | 6G81114. | 11.7596 | 0.0289 | 12.3854 | 0.0242 |
| 6G81135.D | AD00283-001 | 10/03/17 07:45 | Soil | 6G81114. | 11.7594 | 0.0272 | 12.3843 | 0.0153 |
| 6G81136.D | CAL EVAL | 10/03/17 11:22 | Soil | | | | | |
| 6G81137.D | CAL PEST@100PPB | 10/03/17 11:45 | Soil | 6G81114. | 11.7588 | 0.0221 | 12.3823 | 0.0008 |
| 6G81138.D | 271-001 | 10/03/17 12:14 | Soil | 6G81137. | 11.7605 | 0.0145 | 12.3834 | 0.0089 |
| 6G81139.D | AD00271-001 | 10/03/17 12:52 | Soil | 6G81137. | 11.7598 | 0.0085 | 12.3807 | 0.0129 |
| 6G81140.D | AD00283-033 | 10/03/17 13:09 | Soil | 6G81137. | 11.7586 | 0.0017 | 12.3797 | 0.021 |
| 6G81141.D | AD00283-027 | 10/03/17 13:27 | Soil | 6G81137. | 11.7580 | 0.0068 | 12.3767 | 0.0452 |
| 6G81142.D | AD00283-047 | 10/03/17 13:45 | Soil | 6G81137. | 11.7576 | 0.0102 | 12.3822 | 0.0008 |
| 6G81143.D | AD00283-023 | 10/03/17 14:02 | Soil | 6G81137. | 11.7582 | 0.0051 | 12.3763 | 0.0485 |
| 6G81144.D | SMB63043(MS) | 10/03/17 14:49 | Soil | 6G81137. | 11.7583 | 0.0042 | 12.3822 | 0.0008 |
| 6G81145.D | SMB63043 | 10/03/17 15:07 | Soil | 6G81137. | 11.7579 | 0.0076 | 12.3836 | 0.0105 |
| 6G81146.D | WMB63054(MS) | 10/03/17 15:39 | Aqueous | 6G81137. | 11.7621 | 0.0281 | 12.3842 | 0.0153 |
| 6G81147.D | WMB63054 | 10/03/17 15:57 | Aqueous | 6G81137. | 11.7576 | 0.0102 | 12.3824 | 0.0008 |
| 6G81148.D | CAL PEST@100PPB | 10/03/17 16:14 | Aqueous | 6G81137. | 11.7578 | 0.0085 | 12.3827 | 0.0032 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8081B

Instrument: GC_6 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 6G81149.D | CAL EVAL | 10/04/17 01:01 | Soil | | | | | |
| 6G81150.D | EVAL | 10/04/17 01:19 | Soil | | | | | |
| 6G81151.D | CAL PEST@100PPB | 10/04/17 01:36 | Soil | 6G81151. | 11.7586 | 0 | 12.3838 | 0 |
| 6G81152.D | 200PPB | 10/04/17 01:54 | Soil | 6G81151. | 11.7576 | 0.0085 | 12.3833 | 0.004 |
| 6G81153.D | AD00316-027(MS) | 10/04/17 02:12 | Soil | 6G81151. | 11.7596 | 0.0085 | 12.3852 | 0.0113 |
| 6G81154.D | AD00316-027(MSD) | 10/04/17 02:29 | Soil | 6G81151. | 11.7604 | 0.0153 | 12.3846 | 0.0065 |
| 6G81155.D | AD00316-027 | 10/04/17 02:47 | Soil | 6G81151. | 11.7591 | 0.0042 | 12.3837 | 0.0008 |
| 6G81156.D | AD00316-026 | 10/04/17 03:04 | Soil | 6G81151. | 11.7588 | 0.0017 | 12.3832 | 0.0048 |
| 6G81157.D | AD00316-028 | 10/04/17 03:22 | Soil | 6G81151. | 11.7599 | 0.0111 | 12.3875 | 0.0299 |
| 6G81158.D | AD00298-002 | 10/04/17 03:39 | Soil | 6G81151. | 11.7604 | 0.0153 | 12.3855 | 0.0137 |
| 6G81159.D | AD00301-001 | 10/04/17 03:57 | Soil | 6G81151. | 11.7604 | 0.0153 | 12.3864 | 0.021 |
| 6G81160.D | AD00301-002 | 10/04/17 04:15 | Soil | 6G81151. | 11.7600 | 0.0119 | 12.3857 | 0.0153 |
| 6G81161.D | AD00301-003 | 10/04/17 04:32 | Soil | 6G81151. | 11.7610 | 0.0204 | 12.3866 | 0.0226 |
| 6G81162.D | AD00301-004 | 10/04/17 04:50 | Soil | 6G81151. | 11.7606 | 0.017 | 12.3865 | 0.0218 |
| 6G81163.D | AD00301-005 | 10/04/17 05:07 | Soil | 6G81151. | 11.7616 | 0.0255 | 12.3868 | 0.0242 |
| 6G81164.D | AD00301-006 | 10/04/17 05:25 | Soil | 6G81151. | 11.7600 | 0.0119 | 12.3866 | 0.0226 |
| 6G81165.D | AD00301-007 | 10/04/17 05:43 | Soil | 6G81151. | 11.7613 | 0.023 | 12.3866 | 0.0226 |
| 6G81166.D | AD00301-008 | 10/04/17 06:00 | Soil | 6G81151. | 11.7609 | 0.0196 | 12.3862 | 0.0194 |
| 6G81167.D | AD00301-009 | 10/04/17 06:18 | Soil | 6G81151. | 11.7610 | 0.0204 | 12.3865 | 0.0218 |
| 6G81168.D | AD00301-010 | 10/04/17 06:35 | Soil | 6G81151. | 11.7603 | 0.0145 | 12.3865 | 0.0218 |
| 6G81169.D | AD00301-011 | 10/04/17 06:53 | Soil | 6G81151. | 11.7618 | 0.0272 | 12.3874 | 0.0291 |
| 6G81170.D | AD00301-012 | 10/04/17 07:10 | Soil | 6G81151. | 11.7617 | 0.0264 | 12.3861 | 0.0186 |
| 6G81171.D | AD00301-013 | 10/04/17 07:28 | Soil | 6G81151. | 11.7608 | 0.0187 | 12.3859 | 0.017 |
| 6G81172.D | AD00301-014 | 10/04/17 07:45 | Soil | 6G81151. | 11.7607 | 0.0179 | 12.3864 | 0.021 |
| 6G81173.D | CAL EVAL | 10/04/17 11:26 | Soil | | | | | |
| 6G81174.D | CAL PEST@200PPB | 10/04/17 11:56 | Soil | 6G81151. | 11.7642 | 0.0476 | 12.3869 | 0.025 |
| 6G81175.D | SMB63076(MS) | 10/04/17 14:31 | Soil | 6G81174. | 11.7667 | 0.0212 | 12.3860 | 0.0073 |
| 6G81176.D | SMB63076 | 10/04/17 14:49 | Soil | 6G81174. | 11.7631 | 0.0094 | 12.3866 | 0.0024 |
| 6G81177.D | AD00370-001 | 10/04/17 15:06 | Soil | 6G81174. | 11.7620 | 0.0187 | 12.3866 | 0.0024 |
| 6G81178.D | 00265-004 | 10/04/17 15:24 | Soil | 6G81174. | 11.7639 | 0.0026 | 12.3889 | 0.0161 |
| 6G81179.D | 00265-004 | 10/04/17 15:49 | Soil | 6G81174. | 11.7668 | 0.0221 | 12.3885 | 0.0129 |
| 6G81180.D | WMB63065(MS) | 10/04/17 16:27 | Aqueous | 6G81174. | 11.7613 | 0.0247 | 12.3854 | 0.0121 |
| 6G81181.D | WMB63065 | 10/04/17 16:45 | Aqueous | 6G81174. | 11.7616 | 0.0221 | 12.3851 | 0.0145 |
| 6G81182.D | CAL PEST@200PPB | 10/04/17 17:03 | Aqueous | 6G81174. | 11.7609 | 0.0281 | 12.3857 | 0.0097 |
| 6G81183.D | AD00316-028(5X) | 10/04/17 17:24 | Soil | 6G81182. | 11.7625 | 0.0136 | 12.3865 | 0.0065 |
| 6G81184.D | CAL PEST@200PPB | 10/04/17 17:42 | Soil | 6G81182. | 11.7622 | 0.0111 | 12.3858 | 0.0008 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 6
## Initial Calibration

Method: EPA 8081B

Instrument: GC_6

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 6G80613.D | CAL PEST@2PPB | 09/18/17 23:42 | 2 | 6G80615.D | CAL PEST@10PPB | 09/19/17 00:17 |
| 3 | 6G80612.D | CAL PEST@50PPB | 09/18/17 23:24 | 4 | 6G80611.D | CAL PEST@100PPB | 09/18/17 23:07 |
| 5 | 6G80616.D | CAL PEST@200PPB | 09/19/17 00:34 | 6 | 6G80617.D | CAL PEST@400PPB | 09/19/17 00:52 |
| 7 | 6G80618.D | CAL CHLOR@100PP | 09/19/17 01:10 | 8 | 6G80619.D | CAL TOX@500PPB | 09/19/17 01:27 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMX-Surrogate | 1 | 0 | Qua | 1.0717 | 1.0307 | 0.9473 | 0.9881 | 0.8731 | 0.7968 | ---- | ---- | 0.951 | 4.57 | 0.996 | 1.00 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| alpha-BHC | 1 | 0 | Qua | 0.9646 | 1.0296 | 1.1336 | 1.3060 | 1.1956 | 1.1507 | ---- | ---- | 1.13 | 5.76 | 0.998 | 0.999 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| gamma-BHC | 1 | 0 | Avg | 0.9570 | 1.0238 | 1.0872 | 1.2251 | 1.1097 | 1.0575 | ---- | ---- | 1.08 | 6.29 | 0.998 | 0.999 | 8.4 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| beta-BHC | 1 | 0 | Qua | 0.7591 | 0.7220 | 0.6490 | 0.6904 | 0.5902 | 0.5410 | ---- | ---- | 0.659 | 7.20 | 0.995 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor | 1 | 0 | Avg | 1.0502 | 0.9553 | 0.8626 | 0.9361 | 0.8362 | 0.7902 | ---- | ---- | 0.905 | 6.58 | 0.998 | 0.999 | 10 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| delta-BHC | 1 | 0 | Avg | 0.9026 | 0.9140 | 0.9939 | 1.1455 | 1.0424 | 1.0014 | ---- | ---- | 1.00 | 7.53 | 0.998 | 0.999 | 8.9 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Aldrin | 1 | 0 | Avg | 0.9762 | 0.9782 | 1.0188 | 1.1508 | 1.0329 | 0.9834 | ---- | ---- | 1.02 | 6.95 | 0.998 | 0.999 | 6.5 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor Epoxide | 1 | 0 | Avg | 1.0386 | 1.0260 | 0.9756 | 1.0620 | 0.9328 | 0.8742 | ---- | ---- | 0.985 | 7.79 | 0.997 | 0.999 | 7.3 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| g-chlordane | 1 | 0 | Avg | 1.1277 | 1.0916 | 1.0792 | 1.2141 | 1.1128 | 1.0544 | ---- | ---- | 1.11 | 8.20 | 0.998 | 1.00 | 5.0 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| a-chlordane | 1 | 0 | Avg | 1.1259 | 1.0927 | 1.0616 | 1.1655 | 1.0316 | 0.9809 | ---- | ---- | 1.08 | 8.27 | 0.998 | 0.999 | 6.2 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan I | 1 | 0 | Avg | 0.8950 | 0.8657 | 0.8374 | 0.9021 | 0.7700 | 0.7036 | ---- | ---- | 0.829 | 8.15 | 0.994 | 0.999 | 9.4 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDE | 1 | 0 | Avg | 0.8804 | 0.8858 | 0.9444 | 1.0756 | 0.9651 | 0.9286 | ---- | ---- | 0.947 | 8.36 | 0.998 | 0.999 | 7.5 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Dieldrin | 1 | 0 | Avg | 0.9196 | 0.9000 | 0.9126 | 1.0284 | 0.9155 | 0.8675 | ---- | ---- | 0.924 | 8.60 | 0.997 | 0.999 | 5.9 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin | 1 | 0 | Avg | 0.8929 | 0.8222 | 0.8279 | 0.9328 | 0.8111 | 0.7465 | ---- | ---- | 0.839 | 8.86 | 0.995 | 0.999 | 7.8 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDD | 1 | 0 | Avg | 0.9029 | 0.8420 | 0.7984 | 0.8736 | 0.7780 | 0.7352 | ---- | ---- | 0.822 | 9.32 | 0.998 | 0.999 | 7.6 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan II | 1 | 0 | Avg | 0.9250 | 0.9060 | 0.8736 | 0.9465 | 0.8414 | 0.7901 | ---- | ---- | 0.880 | 9.43 | 0.997 | 0.999 | 6.6 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDT | 1 | 0 | Qua | 0.1493 | 0.3229 | 0.4390 | 0.5266 | 0.4869 | 0.4932 | ---- | ---- | 0.403 | 9.53 | 0.999 | 0.999 | 36 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Aldehyde | 1 | 0 | Avg | 0.7530 | 0.7892 | 0.7074 | 0.7454 | 0.6656 | 0.6328 | ---- | ---- | 0.716 | 9.92 | 0.998 | 0.999 | 8.2 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan Sulfate | 1 | 0 | Avg | 0.7290 | 0.7195 | 0.6973 | 0.7494 | 0.7047 | 0.6713 | ---- | ---- | 0.712 | 10.29 | 0.999 | 1.00 | 3.8 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Methoxychlor | 1 | 0 | Qua | 0.2174 | 0.2951 | 0.3111 | 0.3344 | 0.3081 | 0.2870 | ---- | ---- | 0.292 | 10.23 | 0.997 | 1.00 | 14 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Ketone | 1 | 0 | Avg | 0.6660 | 0.7272 | 0.7355 | 0.8256 | 0.7480 | 0.7133 | ---- | ---- | 0.736 | 10.80 | 0.998 | 0.999 | 7.1 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| DCB-Surrogate | 1 | 0 | Qua | 1.2160 | 1.1141 | 0.9296 | 0.9481 | 0.8015 | 0.7393 | ---- | ---- | 0.958 | 11.76 | 0.995 | 0.999 | 19 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Chlordane (Technical) | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0520 | 6.58 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.124 | 8.20 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.193 | 8.27 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Toxaphene | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0147 | 8.99 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00783 | 9.12 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0161 | 9.46 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0147 | 9.79 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0233 | 10.25 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| TCMX-Surrogate | 2 | 0 | Avg | 0.4748 | 0.4379 | 0.4283 | 0.4730 | 0.4199 | 0.3973 | ---- | ---- | 0.439 | 4.65 | 0.997 | 0.999 | 7.0 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| alpha-BHC | 2 | 0 | Qua | 0.3897 | 0.4116 | 0.4951 | 0.6121 | 0.5745 | 0.5712 | ---- | ---- | 0.509 | 5.59 | 0.999 | 0.999 | 18 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| gamma-BHC | 2 | 0 | Qua | 0.3947 | 0.4140 | 0.4800 | 0.5760 | 0.5289 | 0.5178 | ---- | ---- | 0.485 | 6.13 | 0.999 | 0.999 | 14 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| beta-BHC | 2 | 0 | Avg | 0.3249 | 0.3138 | 0.3046 | 0.3331 | 0.2903 | 0.2716 | ---- | ---- | 0.306 | 6.21 | 0.996 | 0.999 | 7.4 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor | 2 | 0 | Avg | 0.4088 | 0.3812 | 0.3777 | 0.4356 | 0.3940 | 0.3908 | ---- | ---- | 0.398 | 6.57 | 0.999 | 0.999 | 5.4 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| delta-BHC | 2 | 0 | Qua | 0.3813 | 0.3896 | 0.4564 | 0.5622 | 0.5185 | 0.5107 | ---- | ---- | 0.470 | 6.71 | 0.999 | 0.999 | 16 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |

Avg Rsd Col 1: 9.94  Avg Rsd Col 2: 10.04

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte..>0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 : Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

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# Form 6
## Initial Calibration

Method: EPA 8081B

Instrument: GC_6

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 6G80613.D | CAL PEST@2PPB | 09/18/17 23:42 | 2 | 6G80615.D | CAL PEST@10PPB | 09/19/17 00:17 |
| 3 | 6G80612.D | CAL PEST@50PPB | 09/18/17 23:24 | 4 | 6G80611.D | CAL PEST@100PPB | 09/18/17 23:07 |
| 5 | 6G80616.D | CAL PEST@200PPB | 09/19/17 00:34 | 6 | 6G80617.D | CAL PEST@400PPB | 09/19/17 00:52 |
| 7 | 6G80618.D | CAL CHLOR@100PP | 09/19/17 01:10 | 8 | 6G80619.D | CAL TOX@500PPB | 09/19/17 01:27 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aldrin | 2 | 0 | Avg | 0.4051 | 0.4012 | 0.4311 | 0.5162 | 0.4785 | 0.4726 | ---- | ---- | 0.451 | 7.02 | 0.999 | 0.999 | 10 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor Epoxide | 2 | 0 | Avg | 0.4289 | 0.4009 | 0.4060 | 0.4715 | 0.4246 | 0.4156 | ---- | ---- | 0.425 | 7.75 | 0.999 | 0.999 | 6.0 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| v-chlordane | 2 | 0 | Avg | 0.4773 | 0.4193 | 0.4306 | 0.5041 | 0.4605 | 0.4568 | ---- | ---- | 0.458 | 7.96 | 0.999 | 0.999 | 6.7 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| a-chlordane | 2 | 0 | Avg | 0.4157 | 0.3994 | 0.4149 | 0.4809 | 0.4323 | 0.4174 | ---- | ---- | 0.427 | 8.17 | 0.998 | 0.999 | 6.7 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan I | 2 | 0 | Avg | 0.4488 | 0.4212 | 0.4166 | 0.4847 | 0.4454 | 0.4465 | ---- | ---- | 0.444 | 8.22 | 0.999 | 0.999 | 5.5 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDE | 2 | 0 | Qua | 0.3730 | 0.3632 | 0.3950 | 0.4756 | 0.4386 | 0.4372 | ---- | ---- | 0.414 | 8.47 | 0.999 | 0.999 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Dieldrin | 2 | 0 | Avg | 0.3782 | 0.3771 | 0.3876 | 0.4646 | 0.4261 | 0.4237 | ---- | ---- | 0.410 | 8.61 | 0.999 | 0.999 | 8.5 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin | 2 | 0 | Avg | 0.3407 | 0.3244 | 0.3411 | 0.4044 | 0.3617 | 0.3499 | ---- | ---- | 0.354 | 9.08 | 0.998 | 0.999 | 7.8 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDD | 2 | 0 | Avg | 0.3437 | 0.3304 | 0.3350 | 0.3900 | 0.3527 | 0.3459 | ---- | ---- | 0.350 | 9.17 | 0.998 | 0.998 | 6.1 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan II | 2 | 0 | Avg | 0.4618 | 0.4042 | 0.3908 | 0.4480 | 0.4046 | 0.3918 | ---- | ---- | 0.417 | 9.31 | 0.999 | 0.999 | 7.3 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDT | 2 | 0 | Qua | 0.1497 | 0.1808 | 0.2180 | 0.2706 | 0.2480 | 0.2572 | ---- | ---- | 0.221 | 9.56 | 0.999 | 0.999 | 21 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Aldehyde | 2 | 0 | Qua | 0.4379 | 0.3725 | 0.3436 | 0.3800 | 0.3359 | 0.3192 | ---- | ---- | 0.365 | 9.71 | 0.998 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan Sulfate | 2 | 0 | Avg | 0.3742 | 0.3378 | 0.3192 | 0.3692 | 0.3279 | 0.3158 | ---- | ---- | 0.341 | 9.86 | 0.998 | 0.999 | 7.4 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Methoxychlor | 2 | 0 | Qua | 0.1177 | 0.1361 | 0.1471 | 0.1683 | 0.1472 | 0.1396 | ---- | ---- | 0.143 | 10.62 | 0.997 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Ketone | 2 | 0 | Avg | 0.4180 | 0.3899 | 0.4013 | 0.4644 | 0.4120 | 0.3965 | ---- | ---- | 0.414 | 10.84 | 0.998 | 0.999 | 6.5 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| DCB-Surrogate | 2 | 0 | Qua | 0.6412 | 0.5778 | 0.4745 | 0.5040 | 0.4195 | 0.3865 | ---- | ---- | 0.501 | 12.39 | 0.994 | 0.998 | 19 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Chlordane (Technical) | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0213 | 6.58 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0901 | 7.97 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0515 | 8.17 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Toxaphene | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00428 | 8.86 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00522 | 9.11 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00506 | 9.60 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00801 | 10.35 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00567 | 10.43 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |

Avg Rsd Col 1: 9.94 Avg Rsd Col 2: 10.04

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte..>0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 : Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

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# Form7
Continuing Calibration

Method: EPA 8081B

| | | | | 6G81137.D | | | 6G81148.D | | | 6G81151.D | | | 6G81174.D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | | 8081 | | | 8081 | | | 8081 | | | 8081 | | | |
| **Method:** | | | | CAL PEST@100PP | | | CAL PEST@100PP | | | CAL PEST@100PP | | | CAL PEST@200PP | | | |
| **Calibration Name:** | | | | 10/03/17 11:45 | | | 10/03/17 16:14 | | | 10/04/17 01:36 | | | 10/04/17 11:56 | | | |
| **Calibration Date/Time** | | | | Conc | | | Conc | | | Conc | | | Conc | | | Conc |
| Compound | Limit | Col | Mr | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc Exp %Diff |
| TCMX-Surrogate | 20 | 1 | 0 | 103.6 | 100 | 3.6 | 105.5 | 100 | 5.5 | 99.58 | 100 | 0.4 | 197.8 | 200 | 1.1 | |
| alpha-BHC | 20 | 1 | 0 | 103.1 | 100 | 3.1 | 105.2 | 100 | 5.2 | 98.03 | 100 | 2.0 | 203.9 | 200 | 1.9 | |
| gamma-BHC | 20 | 1 | 0 | 111.8 | 100 | 11.8 | 114.2 | 100 | 14.2 | 106 | 100 | 6.0 | 212.2 | 200 | 6.1 | |
| beta-BHC | 20 | 1 | 0 | 105.4 | 100 | 5.4 | 104.4 | 100 | 4.4 | 101.0 | 100 | 1.0 | 197.8 | 200 | 1.1 | |
| Heptachlor | 20 | 1 | 0 | 105 | 100 | 5.0 | 108.5 | 100 | 8.5 | 92.25 | 100 | 7.8 | 198.3 | 200 | 0.9 | |
| delta-BHC | 20 | 1 | 0 | 112.4 | 100 | 12.4 | 115.5 | 100 | 15.5 | 104.7 | 100 | 4.7 | 212.5 | 200 | 6.2 | |
| Aldrin | 20 | 1 | 0 | 109 | 100 | 9.0 | 110.8 | 100 | 10.8 | 106 | 100 | 6.0 | 205.3 | 200 | 2.7 | |
| Heptachlor Epoxide | 20 | 1 | 0 | 105.9 | 100 | 5.9 | 107.4 | 100 | 7.4 | 102.7 | 100 | 2.7 | 193.6 | 200 | 3.2 | |
| y-chlordane | 20 | 1 | 0 | 107.7 | 100 | 7.7 | 109.3 | 100 | 9.3 | 104.3 | 100 | 4.3 | 200.8 | 200 | 0.4 | |
| a-chlordane | 20 | 1 | 0 | 106.4 | 100 | 6.4 | 107.3 | 100 | 7.3 | 102.9 | 100 | 2.8 | 193.1 | 200 | 3.4 | |
| Endosulfan I | 20 | 1 | 0 | 105.8 | 100 | 5.8 | 106 | 100 | 6.0 | 102.8 | 100 | 2.8 | 187 | 200 | 6.5 | |
| p,p'-DDE | 20 | 1 | 0 | 111.5 | 100 | 11.5 | 112.0 | 100 | 12.0 | 108.4 | 100 | 8.4 | 207.1 | 200 | 3.5 | |
| Dieldrin | 20 | 1 | 0 | 109.0 | 100 | 9.0 | 109.8 | 100 | 9.8 | 105.2 | 100 | 5.2 | 201 | 200 | 0.5 | |
| Endrin | 20 | 1 | 0 | 105.7 | 100 | 5.7 | 101.3 | 100 | 1.3 | 94.56 | 100 | 5.4 | 193.7 | 200 | 3.2 | |
| p,p'-DDD | 20 | 1 | 0 | 105.3 | 100 | 5.3 | 107.9 | 100 | 7.9 | 100.9 | 100 | 0.8 | 191.0 | 200 | 4.5 | |
| Endosulfan II | 20 | 1 | 0 | 106.3 | 100 | 6.3 | 107.2 | 100 | 7.2 | 102.7 | 100 | 2.7 | 192.3 | 200 | 3.9 | |
| p,p'-DDT | 20 | 1 | 0 | 114.1 | 100 | 14.1 | 106.3 | 100 | 6.3 | 93.33 | 100 | 6.7 | 211.6 | 200 | 5.8 | |
| Endrin Aldehyde | 20 | 1 | 0 | 100.6 | 100 | 0.6 | 101.7 | 100 | 1.7 | 97.34 | 100 | 2.7 | 182.1 | 200 | 8.9 | |
| Endosulfan Sulfate | 20 | 1 | 0 | 101.5 | 100 | 1.5 | 104.2 | 100 | 4.2 | 93.15 | 100 | 6.8 | 185.3 | 200 | 7.3 | |
| Methoxychlor | 20 | 1 | 0 | 107.6 | 100 | 7.6 | 102.1 | 100 | 2.1 | 85.19 | 100 | 14.8 | 202.7 | 200 | 1.3 | |
| Endrin Ketone | 20 | 1 | 0 | 119.5 | 100 | 19.5 | 122.3 | 100 | 22.3* | 109.3 | 100 | 9.3 | 207.3 | 200 | 3.7 | |
| DCB-Surrogate | 20 | 1 | 0 | 112.1 | 100 | 12.1 | 108.5 | 100 | 8.5 | 105.6 | 100 | 5.6 | 193.5 | 200 | 3.3 | |
| Average Difference | 20 | 1 | 0 | | | 7.7 | | | 8.1 | | | 5.0 | | | 3.6 | |
| TCMX-Surrogate | 20 | 2 | 0 | 102.2 | 100 | 2.2 | 104.8 | 100 | 4.8 | 102.9 | 100 | 2.9 | 193 | 200 | 3.5 | |
| alpha-BHC | 20 | 2 | 0 | 99.22 | 100 | 0.8 | 100.9 | 100 | 0.9 | 99.04 | 100 | 1.0 | 199.5 | 200 | 0.3 | |
| gamma-BHC | 20 | 2 | 0 | 99.92 | 100 | 0.1 | 102.1 | 100 | 2.1 | 99.2 | 100 | 0.8 | 199.0 | 200 | 0.5 | |
| beta-BHC | 20 | 2 | 0 | 103.6 | 100 | 3.6 | 105.2 | 100 | 5.2 | 103.3 | 100 | 3.3 | 190.4 | 200 | 4.8 | |
| Heptachlor | 20 | 2 | 0 | 101.5 | 100 | 1.5 | 106 | 100 | 6.0 | 93.18 | 100 | 6.8 | 201.2 | 200 | 0.6 | |
| delta-BHC | 20 | 2 | 0 | 99.94 | 100 | 0.1 | 102.3 | 100 | 2.3 | 97.31 | 100 | 2.7 | 198.6 | 200 | 0.7 | |
| Aldrin | 20 | 2 | 0 | 107.8 | 100 | 7.8 | 108.7 | 100 | 8.7 | 108.9 | 100 | 8.9 | 210.5 | 200 | 5.3 | |
| Heptachlor Epoxide | 20 | 2 | 0 | 104.8 | 100 | 4.8 | 106 | 100 | 6.0 | 105.3 | 100 | 5.3 | 199.2 | 200 | 0.4 | |
| y-chlordane | 20 | 2 | 0 | 104.5 | 100 | 4.4 | 105.0 | 100 | 5.0 | 104.4 | 100 | 4.4 | 198.3 | 200 | 0.9 | |
| a-chlordane | 20 | 2 | 0 | 106.6 | 100 | 6.6 | 107.2 | 100 | 7.2 | 107.1 | 100 | 7.1 | 198.7 | 200 | 0.6 | |
| Endosulfan I | 20 | 2 | 0 | 103.5 | 100 | 3.5 | 104.6 | 100 | 4.6 | 103.4 | 100 | 3.4 | 199 | 200 | 0.5 | |
| p,p'-DDE | 20 | 2 | 0 | 101.2 | 100 | 1.2 | 102.3 | 100 | 2.3 | 100.8 | 100 | 0.8 | 196.8 | 200 | 1.6 | |
| Dieldrin | 20 | 2 | 0 | 106.8 | 100 | 6.8 | 107.4 | 100 | 7.4 | 106 | 100 | 6.0 | 205.0 | 200 | 2.5 | |
| Endrin | 20 | 2 | 0 | 104 | 100 | 3.9 | 99.27 | 100 | 0.7 | 94.81 | 100 | 5.2 | 199.1 | 200 | 0.5 | |
| p,p'-DDD | 20 | 2 | 0 | 106.3 | 100 | 6.3 | 110.7 | 100 | 10.7 | 101 | 100 | 1.0 | 201.9 | 200 | 0.9 | |
| Endosulfan II | 20 | 2 | 0 | 101.3 | 100 | 1.3 | 101.9 | 100 | 1.9 | 100.9 | 100 | 0.9 | 189.1 | 200 | 5.5 | |
| p,p'-DDT | 20 | 2 | 0 | 101.5 | 100 | 1.5 | 102.6 | 100 | 2.6 | 85.15 | 100 | 14.9 | 193.9 | 200 | 3.1 | |
| Endrin Aldehyde | 20 | 2 | 0 | 102.7 | 100 | 2.7 | 108.1 | 100 | 8.1 | 101.8 | 100 | 1.8 | 194.5 | 200 | 2.8 | |
| Endosulfan Sulfate | 20 | 2 | 0 | 99.92 | 100 | 0.1 | 102.7 | 100 | 2.7 | 95.04 | 100 | 5.0 | 184.3 | 200 | 7.8 | |
| Methoxychlor | 20 | 2 | 0 | 98.7 | 100 | 1.3 | 101.1 | 100 | 1.1 | 79.6 | 100 | 20.4 | 185.4 | 200 | 7.3 | |
| Endrin Ketone | 20 | 2 | 0 | 111.8 | 100 | 11.8 | 111.5 | 100 | 11.5 | 105.6 | 100 | 5.6 | 198.9 | 200 | 0.5 | |
| DCB-Surrogate | 20 | 2 | 0 | 107.3 | 100 | 7.3 | 109 | 100 | 9.0 | 104.5 | 100 | 4.5 | 196.4 | 200 | 1.8 | |
| Average Difference | 20 | 2 | 0 | | | 3.6 | | | 5.0 | | | 5.1 | | | 2.4 | |

***Flags/Notes:*** ** - Values outside of limits for this column/run*

# Form7
RtWindow Summary

Method: EPA 8081B

| Data File: | | | 6G80613.D | | 6G81137.D | | 6G81151.D | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calibration Name: | | | CAL PEST@2PPB | | CAL PEST@100PPB | | CAL PEST@100PPB | | | | | |
| Calibration Date/Time | | | 9/18/2017 11:42:00 PM | | 10/3/2017 11:45:00 AM | | 10/4/2017 1:36:00 AM | | | | | |
| Compound | Col | Mr | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit |
| TCMX-Surrogate | 1 | 0 | 4.57 | (4.51 - 4.63) | 4.57 | (4.51 - 4.63) | 4.57 | (4.51 - 4.63) | | | | |
| alpha-BHC | 1 | 0 | 5.76 | (5.72 - 5.80) | 5.75 | (5.71 - 5.79) | 5.75 | (5.71 - 5.79) | | | | |
| gamma-BHC | 1 | 0 | 6.29 | (6.25 - 6.33) | 6.28 | (6.24 - 6.32) | 6.28 | (6.24 - 6.32) | | | | |
| beta-BHC | 1 | 0 | 7.20 | (7.12 - 7.28) | 7.19 | (7.11 - 7.27) | 7.19 | (7.11 - 7.27) | | | | |
| Heptachlor | 1 | 0 | 6.58 | (6.54 - 6.62) | 6.58 | (6.54 - 6.62) | 6.58 | (6.54 - 6.62) | | | | |
| delta-BHC | 1 | 0 | 7.53 | (7.45 - 7.61) | 7.52 | (7.44 - 7.60) | 7.52 | (7.44 - 7.60) | | | | |
| Aldrin | 1 | 0 | 6.95 | (6.87 - 7.03) | 6.95 | (6.87 - 7.03) | 6.95 | (6.87 - 7.03) | | | | |
| Heptachlor Epoxide | 1 | 0 | 7.79 | (7.75 - 7.83) | 7.79 | (7.75 - 7.83) | 7.79 | (7.75 - 7.83) | | | | |
| v-chlordane | 1 | 0 | 8.20 | (8.16 - 8.24) | 8.19 | (8.15 - 8.23) | 8.19 | (8.15 - 8.23) | | | | |
| a-chlordane | 1 | 0 | 8.26 | (8.22 - 8.30) | 8.26 | (8.22 - 8.30) | 8.26 | (8.22 - 8.30) | | | | |
| Endosulfan I | 1 | 0 | 8.15 | (8.11 - 8.19) | 8.15 | (8.11 - 8.19) | 8.15 | (8.11 - 8.19) | | | | |
| p,p'-DDE | 1 | 0 | 8.36 | (8.28 - 8.44) | 8.36 | (8.28 - 8.44) | 8.35 | (8.27 - 8.43) | | | | |
| Dieldrin | 1 | 0 | 8.60 | (8.52 - 8.68) | 8.60 | (8.52 - 8.68) | 8.60 | (8.52 - 8.68) | | | | |
| Endrin | 1 | 0 | 8.86 | (8.82 - 8.90) | 8.86 | (8.82 - 8.90) | 8.86 | (8.82 - 8.90) | | | | |
| o,p'-DDD | 1 | 0 | 9.32 | (9.24 - 9.40) | 9.31 | (9.23 - 9.39) | 9.31 | (9.23 - 9.39) | | | | |
| Endosulfan II | 1 | 0 | 9.43 | (9.35 - 9.51) | 9.42 | (9.34 - 9.50) | 9.42 | (9.34 - 9.50) | | | | |
| o,p'-DDT | 1 | 0 | 9.53 | (9.45 - 9.61) | 9.52 | (9.44 - 9.60) | 9.52 | (9.44 - 9.60) | | | | |
| Endrin Aldehyde | 1 | 0 | 9.92 | (9.84 - 10.00) | 9.91 | (9.83 - 9.99) | 9.91 | (9.83 - 9.99) | | | | |
| Endosulfan Sulfate | 1 | 0 | 10.29 | (10.25 - 10.33) | 10.28 | (10.24 - 10.32) | 10.28 | (10.24 - 10.32) | | | | |
| Methoxychlor | 1 | 0 | 10.23 | (10.19 - 10.27) | 10.22 | (10.18 - 10.26) | 10.22 | (10.18 - 10.26) | | | | |
| Endrin Ketone | 1 | 0 | 10.80 | (10.72 - 10.88) | 10.79 | (10.71 - 10.87) | 10.79 | (10.71 - 10.87) | | | | |
| DCB-Surrogate | 1 | 0 | 11.76 | (11.70 - 11.82) | 11.76 | (11.70 - 11.82) | 11.76 | (11.70 - 11.82) | | | | |
| Chlordane (Technical | 1 | 1 | | | | | | | | | | |
| Chlordane (Technical | 1 | 2 | | | | | | | | | | |
| Chlordane (Technical | 1 | 3 | | | | | | | | | | |
| Toxaphene | 1 | 1 | 8.99 | (8.95 - 9.03) | | | | | | | | |
| Toxaphene | 1 | 2 | 9.12 | (9.08 - 9.16) | | | | | | | | |
| Toxaphene | 1 | 3 | 9.46 | (9.42 - 9.50) | | | | | | | | |
| Toxaphene | 1 | 4 | 9.79 | (9.75 - 9.83) | | | | | | | | |
| Toxaphene | 1 | 5 | 10.25 | (10.21 - 10.29) | | | | | | | | |
| TCMX-Surrogate | 2 | 0 | 4.65 | (4.59 - 4.71) | 4.64 | (4.58 - 4.70) | 4.64 | (4.58 - 4.70) | | | | |
| alpha-BHC | 2 | 0 | 5.59 | (5.55 - 5.63) | 5.58 | (5.54 - 5.62) | 5.59 | (5.55 - 5.63) | | | | |
| gamma-BHC | 2 | 0 | 6.13 | (6.09 - 6.17) | 6.12 | (6.08 - 6.16) | 6.12 | (6.08 - 6.16) | | | | |
| beta-BHC | 2 | 0 | 6.21 | (6.13 - 6.29) | 6.21 | (6.13 - 6.29) | 6.21 | (6.13 - 6.29) | | | | |
| Heptachlor | 2 | 0 | 6.57 | (6.53 - 6.61) | 6.57 | (6.53 - 6.61) | 6.57 | (6.53 - 6.61) | | | | |
| delta-BHC | 2 | 0 | 6.71 | (6.63 - 6.79) | 6.71 | (6.63 - 6.79) | 6.71 | (6.63 - 6.79) | | | | |
| Aldrin | 2 | 0 | 7.02 | (6.94 - 7.10) | 7.02 | (6.94 - 7.10) | 7.02 | (6.94 - 7.10) | | | | |
| Heptachlor Epoxide | 2 | 0 | 7.75 | (7.71 - 7.79) | 7.75 | (7.71 - 7.79) | 7.75 | (7.71 - 7.79) | | | | |
| v-chlordane | 2 | 0 | 7.96 | (7.92 - 8.00) | 7.96 | (7.92 - 8.00) | 7.96 | (7.92 - 8.00) | | | | |
| a-chlordane | 2 | 0 | 8.17 | (8.13 - 8.21) | 8.16 | (8.12 - 8.20) | 8.16 | (8.12 - 8.20) | | | | |
| Endosulfan I | 2 | 0 | 8.22 | (8.18 - 8.26) | 8.21 | (8.17 - 8.25) | 8.21 | (8.17 - 8.25) | | | | |
| p,p'-DDE | 2 | 0 | 8.47 | (8.39 - 8.55) | 8.46 | (8.38 - 8.54) | 8.46 | (8.38 - 8.54) | | | | |
| Dieldrin | 2 | 0 | 8.61 | (8.53 - 8.69) | 8.61 | (8.53 - 8.69) | 8.61 | (8.53 - 8.69) | | | | |
| Endrin | 2 | 0 | 9.08 | (9.04 - 9.12) | 9.08 | (9.04 - 9.12) | 9.08 | (9.04 - 9.12) | | | | |
| o,p'-DDD | 2 | 0 | 9.17 | (9.09 - 9.25) | 9.17 | (9.09 - 9.25) | 9.17 | (9.09 - 9.25) | | | | |
| Endosulfan II | 2 | 0 | 9.31 | (9.23 - 9.39) | 9.30 | (9.22 - 9.38) | 9.30 | (9.22 - 9.38) | | | | |
| o,p'-DDT | 2 | 0 | 9.56 | (9.48 - 9.64) | 9.55 | (9.47 - 9.63) | 9.55 | (9.47 - 9.63) | | | | |
| Endrin Aldehyde | 2 | 0 | 9.71 | (9.63 - 9.79) | 9.71 | (9.63 - 9.79) | 9.71 | (9.63 - 9.79) | | | | |
| Endosulfan Sulfate | 2 | 0 | 9.86 | (9.82 - 9.90) | 9.86 | (9.82 - 9.90) | 9.86 | (9.82 - 9.90) | | | | |
| Methoxychlor | 2 | 0 | 10.62 | (10.58 - 10.66) | 10.61 | (10.57 - 10.65) | 10.61 | (10.57 - 10.65) | | | | |
| Endrin Ketone | 2 | 0 | 10.84 | (10.76 - 10.92) | 10.84 | (10.76 - 10.92) | 10.84 | (10.76 - 10.92) | | | | |
| DCB-Surrogate | 2 | 0 | 12.39 | (12.33 - 12.45) | 12.38 | (12.32 - 12.44) | 12.38 | (12.32 - 12.44) | | | | |
| Chlordane (Technical | 2 | 1 | | | | | | | | | | |
| Chlordane (Technical | 2 | 2 | | | | | | | | | | |
| Chlordane (Technical | 2 | 3 | | | | | | | | | | |
| Toxaphene | 2 | 1 | 8.86 | (8.82 - 8.90) | | | | | | | | |
| Toxaphene | 2 | 2 | 9.11 | (9.07 - 9.15) | | | | | | | | |
| Toxaphene | 2 | 3 | 9.60 | (9.56 - 9.64) | | | | | | | | |
| Toxaphene | 2 | 4 | 10.35 | (10.31 - 10.39) | | | | | | | | |
| Toxaphene | 2 | 5 | 10.43 | (10.39 - 10.47) | | | | | | | | |

# Herbicide Data

# Form1

ORGANICS HERBICIDE REPORT

Sample Number: AD00298-002
Client Id: 475 EXTERIOR NYRECYC
Data File: 12G14889.D
Analysis Date: 10/04/17 16:37
Date Rec/Extracted: 09/28/17-10/03/17
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8151A
Matrix: Soil
Initial Vol: 50g
Final Vol: 10ml
Dilution: 1
Solids: 92

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 93-76-5 | 2,4,5-T | 0.011 | U | 93-72-1 | Silvex | 0.011 | U |
| 94-75-7 | 2,4-D | 0.011 | U | | | | |

Worksheet #: 439202

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2017\GC_12\Data\10-04-17\
Data File : 12G14889.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04-Oct-17, 16:37:34
Operator : MLC/MS/ZM
Sample : AD00298-002
Misc : S,HERB
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 04 17:29:19 2017
Quant Method : G:\GCDATA\2017\GC_12\METHODQT\12G_HERB928.M
Quant Title : @GC_12,ug,8151
QLast Update : Wed Oct 04 15:55:05 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

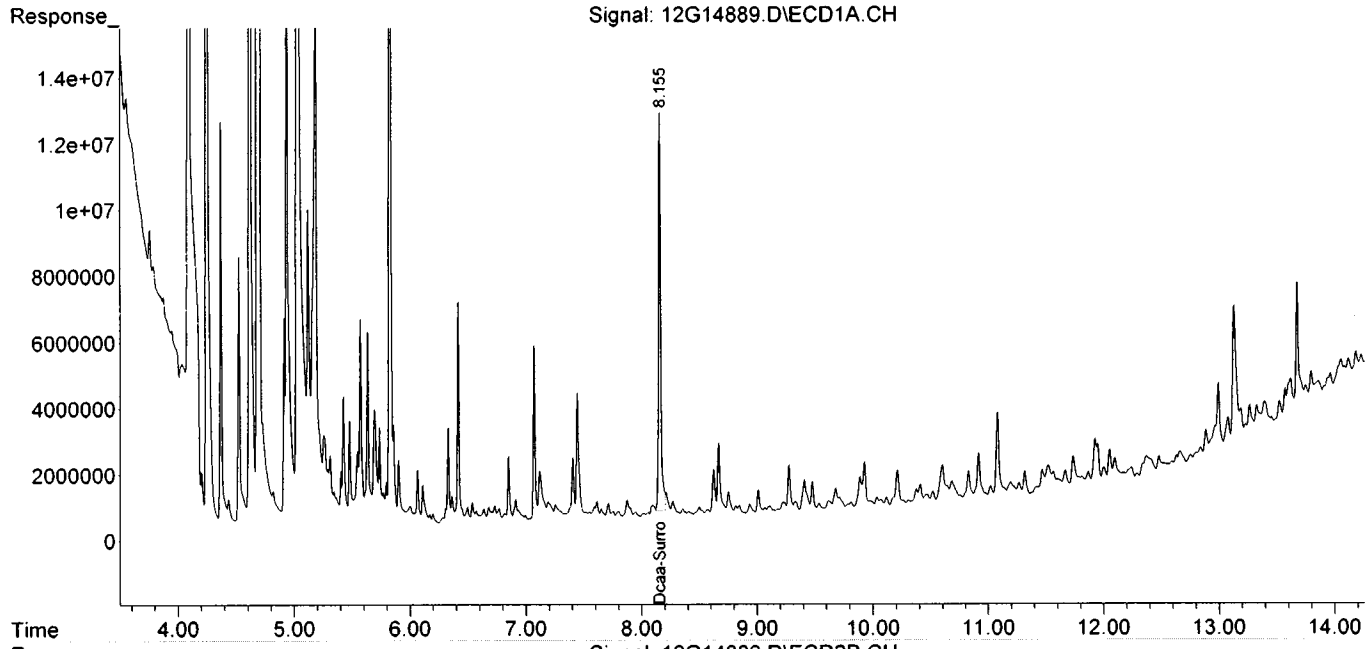
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng#1 | ng#2 |
|---|---|---|---|---|---|---|
| Target Compounds | | | | | | |
| 2)Dcaa-Surrogate | 8.155 | 8.122 | 155.4E6 | 49533554 | 811.160m | 786.244m |

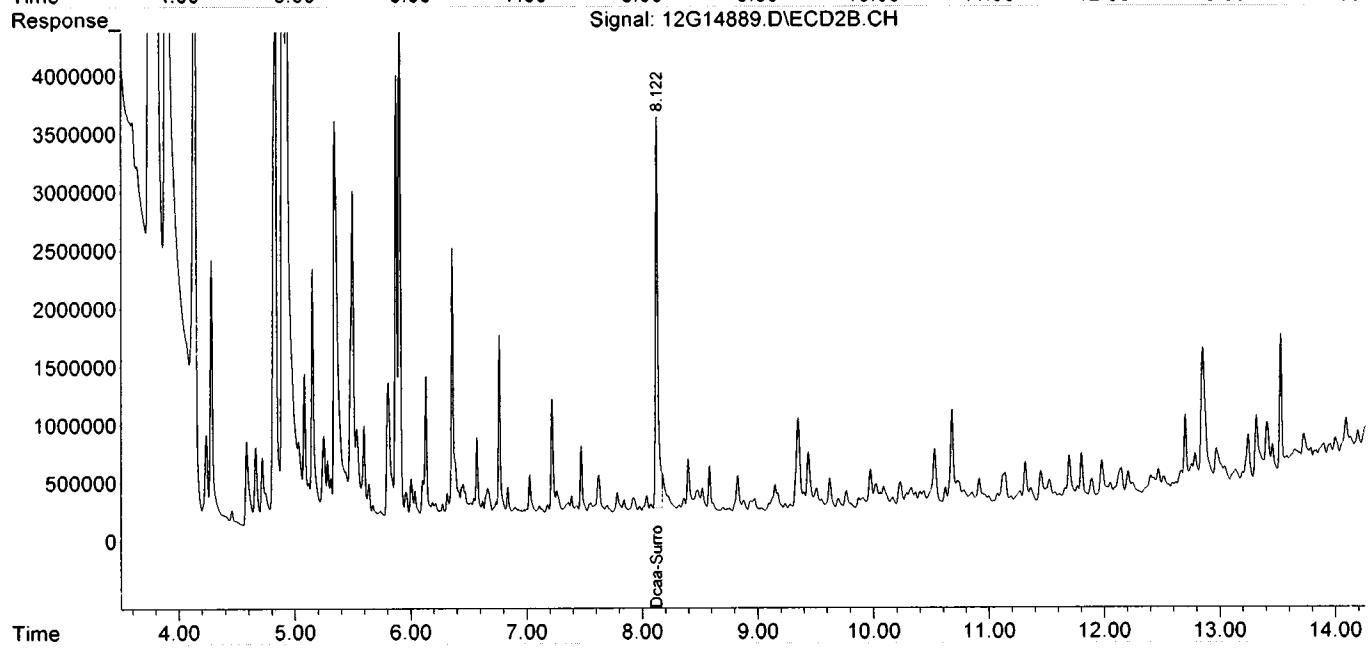
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2017\GC_12\Data\10-04-17\
Data File : 12G14889.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04-Oct-17, 16:37:34
Operator : MLC/MS/ZM
Sample : AD00298-002
Misc : S,HERB
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 04 17:29:19 2017
Quant Method : G:\GCDATA\2017\GC_12\METHODQT\12G_HERB928.M
Quant Title : @GC_12,ug,8151
QLast Update : Wed Oct 04 15:55:05 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# Form1

ORGANICS HERBICIDE REPORT

Sample Number: SMB63053
Client Id:
Data File: 12G14890.D
Analysis Date: 10/04/17 16:56
Date Rec/Extracted: NA-10/03/17
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8151A
Matrix: Soil
Initial Vol: 50g
Final Vol: 10ml
Dilution: 1
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 93-76-5 | 2,4,5-T | 0.010 | U | 93-72-1 | Silvex | 0.010 | U |
| 94-75-7 | 2,4-D | 0.010 | U | | | | |

Worksheet #: 439202

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2017\GC_12\Data\10-04-17\
Data File : 12G14890.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04-Oct-17, 16:56:54
Operator : MLC/MS/ZM
Sample : SMB63053
Misc : S,HERB
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 04 17:32:43 2017
Quant Method : G:\GCDATA\2017\GC_12\METHODQT\12G_HERB928.M
Quant Title : @GC_12,ug,8151
QLast Update : Wed Oct 04 15:55:05 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

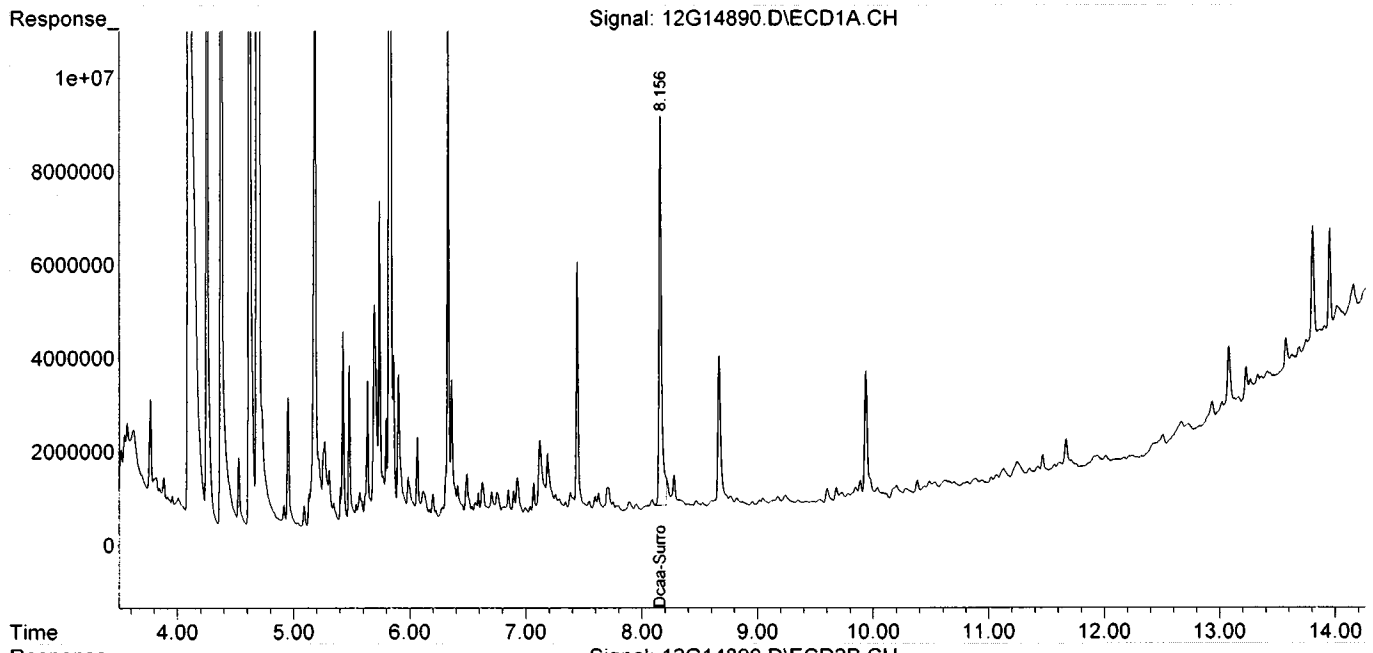
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng#1 | ng#2 |
|---|---|---|---|---|---|---|
| Target Compounds | | | | | | |
| 2)Dcaa-Surrogate | 8.156 | 8.124 | 125.0E6 | 40709721 | 652.584m | 646.184m |

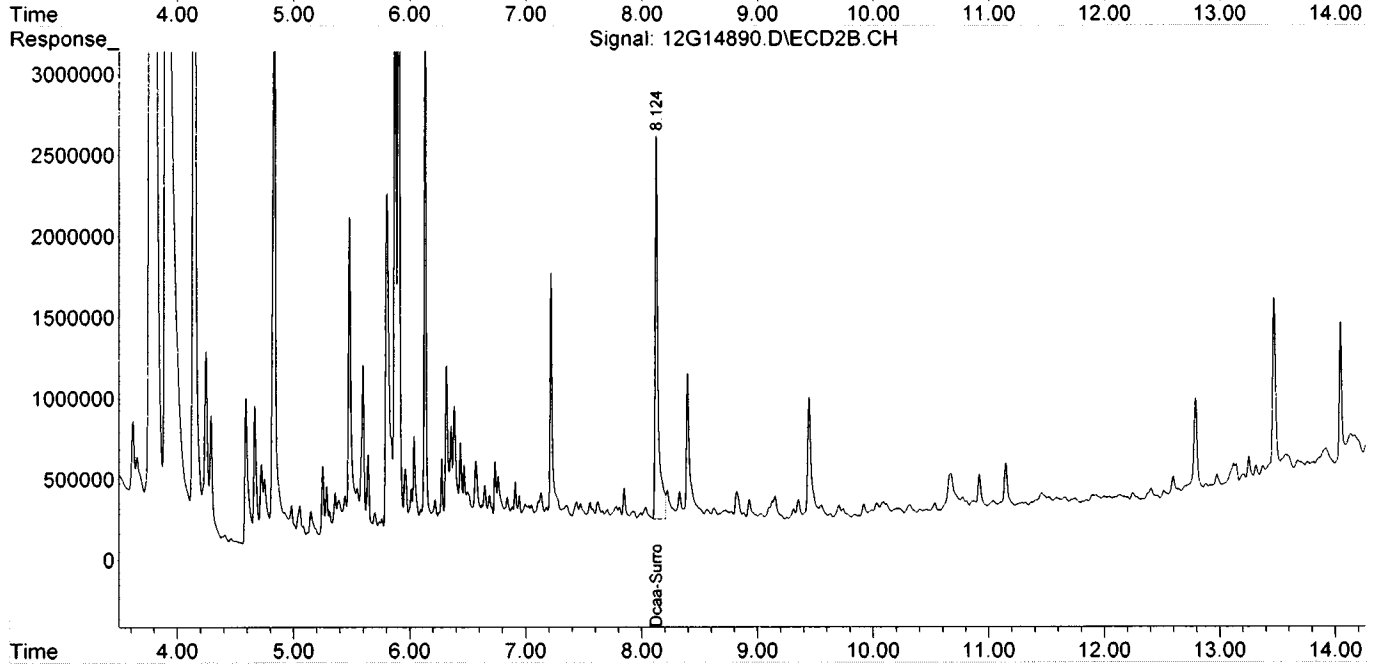
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2017\GC_12\Data\10-04-17\
Data File : 12G14890.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04-Oct-17, 16:56:54
Operator : MLC/MS/ZM
Sample : SMB63053
Misc : S,HERB
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Oct 04 17:32:43 2017
Quant Method : G:\GCDATA\2017\GC_12\METHODQT\12G_HERB928.M
Quant Title : @GC_12,ug,8151
QLast Update : Wed Oct 04 15:55:05 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# FORM2

## Surrogate Recovery

Method: EPA 8151A

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column2 S2 Recov | Column0 S3 Recov | Column0 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12G14890.D | SMB63053 | S | 10/04/17 16:56 | 1 | | 65 | 65 | | | | |
| 12G14889.D | AD00298-002 | S | 10/04/17 16:37 | 1 | | 81 | 79 | | | | |
| 12G14900.D | SMB63053(MS) | S | 10/04/17 21:49 | 1 | | 76 | 82 | | | | |
| 12G14906.D | AD00356-001(MS) | S | 10/04/17 23:46 | 1 | | 85 | 104 | | | | |
| 12G14907.D | AD00356-001(MSD) | S | 10/05/17 00:05 | 1 | | 78 | 87 | | | | |
| 12G14908.D | AD00356-001 | S | 10/05/17 00:25 | 1 | | 59 | 62 | | | | |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8151A

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=Dcaa-Surrogate | 1000 | 25-138 |
| S2=Dcaa-Surrogate | 1000 | 25-138 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63053

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 12G14900.D | SMB63053(MS) | 10/4/2017 9:49:20 PM |
| Non Spike(If applicable): | | | |
| Inst Blank(If applicable): | | | |

Method: 8151 Matrix: Soil QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Dicamba | 1 | 244.77 | 0 | 400 | 61 | 25 | 130 |
| 2,4-D | 1 | 222.59 | 0 | 400 | 56 | 10 | 130 |
| Silvex | 1 | 269.2 | 0 | 400 | 67 | 25 | 130 |
| 2,4,5-T | 1 | 228.5 | 0 | 400 | 57 | 25 | 130 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB63053

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 12G14906.D | AD00356-001(MS) | 10/4/2017 11:46:08 PM |
| Non Spike(If applicable): | 12G14908.D | AD00356-001 | 10/5/2017 12:25:06 AM |
| Inst Blank(If applicable): | | | |

Method: 8151 Matrix: Soil QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Dicamba | 1 | 260.27 | 0 | 400 | 65 | 25 | 130 |
| 2,4-D | 1 | 279.55 | 0 | 400 | 70 | 10 | 130 |
| Silvex | 1 | 301.24 | 0 | 400 | 75 | 25 | 130 |
| 2,4,5-T | 1 | 298.53 | 0 | 400 | 75 | 25 | 130 |

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 12G14907.D | AD00356-001(MSD) | 10/5/2017 12:05:38 AM |
| Non Spike(If applicable): | 12G14908.D | AD00356-001 | 10/5/2017 12:25:06 AM |
| Inst Blank(If applicable): | | | |

Method: 8151 Matrix: Soil QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Dicamba | 1 | 234.75 | 0 | 400 | 59 | 25 | 130 |
| 2,4-D | 1 | 258.86 | 0 | 400 | 65 | 10 | 130 |
| Silvex | 1 | 270.22 | 0 | 400 | 68 | 25 | 130 |
| 2,4,5-T | 1 | 259.59 | 0 | 400 | 65 | 25 | 130 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
# RPD Data Laboratory Limits
## QC Batch: SMB63053

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 12G14907.D | AD00356-001(MSD) | 10/5/2017 12:05:38 AM |
| Duplicate(If applicable): | 12G14906.D | AD00356-001(MS) | 10/4/2017 11:46:08 PM |
| Inst Blank(If applicable): | | | |

Method: 8151 Matrix: Soil QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Dicamba | 1 | 234.75 | 260.27 | 10 | 40 |
| 2,4-D | 1 | 258.86 | 279.55 | 7.7 | 40 |
| Silvex | 1 | 270.22 | 301.24 | 11 | 40 |
| 2,4,5-T | 1 | 259.59 | 298.53 | 14 | 40 |

* - Indicates outside of limits NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: SMB63053
Blank Data File: 12G14890.D
Matrix: Soil

Blank Analysis Date: 10/04/17 16:56
Blank Extraction Date: 10/03/17
(If Applicable)
Method: EPA 8151A

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD00298-002 | 12G14889.D | 10/04/17 16:37 |
| AD00356-001 | 12G14908.D | 10/05/17 00:25 |
| AD00356-001(MSD | 12G14907.D | 10/05/17 00:05 |
| AD00356-001(MS) | 12G14906.D | 10/04/17 23:46 |
| SMB63053(MS) | 12G14900.D | 10/04/17 21:49 |

# Form 5

Method: EPA 8151A

Instrument: GC_12 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 12G14825.D | CAL HERB@50PPB | 09/28/17 11:05 | Soil | 12G1482 | 8.2239 | 0 | 8.1908 | 0 |
| 12G14826.D | CAL HERB@100PPB | 09/28/17 11:24 | Soil | 12G1482 | 8.2017 | 0.2703 | 8.1658 | 0.3057 |
| 12G14827.D | CAL HERB@200PPB | 09/28/17 11:44 | Soil | 12G1482 | 8.1804 | 0.5303 | 8.1447 | 0.5644 |
| 12G14828.D | CAL HERB@400PPB | 09/28/17 12:03 | Soil | 12G1482 | 8.1684 | 0.6771 | 8.1348 | 0.686 |
| 12G14829.D | CAL HERB@500PPB | 09/28/17 12:22 | Soil | 12G1482 | 8.1660 | 0.7065 | 8.1319 | 0.7217 |
| 12G14830.D | CAL HERB@600PPB | 09/28/17 12:42 | Soil | 12G1482 | 8.1623 | 0.7518 | 8.1293 | 0.7537 |
| 12G14831.D | ICV | 09/28/17 13:01 | Soil | 12G1482 | 8.1960 | 0.3398 | 8.1599 | 0.378 |
| 12G14832.D | TEST | 09/28/17 13:30 | Soil | 12G1482 | 8.1582 | 0.8021 | 8.1953 | 0.0549 |
| 12G14833.D | WMB63020 | 09/28/17 13:49 | Aqueous | 12G1482 | 8.1738 | 0.6111 | 8.1355 | 0.6774 |
| 12G14834.D | WMB63020(MS) | 09/28/17 14:09 | Aqueous | 12G1482 | 8.1541 | 0.8524 | 8.1262 | 0.7918 |
| 12G14835.D | AD00197-006(T)(MS) | 09/28/17 14:28 | Aqueous | 12G1482 | 8.1535 | 0.8597 | 8.1263 | 0.7906 |
| 12G14836.D | AD00197-006(T)(MSD) | 09/28/17 14:48 | Aqueous | 12G1482 | 8.1536 | 0.8585 | 8.1265 | 0.7881 |
| 12G14837.D | MB | 09/28/17 15:07 | Aqueous | 12G1482 | 8.2609 | 0.4489 | 8.1800 | 0.1319 |
| 12G14838.D | AD00197-006(T) | 09/28/17 15:27 | Aqueous | 12G1482 | 8.1707 | 0.649 | 8.1348 | 0.686 |
| 12G14839.D | AD00263-001(T) | 09/28/17 15:46 | Aqueous | 12G1482 | 8.1758 | 0.5866 | 8.1374 | 0.6541 |
| 12G14840.D | AD00263-002(T) | 09/28/17 16:06 | Aqueous | 12G1482 | 8.1742 | 0.6062 | 8.1363 | 0.6676 |
| 12G14841.D | EF-1-V-263495(9/26) | 09/28/17 16:25 | Aqueous | 12G1482 | 8.1830 | 0.4986 | 8.1431 | 0.5841 |
| 12G14842.D | SMB62335 | 09/28/17 16:55 | Soil | 12G1482 | 8.1555 | 0.8352 | 8.1263 | 0.7906 |
| 12G14843.D | CAL HERB@200PPB | 09/28/17 17:15 | Aqueous | 12G1482 | 8.1778 | 0.5621 | 8.1426 | 0.5902 |

Drift Compound: Dcaa-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8151A

Instrument: GC_12 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 12G14887.D | 400PPB | 10/04/17 14:07 | Aqueous | | | | | |
| 12G14888.D | CAL HERB@200PPB | 10/04/17 14:27 | Aqueous | 12G1488 | 8.1800 | 0 | 8.1461 | 0 |
| 12G14889.D | AD00298-002 | 10/04/17 16:37 | Soil | 12G1488 | 8.1550 | 0.3061 | 8.1217 | 0.3 |
| 12G14890.D | SMB63053 | 10/04/17 16:56 | Soil | 12G1488 | 8.1556 | 0.2987 | 8.1243 | 0.268 |
| 12G14891.D | CAL HERB@400PPB | 10/04/17 17:16 | Soil | 12G1488 | 8.1595 | 0.2509 | 8.1290 | 0.2101 |

Drift Compound: Dcaa-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8151A
Instrument: GC_12 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 12G14892.D | CAL HERB@50PPB | 10/04/17 19:13 | Soil | 12G1489 | 8.2341 | 0 | 8.1991 | 0 |
| 12G14893.D | 50PPB | 10/04/17 19:33 | Soil | 12G1489 | 8.2341 | 0 | 8.1962 | 0.0354 |
| 12G14894.D | CAL HERB@100PPB | 10/04/17 19:52 | Soil | 12G1489 | 8.2076 | 0.3224 | 8.1730 | 0.3188 |
| 12G14895.D | CAL HERB@200PPB | 10/04/17 20:11 | Soil | 12G1489 | 8.1803 | 0.6555 | 8.1457 | 0.6534 |
| 12G14896.D | CAL HERB@400PPB | 10/04/17 20:31 | Soil | 12G1489 | 8.1610 | 0.8917 | 8.1304 | 0.8414 |
| 12G14897.D | CAL HERB@500PPB | 10/04/17 20:50 | Soil | 12G1489 | 8.1597 | 0.9077 | 8.1290 | 0.8586 |
| 12G14898.D | CAL HERB@600PPB | 10/04/17 21:10 | Soil | 12G1489 | 8.1545 | 0.9714 | 8.1248 | 0.9103 |
| 12G14899.D | ICV | 10/04/17 21:29 | Soil | 12G1489 | 8.2032 | 0.376 | 8.1783 | 0.254 |
| 12G14900.D | SMB63053(MS) | 10/04/17 21:49 | Soil | 12G1489 | 8.1459 | 1.0769 | 8.1215 | 0.9509 |
| 12G14901.D | WMB63062 | 10/04/17 22:08 | Aqueous | 12G1489 | 8.1689 | 0.795 | 8.1332 | 0.807 |
| 12G14902.D | WMB63062(MS) | 10/04/17 22:28 | Aqueous | 12G1489 | 8.1459 | 1.0769 | 8.1220 | 0.9448 |
| 12G14903.D | AD00291-001(T)(MS) | 10/04/17 22:47 | Aqueous | 12G1489 | 8.1448 | 1.0904 | 8.1205 | 0.9633 |
| 12G14904.D | AD00291-001(T)(MSD) | 10/04/17 23:07 | Aqueous | 12G1489 | 8.1451 | 1.0868 | 8.1216 | 0.9497 |
| 12G14905.D | AD00291-001(T) | 10/04/17 23:26 | Aqueous | 12G1489 | 8.1708 | 0.7717 | 8.1358 | 0.775 |
| 12G14906.D | AD00356-001(MS) | 10/04/17 23:46 | Soil | 12G1489 | 8.1441 | 1.099 | 8.1198 | 0.9719 |
| 12G14907.D | AD00356-001(MSD) | 10/05/17 00:05 | Soil | 12G1489 | 8.1440 | 1.1003 | 8.1187 | 0.9854 |
| 12G14908.D | AD00356-001 | 10/05/17 00:25 | Soil | 12G1489 | 8.1510 | 1.0143 | 8.1211 | 0.9559 |
| 12G14909.D | AD00291-002(T) | 10/05/17 00:44 | Aqueous | 12G1489 | 8.1628 | 0.8697 | 8.1279 | 0.8722 |
| 12G14910.D | AD00350-003(T) | 10/05/17 01:04 | Aqueous | 12G1489 | 8.1618 | 0.8819 | 8.1274 | 0.8783 |
| 12G14911.D | AD00350-005(T) | 10/05/17 01:23 | Aqueous | 12G1489 | 8.1659 | 0.8317 | 8.1308 | 0.8365 |
| 12G14912.D | AD00366-001(T) | 10/05/17 01:43 | Aqueous | 12G1489 | 8.1612 | 0.8893 | 8.1273 | 0.8795 |
| 12G14913.D | EF-1-V-264501(10/3) | 10/05/17 02:02 | Aqueous | 12G1489 | 8.1716 | 0.7619 | 8.1349 | 0.7861 |
| 12G14914.D | BLK | 10/05/17 02:21 | Aqueous | 12G1489 | 8.2907 | 0.685 | 8.2159 | 0.2047 |
| 12G14915.D | BLK | 10/05/17 02:41 | Aqueous | 12G1489 | 8.2902 | 0.679 | 8.2140 | 0.1816 |
| 12G14916.D | 200PPB | 10/05/17 03:00 | Aqueous | 12G1489 | 8.1769 | 0.6971 | 8.1428 | 0.689 |
| 12G14917.D | CAL HERB@400PPB | 10/05/17 03:20 | Aqueous | 12G1489 | 8.1596 | 0.9089 | 8.1292 | 0.8562 |

Drift Compound: Dcaa-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 6
## Initial Calibration

7092827 0186

Method: EPA 8151A

Instrument: GC_12

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 12G14825.D | CAL HERB@50PPB | 09/28/17 11:05 | 2 | 12G14826.D | CAL HERB@100PPB | 09/28/17 11:24 |
| 3 | 12G14827.D | CAL HERB@200PPB | 09/28/17 11:44 | 4 | 12G14828.D | CAL HERB@400PPB | 09/28/17 12:03 |
| 5 | 12G14829.D | CAL HERB@500PPB | 09/28/17 12:22 | 6 | 12G14830.D | CAL HERB@600PPB | 09/28/17 12:42 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dalapon | 1 | 0 | Avg | 28.766 | 29.415 | 31.302 | 30.320 | 29.079 | 30.539 | ---- | ---- | 29.9 | 4.52 | 0.998 | 0.998 | 3.3 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dcaa-Surrogate | 1 | 0 | Avg | 17.693 | 17.936 | 19.085 | 19.738 | 19.140 | 21.361 | ---- | ---- | 19.2 | 8.22 | 0.994 | 0.997 | 6.9 | 250.0 | 500.0 | 1000. | 2000. | 2500. | 3000. | | |
| Dicamba | 1 | 0 | Avg | 96.362 | 93.421 | 94.665 | 82.997 | 86.764 | 86.724 | ---- | ---- | 90.2 | 8.35 | 0.998 | 0.998 | 6.0 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dichloroprop | 1 | 0 | Avg | 23.718 | 23.298 | 23.545 | 21.554 | 20.377 | 21.606 | ---- | ---- | 22.4 | 8.93 | 0.997 | 0.997 | 6.1 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2.4-D | 1 | 0 | Avg | 26.836 | 26.555 | 26.876 | 25.902 | 24.540 | 26.214 | ---- | ---- | 26.2 | 9.26 | 0.997 | 0.997 | 3.3 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Silvex | 1 | 0 | Avg | 110.43 | 110.48 | 116.85 | 117.04 | 111.83 | 122.03 | ---- | ---- | 115 | 9.80 | 0.996 | 0.997 | 4.1 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2.4.5-T | 1 | 0 | Avg | 102.97 | 103.62 | 110.25 | 110.38 | 105.36 | 115.21 | ---- | ---- | 108 | 10.22 | 0.996 | 0.997 | 4.4 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2.4-DB | 1 | 0 | Avg | 13.050 | 13.881 | 14.976 | 14.885 | 14.088 | 15.278 | ---- | ---- | 14.4 | 10.62 | 0.996 | 0.997 | 5.8 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dinoseb | 1 | 0 | Avg | 70.251 | 71.520 | 76.143 | 75.876 | 72.335 | 79.341 | ---- | ---- | 74.2 | 11.07 | 0.995 | 0.996 | 4.6 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Picloram | 1 | 0 | Avg | 118.29 | 126.04 | 138.62 | 145.28 | 140.66 | 157.31 | ---- | ---- | 138 | 12.13 | 0.994 | 0.996 | 10 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dalapon | 2 | 0 | Avg | 9.6118 | 9.6949 | 10.020 | 9.6898 | 9.2475 | 9.6354 | ---- | ---- | 9.65 | 4.36 | 0.998 | 0.998 | 2.6 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dcaa-Surrogate | 2 | 0 | Avg | 6.0838 | 6.0500 | 6.3207 | 6.4085 | 6.2032 | 6.7336 | ---- | ---- | 6.30 | 8.19 | 0.996 | 0.998 | 4.0 | 250.0 | 500.0 | 1000. | 2000. | 2500. | 3000. | | |
| Dicamba | 2 | 0 | Avg | 31.623 | 30.194 | 30.046 | 28.622 | 27.068 | 28.803 | ---- | ---- | 29.4 | 8.34 | 0.997 | 0.997 | 5.4 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dichloroprop | 2 | 0 | Avg | 10.707 | 10.177 | 9.8279 | 8.3384 | 7.8042 | 8.1242 | ---- | ---- | 9.16 | 8.76 | 0.995 | 0.995 | 13 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2.4-D | 2 | 0 | Avg | 10.739 | 10.195 | 9.9854 | 9.4615 | 8.8776 | 9.4168 | ---- | ---- | 9.78 | 9.13 | 0.997 | 0.997 | 6.8 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Silvex | 2 | 0 | Avg | 40.495 | 40.975 | 42.515 | 41.077 | 38.959 | 41.548 | ---- | ---- | 40.9 | 9.61 | 0.997 | 0.997 | 2.9 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2.4.5-T | 2 | 0 | Avg | 19.992 | 23.364 | 27.112 | 28.314 | 27.610 | 30.450 | ---- | ---- | 26.1 | 10.06 | 0.998 | 0.998 | 15 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2.4-DB | 2 | 0 | Avg | 7.7049 | 8.0508 | 8.1720 | 7.7062 | 7.1983 | 7.5529 | ---- | ---- | 7.73 | 10.42 | 0.997 | 0.997 | 4.5 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dinoseb | 2 | 0 | Avg | 44.852 | 42.264 | 41.139 | 37.864 | 35.554 | 37.235 | ---- | ---- | 39.8 | 10.11 | 0.997 | 0.997 | 8.8 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Picloram | 2 | 0 | Avg | 43.930 | 46.156 | 50.245 | 50.214 | 48.526 | 53.366 | ---- | ---- | 48.7 | 12.05 | 0.995 | 0.997 | 6.8 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |

Avg Rsd Col 1: 5.46 Avg Rsd Col 2: 6.96

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pcb/chlordane etc.)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 ; Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

7092827 0187

# Form 6
## Initial Calibration

Method: EPA 8151A

Instrument: GC_12

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 12G14892.D | CAL HERB@50PPB | 10/04/17 19:13 | 2 | 12G14894.D | CAL HERB@100PPB | 10/04/17 19:52 |
| 3 | 12G14895.D | CAL HERB@200PPB | 10/04/17 20:11 | 4 | 12G14896.D | CAL HERB@400PPB | 10/04/17 20:31 |
| 5 | 12G14897.D | CAL HERB@500PPB | 10/04/17 20:50 | 6 | 12G14898.D | CAL HERB@600PPB | 10/04/17 21:10 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dalapon | 1 | 0 | Avg | 29.676 | 32.469 | 32.693 | 31.656 | 29.370 | 31.378 | ---- | ---- | 31.2 | 4.53 | 0.996 | 0.996 | 4.5 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dcaa-Surrogate | 1 | 0 | Avg | 17.465 | 18.498 | 19.079 | 19.625 | 18.337 | 20.886 | ---- | ---- | 19.0 | 8.23 | 0.991 | 0.994 | 6.2 | 250.0 | 500.0 | 1000. | 2000. | 2500. | 3000. | | |
| Dicamba | 1 | 0 | Avg | 95.933 | 97.820 | 97.068 | 93.151 | 77.114 | 85.825 | ---- | ---- | 91.2 | 8.36 | 0.984 | 0.985 | 8.9 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dichloroprop | 1 | 0 | Avg | 23.454 | 24.546 | 24.221 | 22.731 | 19.858 | 21.560 | ---- | ---- | 22.7 | 8.93 | 0.991 | 0.991 | 7.8 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4-D | 1 | 0 | Avg | 26.035 | 27.497 | 27.620 | 26.016 | 23.866 | 26.110 | ---- | ---- | 26.2 | 9.27 | 0.994 | 0.994 | 5.2 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Silvex | 1 | 0 | Avg | 107.22 | 112.31 | 116.17 | 115.70 | 107.44 | 119.79 | ---- | ---- | 113 | 9.80 | 0.993 | 0.994 | 4.5 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4,5-T | 1 | 0 | Avg | 101.46 | 106.36 | 109.79 | 109.73 | 101.50 | 113.02 | ---- | ---- | 107 | 10.21 | 0.994 | 0.994 | 4.4 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4-DB | 1 | 0 | Avg | 17.461 | 15.782 | 15.767 | 15.262 | 14.078 | 15.428 | ---- | ---- | 15.6 | 10.61 | 0.994 | 0.995 | 7.0 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dinoseb | 1 | 0 | Avg | 70.790 | 75.649 | 77.970 | 76.716 | 71.712 | 79.394 | ---- | ---- | 75.4 | 11.06 | 0.994 | 0.995 | 4.6 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Picloram | 1 | 0 | Avg | 135.66 | 124.70 | 129.04 | 149.93 | 146.11 | 160.45 | ---- | ---- | 141 | 12.11 | 0.994 | 0.998 | 9.6 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dalapon | 2 | 0 | Avg | 9.5084 | 9.9927 | 10.045 | 9.6310 | 9.0508 | 9.5728 | ---- | ---- | 9.63 | 4.37 | 0.997 | 0.997 | 3.8 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dcaa-Surrogate | 2 | 0 | Avg | 5.6667 | 5.9273 | 6.0795 | 6.1393 | 5.7275 | 6.3968 | ---- | ---- | 5.99 | 8.20 | 0.993 | 0.995 | 4.6 | 250.0 | 500.0 | 1000. | 2000. | 2500. | 3000. | | |
| Dicamba | 2 | 0 | Avg | 29.316 | 29.808 | 29.337 | 27.938 | 25.662 | 27.908 | ---- | ---- | 28.3 | 8.35 | 0.995 | 0.995 | 5.4 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dichloroprop | 2 | 0 | Avg | 10.374 | 10.442 | 9.0879 | 8.2415 | 8.0001 | 7.9257 | ---- | ---- | 9.01 | 8.77 | 0.999 | 0.999 | 13 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4-D | 2 | 0 | Avg | 10.392 | 11.217 | 10.819 | 9.4879 | 8.6798 | ---- | ---- | ---- | 10.1 | 9.14 | 0.989 | 1.00 | 10 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | | | |
| Silvex | 2 | 0 | Avg | 36.974 | 40.596 | 40.963 | 39.656 | 36.580 | 39.832 | ---- | ---- | 39.1 | 9.61 | 0.995 | 0.995 | 4.8 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4,5-T | 2 | 0 | Avg | 19.113 | 22.799 | 25.262 | 26.830 | 25.228 | 28.413 | ---- | ---- | 24.6 | 10.05 | 0.997 | 0.997 | 13 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4-DB | 2 | 0 | Avg | 6.5009 | 6.9393 | 8.6501 | 7.8788 | 7.1191 | 7.5722 | ---- | ---- | 7.44 | 10.41 | 0.992 | 0.993 | 10 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dinoseb | 2 | 0 | Avg | 40.615 | 42.619 | 40.824 | 37.671 | 34.550 | 36.836 | ---- | ---- | 38.9 | 10.11 | 0.995 | 0.995 | 7.7 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Picloram | 2 | 0 | Avg | 47.432 | 46.051 | 47.147 | 51.994 | 50.655 | 54.610 | ---- | ---- | 49.6 | 12.04 | 0.997 | 0.999 | 6.7 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |

Avg Rsd Col 1: 6.27 Avg Rsd Col 2: 7.95

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 : Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

# Form7
Continuing Calibration

Method: EPA 8151A

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | | 12G14888.D | | | 12G14891.D | | | 12G14917.D | | | | | | | | | |
| **Method:** | | | | 8151 | | | 8151 | | | 8151 | | | | | | | | | |
| **Calibration Name:** | | | | CAL HERB@200P | | | CAL HERB@400P | | | CAL HERB@400P | | | | | | | | | |
| **Calibration Date/Time** | | | | 10/04/17 14:27 | | | 10/04/17 17:16 | | | 10/05/17 03:20 | | | | | | | | | |
| Compound | Limit | Col | Mr | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff |
| Dalapon | 15 | 1 | 0 | 210.1 | 200 | 5.0 | 431.3 | 400 | 7.8 | 399.6 | 400 | 0.1 | | | | | | |
| Dcaa-Surrogate | 15 | 1 | 0 | 974 | 1000 | 2.6 | 2227 | 2000 | 11.3 | 2081 | 2000 | 4.1 | | | | | | |
| Dicamba | 15 | 1 | 0 | 207.1 | 200 | 3.5 | 388.1 | 400 | 3.0 | 360.8 | 400 | 9.8 | | | | | | |
| Dichloroprop | 15 | 1 | 0 | 205.7 | 200 | 2.9 | 395.1 | 400 | 1.2 | 379.1 | 400 | 5.2 | | | | | | |
| 2,4-D | 15 | 1 | 0 | 201.8 | 200 | 0.9 | 394.9 | 400 | 1.3 | 380.6 | 400 | 4.8 | | | | | | |
| Silvex | 15 | 1 | 0 | 198.6 | 200 | 0.7 | 419.9 | 400 | 5.0 | 394.6 | 400 | 1.3 | | | | | | |
| 2,4,5-T | 15 | 1 | 0 | 199.8 | 200 | 0.1 | 427.8 | 400 | 7.0 | 395.1 | 400 | 1.2 | | | | | | |
| 2,4-DB | 15 | 1 | 0 | 206.7 | 200 | 3.3 | 435.5 | 400 | 8.9 | 369.4 | 400 | 7.6 | | | | | | |
| Dinoseb | 15 | 1 | 0 | 199.3 | 200 | 0.3 | 433.6 | 400 | 8.4 | 396.1 | 400 | 1.0 | | | | | | |
| Picloram | 15 | 1 | 0 | 207.4 | 200 | 3.7 | 335.2 | 400 | 16.2* | 354.7 | 400 | 11.3 | | | | | | |
| Average Difference | 15 | 1 | 0 | | | 2.3 | | | 7.0 | | | 4.7 | | | | | | |
| Dalapon | 15 | 2 | 0 | 204.4 | 200 | 2.2 | 417.2 | 400 | 4.3 | 403.8 | 400 | 0.9 | | | | | | |
| Dcaa-Surrogate | 15 | 2 | 0 | 987.2 | 1000 | 1.3 | 2175 | 2000 | 8.7 | 2085 | 2000 | 4.2 | | | | | | |
| Dicamba | 15 | 2 | 0 | 201.5 | 200 | 0.8 | 407.2 | 400 | 1.8 | 392.6 | 400 | 1.9 | | | | | | |
| Dichloroprop | 15 | 2 | 0 | 215.1 | 200 | 7.5 | 363.8 | 400 | 9.1 | 359.6 | 400 | 10.1 | | | | | | |
| 2,4-D | 15 | 2 | 0 | 213.2 | 200 | 6.6 | 384.3 | 400 | 3.9 | 348.7 | 400 | 12.8 | | | | | | |
| Silvex | 15 | 2 | 0 | 205.3 | 200 | 2.6 | 405.8 | 400 | 1.4 | 401.9 | 400 | 0.5 | | | | | | |
| 2,4,5-T | 15 | 2 | 0 | 198.7 | 200 | 0.7 | 450.5 | 400 | 12.6 | 449.9 | 400 | 12.5 | | | | | | |
| 2,4-DB | 15 | 2 | 0 | 220.6 | 200 | 10.3 | 391 | 400 | 2.3 | 399 | 400 | 0.3 | | | | | | |
| Dinoseb | 15 | 2 | 0 | 207.6 | 200 | 3.8 | 386.3 | 400 | 3.4 | 385.3 | 400 | 3.7 | | | | | | |
| Picloram | 15 | 2 | 0 | 211.9 | 200 | 5.9 | 325.1 | 400 | 18.7* | 382.9 | 400 | 4.3 | | | | | | |
| Average Difference | 15 | 2 | 0 | | | 4.2 | | | 6.6 | | | 5.1 | | | | | | |

***Flags/Notes:*** **** - Values outside of limits for this column/run***

# Form7

RtWindow Summary

**Method:** EPA 8151A

| | | | 12G14825.D | | 12G14892.D | | 12G14888.D | | 12G14892.D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | | | | | | | | | | |
| **Calibration Name:** | | | CAL HERB@50PPB | | CAL HERB@50PPB | | CAL HERB@200PPB | | CAL HERB@50PPB | | | |
| **Calibration Date/Time** | | | 9/28/2017 11:05:12 AM | | 10/4/2017 7:13:37 PM | | 10/4/2017 2:27:01 PM | | 10/4/2017 7:13:37 PM | | | |
| Compound | Col | Mr | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit |
| Dalapon | 1 | 0 | 4.53 | (4.49 - 4.57) | 4.53 | (4.49 - 4.57) | 4.52 | (4.48 - 4.56) | 4.53 | (4.49 - 4.57) | | |
| Dcaa-Surrogate | 1 | 0 | | | | | | | | | | |
| Dicamba | 1 | 0 | 8.32 | (8.28 - 8.36) | 8.31 | (8.27 - 8.35) | 8.31 | (8.27 - 8.35) | 8.36 | (8.32 - 8.40) | | |
| Dichloroprop | 1 | 0 | 8.90 | (8.86 - 8.94) | 8.90 | (8.86 - 8.94) | 8.90 | (8.86 - 8.94) | 8.93 | (8.89 - 8.97) | | |
| 2,4-D | 1 | 0 | 9.23 | (9.19 - 9.27) | 9.23 | (9.19 - 9.27) | 9.23 | (9.19 - 9.27) | 9.27 | (9.23 - 9.31) | | |
| Silvex | 1 | 0 | 9.78 | (9.74 - 9.82) | 9.78 | (9.74 - 9.82) | 9.78 | (9.74 - 9.82) | 9.80 | (9.76 - 9.84) | | |
| 2,4,5-T | 1 | 0 | 10.19 | (10.15 - 10.23) | 10.19 | (10.15 - 10.23) | 10.19 | (10.15 - 10.23) | 10.21 | (10.17 - 10.25) | | |
| 2,4-DB | 1 | 0 | 10.60 | (10.56 - 10.64) | 10.59 | (10.55 - 10.63) | 10.60 | (10.56 - 10.64) | 10.61 | (10.57 - 10.65) | | |
| Dinoseb | 1 | 0 | 11.06 | (11.02 - 11.10) | 11.05 | (11.01 - 11.09) | 11.05 | (11.01 - 11.09) | 11.06 | (11.02 - 11.10) | | |
| Picloram | 1 | 0 | 12.10 | (12.06 - 12.14) | 12.09 | (12.05 - 12.13) | 12.10 | (12.06 - 12.14) | 12.11 | (12.07 - 12.15) | | |
| Dalapon | 2 | 0 | 4.37 | (4.33 - 4.41) | 4.37 | (4.33 - 4.41) | 4.37 | (4.33 - 4.41) | 4.37 | (4.33 - 4.41) | | |
| Dcaa-Surrogate | 2 | 0 | | | | | | | | | | |
| Dicamba | 2 | 0 | 8.32 | (8.28 - 8.36) | 8.32 | (8.28 - 8.36) | 8.31 | (8.27 - 8.35) | 8.35 | (8.31 - 8.39) | | |
| Dichloroprop | 2 | 0 | 8.73 | (8.69 - 8.77) | 8.74 | (8.70 - 8.78) | 8.74 | (8.70 - 8.78) | 8.77 | (8.73 - 8.81) | | |
| 2,4-D | 2 | 0 | 9.10 | (9.06 - 9.14) | 9.11 | (9.07 - 9.15) | 9.10 | (9.06 - 9.14) | 9.14 | (9.10 - 9.18) | | |
| Silvex | 2 | 0 | 9.59 | (9.55 - 9.63) | 9.59 | (9.55 - 9.63) | 9.59 | (9.55 - 9.63) | 9.61 | (9.57 - 9.65) | | |
| 2,4,5-T | 2 | 0 | 10.03 | (9.99 - 10.07) | 10.03 | (9.99 - 10.07) | 10.03 | (9.99 - 10.07) | 10.05 | (10.01 - 10.09) | | |
| 2,4-DB | 2 | 0 | 10.39 | (10.35 - 10.43) | 10.39 | (10.35 - 10.43) | 10.39 | (10.35 - 10.43) | 10.41 | (10.37 - 10.45) | | |
| Dinoseb | 2 | 0 | 10.09 | (10.05 - 10.13) | 10.09 | (10.05 - 10.13) | 10.09 | (10.05 - 10.13) | 10.11 | (10.07 - 10.15) | | |
| Picloram | 2 | 0 | 12.03 | (11.99 - 12.07) | 12.02 | (11.98 - 12.06) | 12.03 | (11.99 - 12.07) | 12.04 | (12.00 - 12.08) | | |

# Metal Data

# Form1
## Inorganic Analysis Data Sheet

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID: | AD00298-002 | % Solid: | 92 | Lab Name: | Hampton-Clarke | Nras No: | |
| Client Id: | 475 EXTERIOR NYRE | Units: | MG/KG | Lab Code: | | Sdg No: | |
| Matrix: | SOIL | Date Rec: | 9/29/2017 | Contract: | | Case No: | |
| Level: | LOW | | | | | | |

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-47-3 | Chromium | 5.4 | 46 | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 36 | P | PEICP4A |
| 7440-50-8 | Copper | 5.4 | 58 | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 36 | P | PEICP4A |
| 7439-92-1 | Lead | 5.4 | 120 | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 36 | P | PEICP4A |
| 7439-97-6 | Mercury | 0.091 | 0.37 | 1 | 0.15 | 25 | 10/02/17 | 62644 | H21541S | 29 | CV | HGCV2A |

Comments: _____

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Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID: | AD00298-002 | % Solid: | 92 | Lab Name: | Hampton-Clarke | Nras No: | |
| Client Id: | 475 EXTERIOR NYRE | Units: | MG/KG | Lab Code: | | Sdg No: | |
| Matrix: | SOIL | Date Rec: | 9/29/2017 | Contract: | | Case No: | |
| Level: | LOW | | | | | | |

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.22 | 6.0 | 1 | 0.5 | 100 | 10/03/17 | 62645 | S100317A | 28 | MS | MS2_7500SWA |
| 7440-43-9 | Cadmium | 0.43 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 40 | MS | MS2_7500SWA |
| 7782-49-2 | Selenium | 2.2 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 40 | MS | MS2_7500SWA |
| 7440-22-4 | Silver | 0.22 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 40 | MS | MS2_7500SWA |

Comments: _____

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Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID: | AD00298-002 | % Solid: | 92 | Lab Name: | Hampton-Clarke | Nras No: | |
| Client Id: | 475 EXTERIOR NYRE | Units: | MG/KG | Lab Code: | | Sdg No: | |
| Matrix: | SOIL | Date Rec: | 9/29/2017 | Contract: | | Case No: | |
| Level: | LOW | | | | | | |

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-39-3 | Barium | 11 | 200 | 1 | 0.5 | 50 | 10/04/17 | 62650 | S21541K4 | 36 | P | PEICP4A |

Comments: _____

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Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 62644 (100) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 62644 (100) Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 200 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-36-0 | Antimony | 4.0 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-38-2 | Arsenic | 4.0 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-41-7 | Beryllium | 1.2 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-43-9 | Cadmium | 1.2 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-70-2 | Calcium | 1000 | ND | 1 | 0.5 | 50 | 09/30/17 | 62644 | S21541B3 | 11 | P | PEICPRAD3A |
| 7440-47-3 | Chromium | 5.0 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-48-4 | Cobalt | 2.5 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-50-8 | Copper | 5.0 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7439-89-6 | Iron | 200 | ND | 1 | 0.5 | 50 | 09/30/17 | 62644 | S21541B3 | 11 | P | PEICPRAD3A |
| 7439-92-1 | Lead | 5.0 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7439-95-4 | Magnesium | 500 | ND | 1 | 0.5 | 50 | 09/30/17 | 62644 | S21541B3 | 11 | P | PEICPRAD3A |
| 7439-96-5 | Manganese | 10 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7439-98-7 | Molybdenum | 2.5 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-02-0 | Nickel | 5.0 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-09-7 | Potassium | 500 | ND | 1 | 0.5 | 50 | 09/30/17 | 62644 | S21541B3 | 11 | P | PEICPRAD3A |
| 7782-49-2 | Selenium | 3.0 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-22-4 | Silver | 1.5 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-23-5 | Sodium | 250 | ND | 1 | 0.5 | 50 | 09/30/17 | 62644 | S21541B3 | 11 | P | PEICPRAD3A |
| 7440-28-0 | Thallium | 1.5 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-31-5 | Tin | 20 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-32-6 | Titanium | 10 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-62-2 | Vanadium | 10 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |
| 7440-66-6 | Zinc | 10 | ND | 1 | 0.5 | 50 | 10/04/17 | 62644 | S21541J4 | 12 | P | PEICP4A |

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 62645 % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 62645 Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-36-0 | Antimony | 0.80 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 15 | MS | MS2_7500SWA |
| 7440-38-2 | Arsenic | 0.20 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 15 | MS | MS2_7500SWA |
| 7440-41-7 | Beryllium | 0.20 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 15 | MS | MS2_7500SWA |
| 7440-43-9 | Cadmium | 0.40 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 15 | MS | MS2_7500SWA |
| 7782-49-2 | Selenium | 2.0 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 15 | MS | MS2_7500SWA |
| 7440-22-4 | Silver | 0.20 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 15 | MS | MS2_7500SWA |
| 7440-28-0 | Thallium | 0.40 | ND | 1 | 0.5 | 100 | 10/02/17 | 62645 | S100217A | 15 | MS | MS2_7500SWA |

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 62650 (100) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 62650 (100) Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-39-3 | Barium | 10 | ND | 1 | 0.5 | 50 | 10/04/17 | 62650 | S21541K4 | 12 | P | PEICP4A |

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 62644 (167) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 62644 (167) Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.083 | ND | 1 | 0.15 | 25 | 10/02/17 | 62644 | H21541S | 11 | CV | HGCV2A |

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# FORM 2
# (ICV/CCV Summary)

Date Analyzed: 10/02/17
Data File: S100217A
Prep Batch: 62645
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: MS2_7500SWA
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| Analyte | ICV/CCV Amt | ICV V-264480-8 | Rec | CCV V-264484-21 | Rec | CCV V-264484-34 | Rec | CCV V-264484-47 | Rec | CCV V-264484-59 | Rec | | Rec | | Rec | | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 50/50 | 46.67000 | 93 | 48.98000 | 98 | 48.11000 | 96 | 47.71000 | 95 | 47.27000 | 95 | | | | | | |
| Arsenic | 50/50 | 49.28000 | 99 | 50.29000 | 101 | 49.94000 | 100 | 50.24000 | 100 | 48.79000 | 98 | | | | | | |
| Beryllium | 50/50 | 50.44000 | 101 | 50.95000 | 102 | 50.77000 | 102 | 50.93000 | 102 | 48.67000 | 97 | | | | | | |
| Cadmium | 50/50 | 49.64000 | 99 | 50.70000 | 101 | 50.23000 | 100 | 49.56000 | 99 | 48.63000 | 97 | | | | | | |
| Selenium | 50/250 | 51.02000 | 102 | 255.00000 | 102 | 257.50000 | 103 | 257.30000 | 103 | 257.20000 | 103 | | | | | | |
| Silver | 10/50 | 9.78700 | 98 | 49.85000 | 100 | 48.56000 | 97 | 48.27000 | 97 | 47.02000 | 94 | | | | | | |
| Thallium | 50/50 | 48.47000 | 97 | 50.96000 | 102 | 50.42000 | 101 | 50.00000 | 100 | 50.36000 | 101 | | | | | | |

**Notes:** a-indicates analyte failed the ICV limits for 6010B/6010C, 6020/6020A
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010B/6010C (Except Hg 7470/7470A,7471A/7471B),6020/6020A
d-indicates analyte failed the CCV limits Hg 7470A/7471A/7471B

**Qc Limits:** ICV - 200.7 : 95-105
CCV- 200.7/200.8/6010B/6010C/245.1 : 90-110 (Except Hg 7470/7470A/ 7471A/7471B=80-120)
ICV -6010B/6010C/6020/6020A/200.8 : 90-110

CLP ICP ICV/CCV: 90-110
CLP Hg ICV/CCV: 80-120

# FORM 2
# (LLICV/LLCCV Summary)

Date Analyzed: 10/02/17
Data File: S100217A
Prep Batch: 62645
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: MS2_7500SWA
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SPEX

| Analyte | LLICV/ LLCCV Amt | LLICV V-264485-9 | Rec | LLCCV V-264485-22 | Rec | LLCCV V-264485-35 | Rec | LLCCV V-264485-48 | Rec | LLCCV V-264485-60 | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 4/4 | 3.834 | 96 | 3.713 | 93 | 3.563 | 89 | 3.531 | 88 | 3.517 | 88 | | | | |
| Arsenic | 1/1 | 1.014 | 101 | 9.845E-01 | 98 | 9.895E-01 | 99 | 1.476 | 148 c | 9.726E-01 | 97 | | | | |
| Beryllium | 1/1 | 1.001 | 100 | 1.011 | 101 | 1.002 | 100 | 9.917E-01 | 99 | 9.462E-01 | 95 | | | | |
| Cadmium | 2/2 | 1.995 | 100 | 1.941 | 97 | 1.903 | 95 | 1.888 | 94 | 1.865 | 93 | | | | |
| Selenium | 10/10 | 9.887 | 99 | 10.13 | 101 | 10.15 | 102 | 10.65 | 106 | 10.06 | 101 | | | | |
| Silver | 1/1 | 9.567E-01 | 96 | 9.346E-01 | 93 | 8.916E-01 | 89 | 9.098E-01 | 91 | 8.818E-01 | 88 | | | | |
| Thallium | 2/2 | 1.777 | 89 | 1.761 | 88 | 1.711 | 86 | 1.662 | 83 | 1.676 | 84 | | | | |

**Notes:** a-indicates analyte failed the LLICV limits for 6010B, 6010C, 6020, 6020A
c-indicates analyte failed the LLCCV limits for 6010B, 6010C, 6020, 6020A

**Qc Limits:** LLCCV- 6010B/6010C/6020/6020A (70-130)
LLICV -6010B/6010C/6020/6020A :70-130

# FORM 2
# (ICV/CCV Summary)

Date Analyzed: 10/04/17
Data File: S21541J4
Prep Batch: 62644
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| Analyte | ICV/CCV Amt | ICV V-263834-7 | Rec | CCV V-263834-20 | Rec | CCV V-263834-27 | Rec | CCV V-263834-39 | Rec | CCV V-263834-51 | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5/5 | 5.37332 | 107 | 5.26724 | 105 | 5.09699 | 102 | 5.39469 | 108 | 4.78728 | 96 | | | |
| Chromium | .5/.5 | 0.54347 | 109 | 0.52831 | 106 | 0.51575 | 103 | 0.54545 | 109 | 0.48411 | 97 | | | |
| Cobalt | .5/.5 | 0.53016 | 106 | 0.52524 | 105 | 0.51073 | 102 | 0.52933 | 106 | 0.47306 | 95 | | | |
| Copper | .5/.5 | 0.52288 | 105 | 0.50974 | 102 | 0.49464 | 99 | 0.52273 | 105 | 0.46071 | 92 | | | |
| Lead | .5/.5 | 0.53575 | 107 | 0.52632 | 105 | 0.50827 | 102 | 0.52002 | 104 | 0.45902 | 92 | | | |
| Manganese | .5/.5 | 0.53047 | 106 | 0.52334 | 105 | 0.50820 | 102 | 0.53317 | 107 | 0.47405 | 95 | | | |
| Nickel | .5/.5 | 0.52859 | 106 | 0.51155 | 102 | 0.49363 | 99 | 0.50554 | 101 | 0.44880 | 90 | | | |
| Vanadium | .5/.5 | 0.53571 | 107 | 0.52841 | 106 | 0.51009 | 102 | 0.53628 | 107 | 0.47720 | 95 | | | |
| Zinc | .5/.5 | 0.53529 | 107 | 0.53042 | 106 | 0.51502 | 103 | 0.53572 | 107 | 0.49750 | 100 | | | |

**Notes:** a-indicates analyte failed the ICV limits for 6010B/6010C, 6020/6020A
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010B/6010C (Except Hg 7470/7470A,7471A/7471B),6020/6020A
d-indicates analyte failed the CCV limits Hg 7470A/7471A/7471B

**Qc Limits:** ICV - 200.7 : 95-105
CCV- 200.7/200.8/6010B/6010C/245.1 : 90-110 (Except Hg 7470/7470A/ 7471A/7471B=80-120)
ICV -6010B/6010C/6020/6020A/200.8 : 90-110

CLP ICP ICV/CCV: 90-110
CLP Hg ICV/CCV: 80-120

# FORM 2
# (LLICV/LLCCV Summary)

Date Analyzed: 10/04/17
Data File: S21541J4
Prep Batch: 62644
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SPEX

| Analyte | LLICV/ LLCCV Amt | LLICV [soil] V-264209-8 | Rec | LLCCV [soil] V-264209-21 | Rec | LLCCV [soil] V-264209-28 | Rec | LLCCV [soil] V-264209-40 | Rec | LLCCV [soil] V-264209-52 | Rec | | Rec | | Rec | | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 2.0/2 | 2.16638 | 108 | 2.17743 | 109 | 2.18325 | 109 | 2.20092 | 110 | 2.22157 | 111 | | | | | | |
| Chromium | 0.05/0.05 | 0.0573422 | 115 | 0.0573953 | 115 | 0.0581169 | 116 | 0.0584665 | 117 | 0.0585404 | 117 | | | | | | |
| Cobalt | 0.025/0.025 | 0.0257912 | 103 | 0.0266585 | 107 | 0.0263405 | 105 | 0.0262496 | 105 | 0.0265941 | 106 | | | | | | |
| Copper | 0.05/0.05 | 0.0495298 | 99 | 0.0496562 | 99 | 0.0482655 | 97 | 0.0496048 | 99 | 0.0486095 | 97 | | | | | | |
| Lead | 0.05/0.05 | 0.0530059 | 106 | 0.0532838 | 107 | 0.0499243 | 100 | 0.0574914 | 115 | 0.0517542 | 104 | | | | | | |
| Manganese | 0.1/0.1 | 0.105863 | 106 | 0.107176 | 107 | 0.107930 | 108 | 0.108292 | 108 | 0.108801 | 109 | | | | | | |
| Nickel | 0.05/0.05 | 0.0531728 | 106 | 0.0527349 | 105 | 0.0524619 | 105 | 0.0514905 | 103 | 0.0542751 | 109 | | | | | | |
| Vanadium | 0.1/0.1 | 0.107947 | 108 | 0.108093 | 108 | 0.108949 | 109 | 0.109344 | 109 | 0.109891 | 110 | | | | | | |
| Zinc | 0.1/0.1 | 0.102726 | 103 | 0.103701 | 104 | 0.103106 | 103 | 0.104214 | 104 | 0.118382 | 118 | | | | | | |

**Notes:** a-indicates analyte failed the LLICV limits for 6010B, 6010C, 6020, 6020A
c-indicates analyte failed the LLCCV limits for 6010B, 6010C, 6020, 6020A

**Qc Limits:** LLCCV- 6010B/6010C/6020/6020A (70-130)
LLICV -6010B/6010C/6020/6020A :70-130

# FORM 2
## (ICV/CCV Summary)

Date Analyzed: 10/04/17
Data File: S21541K4
Prep Batch: 62650
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| Analyte | ICV/CCV Amt | ICV V-263834-7 | Rec | CCV V-263834-20 | Rec | CCV V-263834-33 | Rec | CCV V-263834-45 | Rec | CCV V-263834-56 | Rec | CCV V-263834-64 | Rec | | Rec | | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | .5/.5 | 0.48423 | 97 | 0.46536 | 93 | 0.46544 | 93 | 0.47000 | 94 | 0.47573 | 95 | 0.48046 | 96 | | | | |

**Notes:**
a-indicates analyte failed the ICV limits for 6010B/6010C, 6020/6020A
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010B/6010C (Except Hg 7470/7470A,7471A/7471B),6020/6020A
d-indicates analyte failed the CCV limits Hg 7470A/7471A/7471B

**Qc Limits:**
ICV - 200.7 : 95-105
CCV- 200.7/200.8/6010B/6010C/245.1 : 90-110 (Except Hg 7470/7470A/ 7471A/7471B=80-120)
ICV -6010B/6010C/6020/6020A/200.8 : 90-110
CLP ICP ICV/CCV: 90-110
CLP Hg ICV/CCV: 80-120

# FORM 2
# (LLICV/LLCCV Summary)

Date Analyzed: 10/04/17
Data File: S21541K4
Prep Batch: 62650
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SPEX

| Analyte | LLICV/ LLCCV Amt | LLICV [soil] V-264209-8 | Rec | LLCCV [soil] V-264209-21 | Rec | LLCCV [soil] V-264209-34 | Rec | LLCCV [soil] V-264209-46 | Rec | LLCCV [soil] V-264209-57 | Rec | LLCCV [soil] V-264209-65 | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.1/0.1 | 0.104516 | 105 | 0.103643 | 104 | 0.104443 | 104 | 0.104138 | 104 | 0.105677 | 106 | 0.105400 | 105 | | |

**Notes:** a-indicates analyte failed the LLICV limits for 6010B, 6010C, 6020, 6020A
c-indicates analyte failed the LLCCV limits for 6010B, 6010C, 6020, 6020A

**Qc Limits:** LLCCV- 6010B/6010C/6020/6020A (70-130)
LLICV -6010B/6010C/6020/6020A :70-130

# FORM 2
# (ICV/CCV Summary)

Date Analyzed: 10/02/17
Data File: H21541S
Prep Batch: 62644
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: HGCV2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| | | ICV (2)-9 | | CCV-21 | | CCV-33 | | CCV-37 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | ICV/CCV Amt | | Rec | | Rec | | Rec | | Rec | Rec | Rec | Rec | Rec |
| Mercury | 20/10 | 18.66000 | 93 | 9.74200 | 97 | 9.66400 | 97 | 9.67000 | 97 | | | | |

**Notes:** a-indicates analyte failed the ICV limits for 6010B/6010C, 6020/6020A
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010B/6010C (Except Hg 7470/7470A,7471A/7471B),6020/6020A
d-indicates analyte failed the CCV limits Hg 7470A/7471A/7471B

**Qc Limits:** ICV - 200.7 : 95-105
CCV- 200.7/200.8/6010B/6010C/245.1 : 90-110 (Except Hg 7470/7470A/ 7471A/7471B=80-120)
ICV -6010B/6010C/6020/6020A/200.8 : 90-110

CLP ICP ICV/CCV: 90-110
CLP Hg ICV/CCV: 80-120

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 10/02/17
Data File: S100217A
Prep Batch: 62645
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: MS2_7500SWA
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB V-264481-10 | CCB V-264481-23 | CCB V-264481-36 | CCB V-264481-49 | CCB V-264481-61 | MB 62645-15 |
|---|---|---|---|---|---|---|
| Antimony | 4 U | 4 U | 4 U | 4 U | 4 U | 800 U |
| Arsenic | 1 U | 1 U | 1 U | 1 U | 1 U | 200 U |
| Beryllium | 1 U | 1 U | 1 U | 1 U | 1 U | 200 U |
| Cadmium | 2 U | 2 U | 2 U | 2 U | 2 U | 400 U |
| Selenium | 10 U | 10 U | 10 U | 10 U | 10 U | 2000 U |
| Silver | 1 U | 1 U | 1 U | 1 U | 1 U | 200 U |
| Thallium | 2 U | 2 U | 2 U | 2 U | 2 U | 400 U |

**Notes:** a-indicates absolute value of result found above the reporting limits in CCB/ICB or result found above reporting limit in the MB
u-indicates result below reporting limit

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 10/04/17
Data File: S21541J4
Prep Batch: 62644
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB V-261851-9 | CCB-22 | CCB-29 | CCB-41 | CCB-53 | MB 62644 (100)-12 | |
|---|---|---|---|---|---|---|---|
| Aluminum | 2 U | 2 U | 2 U | 2 U | 2 U | 200 U | |
| Chromium | .05 U | .05 U | .05 U | .05 U | .05 U | 5 U | |
| Cobalt | .025 U | .025 U | .025 U | .025 U | .025 U | 2.5 U | |
| Copper | .05 U | .05 U | .05 U | .05 U | .05 U | 5 U | |
| Lead | .05 U | .05 U | .05 U | .05 U | .05 U | 5 U | |
| Manganese | .1 U | .1 U | .1 U | .1 U | .1 U | 10 U | |
| Nickel | .05 U | .05 U | .05 U | .05 U | .05 U | 5 U | |
| Vanadium | .1 U | .1 U | .1 U | .1 U | .1 U | 10 U | |
| Zinc | .1 U | .1 U | .1 U | .1 U | .1 U | 10 U | |

**Notes:** a-indicates absolute value of result found above the reporting limits in CCB/ICB or result found above reporting limit in the MB
u-indicates result below reporting limit

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 10/04/17
Data File: S21541K4
Prep Batch: 62650
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB V-261851-9 | CCB-22 | CCB-35 | CCB-47 | CCB-58 | CCB-66 | MB 62650 (100)-12 |
|---|---|---|---|---|---|---|---|
| Barium | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U | 10 U |

**Notes:** a-indicates absolute value of result found above the reporting limits in CCB/ICB or result found above reporting limit in the MB
u-indicates result below reporting limit

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 10/02/17
Data File: H21541S
Prep Batch: 62644
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: HGCV2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB-10 | CCB-22 | CCB-34 | CCB-38 | MB 62644 (167)-11 |
|---|---|---|---|---|---|
| Mercury | .5 U | .5 U | .5 U | .5 U | 83 U |

**Notes:** a-indicates absolute value of result found above the reporting limits in CCB/ICB or result found above reporting limit in the MB
u-indicates result below reporting limit

# FORM 4
## (ICSA/ICSAB Summary)

Date Analyzed: 10/02/17
Data File: S100217A
Prep Batch: 62645
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: MS2_7500SWA
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICSA/ICSAB: SOURCE: SCP Science

| Analyte | Spk Amt | ICSA V-264482-11 | Rec | ICSAB V-264483-12 | Rec | Rec | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 50000 | 42480 | 85 | 47220.00000 | 94 | | | | | | |
| Antimony | 0 | U | | 0.21990 | | | | | | | |
| Arsenic | 100 | U | | 105.00000 | 105 | | | | | | |
| Beryllium | 0 | U | | 0.00274 | | | | | | | |
| Cadmium | 100 | U | | 98.20000 | 98 | | | | | | |
| Calcium | 150000 | 133200 | 89 | 49000.00000 | 99 | | | | | | |
| Iron | 125000 | 105000 | 84 | 116100.00000 | 93 | | | | | | |
| Magnesium | 50000 | 42030 | 84 | 47350.00000 | 95 | | | | | | |
| Selenium | 100 | U | | 100.10000 | 100 | | | | | | |
| Silver | 50 | U | | 45.91000 | 92 | | | | | | |
| Thallium | 0 | U | | -0.07650 | | | | | | | |

**Notes:** a-indicates absolute value of the concentration > 2 * Reporting Limits In the ICSA
b-indicates absolute value of the concentration above Reporting Limits but < 2 * Reporting Limits in the ICSA
c-indicates the recovery failed the Qc Criteria in the ICSAB
u-indicates the absolute value of the concentration was below the reporting limit

# FORM 4
## (ICSA/ICSAB Summary)

Date Analyzed: 10/04/17
Data File: S21541J4
Prep Batch: 62644
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICSA/ICSAB: SOURCE: SCP Science

| Analyte | Spk Amt | ICSA V-263927-10 | Rec | ICSAB V-263293-11 | Rec | ICSA V-263927-25 | Rec | ICSAB V-263293-26 | Rec | ICSA V-263927-37 | Rec | ICSAB V-263293-38 | Rec | ICSA V-263927-49 | Rec | ICSAB V-263293-50 | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 500 | 511.122 | 102 | 533.26900 | 107 | 516.673 | 103 | 537.18900 | 107 | 515.205 | 103 | 530.25400 | 106 | 531.153 | 106 | 491.28000 | 98 |
| Calcium | 500 | 495.646 | 99 | 519.83600 | 104 | 492.996 | 99 | 521.81200 | 104 | 508.195 | 102 | 516.33900 | 103 | 513.348 | 103 | 494.17800 | 99 |
| Chromium | .5 | U | | 0.56179 | 112 | U | | 0.56322 | 113 | U | | 0.55936 | 112 | U | | 0.53089 | 106 |
| Cobalt | .5 | U | | 0.48835 | 98 | U | | 0.48408 | 97 | U | | 0.47616 | 95 | U | | 0.45242 | 90 |
| Copper | .5 | U | | 0.55051 | 110 | U | | 0.55019 | 110 | U | | 0.53988 | 108 | U | | 0.52393 | 105 |
| Iron | 200 | 190.95 | 95 | 200.02400 | 100 | 194.437 | 97 | 201.84800 | 101 | 194.678 | 97 | 199.03300 | 100 | 199.959 | 100 | 186.45500 | 93 |
| Lead | 1 | U | | 0.99214 | 99 | U | | 0.96936 | 97 | U | | 0.93898 | 94 | U | | 0.87631 | 88 |
| Magnesium | 500 | 527.014 | 105 | 551.86400 | 110 | 535.354 | 107 | 554.41400 | 111 | 531.89 | 106 | 544.66800 | 109 | 548.549 | 110 | 508.36700 | 102 |
| Manganese | .5 | U | | 0.51503 | 103 | U | | 0.51909 | 104 | U | | 0.51050 | 102 | U | | 0.48885 | 98 |
| Nickel | 1 | U | | 0.95599 | 96 | U | | 0.92747 | 93 | U | | 0.89572 | 90 | U | | 0.84613 | 85 |
| Vanadium | .5 | U | | 0.54754 | 110 | U | | 0.54692 | 109 | U | | 0.53940 | 108 | U | | 0.51975 | 104 |
| Zinc | 1 | U | | 1.00589 | 101 | U | | 0.99639 | 100 | U | | 0.98385 | 98 | U | | 0.96818 | 97 |

**Notes:** a-indicates absolute value of the concentration > 2 * Reporting Limits In the ICSA
b-indicates absolute value of the concentration above Reporting Limits but < 2 * Reporting Limits in the ICSA
c-indicates the recovery failed the Qc Criteria in the ICSAB
u-indicates the absolute value of the concentration was below the reporting limit

# FORM 4
## (ICSA/ICSAB Summary)

Date Analyzed: 10/04/17
Data File: S21541K4
Prep Batch: 62650
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICSA/ICSAB: SOURCE: SCP Science

| Analyte | Spk Amt | ICSA V-263927-10 | Rec | ICSAB V-263293-11 | Rec | ICSA V-263927-31 | Rec | ICSAB V-263293-32 | Rec | ICSA V-263927-43 | Rec | ICSAB V-263293-44 | Rec | ICSA V-293927-62 | Rec | ICSAB V-263293-63 | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 500 | 490.753 | 98 | 453.24400 | 91 | 489.789 | 98 | 475.38500 | 95 | 485.491 | 97 | 475.94300 | 95 | 490.909 | 98 | 479.28100 | 96 |
| Barium | .5 | U | | 0.44270 | 89 | U | | 0.48306 | 97 | U | | 0.48623 | 97 | U | | 0.46410 | 93 |
| Calcium | 500 | 470.989 | 94 | 430.69100 | 86 | 457.221 | 91 | 451.13700 | 90 | 457.618 | 92 | 451.14500 | 90 | 456.937 | 91 | 448.38100 | 90 |
| Iron | 200 | 181.14 | 91 | 167.05100 | 84 | 179.836 | 90 | 174.69100 | 87 | 178.996 | 89 | 174.96100 | 87 | 177.638 | 89 | 174.14200 | 87 |
| Magnesium | 500 | 498.301 | 100 | 457.40200 | 91 | 493.419 | 99 | 477.27900 | 95 | 490.851 | 98 | 477.96200 | 96 | 484.874 | 97 | 475.47400 | 95 |

**Notes:** a-indicates absolute value of the concentration > 2 * Reporting Limits In the ICSA
b-indicates absolute value of the concentration above Reporting Limits but < 2 * Reporting Limits in the ICSA
c-indicates the recovery failed the Qc Criteria in the ICSAB
u-indicates the absolute value of the concentration was below the reporting limit

# FORM5/FORM7
## SPIKE RECOVERY DATA
PREP BATCH: 62644

Instrument Type: ICP/HG
Analytical Method(s):6010/200.7/7470A/7471A/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 62644

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 62644 | 1 | S21541J4 | 14 | 0.6926 | 0.650 | 107 | | 79 | 121 |
| Copper | 62644 | 1 | S21541J4 | 14 | 0.5971 | 0.564 | 106 | | 80 | 120 |
| Lead | 62644 | 1 | S21541J4 | 14 | 0.8427 | 0.856 | 98 | | 82 | 118 |
| Mercury | 62644 | 5 | H21541S | 15 | 13.1900 | 73.8 | 89 | | 64 | 136 |

TxtQcType: LCS Matrix: SOIL SampleID: LCS 62644

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 62644 | 1 | S21541J4 | 13 | 0.6743 | 0.650 | 104 | | 79 | 121 |
| Copper | 62644 | 1 | S21541J4 | 13 | 0.5793 | 0.564 | 103 | | 80 | 120 |
| Lead | 62644 | 1 | S21541J4 | 13 | 0.8328 | 0.856 | 97 | | 82 | 118 |
| Mercury | 62644 | 5 | H21541S | 14 | 14.1300 | 73.8 | 96 | | 64 | 136 |

TxtQcType: MSD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 62644 | 1 | S21541J4 | 18 | S21541J4 | 15 | 0.6906 | 0.2317 | 0.5 | 92 | | 75 | 125 |
| Copper | 62644 | 1 | S21541J4 | 18 | S21541J4 | 15 | 0.6917 | 0.2280 | 0.5 | 93 | | 75 | 125 |
| Lead | 62644 | 1 | S21541J4 | 18 | S21541J4 | 15 | 0.7165 | 0.2488 | 0.5 | 94 | | 75 | 125 |
| Mercury | 62644 | 1 | H21541S | 19 | H21541S | 16 | 9.2460 | 0.8030 | 10 | 84 | | 75 | 125 |

TxtQcType: MS Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 62644 | 1 | S21541J4 | 17 | S21541J4 | 15 | 0.7134 | 0.2317 | 0.5 | 96 | | 75 | 125 |
| Copper | 62644 | 1 | S21541J4 | 17 | S21541J4 | 15 | 0.7412 | 0.2280 | 0.5 | 103 | | 75 | 125 |
| Lead | 62644 | 1 | S21541J4 | 17 | S21541J4 | 15 | 0.8040 | 0.2488 | 0.5 | 111 | | 75 | 125 |
| Mercury | 62644 | 1 | H21541S | 18 | H21541S | 16 | 9.2250 | 0.8030 | 10 | 84 | | 75 | 125 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7

## SPIKE RECOVERY DATA

PREP BATCH: 62644

Instrument Type: ICP/HG

Analytical Method(s):6010/200.7/7470A/7471A/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: PS Matrix: SOIL SampleID: AD00314-012

| Analyte | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 1 | S21541J4 | 19 | S21541J4 | 15 | 0.7445 | 0.2317 | 0.50 | 103 | | 80 | 120 |
| Copper | 1 | S21541J4 | 19 | S21541J4 | 15 | 0.7496 | 0.2280 | 0.50 | 104 | | 80 | 120 |
| Lead | 1 | S21541J4 | 19 | S21541J4 | 15 | 0.7476 | 0.2488 | 0.50 | 100 | | 80 | 120 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7
## SPIKE RECOVERY DATA
PREP BATCH: 62645

Instrument Type: ICPMS
Analytical Method(s):6020/200.8

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 62645

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62645 | 1 | S100217A | 17 | 58.2200 | 57 | 102 | | 75.1 | 124.9 |
| Cadmium | 62645 | 1 | S100217A | 17 | 77.7300 | 77.8 | 100 | | 82.8 | 117.2 |
| Selenium | 62645 | 1 | S100217A | 17 | 80.4500 | 78.9 | 102 | | 77.6 | 122.4 |
| Silver | 62645 | 1 | S100217A | 17 | 58.0500 | 54.2 | 107 | | 74.7 | 125.3 |

TxtQcType: LCS Matrix: SOIL SampleID: LCS 62645

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62645 | 1 | S100217A | 16 | 57.3700 | 57 | 101 | | 75.1 | 124.9 |
| Cadmium | 62645 | 1 | S100217A | 16 | 76.3700 | 77.8 | 98 | | 82.8 | 117.2 |
| Selenium | 62645 | 1 | S100217A | 16 | 78.2200 | 78.9 | 99 | | 77.6 | 122.4 |
| Silver | 62645 | 1 | S100217A | 16 | 56.9200 | 54.2 | 105 | | 74.7 | 125.3 |

TxtQcType: MSD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62645 | 1 | S100217A | 26 | S100217A | 18 | 234.2000 | 22.6200 | 250 | 85 | | 75 | 125 |
| Cadmium | 62645 | 1 | S100217A | 26 | S100217A | 18 | 223.1000 | 2U | 250 | 89 | | 75 | 125 |
| Selenium | 62645 | 1 | S100217A | 26 | S100217A | 18 | 201.2000 | 10U | 250 | 80 | | 75 | 125 |
| Silver | 62645 | 1 | S100217A | 26 | S100217A | 18 | 41.5900 | 1U | 50 | 83 | | 75 | 125 |

TxtQcType: MS Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62645 | 1 | S100217A | 25 | S100217A | 18 | 222.3000 | 22.6200 | 250 | 80 | | 75 | 125 |
| Cadmium | 62645 | 1 | S100217A | 25 | S100217A | 18 | 213.0000 | 2U | 250 | 85 | | 75 | 125 |
| Selenium | 62645 | 1 | S100217A | 25 | S100217A | 18 | 197.6000 | 10U | 250 | 79 | | 75 | 125 |
| Silver | 62645 | 1 | S100217A | 25 | S100217A | 18 | 38.6800 | 1U | 50 | 77 | | 75 | 125 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7
## SPIKE RECOVERY DATA
PREP BATCH: 62645

Instrument Type: ICPMS
Analytical Method(s):6020/200.8

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: PS  Matrix: SOIL  SampleID: AD00314-012

| Analyte | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 1 | S100217A | 27 | S100217A | 18 | 70.1200 | 22.6200 | 50 | 95 | | 80 | 120 |
| Cadmium | 1 | S100217A | 27 | S100217A | 18 | 47.7900 | 2U | 50 | 96 | | 80 | 120 |
| Selenium | 1 | S100217A | 27 | S100217A | 18 | 236.4000 | 10U | 250 | 95 | | 80 | 120 |
| Silver | 1 | S100217A | 27 | S100217A | 18 | 46.1600 | 1U | 50 | 92 | | 80 | 120 |

a-Indicates Recovery Failed the criteria  b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7
## SPIKE RECOVERY DATA
PREP BATCH: 62650

Instrument Type: ICP/HG
Analytical Method(s):6010/200.7/7470A/7471A/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 62650

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 62650 | 1 | S21541K4 | 14 | 1.0029 | 1.10 | 91 | | 82 | 118 |

TxtQcType: LCS Matrix: SOIL SampleID: LCS 62650

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 62650 | 1 | S21541K4 | 13 | 0.9501 | 1.10 | 86 | | 82 | 118 |

TxtQcType: MSD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 62650 | 1 | S21541K4 | 18 | S21541K4 | 15 | 1.4115 | 1.2108 | 0.5 | 40 | a | 75 | 125 |

TxtQcType: MS Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 62650 | 1 | S21541K4 | 17 | S21541K4 | 15 | 1.1243 | 1.2108 | 0.5 | -17 | a | 75 | 125 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7
## SPIKE RECOVERY DATA
PREP BATCH: 62650

Instrument Type: ICP/HG
Analytical Method(s):6010/200.7/7470A/7471A/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: PS Matrix: SOIL SampleID: AD00314-012

| Analyte | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 1 | S21541K4 | 19 | S21541K4 | 15 | 1.8067 | 1.2108 | 0.50 | 119 | | 80 | 120 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM6/FORM9

## RPD/%Difference Data

PREP BATCH: 62644

Instrument Type: ICP/HG

Analytical Method(s):6010/200.7/7470A/7471A/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 62644

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 62644 | S21541J4 | 14 | S21541J4 | 13 | 0.6926 | 0.6743 | 2.7 | | 20 |
| Copper | 62644 | S21541J4 | 14 | S21541J4 | 13 | 0.5971 | 0.5793 | 3 | | 20 |
| Lead | 62644 | S21541J4 | 14 | S21541J4 | 13 | 0.8427 | 0.8328 | 1.2 | | 20 |
| Mercury | 62644 | H21541S | 15 | H21541S | 14 | 13.1900 | 14.1300 | 6.9 | | 20 |

TxtQcType: MR Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 62644 | S21541J4 | 16 | S21541J4 | 15 | 0.2822 | 0.2317 | 20 | | 20 |
| Copper | 62644 | S21541J4 | 16 | S21541J4 | 15 | 0.2925 | 0.2280 | 25 | a | 20 |
| Lead | 62644 | S21541J4 | 16 | S21541J4 | 15 | 0.4064 | 0.2488 | 48 | a | 20 |
| Mercury | 62644 | H21541S | 17 | H21541S | 16 | 0.6600 | 0.8030 | 20 | | 20 |

TxtQcType: MSD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | MS File | Seq# | Result 1 | Result 2 | RPD | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 62644 | S21541J4 | 18 | S21541J4 | 17 | 0.6906 | 0.7134 | 3.2 | | 20 |
| Copper | 62644 | S21541J4 | 18 | S21541J4 | 17 | 0.6917 | 0.7412 | 6.9 | | 20 |
| Lead | 62644 | S21541J4 | 18 | S21541J4 | 17 | 0.7165 | 0.8040 | 12 | | 20 |
| Mercury | 62644 | H21541S | 19 | H21541S | 18 | 9.2460 | 9.2250 | .23 | | 20 |

TxtQcType: SD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | DF | Result 1 | Result 2 | %Diff | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 62644 | S21541J4 | 23 | S21541J4 | 15 | 5 | 0.0467 | 0.2317 | 0.78 | | 10 |
| Copper | 62644 | S21541J4 | 23 | S21541J4 | 15 | 5 | 0.0457 | 0.2280 | 0.26 | | 10 |
| Lead | 62644 | S21541J4 | 23 | S21541J4 | 15 | 5 | 0.0579 | 0.2488 | 16 | a | 10 |

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

# FORM6/FORM9

## RPD/%Difference Data

PREP BATCH: 62645

Instrument Type: ICPMS

Analytical Method(s):6020/200.8

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 62645

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62645 | S100217A | 17 | S100217A | 16 | 58.2200 | 57.3700 | 1.5 | 20 |
| Cadmium | 62645 | S100217A | 17 | S100217A | 16 | 77.7300 | 76.3700 | 1.8 | 20 |
| Selenium | 62645 | S100217A | 17 | S100217A | 16 | 80.4500 | 78.2200 | 2.8 | 20 |
| Silver | 62645 | S100217A | 17 | S100217A | 16 | 58.0500 | 56.9200 | 2 | 20 |

TxtQcType: MR Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62645 | S100217A | 19 | S100217A | 18 | 21.8300 | 22.6200 | 3.6 | 20 |
| Cadmium | 62645 | S100217A | 19 | S100217A | 18 | 2U | 2U | --- | 20 |
| Selenium | 62645 | S100217A | 19 | S100217A | 18 | 10U | 10U | --- | 20 |
| Silver | 62645 | S100217A | 19 | S100217A | 18 | 1U | 1U | --- | 20 |

TxtQcType: MSD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | MS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62645 | S100217A | 26 | S100217A | 25 | 234.2000 | 222.3000 | 5.2 | 20 |
| Cadmium | 62645 | S100217A | 26 | S100217A | 25 | 223.1000 | 213.0000 | 4.6 | 20 |
| Selenium | 62645 | S100217A | 26 | S100217A | 25 | 201.2000 | 197.6000 | 1.8 | 20 |
| Silver | 62645 | S100217A | 26 | S100217A | 25 | 41.5900 | 38.6800 | 7.3 | 20 |

TxtQcType: SD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | DF | Result 1 | Result 2 | %Diff | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62645 | S100217A | 24 | S100217A | 18 | 5 | 4.6080 | 22.6200 | 1.9 | | 10 |
| Cadmium | 62645 | S100217A | 24 | S100217A | 18 | 5 | 0.1353 | 0.6756 | 0.13 | | 10 |
| Selenium | 62645 | S100217A | 24 | S100217A | 18 | 5 | 1.1160 | 5.7190 | 2.4 | | 10 |
| Silver | 62645 | S100217A | 24 | S100217A | 18 | 5 | 0.0408 | 0.2603 | 22 | c | 10 |

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

# FORM6/FORM9

## RPD/%Difference Data

PREP BATCH: 62650

Instrument Type: ICP/HG

Analytical Method(s):6010/200.7/7470A/7471A/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 62650

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 62650 | S21541K4 | 14 | S21541K4 | 13 | 1.0029 | 0.9501 | 5.4 | | 20 |

TxtQcType: MR Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 62650 | S21541K4 | 16 | S21541K4 | 15 | 0.9825 | 1.2108 | 21 | a | 20 |

TxtQcType: MSD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | MS File | Seq# | Result 1 | Result 2 | RPD | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 62650 | S21541K4 | 18 | S21541K4 | 17 | 1.4115 | 1.1243 | 23 | a | 20 |

TxtQcType: SD Matrix: SOIL SampleID: AD00314-012

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | DF | Result 1 | Result 2 | %Diff | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 62650 | S21541K4 | 23 | S21541K4 | 15 | 5 | 0.2994 | 1.2108 | 24 | a | 10 |

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

*Hampton-Clarke*

# ICP SAMPLE PREPARATION LOG

**ANALYTICAL METHOD:** 3010A 3005A (3050B) 200.7/200.8 OTHER _____

Batch No.: 21941 Analyst: CM

QC Number: 62644 Prep Date: 9/30/17

Matrix: SOIL Reviewed By: RS

| LAB ID# | ICP | | ICP-MS (Secondary dil) | | TCLP | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | Initial | Final | Aliquot | Final | Eff | TCLP | |
| Method blank | 50mL | 50mL | | | | – | Balance used: 38 |
| LCS | 0.5g | ↓ | | | | – | Pipettes used: 149,144 |
| LCSD | ↓ | ↓ | | | | – | |
| 1. 00314-012 | 1.0g | 100mL | | | | | Hot Block used: 4 |
| MR -012 | 0.5g | | | | | | |
| MS -012 | | | | | | | |
| MSD -012 | | | | | | | |
| 2. 00314-007 | | | | | | | |
| 3. -009 | | | | | | | |
| 4. -010 | | | | | | | |
| 5. 00294-001 | | | | | | | |
| 6. 00293-001 | | | | | | | |
| 7. 00297-002 | | | | | | | |
| 8. 00319-002 | | | | | | | |
| 9. 00298-002 | | | | | | | |
| 10. 00274-001 | | | | | | | |
| 11. -002 | | | | | | | |
| 12. -003 | | | | | | | |
| 13. -004 | | | | | | | |
| 14. -005 | | | | | | | |
| 15. | | | | | | | |
| 16. | | | | | | | |
| 17. | | | | | | | |
| 18. | | | | | | | |
| 19. | | | | | | | |
| 20. | | | | | | | |
| 21. | | | | | | | |
| 22. | | | | | | | |

Digestate Temperature: 93.7 C (90-95° C) Start Time: 11:00 End Time: 13:40

| | Volume mL | Lot # |
|---|---|---|
| | 0.5g | V-10950 |
| LCSD | | V- |
| | 0.2mL | V-11062, 11063. |
| MSD | | V- |

| Acid | Vol mL | Lot# |
|---|---|---|
| $HNO_3$ | 2.5 | V-11137 |
| HCl | 5 | V-11019 |
| $H_2O_2$ | 1.5 | V-10895 |
| | | |

| Acid | Vol mL | Lot# |
|---|---|---|
| 1:1 $HNO_3$ | 5 | V-26285 |
| 1:1 HCl | | V- |
| | | |
| | | |

Relinquished By _____ Date 9/30/17

Received By _____ Date 10/4/17

RESET

*Hampton-Clarke*

# ICP SAMPLE PREPARATION LOG

**ANALYTICAL METHOD: 3010A 3005A 3050B 200.7/200.8 OTHER**_____

Batch No.: 21541 Analyst: CM

QC Number: 62650 Prep Date: 10/2/17

Matrix: SOIL Reviewed By: SB

| LAB ID# | ICP | | ICP-MS (Secondary dil) | | TCLP | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | Initial | Final | Aliquot | Final | Eff | TCLP | |
| Method blank | 50mL | 50mL | | | | -- | Balance used: #38 |
| LCS | 0.5g | ↓ | | | | -- | Pipettes used: #49, #44 |
| LCSD | ↓ | ↓ | | | | -- | |
| 1. 00314-012 | 1.0g | 100mL | | | | | Hot Block used: 4 |
| MR -012 | 0.5g | 50mL | | | | | |
| MS -012 | ↓ | ↓ | | | | | |
| MSD -012 | ↓ | ↓ | | | | | |
| 2. 00314-007 | ↓ | ↓ | | | | | |
| 3. -009 | ↓ | ↓ | | | | | |
| 4. -010 | ↓ | ↓ | | | | | |
| 5. 00294-001 | ↓ | ↓ | | | | | |
| 6. 00293-001 | ↓ | ↓ | | | | | |
| 7. 00297-002 | ↓ | ↓ | | | | | |
| 8. 00319-002 | ↓ | ↓ | | | | | |
| 9. 00298-002 | ↓ | ↓ | | | | | |
| 10. 00274-001 | ↓ | ↓ | | | | | |
| 11. -002 | ↓ | ↓ | | | | | |
| 12. -003 | ↓ | ↓ | | | | | |
| 13. -004 | ↓ | ↓ | | | | | |
| 14. -005 | ↓ | ↓ | | | | | |
| 15. | | | | | | | |
| 16. | | | | | | | |
| 17. | | | | | | | |
| 18. | | | | | | | |
| 19. | | | | | | | |
| 20. | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Hot Plate Temperature: 93.1 C (90-95° C) Start Time: 11:45 End Time: 14:00

| | Volume mL | Lot # |
|---|---|---|
| LCS, LCSD | 0.5g | V- 10450 |
| LLLCS, LLLCSD | | V- |
| MS, MSD | 0.25mL | V- 11062, 11063 |
| LLMS, LLMSD | | V- |

| Acid | Vol mL | Lot# |
|---|---|---|
| $HNO_3$ | 2.5 | V-11137 |
| HCl | 5 | V-11015 |
| $H_2O_2$ | 1.5 | V-10879 |

| Acid | Vol mL | Lot# |
|---|---|---|
| 1:1 $HNO_3$ | 5 | V-21262 |
| 1:1 HCl | | V- |
| | | |
| | | |

Relinquished By CM Date 10/2/17

Received By CM Date 10/3/17

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*Hampton-Clarke*

# ICP SAMPLE PREPARATION LOG

**ANALYTICAL METHOD:** 3010A 3005A (3050B) 200.7/200.8 OTHER _____

Batch No.: 21042 Analyst: CM

QC Number: 62647 Prep Date: 9/30/17

Matrix: SOIL - 0020 Reviewed By: pc

| LAB ID# | ICP | | ICP-MS (Secondary dil) | | TCLP | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | Initial | Final | Aliquot | Final | Eff | TCLP | |
| Method blank | 50mL | 50mL | 25mL | 50mL | | – | Balance used: 38 |
| LCS | 0.1g | | | | | – | Pipettes used: 149, 144 |
| LCSD | ↓ | | | | | – | |
| 1. 00314-012 | 0.5g | | | | | | Hot Block used: 4 |
| MR -012 | | | | | | | |
| MS -012 | | | | | | | |
| MSD -012 | | | | | | | |
| 2. 00314-007 | | | | | | | |
| 3. -009 | | | | | | | |
| 4. -010. | | | | | | | |
| 5. 00294-001 | | | | | | | |
| 6. 00293-001 | | | | | | | |
| 7. 00297-002 | | | | | | | |
| 8. 00182-016 | | | | | | | |
| 9. 00319-002 | | | | | | | |
| 10. 00298-002 | | | | | | | |
| 11. 00274-001 | | | | | | | |
| 12. -002 | | | | | | | |
| 13. -003 | | | | | | | |
| 14. -004 | | | | | | | |
| 15. -005 | | | | | | | |
| 16. 00324-001 | | | | | | | |
| 17. -002 | | | | | | | |
| 18. -003 | | | | | | | |
| 19. -004 | | | | | | | |
| 20. -005 | ↓ | ↓ | ↓ | ↓ | | | |
| | | | | | | | |
| | | | | | | | |

Hot Plate Temperature: 93.7 C (90-95° C) Start Time: 11:00 End Time: 13:20.

| | Volume mL | Lot # |
|---|---|---|
| LCS, LCSD | 0.1g | V-10950 |
| LLLCS, LLLCSD | | V- |
| MS, MSD | 0.25 | V-11062, 11063 |
| LLMS, LLMSD | | V- |

| Acid | Vol mL | Lot# |
|---|---|---|
| $HNO_3$ | 2.5 | V-11137 |
| HCl CM | ~~5~~ | V-~~11015~~ |
| $H_2O_2$ | 1.5 | V-10870 |
| | | |

| Acid | Vol mL | Lot# |
|---|---|---|
| 1:1 $HNO_3$ | 5 | V-26268. |
| 1:1 HCl | | V- |
| | | |
| | | |

Relinquished By CM Date 9/30/17

Received By _____ Date 9/30/17

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# HG SAMPLE PREPARATION LOG

ANALYTICAL METHOD: 245.1 7470A (7471B) OTHER_____

Batch No.:* 210411

Number: 62644

Matrix: SOIL

Analyst: GM

Prep Date: 9/30/17

Review By: BA

| LAB ID# | MERCURY INITIAL | MERCURY FINAL | COMMENTS | STANDARDS |
|---|---|---|---|---|
| Blank | 25mL | 25mL | | CAL CURVE BLK 0ppb V- 264464 |
| | 0.15g | | | |
| | | | | STD 0.2 ppb V- 264469 |
| 314-012 | | | | STD 0.5 ppb V- 466 |
| -012 | | | | STD 1.0 ppb V- 467 |
| -012 | | | | STD 2.0 ppb V- 468 |
| -012 | | | | STD 5.0 ppb V- 469 |
| 314-007 | | | | STD 10.0 ppb V- 470 |
| -009 | | | | STD 25.0 ppb V- 471 |
| -010 | | | | ICV 10.0 ppb V- 264462 |
| 294-001 | | | | CCV 20.0 ppb V- 264463 |
| 303-001 | | | | |
| 307-002 | | | | |
| 319-002 | | | | Balance used: 38 |
| 308-002 | | | | Pipettes used: 121, 132, 136, 150 |
| 274-001 | | | | |
| -002 | | | | Hot Block used: 7 |
| -003 | | | | |
| -004 | | | | |
| -005 | | | | |

| Lot Numbers | Acid | Volume (mL) | | Lot # |
|---|---|---|---|---|
| $KMnO_4$: V- 2006347 | $HNO_3$ | | | V- |
| $K_2S_2O_8$: V- | HCl | | | V- |
| $NH_2OH$: V- 2006349 | $H_2SO_4$ | | | V- |
| | Aqua Regia | 1.25mL | | V- 264461 |

**Blk Temp: 92.1 °C

Time In Block: 12:00

Time Out of Block: 12:30

Spike Volume & Lot #

☐ LCS V- 10990 0.15 / 0.25 ml

☐ MS V- 264460 0.250 ml

☐ Standards/Control Batch B- 23722

Start time: 11:00 End Time: 12:30

**Temperature
245.1 / 7470A: 90-95C
7471B : 92-98C

Relinquished By: GM

*25 mLs of each standard was digested with this batch using the same reagents and at the same time as the above samples. The preparation of each standard may be referenced in Veriprog using the standard batch number and the corresponding V #s.

HG PREP 2016

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\HGCV2A\H21541S.txt

**Analysis Date:** 10/02/17 **Instrument:** HGCV2A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calibration Blank | 1 | CAL | 11:57 | 1 | | | | | | | 0 |
| .2 PPB | 1 | CAL | 11:58 | 2 | | | | | | | 0 |
| .5 PPB | 1 | CAL | 12:00 | 3 | | | | | | | 0 |
| 1 PPB | 1 | CAL | 12:01 | 4 | | | | | | | 0 |
| 2 PPB | 1 | CAL | 12:02 | 5 | | | | | | | 0 |
| 5 PPB | 1 | CAL | 12:04 | 6 | | | | | | | 0 |
| 10 PPB | 1 | CAL | 12:05 | 7 | | | | | | | 0 |
| 25 PPB | 1 | CAL | 12:07 | 8 | | | | | | | 0 |
| ICV (2) | 1 | ICV | 12:09 | 9 | | | | | | | 0 |
| ICB | 1 | ICB | 12:10 | 10 | | | | | | | 0 |
| MB 62644 (167) | 1 | MB | 12:12 | 11 | | SOIL | SOIL | SW846 | 62644 | | 0 |
| LCS 62644 | 1 | NA | 12:13 | 12 | | SOIL | SOIL | SW846 | 62644 | over calibration range | 0 |
| LCS MR 62644 | 1 | NA | 12:15 | 13 | | SOIL | SOIL | SW846 | 62644 | over calibration range | 0 |
| LCS 5D | 5 | LCS | 12:16 | 14 | | SOIL | SOIL | SW846 | 62644 | | 0 |
| LCS MR 5D | 5 | LCS | 12:18 | 15 | | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00314-012 | 1 | SMP | 12:20 | 16 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00314-012 | 1 | MR | 12:21 | 17 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00314-012 | 1 | MS | 12:22 | 18 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00314-012 | 1 | MSD | 12:24 | 19 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00314-007 | 1 | SMP | 12:26 | 20 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| CCV | 1 | CCV | 12:27 | 21 | | | | | | | 0 |
| CCB | 1 | CCB | 12:29 | 22 | | | | | | | 0 |
| AD00314-009 | 1 | SMP | 12:30 | 23 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00314-010 | 1 | SMP | 12:32 | 24 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00294-001 | 1 | SMP | 12:33 | 25 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00293-001 | 1 | SMP | 12:34 | 26 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00297-002 | 1 | SMP | 12:36 | 27 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00319-002 | 1 | SMP | 12:37 | 28 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00298-002 | 1 | SMP | 12:38 | 29 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00274-001 | 1 | SMP | 12:39 | 30 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00274-002 | 1 | SMP | 12:41 | 31 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00274-003 | 1 | SMP | 12:42 | 32 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| CCV | 1 | CCV | 12:43 | 33 | | | | | | | 0 |
| CCB | 1 | CCB | 12:45 | 34 | | | | | | | 0 |
| AD00274-004 | 1 | SMP | 12:47 | 35 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| AD00274-005 | 1 | SMP | 12:48 | 36 | HG-SOIL | SOIL | SOIL | SW846 | 62644 | | 0 |
| CCV | 1 | CCV | 12:49 | 37 | | | | | | | 0 |
| CCB | 1 | CCB | 12:51 | 38 | | | | | | | 0 |

**Comments/Reviewedby:**

olufemi
192.168.1.25 10/2/2017 2:25:45 PM

RUN IS OK

10/4/17

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

V-264489

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\MS2_7500SWA\S100217A.b\S100217A.TXT

**Analysis Date:** 10/02/17 **Instrument:** MS2_7500SWA

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rinse | 1 | NA | 10:49 | 1 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | 0 |
| CalBlk V-264474 | 1 | ISBLK | 10:55 | 2 | | SOIL | SOIL | | | | V-264474(Cal Blk WARNING) |
| CalStd1 V-264475 | 1 | CAL | 11:01 | 3 | | | | | | | V-264475(Cal Std-1 WARNING) |
| CalStd2 V-264476 | 1 | CAL | 11:08 | 4 | | | | | | | V-264476(Cal Std-2 WARNING) |
| CalStd3 V-264477 | 1 | CAL | 11:14 | 5 | | | | | | | V-264477(Cal Std-3 WARNING) |
| CalStd4 V-264478 | 1 | CAL | 11:20 | 6 | | | | | | | V-264478(Cal Std-4 WARNING) |
| CalStd5 V-264479 | 1 | CAL | 11:25 | 7 | | | | | | | V-264479(Cal Std-5 WARNING) |
| ICV V-264480 | 1 | ICV | 11:31 | 8 | | | | | | | V-264480(ICV WARNING) |
| LLICV V-264485 | 1 | LLICV | 11:37 | 9 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | V-264485(LL-ICV/CCV SOIL WARNING) |
| ICB V-264481 | 1 | ICB | 11:43 | 10 | | | | | | | V-264481(ICB/CCB WARNING) |
| ICSA V-264482 | 1 | ICSA | 11:48 | 11 | | | | | | | V-264482(ICSA WARNING) |
| ICSAB V-264483 | 1 | ICSAB | 11:54 | 12 | | | | | | | V-264483(ICSAB WARNING) |
| RINSE | 1 | NA | 12:00 | 13 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00268-001 | 2 | SMP | 12:06 | 14 | MET-5-6020 | SOIL | SOIL | SW846 | 62639 | Report Be. | 0 |
| MB 62645 | 1 | MB | 12:12 | 15 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | 0 |
| LCS 62645 | 1 | LCS | 12:17 | 16 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | 0 |
| LCS MR 62645 | 1 | LCS | 12:23 | 17 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00314-012 | 1 | SMP | 12:29 | 18 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00314-012 | 1 | MR | 12:34 | 19 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| RINSE | 1 | NA | 12:40 | 20 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | 0 |
| CCV V-264484 | 1 | CCV | 12:46 | 21 | | | | | | | V-264484(CCV WARNING) |
| LLCCV V-264485 | 1 | LLCCV | 12:52 | 22 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | V-264485(LL-ICV/CCV SOIL WARNING) |
| CCB V-264481 | 1 | CCB | 12:58 | 23 | | | | | | | V-264481(ICB/CCB WARNING) |
| AD00314-012 | 5 | SD | 13:03 | 24 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00314-012 | 1 | MS | 13:09 | 25 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00314-012 | 1 | MSD | 13:15 | 26 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00314-012 | 1 | PS | 13:20 | 27 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00314-007 | 1 | SMP | 13:26 | 28 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | Rerun Be. | 0 |
| AD00314-009 | 1 | SMP | 13:31 | 29 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00314-010 | 1 | SMP | 13:37 | 30 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | Rerun Be. | 0 |
| AD00294-001 | 1 | SMP | 13:43 | 31 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | Rerun Be. | 0 |
| AD00293-001 | 1 | SMP | 13:48 | 32 | MET-TAL6020S | SOIL | SOIL | SW846 | 62645 | | 0 |
| RINSE | 1 | NA | 13:55 | 33 | | SOIL | SOIL | SW846 | 62645 | | 0 |
| CCV V-264484 | 1 | CCV | 14:00 | 34 | | | | | | | V-264484(CCV WARNING) |
| LLCCV V-264485 | 1 | LLCCV | 14:06 | 35 | | SOIL | SOIL | SW846 | 62645 | | V-264485(LL-ICV/CCV SOIL WARNING) |
| CCB V-264481 | 1 | CCB | 14:12 | 36 | | | | | | | V-264481(ICB/CCB WARNING) |
| AD00297-002 | 1 | SMP | 14:18 | 37 | MET-TAL6020S | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00182-016 | 1 | SMP | 14:23 | 38 | MET-2-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00319-002 | 1 | SMP | 14:29 | 39 | MET-TAL6020S | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00298-002 | 1 | SMP | 14:35 | 40 | MET-RCRA-MS | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00324-001 | 1 | NA | 14:40 | 41 | MET-1-6020 | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00324-002 | 1 | NA | 14:46 | 42 | MET-1-6020 | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00324-003 | 1 | NA | 14:52 | 43 | MET-1-6020 | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00324-004 | 1 | NA | 14:57 | 44 | MET-1-6020 | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00324-005 | 1 | NA | 15:03 | 45 | MET-1-6020 | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| RINSE | 1 | NA | 15:09 | 46 | | SOIL | SOIL | SW846 | 62645 | | 0 |
| CCV V-264484 | 1 | CCV | 15:15 | 47 | | | | | | | V-264484(CCV WARNING) |
| LLCCV V-264485 | 1 | LLCCV | 15:20 | 48 | | SOIL | SOIL | SW846 | 62645 | As fail. | V-264485(LL-ICV/CCV SOIL WARNING) |
| CCB V-264481 | 1 | CCB | 15:26 | 49 | | | | | | | V-264481(ICB/CCB WARNING) |
| AD00274-001 | 1 | SMP | 15:32 | 50 | MET-RCRA-MS | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00274-002 | 1 | SMP | 15:38 | 51 | MET-RCRA-MS | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00274-003 | 1 | SMP | 15:43 | 52 | MET-RCRA-MS | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00274-004 | 1 | SMP | 15:49 | 53 | MET-RCRA-MS | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00274-005 | 1 | SMP | 15:55 | 54 | MET-RCRA-MS | SOIL | SOIL | SW846 | 62645 | Rerun As. | 0 |
| AD00314-007 | 10 | NA | 16:01 | 55 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00314-010 | 2 | NA | 16:06 | 56 | MET-5-6020 | SOIL | SOIL | SW846 | 62645 | | 0 |
| AD00294-001 | 5 | NA | 16:12 | 57 | MET-SRS6020S | SOIL | SOIL | SW846 | 62645 | | 0 |
| RINSE | 1 | NA | 16:18 | 58 | | SOIL | SOIL | SW846 | 62645 | | 0 |

**Comments/Reviewedby:**

pcousineau
192.168.1.28 10/3/2017 12:29:37 PM

Run ok. Report Ag, As, Be, Cd, Sb, Se, Tl. Rerun Be for 00314-007, 010, 00294-001 (int. std. 45 fail). Rerun As for 00297-002, 00319-002, 00298-002, 00274-001~005, 00324-001~005 (LLCCV fail). PC. B-21536 Report Be for 00268-001.

10/4/17

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor: No 9/30/17

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\MS2_7500SWA\S100217A.b\S100217A.TXT

**Analysis Date:** 10/02/17 **Instrument:** MS2_7500SWA

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CCV V-264484 | 1 | CCV | 16:24 | 59 | | | | | | | V-264484(CCV WARNING) |
| LLCCV V-264485 | 1 | LLCCV | 16:30 | 60 | | SOIL | SOIL | SW846 | 62645 | | V-264485(LL-ICV/CCV SOIL WARNING) |
| CCB V-264481 | 1 | CCB | 16:36 | 61 | | | | | | | V-264481(ICB/CCB WARNING) |

**Comments/Reviewedby:**

pcousineau
192.168.1.28 10/3/2017 12:29:37 PM

Run ok. Report Ag, As, Be, Cd, Sb, Se, Tl. Rerun Be for 00314-007, 010, 00294-001 (int. std. 45 fail). Rerun As for 00297-002, 00319-002, 00298-002, 00274-001~005, 00324-001~005 (LLCCV fail). PC. B-21536 Report Be for 00268-001.

e 10/4/17

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor: 20 9 30 10

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\PEICP4A\S21541J4.txt

**Analysis Date:** 10/04/17 **Instrument:** PEICP4A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CALBLK V-261851 | 1 | CAL | 10:39 | 1 | | | | | | | V-261851(ICB/CCB) |
| CALST1 V-263294 | 1 | CAL | 10:42 | 2 | | | | | | | V-263294(ICS1 Lowest std) |
| CALST2 V-263538 | 1 | CAL | 10:46 | 3 | | | | | | | V-263538(ICS2- Low Std) |
| CALST3 V-263925 | 1 | CAL | 10:49 | 4 | | | | | | | V-263925(ICS3 - Middle Std) |
| CALST4 V-263540 | 1 | CAL | 10:52 | 5 | | | | | | | V-263540(ICS4 High std) |
| ICS3 V-263925 | 1 | ICS | 10:56 | 6 | | | | | | | V-263925(ICS3 - Middle Std) |
| ICV V-263834 | 1 | ICV | 10:59 | 7 | | | | | | | V-263834(CCV) |
| LLICV [soil] V-264209 | 1 | LLICV | 11:03 | 8 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | V-264209(LLICV/LLCCV soil) |
| ICB V-261851 | 1 | ICB | 11:06 | 9 | | | | | | | V-261851(ICB/CCB) |
| ICSA V-263927 | 1 | ICSA | 11:09 | 10 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 11:14 | 11 | | | | | | | V-263293(ICSAB) |
| MB 62644 (100) | 1 | MB | 11:19 | 12 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | () |
| LCS 62644 | 1 | LCS | 11:22 | 13 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | Ba failed in LCS | () |
| LCS MR 62644 | 1 | LCS | 11:27 | 14 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | Ba failed in LCS | () |
| AD00314-012 | 1 | SMP | 11:31 | 15 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00314-012 | 1 | MR | 11:35 | 16 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00314-012 | 1 | MS | 11:38 | 17 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00314-012 | 1 | MSD | 11:42 | 18 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00314-012 | 1 | PS | 11:45 | 19 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | | () |
| CCV V-263834 | 1 | CCV | 11:49 | 20 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 11:52 | 21 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 11:56 | 22 | | | | | | | () |
| AD00314-012 | 5 | SD | 11:59 | 23 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00314-007 | 1 | SMP | 12:02 | 24 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | Mn not reported (higher than LR) | () |
| ICSA V-263927 | 1 | ICSA | 12:07 | 25 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 12:12 | 26 | | | | | | | V-263293(ICSAB) |
| CCV V-263834 | 1 | CCV | 12:17 | 27 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 12:20 | 28 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 12:24 | 29 | | | | | | | () |
| AD00314-009 | 1 | SMP | 12:27 | 30 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00314-010 | 1 | SMP | 12:32 | 31 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00294-001 | 1 | SMP | 12:36 | 32 | MET-SRS6010S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00293-001 | 1 | SMP | 12:40 | 33 | MET-TAL6010S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00297-002 | 1 | SMP | 12:44 | 34 | MET-TAL6010S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00319-002 | 1 | SMP | 12:47 | 35 | MET-TAL6010S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00298-002 | 1 | SMP | 12:51 | 36 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | () |
| ICSA V-263927 | 1 | ICSA | 12:55 | 37 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 12:59 | 38 | | | | | | | V-263293(ICSAB) |
| CCV V-263834 | 1 | CCV | 13:04 | 39 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 13:08 | 40 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 13:11 | 41 | | | | | | | () |
| AD00274-001 | 1 | SMP | 13:14 | 42 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00274-002 | 1 | SMP | 13:18 | 43 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00274-003 | 1 | SMP | 13:22 | 44 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | Cr not reported, (higher than LR) | () |
| AD00274-004 | 1 | SMP | 13:27 | 45 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00274-005 | 1 | SMP | 13:31 | 46 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | () |
| AD00314-007 | 2 | SMP | 13:36 | 47 | SRSMETALS-S | SOIL | SOIL | SW846 | 62644 | Mn reported | () |
| AD00274-003 | 2 | SMP | 13:41 | 48 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | Cr reported | () |
| ICSA V-263927 | 1 | ICSA | 13:45 | 49 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 13:50 | 50 | | | | | | | V-263293(ICSAB) |
| CCV V-263834 | 1 | CCV | 13:55 | 51 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 13:59 | 52 | MET-RCRA-S | SOIL | SOIL | SW846 | 62644 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 14:02 | 53 | | | | | | | () |
| RINSE | 1 | SMP | 14:05 | 54 | | SOIL | SOIL | SW846 | 62644 | | () |

**Comments/Reviewedby:**

carmela
192.168.1.28 10/4/2017 2:32:13 PM

OK.
Ba not reported failed in LCS
10/5/17

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\PEICP4A\S21541K4.txt

**Analysis Date:** 10/04/17 **Instrument:** PEICP4A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CALBLK V-261851 | 1 | CAL | 14:38 | 1 | | | | | | | V-261851(ICB/CCB) |
| CALST1 V-263294 | 1 | CAL | 14:41 | 2 | | | | | | | V-263294(ICS1 Lowest std) |
| CALST2 V-263538 | 1 | CAL | 14:44 | 3 | | | | | | | V-263538(ICS2- Low Std) |
| CALST3 V-263925 | 1 | CAL | 14:47 | 4 | | | | | | | V-263925(ICS3 - Middle Std) |
| CALST4 V-263540 | 1 | CAL | 14:51 | 5 | | | | | | | V-263540(ICS4 High std) |
| ICS3 V-263925 | 1 | ICS | 14:54 | 6 | | | | | | | V-263925(ICS3 - Middle Std) |
| ICV V-263834 | 1 | ICV | 14:58 | 7 | | | | | | | V-263834(CCV) |
| LLICV [soil] V-264209 | 1 | LLICV | 15:01 | 8 | | SOIL | SOIL | SW846 | 62650 | | V-264209(LLICV/LLCCV soil) |
| ICB V-261851 | 1 | ICB | 15:04 | 9 | | | | | | | V-261851(ICB/CCB) |
| ICSA V-263927 | 1 | ICSA | 15:08 | 10 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 15:13 | 11 | | | | | | | V-263293(ICSAB) |
| MB 62650 (100) | 1 | MB | 15:17 | 12 | | SOIL | SOIL | SW846 | 62650 | | () |
| LCS 62650 | 1 | LCS | 15:21 | 13 | | SOIL | SOIL | SW846 | 62650 | | () |
| LCS MR 62650 | 1 | LCS | 15:25 | 14 | | SOIL | SOIL | SW846 | 62650 | | () |
| AD00314-012 | 1 | SMP | 15:30 | 15 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00314-012 | 1 | MR | 15:34 | 16 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00314-012 | 1 | MS | 15:37 | 17 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00314-012 | 1 | MSD | 15:41 | 18 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00314-012 | 1 | PS | 15:44 | 19 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| CCV V-263834 | 1 | CCV | 15:48 | 20 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 15:51 | 21 | | SOIL | SOIL | SW846 | 62650 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 15:54 | 22 | | | | | | | () |
| AD00314-012 | 5 | SD | 15:58 | 23 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00314-007 | 1 | SMP | 16:01 | 24 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00314-009 | 1 | SMP | 16:06 | 25 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00314-010 | 1 | SMP | 16:09 | 26 | SRSMETALS-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00294-001 | 1 | SMP | 16:14 | 27 | MET-SRS6010S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00293-001 | 1 | SMP | 16:18 | 28 | MET-TAL6010S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00297-002 | 1 | SMP | 16:22 | 29 | MET-TAL6010S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00319-002 | 1 | SMP | 16:27 | 30 | MET-TAL6010S | SOIL | SOIL | SW846 | 62650 | | () |
| ICSA V-263927 | 1 | ICSA | 16:31 | 31 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 16:36 | 32 | | | | | | | V-263293(ICSAB) |
| CCV V-263834 | 1 | CCV | 16:41 | 33 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 16:44 | 34 | | SOIL | SOIL | SW846 | 62650 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 16:48 | 35 | | | | | | | () |
| AD00298-002 | 1 | SMP | 16:51 | 36 | MET-RCRA-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00274-001 | 1 | SMP | 16:54 | 37 | MET-RCRA-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00274-002 | 1 | SMP | 16:58 | 38 | MET-RCRA-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00274-003 | 1 | SMP | 17:03 | 39 | MET-RCRA-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00274-004 | 1 | NA | 17:08 | 40 | MET-RCRA-S | SOIL | SOIL | SW846 | 62650 | Ba NOT reported (higher than LR) | () |
| AD00274-005 | 1 | SMP | 17:12 | 41 | MET-RCRA-S | SOIL | SOIL | SW846 | 62650 | | () |
| AD00274-004 | 2 | SMP | 17:17 | 42 | MET-RCRA-S | SOIL | SOIL | SW846 | 62650 | Ba reported | () |
| ICSA V-263927 | 1 | ICSA | 17:21 | 43 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 17:26 | 44 | | | | | | | V-263293(ICSAB) |
| CCV V-263834 | 1 | CCV | 17:31 | 45 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 17:34 | 46 | | SOIL | SOIL | SW846 | 62650 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 17:37 | 47 | | | | | | | () |
| MB 62647 (100) | 1 | MB | 17:40 | 48 | | SOIL | SOIL | SW846 | 62647 | | () |
| LCS 62647 | 1 | LCS | 17:44 | 49 | | SOIL | SOIL | SW846 | 62647 | | () |
| LCS MR 62647 | 1 | LCS | 17:48 | 50 | | SOIL | SOIL | SW846 | 62647 | | () |
| AD00316-027 | 1 | SMP | 17:53 | 51 | MET-TAL6010S | SOIL | SOIL | SW846 | 62647 | | () |
| AD00316-027 | 1 | MR | 17:57 | 52 | MET-TAL6010S | SOIL | SOIL | SW846 | 62647 | | () |
| AD00316-027 | 1 | MS | 18:00 | 53 | MET-TAL6010S | SOIL | SOIL | SW846 | 62647 | | () |
| AD00316-027 | 1 | MSD | 18:04 | 54 | MET-TAL6010S | SOIL | SOIL | SW846 | 62647 | | () |
| AD00316-027 | 1 | PS | 18:07 | 55 | MET-TAL6010S | SOIL | SOIL | SW846 | 62647 | | () |
| CCV V-263834 | 1 | CCV | 18:11 | 56 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 18:14 | 57 | | SOIL | SOIL | SW846 | 62647 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 18:17 | 58 | | | | | | | () |
| AD00316-027 | 5 | SD | 18:21 | 59 | MET-TAL6010S | SOIL | SOIL | SW846 | 62647 | | () |
| AD00316-026 | 1 | SMP | 18:24 | 60 | MET-TAL6010S | SOIL | SOIL | SW846 | 62647 | | () |

**Comments/Reviewedby:**

CARMELA
192.168.1.85 10/5/2017 1:12:39 PM

OK
BATCH# 21541/62650: Ba reported
BATHC# 21544/62647: ALL ELEMENTS EXCEPT EARTH ELEMENTS

10/5/17

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\PEICP4A\S21541K4.txt

**Analysis Date:** 10/04/17 **Instrument:** PEICP4A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AD00316-028 | 1 | SMP | 18:28 | 61 | MET-TAL6010S | SOIL | SOIL | SW846 | 62647 | | 0 |
| ICSA V-293927 | 1 | ICSA | 18:33 | 62 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 18:37 | 63 | | | | | | | V-263293(ICSAB) |
| CCV V-263834 | 1 | CCV | 18:42 | 64 | | | | | | | V-263834(CCV) |
| LLCCV [soil] V-264209 | 1 | LLCCV | 18:46 | 65 | MET-TAL6010S | SOIL | SOIL | SW846 | 62650 | | V-264209(LLICV/LLCCV soil) |
| CCB | 1 | CCB | 18:49 | 66 | | | | | | | 0 |

**Comments/Reviewedby:**

CARMELA
192.168.1.85 10/5/2017 1:12:39 PM

OK.
BATCH# 21541/62650: Ba reported
BATHC# 21544/62647: ALL ELEMENTS EXCEPT EARTH ELEMENTS

10/5/17

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# ICPMS Internal Standard Summary Report



TuneID: 1

Batch/FileID: S100217A Sample ID: CalBlk V-264474 Sample Date 10/02/17 Sample Time: 10:55

| IS ID: | Area | Area Limit |
|---|---|---|
| Ho-1 | 1197360 | 838152 - 1797237.36 |
| In-1 | 477947.1 | 334562.97 - 717398.5971 |
| Sc-1 | 100604.4 | 70423.08 - 151007.2044 |
| Tb-1 | 1208543 | 845980.1 - 1814023.043 |

| QcType | txtSamId: | Pos | Ho-1 Area | In-1 Area | Sc-1 Area | Tb-1 Area | Area | Area | Area | Area |
|---|---|---|---|---|---|---|---|---|---|---|
| ISBLK | CalBlk V-264474 | 2 | 1197360 | 477947.1 | 100604.4 | 1208543 | | | | |
| SMP | Rinse | 1 | 1100649 | 417652.3 | 91117.85 | 1117107 | | | | |
| CAL | CalStd1 V-26447 | 3 | 1211400 | 483454.0 | 99071.56 | 1230849 | | | | |
| CAL | CalStd2 V-26447 | 4 | 1227381 | 493981.3 | 102417.3 | 1255674 | | | | |
| CAL | CalStd3 V-26447 | 5 | 1231769 | 497798.0 | 104317.8 | 1250096 | | | | |
| CAL | CalStd4 V-26447 | 6 | 1257751 | 501722.4 | 109785.3 | 1270284 | | | | |
| CAL | CalStd5 V-26447 | 7 | 1234365 | 499363.8 | 111232.7 | 1261093 | | | | |
| ICV | ICV V-264480 | 8 | 1245568 | 504435.3 | 106355.1 | 1263477 | | | | |
| LLICV | LLICV V-264485 | 9 | 1263020 | 514318.2 | 108323.7 | 1296442 | | | | |
| ICB | ICB V-264481 | 10 | 1270785 | 513463.7 | 105672.4 | 1301578 | | | | |
| ICSA | ICSA V-264482 | 11 | 1184049 | 461520.2 | 127679.7 | 1206130 | | | | |
| ICSAB | ICSAB V-264483 | 12 | 1207629 | 470653.5 | 114937.8 | 1221839 | | | | |
| SMP | RINSE | 13 | 1323002 | 545925.4 | 110404.4 | 1353531 | | | | |
| SMP | AD00268-001 | 14 | 1217043 | 483896.9 | 128548.6 | 1235493 | | | | |
| MB | MB 62645 | 15 | 1284468 | 528857.8 | 111629.9 | 1311292 | | | | |
| LCS | LCS 62645 | 16 | 1279405 | 516130.9 | 120330.2 | 1296028 | | | | |
| MR | LCS MR 62645 | 17 | 1266452 | 510337.4 | 119840.0 | 1290187 | | | | |
| SMP | AD00314-012 | 18 | 1307011 | 508095.8 | 152925.5 * | 1321598 | | | | |
| MR | AD00314-012 | 19 | 1287418 | 491891.9 | 155090.6 * | 1301521 | | | | |
| SMP | RINSE | 20 | 1279636 | 530850.1 | 107659.3 | 1319766 | | | | |
| CCV | CCV V-264484 | 21 | 1254761 | 518201.5 | 111720.3 | 1287560 | | | | |
| LLCCV | LLCCV V-264485 | 22 | 1270473 | 521798.4 | 109297.8 | 1300594 | | | | |
| CCB | CCB V-264481 | 23 | 1263982 | 522880.6 | 107758.3 | 1291972 | | | | |
| SD | AD00314-012 | 24 | 1303944 | 524384.3 | 124435.6 | 1313557 | | | | |
| MS | AD00314-012 | 25 | 1258614 | 483968.1 | 144528.8 | 1271494 | | | | |
| MSD | AD00314-012 | 26 | 1261485 | 486885.8 | 144489.0 | 1269500 | | | | |
| PS | AD00314-012 | 27 | 1297616 | 501083.8 | 149004.8 | 1318502 | | | | |
| SMP | AD00314-007 | 28 | 1282232 | 458837.1 | 324072.4 * | 1312773 | | | | |
| SMP | AD00314-009 | 29 | 1243088 | 450467.2 | 156238.5 * | 1240227 | | | | |
| SMP | AD00314-010 | 30 | 1251567 | 464702.6 | 175775.5 * | 1265681 | | | | |
| SMP | AD00294-001 | 31 | 1157541 | 409494.1 | 275458.4 * | 1171220 | | | | |
| SMP | AD00293-001 | 32 | 1217493 | 464721.4 | 133582.5 | 1240297 | | | | |
| SMP | RINSE | 33 | 1250361 | 518026.2 | 106052.4 | 1281446 | | | | |
| CCV | CCV V-264484 | 34 | 1235108 | 508374.8 | 109425.2 | 1252753 | | | | |
| LLCCV | LLCCV V-264485 | 35 | 1247860 | 511628.4 | 106641.0 | 1278304 | | | | |
| CCB | CCB V-264481 | 36 | 1235088 | 508269.2 | 104544.0 | 1249840 | | | | |
| SMP | AD00297-002 | 37 | 1227444 | 475994.8 | 140522.1 | 1236740 | | | | |
| SMP | AD00182-016 | 38 | 1427071 | 465349.3 | 219422.5 * | 1431393 | | | | |
| SMP | AD00319-002 | 39 | 1219348 | 467240.4 | 140789.3 | 1241083 | | | | |
| SMP | AD00298-002 | 40 | 1178348 | 446902.8 | 152983.9 * | 1181676 | | | | |
| SMP | AD00324-001 | 41 | 1148412 | 460225.9 | 110814.6 | 1172835 | | | | |
| SMP | AD00324-002 | 42 | 1131098 | 456426.9 | 117979.3 | 1135566 | | | | |
| SMP | AD00324-003 | 43 | 837980.2 * | 334098.6 * | 170280.1 * | 851510.6 | | | | |
| SMP | AD00324-004 | 44 | 1003302 | 403048.6 | 124153.0 | 1034770 | | | | |
| SMP | AD00324-005 | 45 | 1062358 | 420771.0 | 135375.1 | 1077252 | | | | |
| SMP | RINSE | 46 | 1219809 | 510548.6 | 106185.8 | 1229911 | | | | |
| CCV | CCV V-264484 | 47 | 1181132 | 489123.0 | 106120.3 | 1191955 | | | | |
| LLCCV | LLCCV V-264485 | 48 | 1177613 | 491111.7 | 102965.1 | 1202649 | | | | |

* Indicates Internal Standard Area outside of limits

# ICPMS Internal Standard Summary Report



TuneID: 1

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CCB | CCB V-264481 | 49 | 1181420 | 493930.8 | 103414.1 | 1207704 | |
| SMP | AD00274-001 | 50 | 1121996 | 462785.1 | 110338.0 | 1145994 | |
| SMP | AD00274-002 | 51 | 1001140 | 405412.3 | 108055.7 | 1013363 | |
| SMP | AD00274-003 | 52 | 1029742 | 418744.6 | 96328.24 | 1045665 | |
| SMP | AD00274-004 | 53 | 1015311 | 408268.2 | 94360.87 | 1033882 | |
| SMP | AD00274-005 | 54 | 798276.1 * | 334287.9 * | 82918.99 | 813488.8 * | |
| SMP | AD00314-007 | 55 | 1097959 | 434418.3 | 108660.5 | 1115288 | |
| SMP | AD00314-010 | 56 | 1097101 | 412888.2 | 117637.1 | 1105808 | |
| SMP | AD00294-001 | 57 | 1075037 | 414295.3 | 115404.9 | 1086875 | |
| SMP | RINSE | 58 | 1129011 | 450770.4 | 88669.43 | 1149545 | |
| CCV | CCV V-264484 | 59 | 1036746 | 412951.1 | 85371.87 | 1055127 | |
| LLCCV | LLCCV V-264485 | 60 | 1041020 | 415459.6 | 82619.75 | 1043765 | |
| CCB | CCB V-264481 | 61 | 1053763 | 420892.3 | 81503.05 | 1073935 | |

* Indicates Internal Standard Area outside of limits

# ICPMS Internal Standard Summary Report



TuneID: 2

Batch/FileID: S100217A Sample ID: CalBlk V-264474 Sample Date 10/02/17 Sample Time: 10:55

| IS ID: | Area | Area Limit |
|---|---|---|
| Ho-2 | 2480116 | 1736081.2 - 3722654.116 |
| In-2 | 1665487 | 1165840.9 - 2499895.987 |
| Sc-2 | 1192548 | 834783.6 - 1790014.548 |
| Tb-2 | 2531804 | 1772262.8 - 3800237.804 |

| QcType | txtSamId: | Pos | Ho-2 Area | In-2 Area | Sc-2 Area | Tb-2 Area | | Area | Area | Area | Area |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISBLK | CalBlk V-264474 | 2 | 2480116 | 1665487 | 1192548 | 2531804 | | | | | |
| SMP | Rinse | 1 | 2410591 | 1649152 | 1180992 | 2477864 | | | | | |
| CAL | CalStd1 V-26447 | 3 | 2460997 | 1669998 | 1169584 | 2511226 | | | | | |
| CAL | CalStd2 V-26447 | 4 | 3268052 | 2224701 | 1548088 | 3313187 | | | | | |
| CAL | CalStd3 V-26447 | 5 | 2516695 | 1690482 | 1211593 | 2539397 | | | | | |
| CAL | CalStd4 V-26447 | 6 | 2542493 | 1690649 | 1249224 | 2551856 | | | | | |
| CAL | CalStd5 V-26447 | 7 | 2509994 | 1676335 | 1270547 | 2541304 | | | | | |
| ICV | ICV V-264480 | 8 | 2524084 | 1684770 | 1217977 | 2568773 | | | | | |
| LLICV | LLICV V-264485 | 9 | 2528919 | 1688224 | 1213203 | 2561264 | | | | | |
| ICB | ICB V-264481 | 10 | 2537836 | 1720605 | 1206866 | 2582457 | | | | | |
| ICSA | ICSA V-264482 | 11 | 2423304 | 1603571 | 1374728 | 2462276 | | | | | |
| ICSAB | ICSAB V-264483 | 12 | 2457736 | 1619434 | 1321133 | 2513187 | | | | | |
| SMP | RINSE | 13 | 2653194 | 1784157 | 1241874 | 2686149 | | | | | |
| SMP | AD00268-001 | 14 | 2463979 | 1640034 | 1615066 | 2522172 | | | | | |
| MB | MB 62645 | 15 | 2602812 | 1738410 | 1266600 | 2644464 | | | | | |
| LCS | LCS 62645 | 16 | 2527186 | 1692916 | 1301796 | 2546953 | | | | | |
| MR | LCS MR 62645 | 17 | 2554217 | 1686524 | 1319599 | 2603123 | | | | | |
| SMP | AD00314-012 | 18 | 2584032 | 1648273 | 1641100 | 2623373 | | | | | |
| MR | AD00314-012 | 19 | 2573359 | 1623015 | 1694702 | 2604324 | | | | | |
| SMP | RINSE | 20 | 2554727 | 1737342 | 1204298 | 2616813 | | | | | |
| CCV | CCV V-264484 | 21 | 2528492 | 1688445 | 1235428 | 2580376 | | | | | |
| LLCCV | LLCCV V-264485 | 22 | 2511426 | 1710454 | 1218264 | 2572261 | | | | | |
| CCB | CCB V-264481 | 23 | 2526123 | 1713300 | 1201305 | 2573699 | | | | | |
| SD | AD00314-012 | 24 | 2565249 | 1690050 | 1346617 | 2622508 | | | | | |
| MS | AD00314-012 | 25 | 2554326 | 1613130 | 1582453 | 2598911 | | | | | |
| MSD | AD00314-012 | 26 | 2544559 | 1619620 | 1596286 | 2582281 | | | | | |
| PS | AD00314-012 | 27 | 2597977 | 1677897 | 1659793 | 2638308 | | | | | |
| SMP | AD00314-007 | 28 | 2553875 | 1552098 | 3561511 | * | 2644221 | | | | |
| SMP | AD00314-009 | 29 | 2718718 | 1665083 | 1795286 | * | 2740826 | OK. 150.5% 10/3/17 m | | | |
| SMP | AD00314-010 | 30 | 2536055 | 1566007 | 1939943 | * | 2558777 | | | | |
| SMP | AD00294-001 | 31 | 2492583 | 1494552 | 3046230 | * | 2526228 | | | | |
| SMP | AD00293-001 | 32 | 2481875 | 1560582 | 1504977 | | 2523973 | | | | |
| SMP | RINSE | 33 | 2541079 | 1723304 | 1186069 | | 2600182 | | | | |
| CCV | CCV V-264484 | 34 | 2494731 | 1681907 | 1208369 | | 2532196 | | | | |
| LLCCV | LLCCV V-264485 | 35 | 2477837 | 1704684 | 1177932 | | 2532053 | | | | |
| CCB | CCB V-264481 | 36 | 2478218 | 1675927 | 1168882 | | 2522532 | | | | |
| SMP | AD00297-002 | 37 | 2443418 | 1577878 | 1485473 | | 2474934 | | | | |
| SMP | AD00182-016 | 38 | 2890057 | 1585493 | 2419574 | * | 2916108 | | | | |
| SMP | AD00319-002 | 39 | 2470321 | 1562031 | 1558682 | | 2483314 | | | | |
| SMP | AD00298-002 | 40 | 2388811 | 1502683 | 1690135 | | 2408952 | | | | |
| SMP | AD00324-001 | 41 | 2369089 | 1582074 | 1275628 | | 2417154 | | | | |
| SMP | AD00324-002 | 42 | 2376096 | 1570269 | 1295461 | | 2414204 | | | | |
| SMP | AD00324-003 | 43 | 1805676 | 1169254 | 1912647 | * | 1835331 | | | | |
| SMP | AD00324-004 | 44 | 2160677 | 1419184 | 1410510 | | 2177474 | | | | |
| SMP | AD00324-005 | 45 | 2222502 | 1451782 | 1517741 | | 2246532 | | | | |
| SMP | RINSE | 46 | 2485411 | 1722434 | 1207435 | | 2562724 | | | | |
| CCV | CCV V-264484 | 47 | 2381036 | 1624033 | 1173602 | | 2436701 | | | | |
| LLCCV | LLCCV V-264485 | 48 | 2419755 | 1651289 | 1164747 | | 2473431 | | | | |

* Indicates Internal Standard Area outside of limits

# ICPMS Internal Standard Summary Report



TuneID: 2

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CCB | CCB V-264481 | 49 | 2418430 | | 1647522 | 1146420 | 2450402 | |
| SMP | AD00274-001 | 50 | 2235395 | | 1513717 | 1149899 | 2304887 | |
| SMP | AD00274-002 | 51 | 2048730 | | 1395549 | 1105957 | 2081654 | |
| SMP | AD00274-003 | 52 | 2164201 | | 1426420 | 1027546 | 2185705 | |
| SMP | AD00274-004 | 53 | 2083744 | | 1397993 | 1048326 | 2136627 | |
| SMP | AD00274-005 | 54 | 1684561 | * | 1183827 | 918081.9 | 1713868 | * |
| SMP | AD00314-007 | 55 | 2249110 | | 1453983 | 1205414 | 2280599 | |
| SMP | AD00314-010 | 56 | 2286545 | | 1408178 | 1341889 | 2315572 | |
| SMP | AD00294-001 | 57 | 2218111 | | 1433812 | 1291781 | 2250604 | |
| SMP | RINSE | 58 | 2199848 | | 1460178 | 957094.1 | 2258849 | |
| CCV | CCV V-264484 | 59 | 2217959 | | 1431263 | 987192.3 | 2243952 | |
| LLCCV | LLCCV V-264485 | 60 | 2167867 | | 1419059 | 940864.1 | 2212064 | |
| CCB | CCB V-264481 | 61 | 2105341 | | 1388268 | 907597.5 | 2154282 | |

* Indicates Internal Standard Area outside of limits

# TCLP Metal Data

# Form1
## Inorganic Analysis Data Sheet

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID: | AD00298-002 | % Solid: | 0 | Lab Name: | Hampton-Clarke | Nras No: | |
| Client Id: | 475 EXTERIOR NYRE | Units: | MG/L | Lab Code: | | Sdg No: | |
| Matrix: | TCLP | Date Rec: | 9/29/2017 | Contract: | | Case No: | |
| Level: | LOW | | | | | | |

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 28 | P | PEICP2A |
| 7440-39-3 | Barium | 0.25 | 0.41 | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 28 | P | PEICP2A |
| 7440-43-9 | Cadmium | 0.050 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 28 | P | PEICP2A |
| 7440-47-3 | Chromium | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 28 | P | PEICP2A |
| 7439-92-1 | Lead | 0.050 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 28 | P | PEICP2A |
| 7439-97-6 | Mercury | 0.00050 | ND | 1 | 25 | 25 | 10/04/17 | 62637 | H21534T | 17 | CV | HGCV2A |
| 7782-49-2 | Selenium | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 28 | P | PEICP2A |
| 7440-22-4 | Silver | 0.050 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 28 | P | PEICP2A |

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 62637 (1) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 62637 (1) Units: MG/L Lab Code:
Matrix: TCLP
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 1.0 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-36-0 | Antimony | 0.070 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-38-2 | Arsenic | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-39-3 | Barium | 0.25 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-41-7 | Beryllium | 0.012 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-43-9 | Cadmium | 0.050 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-70-2 | Calcium | 5.0 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-47-3 | Chromium | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-48-4 | Cobalt | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-50-8 | Copper | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7439-89-6 | Iron | 1.0 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7439-92-1 | Lead | 0.050 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7439-95-4 | Magnesium | 5.0 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7439-96-5 | Manganese | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7439-97-6 | Mercury | 0.00050 | ND | 1 | 25 | 25 | 10/04/17 | 62637 | H21534T | 11 | CV | HGCV2A |
| 7439-98-7 | Molybdenum | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-02-0 | Nickel | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7782-49-2 | Selenium | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-22-4 | Silver | 0.050 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-28-0 | Thallium | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-31-5 | Tin | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-32-6 | Titanium | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-62-2 | Vanadium | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |
| 7440-66-6 | Zinc | 0.10 | ND | 1 | 50 | 50 | 10/04/17 | 62637 | T21534B2 | 12 | P | PEICP2A |

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# FORM 2
# (ICV/CCV Summary)

Date Analyzed: 10/04/17
Data File: T21534B2
Prep Batch: 62637
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| Analyte | ICV/CCV Amt | ICV V-263834-7 | Rec | CCV V-263834-20 | Rec | CCV V-263834-32 | Rec | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | .5/.5 | 0.49708 | 99 | 0.46461 | 93 | 0.45403 | 91 | | | | | |
| Barium | .5/.5 | 0.49754 | 100 | 0.46914 | 94 | 0.46000 | 92 | | | | | |
| Cadmium | .5/.5 | 0.48972 | 98 | 0.46504 | 93 | 0.45626 | 91 | | | | | |
| Chromium | .5/.5 | 0.50929 | 102 | 0.47841 | 96 | 0.47034 | 94 | | | | | |
| Copper | .5/.5 | 0.50934 | 102 | 0.48774 | 98 | 0.47702 | 95 | | | | | |
| Lead | .5/.5 | 0.50874 | 102 | 0.47346 | 95 | 0.46816 | 94 | | | | | |
| Nickel | .5/.5 | 0.49264 | 99 | 0.46368 | 93 | 0.45705 | 91 | | | | | |
| Selenium | .5/.5 | 0.50909 | 102 | 0.46870 | 94 | 0.45960 | 92 | | | | | |
| Silver | 0.1/0.1 | 0.09723 | 97 | 0.09154 | 92 | 0.09013 | 90 | | | | | |
| Zinc | .5/.5 | 0.50923 | 102 | 0.46357 | 93 | 0.45893 | 92 | | | | | |

**Notes:** a-indicates analyte failed the ICV limits for 6010B/6010C, 6020/6020A
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010B/6010C (Except Hg 7470/7470A,7471A/7471B),6020/6020A
d-indicates analyte failed the CCV limits Hg 7470A/7471A/7471B

**Qc Limits:** ICV - 200.7 : 95-105
CCV- 200.7/200.8/6010B/6010C/245.1 : 90-110 (Except Hg 7470/7470A/ 7471A/7471B=80-120)
ICV -6010B/6010C/6020/6020A/200.8 : 90-110

CLP ICP ICV/CCV: 90-110
CLP Hg ICV/CCV: 80-120

# FORM 2
## (LLICV/LLCCV Summary)

Date Analyzed: 10/04/17
Data File: T21534B2
Prep Batch: 62637
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SPEX

| Analyte | LLICV/ LLCCV Amt | LLICV [leach] V-260724- | Rec | LLCCV [leach] V-260724-21 | Rec | LLCCV [leach] V-260724-33 | Rec | Rec | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1/0.1 | 0.0999541 | 100 | 0.0925292 | 93 | 0.0894353 | 89 | | | | | | |
| Barium | 0.25/0.25 | 0.256158 | 102 | 0.247389 | 99 | 0.237564 | 95 | | | | | | |
| Cadmium | 0.05/0.05 | 0.0494421 | 99 | 0.0469915 | 94 | 0.0455704 | 91 | | | | | | |
| Chromium | 0.1/0.1 | 0.101862 | 102 | 0.0981932 | 98 | 0.0940162 | 94 | | | | | | |
| Copper | 0.1/0.1 | 0.102742 | 103 | 0.0993845 | 99 | 0.0961046 | 96 | | | | | | |
| Lead | 0.05/0.05 | 0.0507517 | 102 | 0.0478495 | 96 | 0.0467657 | 94 | | | | | | |
| Nickel | 0.1/0.1 | 0.101109 | 101 | 0.0952249 | 95 | 0.0921058 | 92 | | | | | | |
| Selenium | 0.1/0.1 | 0.105464 | 105 | 0.0977493 | 98 | 0.0927124 | 93 | | | | | | |
| Silver | 0.05/0.05 | 0.0477626 | 96 | 0.0457925 | 92 | 0.0435333 | 87 | | | | | | |
| Zinc | 0.1/0.1 | 0.0998904 | 100 | 0.0931742 | 93 | 0.0904395 | 90 | | | | | | |

**Notes:** a-indicates analyte failed the LLICV limits for 6010B, 6010C, 6020, 6020A
c-indicates analyte failed the LLCCV limits for 6010B, 6010C, 6020, 6020A

**Qc Limits:** LLCCV- 6010B/6010C/6020/6020A (70-130)
LLICV -6010B/6010C/6020/6020A :70-130

# FORM 2
## (ICV/CCV Summary)

Date Analyzed: 10/04/17
Data File: H21534T
Prep Batch: 62637
Analytical Method: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: HGCV2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| | | ICV (2)-9 | | CCV-21 | | CCV-33 | | CCV-39 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | ICV/CCV Amt | | Rec | | Rec | | Rec | | Rec | | Rec | | Rec | | Rec |
| Mercury | 20/10 | 20.82000 | 104 | 10.63000 | 106 | 10.52000 | 105 | 10.77000 | 108 | | | | | | |

**Notes:**
a-indicates analyte failed the ICV limits for 6010B/6010C, 6020/6020A
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010B/6010C (Except Hg 7470/7470A,7471A/7471B),6020/6020A
d-indicates analyte failed the CCV limits Hg 7470A/7471A/7471B

**Qc Limits:**
ICV - 200.7 : 95-105
CCV- 200.7/200.8/6010B/6010C/245.1 : 90-110 (Except Hg 7470/7470A/ 7471A/7471B=80-120)
ICV -6010B/6010C/6020/6020A/200.8 : 90-110

CLP ICP ICV/CCV: 90-110
CLP Hg ICV/CCV: 80-120

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 10/04/17
Data File: T21534B2
Prep Batch: 62637
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB V-261851-9 | CCB-22 | CCB-34 | MB 62637 (1)-12 | EF-V-264501-29 | | | |
|---|---|---|---|---|---|---|---|---|
| Arsenic | .1 U | .1 U | .1 U | .1 U | .1 U | | | |
| Barium | .25 U | .25 U | .25 U | .25 U | .25 U | | | |
| Cadmium | .05 U | .05 U | .05 U | .05 U | .05 U | | | |
| Chromium | .1 U | .1 U | .1 U | .1 U | .1 U | | | |
| Copper | .1 U | .1 U | .1 U | .1 U | .1 U | | | |
| Lead | .05 U | .05 U | .05 U | .05 U | .05 U | | | |
| Nickel | .1 U | .1 U | .1 U | .1 U | .1 U | | | |
| Selenium | .1 U | .1 U | .1 U | .1 U | .1 U | | | |
| Silver | .05 U | .05 U | .05 U | .05 U | .05 U | | | |
| Zinc | .1 U | .1 U | .1 U | .1 U | .1 U | | | |

**Notes:** a-indicates absolute value of result found above the reporting limits in CCB/ICB or result found above reporting limit in the MB
u-indicates result below reporting limit

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 10/04/17
Data File: H21534T
Prep Batch: 62637
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: HGCV2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB-10 | CCB-22 | CCB-34 | CCB-40 | MB 62637 (1)-11 | EF-V-264501-38 | | |
|---|---|---|---|---|---|---|---|---|
| Mercury | .5 U | .5 U | .5 U | .5 U | .5 U | .5 U | | |

**Notes:** a-indicates absolute value of result found above the reporting limits in CCB/ICB or result found above reporting limit in the MB
u-indicates result below reporting limit

# FORM 4
## (ICSA/ICSAB Summary)

Date Analyzed: 10/04/17
Data File: T21534B2
Prep Batch: 62637
Reporting Limits Used: 6010B/6010C/7470A,7471A/7471B(Hg),6020/6020A
Instrument: PEICP2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 7092827

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICSA/ICSAB: SOURCE: SCP Science

| Analyte | Spk Amt | ICSA V-263927-10 | Rec | ICSAB V-263293-11 | Rec | ICSA V-263927-30 | Rec | ICSAB V-263293-31 | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 500 | 488.287 | 98 | 477.98700 | 96 | 453.923 | 91 | 454.87800 | 91 | | | | |
| Arsenic | 1 | U | | 0.99364 | 99 | U | | 0.90384 | 90 | | | | |
| Barium | .5 | U | | 0.48740 | 97 | U | | 0.45956 | 92 | | | | |
| Cadmium | 1 | U | | 0.98984 | 99 | U | | 0.92063 | 92 | | | | |
| Calcium | 500 | 479.84 | 96 | 471.67200 | 94 | 445.965 | 89 | 447.04900 | 89 | | | | |
| Chromium | .5 | U | | 0.49206 | 98 | U | | 0.46510 | 93 | | | | |
| Copper | .5 | U | | 0.52829 | 106 | U | | 0.50311 | 101 | | | | |
| Iron | 200 | 188.526 | 94 | 186.41400 | 93 | 175.423 | 88 | 176.67600 | 88 | | | | |
| Lead | 1 | U | | 0.97954 | 98 | U | | 0.89776 | 90 | | | | |
| Magnesium | 500 | 496.633 | 99 | 489.52500 | 98 | 460.185 | 92 | 462.95400 | 93 | | | | |
| Nickel | 1 | U | | 0.94651 | 95 | U | | 0.88193 | 88 | | | | |
| Selenium | 1 | U | | 1.01228 | 101 | U | | 0.92865 | 93 | | | | |
| Silver | 1 | U | | 1.06038 | 106 | U | | 1.00253 | 100 | | | | |
| Zinc | 1 | U | | 0.96940 | 97 | U | | 0.89296 | 89 | | | | |

**Notes:** a-indicates absolute value of the concentration > 2 * Reporting Limits In the ICSA
b-indicates absolute value of the concentration above Reporting Limits but < 2 * Reporting Limits in the ICSA
c-indicates the recovery failed the Qc Criteria in the ICSAB
u-indicates the absolute value of the concentration was below the reporting limit

# FORM5/FORM7

## SPIKE RECOVERY DATA

PREP BATCH: 62637

Instrument Type: ICP/HG

Analytical Method(s):6010/200.7/7470A/7471A/245.1

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: TCLP SampleID: LCSW MR 62637

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62637 | 1 | T21534B2 | 14 | 0.4957 | 0.5 | 99 | | 80 | 120 |
| Barium | 62637 | 1 | T21534B2 | 14 | 0.4975 | 0.5 | 99 | | 80 | 120 |
| Cadmium | 62637 | 1 | T21534B2 | 14 | 0.4920 | 0.5 | 98 | | 80 | 120 |
| Chromium | 62637 | 1 | T21534B2 | 14 | 0.4954 | 0.5 | 99 | | 80 | 120 |
| Lead | 62637 | 1 | T21534B2 | 14 | 0.5097 | 0.5 | 102 | | 80 | 120 |
| Mercury | 62637 | 1 | H21534T | 13 | 10.6200 | 10 | 106 | | 80 | 120 |
| Selenium | 62637 | 1 | T21534B2 | 14 | 0.4984 | 0.5 | 100 | | 80 | 120 |
| Silver | 62637 | 1 | T21534B2 | 14 | 0.0952 | 0.100 | 95 | | 80 | 120 |

TxtQcType: LCS Matrix: TCLP SampleID: LCSW 62637

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62637 | 1 | T21534B2 | 13 | 0.5033 | 0.5 | 101 | | 80 | 120 |
| Barium | 62637 | 1 | T21534B2 | 13 | 0.4999 | 0.5 | 100 | | 80 | 120 |
| Cadmium | 62637 | 1 | T21534B2 | 13 | 0.4973 | 0.5 | 99 | | 80 | 120 |
| Chromium | 62637 | 1 | T21534B2 | 13 | 0.5003 | 0.5 | 100 | | 80 | 120 |
| Lead | 62637 | 1 | T21534B2 | 13 | 0.5124 | 0.5 | 102 | | 80 | 120 |
| Mercury | 62637 | 1 | H21534T | 12 | 10.7200 | 10 | 107 | | 80 | 120 |
| Selenium | 62637 | 1 | T21534B2 | 13 | 0.5056 | 0.5 | 101 | | 80 | 120 |
| Silver | 62637 | 1 | T21534B2 | 13 | 0.0966 | 0.100 | 97 | | 80 | 120 |

TxtQcType: MS Matrix: TCLP SampleID: AD00292-002

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62637 | 1 | T21534B2 | 17 | T21534B2 | 15 | 0.5038 | 0.1U | 0.5 | 101 | | 50 | |
| Barium | 62637 | 1 | T21534B2 | 17 | T21534B2 | 15 | 0.9722 | 0.4843 | 0.5 | 98 | | 50 | |
| Cadmium | 62637 | 1 | T21534B2 | 17 | T21534B2 | 15 | 0.4884 | 0.05U | 0.5 | 98 | | 50 | |
| Chromium | 62637 | 1 | T21534B2 | 17 | T21534B2 | 15 | 0.4742 | 0.1U | 0.5 | 95 | | 50 | |
| Lead | 62637 | 1 | T21534B2 | 17 | T21534B2 | 15 | 0.4803 | 0.05U | 0.5 | 96 | | 50 | |
| Mercury | 62637 | 1 | H21534T | 16 | H21534T | 14 | 10.3500 | 0.50U | 10 | 104 | | 50 | |
| Selenium | 62637 | 1 | T21534B2 | 17 | T21534B2 | 15 | 0.5142 | 0.1U | 0.5 | 103 | | 50 | |
| Silver | 62637 | 1 | T21534B2 | 17 | T21534B2 | 15 | 0.0975 | 0.05U | 0.10 | 97 | | 50 | |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7
## SPIKE RECOVERY DATA
PREP BATCH: 62637

Instrument Type: ICP/HG
Analytical Method(s):6010/200.7/7470A/7471A/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: PS Matrix: TCLP SampleID: AD00292-002

| Analyte | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 1 | T21534B2 | 18 | T21534B2 | 15 | 0.4871 | 0.1U | 0.5 | 97 | | 80 | 120 |
| Barium | 1 | T21534B2 | 18 | T21534B2 | 15 | 0.9162 | 0.4843 | 0.5 | 86 | | 80 | 120 |
| Cadmium | 1 | T21534B2 | 18 | T21534B2 | 15 | 0.4748 | 0.05U | 0.5 | 95 | | 80 | 120 |
| Chromium | 1 | T21534B2 | 18 | T21534B2 | 15 | 0.4584 | 0.1U | 0.5 | 92 | | 80 | 120 |
| Lead | 1 | T21534B2 | 18 | T21534B2 | 15 | 0.4697 | 0.05U | 0.5 | 94 | | 80 | 120 |
| Selenium | 1 | T21534B2 | 18 | T21534B2 | 15 | 0.4984 | 0.1U | 0.5 | 100 | | 80 | 120 |
| Silver | 1 | T21534B2 | 18 | T21534B2 | 15 | 0.0821 | 0.05U | 0.1 | 82 | | 80 | 120 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM6/FORM9

## RPD/%Difference Data

PREP BATCH: 62637

Instrument Type: ICP/HG

Analytical Method(s):6010/200.7/7470A/7471A/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: TCLP SampleID: LCSW MR 62637

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62637 | T21534B2 | 14 | T21534B2 | 13 | 0.4957 | 0.5033 | 1.5 | 20 |
| Barium | 62637 | T21534B2 | 14 | T21534B2 | 13 | 0.4975 | 0.4999 | .5 | 20 |
| Cadmium | 62637 | T21534B2 | 14 | T21534B2 | 13 | 0.4920 | 0.4973 | 1.1 | 20 |
| Chromium | 62637 | T21534B2 | 14 | T21534B2 | 13 | 0.4954 | 0.5003 | .99 | 20 |
| Lead | 62637 | T21534B2 | 14 | T21534B2 | 13 | 0.5097 | 0.5124 | .53 | 20 |
| Mercury | 62637 | H21534T | 13 | H21534T | 12 | 10.6200 | 10.7200 | .94 | 20 |
| Selenium | 62637 | T21534B2 | 14 | T21534B2 | 13 | 0.4984 | 0.5056 | 1.4 | 20 |
| Silver | 62637 | T21534B2 | 14 | T21534B2 | 13 | 0.0952 | 0.0966 | 1.5 | 20 |

TxtQcType: MR Matrix: TCLP SampleID: AD00292-002

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62637 | T21534B2 | 16 | T21534B2 | 15 | 0.1U | 0.1U | --- | 20 |
| Barium | 62637 | T21534B2 | 16 | T21534B2 | 15 | 0.4734 | 0.4843 | 2.3 | 20 |
| Cadmium | 62637 | T21534B2 | 16 | T21534B2 | 15 | 0.05U | 0.05U | --- | 20 |
| Chromium | 62637 | T21534B2 | 16 | T21534B2 | 15 | 0.1U | 0.1U | --- | 20 |
| Lead | 62637 | T21534B2 | 16 | T21534B2 | 15 | 0.05U | 0.05U | --- | 20 |
| Mercury | 62637 | H21534T | 15 | H21534T | 14 | 0.50U | 0.50U | --- | 20 |
| Selenium | 62637 | T21534B2 | 16 | T21534B2 | 15 | 0.1U | 0.1U | --- | 20 |
| Silver | 62637 | T21534B2 | 16 | T21534B2 | 15 | 0.05U | 0.05U | --- | 20 |

TxtQcType: SD Matrix: TCLP SampleID: AD00292-002

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | DF | Result 1 | Result 2 | %Diff | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 62637 | T21534B2 | 19 | T21534B2 | 15 | 5 | -0.0014 | 0.0002 | --- | 10 |
| Barium | 62637 | T21534B2 | 19 | T21534B2 | 15 | 5 | 0.0898 | 0.4843 | 7.3 | 10 |
| Cadmium | 62637 | T21534B2 | 19 | T21534B2 | 15 | 5 | -0.0006 | 0.0011 | --- | 10 |
| Chromium | 62637 | T21534B2 | 19 | T21534B2 | 15 | 5 | -0.0004 | 0.0037 | --- | 10 |
| Lead | 62637 | T21534B2 | 19 | T21534B2 | 15 | 5 | -0.0018 | 0.0150 | --- | 10 |
| Selenium | 62637 | T21534B2 | 19 | T21534B2 | 15 | 5 | -0.0081 | -0.0063 | --- | 10 |
| Silver | 62637 | T21534B2 | 19 | T21534B2 | 15 | 5 | -0.0003 | 0.0002 | --- | 10 |

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

*Hampton-Clarke*

# ICP SAMPLE PREPARATION LOG

**ANALYTICAL METHOD:** (3010A) 3005A 3050B 200.7/200.8 OTHER_____

Batch No.: 21534 Analyst: lm

QC Number: 62637 Prep Date: 10/4/17

Matrix: TCLP Reviewed By: ~~OA~~

| LAB ID# | ICP | | ICP-MS (Secondary dil) | | TCLP | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | Initial | Final | Aliquot | Final | Eff | TCLP | |
| Method blank | 50ml | 50ml | | | | -- | Balance used: N/A |
| LCS | | | | | | -- | Pipettes used: 49, 1000 |
| LCSD | | | | | | -- | |
| 1. ~~LD~~ 00292-002 | | | | | V264501 | 00292-002 | Hot Block used: 1 |
| MR 00292-002 | | | | | | | |
| MS 00292-002 | | | | | | | |
| ~~MSD~~ | | | | | | | |
| 2. 00291-001 | 50ml | 50ml | | | V264501 | 00292-002 | |
| 3. 00291-002 | | | | | | | |
| 4. 00292-004 | | | | | | | |
| 5. -006 | | | | | | | |
| 6. -008 | | | | | | | |
| 7. -010 | | | | | | | |
| 8. -012 | | | | | | | |
| 9 00296-012 | | | | | | | |
| 10. 00298-002 | | | | | | | |
| 11. 00319-002 | | | | | | | |
| 12 00328-001 | | | | | | | |
| 13. 00316-026 | | | | | | | |
| 14. -027 | | | | | | | |
| 15. -028 | | | | | | | |
| 16. 00350-003 | | | | | | | |
| 17. 00350-005 | | | | | | | |
| 18. 00366-001 | | | | | filtered | | |
| 19. V-264501 | | | | | V264501 | | |
| 20. | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Hot Plate Temperature: 93.0 C (90-95° C) Start Time: 9:00 End Time: 13:20

| | Volume mL | Lot # |
|---|---|---|
| LCS, LCSD | 0.25ml | V-11062, 11063 |
| LLLCS, LLLCSD | | V- |
| MS, MSD | 0.25ml | V-11062, 11063 |
| LLMS, LLMSD | | V- |

| Acid | Vol mL | Lot# |
|---|---|---|
| $HNO_3$ | 3ml | V-11137 |
| HCl | | V- |
| $H_2O_2$ | | V- |
| | | |

| Acid | Vol mL | Lot# |
|---|---|---|
| 1:1 $HNO_3$ | | V- |
| 1:1 HCl | 5ml | V-262677 |
| | | |
| | | |

Relinquished By lm Date 10/4/17

Received By OA Date 10/04/2017

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# HG SAMPLE PREPARATION LOG

**ANALYTICAL METHOD:** 245.1 (7470A) 7471B OTHER_____

Batch No.:* 21534

QC Number: 62637

Matrix: TCLP

Analyst: JM

Prep Date: 10/4/19

Review By: [illegible]

| LAB ID# | MERCURY | | COMMENTS | STANDARDS |
|---|---|---|---|---|
| | INITIAL | FINAL | | |
| Method blank | 25ML | 25ML | | CAL CURVE BLK 0ppb V-264643 |
| LCS | | | | |
| LCSD | | | | STD 0.2 ppb V-264644 |
| 1 (GC) 00292-002 | | | | STD 0.5 ppb V-264645 |
| MR 00292-002 | | | | STD 1.0 ppb V-264646 |
| MS 00292-002 | | | | STD 2.0 ppb V-264647 |
| ~~MSD~~ | | | | STD 5.0 ppb V-264648 |
| 2 00291-001 | | | | STD 10.0 ppb V-264649 |
| 3 -002 | | | | STD 25.0 ppb V-264650 |
| 4 -004 | | | | ICV 10.0 ppb V-264641 |
| 5 -006 | | | | CCV 20.0 ppb V-264642 |
| 6 -008 | | | | |
| 7 -010 | | | | |
| 8 -012 | | | | Balance used: N/A |
| 9 00296-012 | | | | Pipettes used: 132, 135, 150, 121 |
| 10 00258-002 | | | | |
| 11 00319-002 | | | | Hot Block used: 7 |
| 12 00328-001 | | | | |
| 13 00316-026 | | | | |
| 14 -027 | | | | |
| 15 -028 | | | | |
| 16 00350-003 | | | | |
| 17 -005 | | | | |
| 18 00366-001 | | | | |
| 19 V-264501 | | | | |
| 20 | | | | |
| | | | | |

| Lot Numbers | Acid | Volume (mL) | | Lot # |
|---|---|---|---|---|
| $KmnO_4$: V-264407 | $HNO_3$ | 0.625ML | | V- 11137 |
| $K_2S_2O_8$: V-264408 | HCl | | | V- |
| $NH_2OH$: V-264409 | $H_2SO_4$ | 1.25ML | | V- 11059 |
| | Aqua Regia | | | V- |

**Block Temp.: 92.3 °C

Time in Block: 10:00

Time Out of Block: 12:00

Spike Volume & Lot #

☐ LCS V-264601 0.15g / 0.25 ml

☐ MS V-264601 0.250 ml

☐ Standards/Control Batch B-23789

Start time: 9:00 End Time: 12:00

**Temperature
245.1 / 7470A: 90-95C
7471B : 92-98C

Relinquished By: JM

*25 mLs of each standard was digested with this batch using the same reagents and at the same time as the above samples. The preparation of each standard may be referenced in Veriprog using the standard batch number and the corresponding V #s.

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\PEICP2A\T21534B2.txt

**Analysis Date:** 10/04/17 **Instrument:** PEICP2A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CALBLK V-261851 | 1 | CAL | 14:41 | 1 | | | | | | | V-261851(ICB/CCB) |
| CALST1 V-263294 | 1 | CAL | 14:44 | 2 | | | | | | | V-263294(ICS1 Lowest std) |
| CALST2 V-263538 | 1 | CAL | 14:47 | 3 | | | | | | | V-263538(ICS2- Low Std) |
| CALST3 V-263925 | 1 | CAL | 14:50 | 4 | | | | | | | V-263925(ICS3 - Middle Std) |
| CALST4 V-263540 | 1 | CAL | 14:55 | 5 | | | | | | | V-263540(ICS4 High std) |
| ICS3 V-263925 | 1 | ICS | 15:00 | 6 | | | | | | | V-263925(ICS3 - Middle Std) |
| ICV V-263834 | 1 | ICV | 15:05 | 7 | | | | | | | V-263834(CCV) |
| LLICV [leach] V-260724 | 1 | LLICV | 15:10 | 8 | | TCLP | TCLP | SW846 | 62637 | | V-260724(LLICV/CCV leachate) |
| ICB V-261851 | 1 | ICB | 15:13 | 9 | | | | | | | V-261851(ICB/CCB) |
| ICSA V-263927 | 1 | ICSA | 15:16 | 10 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 15:22 | 11 | | | | | | | V-263293(ICSAB) |
| MB 62637 (1) | 1 | MB | 15:27 | 12 | | TCLP | TCLP | SW846 | 62637 | | 0 |
| LCSW 62637 | 1 | LCS | 15:31 | 13 | | TCLP | TCLP | SW846 | 62637 | | 0 |
| LCSW MR 62637 | 1 | LCS | 15:35 | 14 | | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-002 | 1 | SMP | 15:40 | 15 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-002 | 1 | MR | 15:44 | 16 | | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-002 | 1 | MS | 15:48 | 17 | | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-002 | 1 | PS | 15:53 | 18 | | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-002 | 5 | SD | 15:58 | 19 | | TCLP | TCLP | SW846 | 62637 | | 0 |
| CCV V-263834 | 1 | CCV | 16:02 | 20 | | | | | | | V-263834(CCV) |
| LLCCV [leach] V-260724 | 1 | LLCCV | 16:07 | 21 | | TCLP | TCLP | SW846 | 62637 | | V-260724(LLICV/CCV leachate) |
| CCB | 1 | CCB | 16:10 | 22 | | | | | | | 0 |
| AD00291-001 | 1 | SMP | 16:13 | 23 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00328-001 | 1 | SMP | 16:17 | 24 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00316-026 | 1 | SMP | 16:21 | 25 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00316-027 | 1 | SMP | 16:25 | 26 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00316-028 | 1 | SMP | 16:29 | 27 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00298-002 | 1 | SMP | 16:32 | 28 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| EF-V-264501 | 1 | EF | 16:36 | 29 | | TCLP | TCLP | SW846 | 62637 | | V-264501(EF-1 WARNING) |
| ICSA V-263927 | 1 | ICSA | 16:40 | 30 | | | | | | | V-263927(ICSA) |
| ICSAB V-263293 | 1 | ICSAB | 16:45 | 31 | | | | | | | V-263293(ICSAB) |
| CCV V-263834 | 1 | CCV | 16:51 | 32 | | | | | | | V-263834(CCV) |
| LLCCV [leach] V-260724 | 1 | LLCCV | 16:56 | 33 | | TCLP | TCLP | SW846 | 62637 | | V-260724(LLICV/CCV leachate) |
| CCB | 1 | CCB | 16:59 | 34 | | | | | | | 0 |
| AD00291-002 | 1 | NA | 17:02 | 35 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-004 | 1 | NA | 17:06 | 36 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-006 | 1 | NA | 17:10 | 37 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-008 | 1 | NA | 17:13 | 38 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-010 | 1 | NA | 17:17 | 39 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-012 | 1 | NA | 17:20 | 40 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00296-012 | 1 | NA | 17:24 | 41 | METALS-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| ICSA V-263927 | 1 | ICSA | 17:27 | 42 | | | | | | failed | V-263927(ICSA) |

**Comments/Reviewedby:**

OLUFEMI
192 168 1 89 10/4/2017 5:08:29 PM

RUN IS OK
All elements reported

10/10/17

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\HGCV2A\H21534T.txt

**Analysis Date:** 10/04/17

**Instrument:** HGCV2A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calibration Blank | 1 | CAL | 17:32 | 1 | | | | | | | 0 |
| .2 PPB | 1 | CAL | 17:33 | 2 | | | | | | | 0 |
| .5 PPB | 1 | CAL | 17:35 | 3 | | | | | | | 0 |
| 1 PPB | 1 | CAL | 17:37 | 4 | | | | | | | 0 |
| 2 PPB | 1 | CAL | 17:39 | 5 | | | | | | | 0 |
| 5 PPB | 1 | CAL | 17:41 | 6 | | | | | | | 0 |
| 10 PPB | 1 | CAL | 17:43 | 7 | | | | | | | 0 |
| 25 PPB | 1 | CAL | 17:45 | 8 | | | | | | | 0 |
| ICV (2) | 1 | ICV | 17:48 | 9 | | | | | | | 0 |
| ICB | 1 | ICB | 17:50 | 10 | | | | | | | 0 |
| MB 62637 (1) | 1 | MB | 17:51 | 11 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| LCSW 62637 | 1 | LCS | 17:53 | 12 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| LCSW MR 62637 | 1 | LCS | 17:56 | 13 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-002 | 1 | SMP | 17:58 | 14 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-002 | 1 | MR | 18:00 | 15 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-002 | 1 | MS | 18:02 | 16 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00298-002 | 1 | SMP | 18:04 | 17 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00328-001 | 1 | SMP | 18:06 | 18 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00316-026 | 1 | SMP | 18:08 | 19 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00316-027 | 1 | SMP | 18:09 | 20 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| CCV | 1 | CCV | 18:11 | 21 | | | | | | | 0 |
| CCB | 1 | CCB | 18:13 | 22 | | | | | | | 0 |
| AD00316-028 | 1 | SMP | 18:15 | 23 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00291-001 | 1 | SMP | 18:17 | 24 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00291-002 | 1 | SMP | 18:19 | 25 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-004 | 1 | SMP | 18:21 | 26 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-006 | 1 | SMP | 18:23 | 27 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-008 | 1 | SMP | 18:25 | 28 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-010 | 1 | SMP | 18:27 | 29 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00292-012 | 1 | SMP | 18:29 | 30 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00296-012 | 1 | SMP | 18:30 | 31 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00319-002 | 1 | SMP | 18:32 | 32 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| CCV | 1 | CCV | 18:34 | 33 | | | | | | | 0 |
| CCB | 1 | CCB | 18:36 | 34 | | | | | | | 0 |
| AD00350-003 | 1 | SMP | 18:38 | 35 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00350-005 | 1 | SMP | 18:40 | 36 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| AD00366-001 | 1 | SMP | 18:42 | 37 | HG-TCLP | TCLP | TCLP | SW846 | 62637 | | 0 |
| EF-V-264501 | 1 | EF | 18:44 | 38 | | TCLP | TCLP | SW846 | 62637 | | V-264501(EF-1 WARNING) |
| CCV | 1 | CCV | 18:46 | 39 | | | | | | | 0 |
| CCB | 1 | CCB | 18:48 | 40 | | | | | | | 0 |

**Comments/Reviewedby:**

olufemi
192.168.1.25 10/4/2017 7:23:35 PM

RUN IS OK

10/9/17

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

V-264640

# Wet Chemistry Data

# VERITECH Wet Chem Form1 Analysis Summary

Lab#: AD00298-002
Matrix Soil
Client SampleID: 475 EXTERIOR NYRECY

Project Number: 7092827
Received Date: 9/28/2017
Collect Date: 9/28/2017

| Analysis | TestGroup | Dilution: | Result | Units: | RL | Prep Date: | Analysis Date: |
|---|---|---|---|---|---|---|---|
| Cyanide (Reactive) | CN-REACTIVE | 1 | ND | mg/Kg | 0.50 | 10/03/17 | 10/03/17 |
| Sulfide (Reactive) | S-REACTIVE | 1 | ND | mg/kg | 100 | 10/03/17 | 10/03/17 |

# VERITECH Wet Chem Form1 Analysis Summary
## % Solids

**TestGroupName: % Solids SM2540G** **Project #:7092827**

**TestGroup: %SOLIDS**

| Lab# | Client SampleID | Matrix | Dilution: | Result | Units: | RL | Prep Date | Analysis Date | Received Date | Collect Date |
|---|---|---|---|---|---|---|---|---|---|---|
| AD00298-001 | 475 EXTERIOR N | Soil/Terracore | 1 | 91 | Percent | | | 09/29/17 | 09/28/17 | 09/28/17 |
| AD00298-002 | 475 EXTERIOR N | Aqueous | 1 | 92 | Percent | | | 09/29/17 | 09/28/17 | 09/28/17 |

# % Solids Report

Analysis Type: SOLIDS-SS
BatchID: SOLIDS-SS-7155

| QcType | SampleID: | Rounded Result | Raw Result | Units | Tare Weight | Wet Weight | Dry Weight | Analysis Date | Analyzed By | QC RPD | Rpd Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DUP | AD00299-004 | 69 | 68.57888 | Percent | 1.36 | 9.03 | 6.62 | 09/29/17 | jessica | 4.2 | 5 |
| Sample | AD00268-002 | 98 | 97.72296 | Percent | 1.35 | 11.89 | 11.65 | 09/29/17 | jessica | | |
| Sample | AD00292-012 | 86 | 86.01472 | Percent | 1.38 | 10.89 | 9.56 | 09/29/17 | jessica | | |
| Sample | AD00298-001 | 91 | 91.08159 | Percent | 1.35 | 11.89 | 10.95 | 09/29/17 | jessica | | |
| Sample | AD00299-004 | 72 | 71.52062 | Percent | 1.36 | 9.12 | 6.91 | 09/29/17 | jessica | | |
| Sample | AD00299-005 | 78 | 77.99443 | Percent | 1.36 | 8.54 | 6.96 | 09/29/17 | jessica | | |
| Sample | AD00299-006 | 64 | 64.31479 | Percent | 1.38 | 8.75 | 6.12 | 09/29/17 | jessica | | |
| Sample | AD00299-007 | 64 | 64.40972 | Percent | 1.35 | 7.11 | 5.06 | 09/29/17 | jessica | | |
| Sample | AD00298-002 | 92 | 92.02966 | Percent | 1.37 | 12.16 | 11.29 | 09/29/17 | jessica | | |
| Sample | AD00306-001 | 82 | 81.64094 | Percent | 1.35 | 13.66 | 11.40 | 09/29/17 | jessica | | |
| Sample | AD00306-002 | 87 | 87.10504 | Percent | 1.35 | 13.06 | 11.54 | 09/29/17 | jessica | | |
| Sample | AD00306-003 | 84 | 84.47099 | Percent | 1.35 | 13.07 | 11.25 | 09/29/17 | jessica | | |
| Sample | AD00306-004 | 84 | 84.25414 | Percent | 1.35 | 12.21 | 10.50 | 09/29/17 | jessica | | |
| Sample | AD00306-005 | 86 | 85.52515 | Percent | 1.35 | 12.68 | 11.04 | 09/29/17 | jessica | | |
| Sample | AD00306-006 | 80 | 80.04315 | Percent | 1.36 | 10.63 | 8.78 | 09/29/17 | jessica | | |
| Sample | AD00306-007 | 83 | 83.03477 | Percent | 1.34 | 10.83 | 9.22 | 09/29/17 | jessica | | |
| Sample | AD00306-008 | 84 | 83.71336 | Percent | 1.35 | 10.56 | 9.06 | 09/29/17 | jessica | | |
| Sample | AD00306-009 | 84 | 84.05694 | Percent | 1.36 | 15.41 | 13.17 | 09/29/17 | jessica | | |
| Sample | AD00306-010 | 83 | 83.14176 | Percent | 1.35 | 14.40 | 12.20 | 09/29/17 | jessica | | |
| Sample | AD00297-002 | 88 | 88.24663 | Percent | 1.36 | 11.74 | 10.52 | 09/29/17 | jessica | | |

* - Indicates Failed Rpd Criteria

# MS/MSD/DUP Recovery

7092827 0255

Prep Batch: S-1091 Sample ID: AD00291-001
Method: SW846 7.3.3 Matrix: Soil

| Qc Type: MS | | Limits | | MS | Sample | | | MS/MSD/DUP | | | Non Spike | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Amt | Recov | Dil | Conc | Conc | % Rec | Flag | Batch | RunID | Analysis Date | Batch | RunID | Analysis Date |
| Cyanide (Reactive) | 0.4 | 75-125 | 1 | 0.4153 | 0 | 104 | | 20171003135 | 13 | 10/03/17 14:21 | 20171003135 | 15 | 10/03/17 14:25 |

| Qc Type: MSD | | Limits | | | MSD | Sample | | | MS/MSD/DUP | | | Non Spike | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Amt | Recov | Rpd | Dil | Conc | Conc | % Rec | Rpd | Flag | Batch | RunID | Analysis Date | Batch | RunID | Analysis Date |
| Cyanide (Reactive) | 0.4 | 75-125 | 20 | 1 | 0.3907 | 0 | 98 | 6.1 | | 20171003135 | 14 | 10/03/17 14:23 | 20171003135 | 15 | 10/03/17 14:25 |

# LCS Recoveries

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | BatchRunID/RunID:====> | | 201710031353-12 | | | | | | |
| | QcBatchID:====> | | LCSS-1091 | | | | | | |
| | Date/Time:====> | | 10/03/17 14:18 | | | | | | |
| | Analytical Method:====> | | SW846 7.3.3 | | | | | | |
| | Matrix:====> | | Soil | | Soil | | Soil | | Soil | | Soil | |
| Analyte | SW846 7.3. Amt | Limits | Amt | Limits | % Rec | Flags | % Rec | Flags | % Rec | Flags | % Rec | Flags | % Rec | Flags |
| Cyanide (Rea | 0.4 | 75-125 | | | 101 | | | | | | | | | |

# Calibration Summary:

7092827 0257

Instrument: DA1
Analysis Meth: SW846 7.3.3

| Analyte | Batch ID | Run# | Qc Type | Recov | Spk Amt | Limit |
|---|---|---|---|---|---|---|
| Cyanide (Reactive) | 20171003135 | 9 | ICV | 99 | 0.4 | 90-110 |
| Cyanide (Reactive) | 20171003135 | 21 | CCV | 103 | 0.4 | 90-110 |
| Cyanide (Reactive) | 20171003135 | 33 | CCV | 103 | 0.4 | 90-110 |
| Cyanide (Reactive) | 20171003135 | 39 | CCV | 100 | 0.4 | 90-110 |

# Blank Summary

Instrument: DA1

Qc Type: Method Blank Summary Prep Date: 10/3/17

| Run Batch ID | Analysis Date/Time | Sample ID | Run# | Analyte | Conc | RL |
|---|---|---|---|---|---|---|
| 20171003135 | 10/3/17 14:16 | MBS-1091 | 11 | Cyanide ( | ND | 0.50 |

Qc Type: ICB Summary Prep Date: NA

| Run Batch ID | Analysis Date/Time | Sample ID | Run# | Analyte | Conc | RL |
|---|---|---|---|---|---|---|
| 20171003135 | 10/3/17 14:14 | CCB | 10 | Cyanide ( | ND | 0.020 |

Qc Type: CCB Summary Prep Date: NA

| Run Batch ID | Analysis Date/Time | Sample ID | Run# | Analyte | Conc | RL |
|---|---|---|---|---|---|---|
| 20171003135 | 10/3/17 14:42 | CCB | 22 | Cyanide ( | ND | 0.020 |
| 20171003135 | 10/3/17 15:10 | CCB | 34 | Cyanide ( | ND | 0.020 |
| 20171003135 | 10/3/17 15:20 | CCB | 40 | Cyanide ( | ND | 0.020 |

**Analysis Type:** RS

7092827 0259

**Batch Number:** RS-1091

**Units:** mg/kg

## Calibration Curve Information

## Qc Summary Results

| Qc Type | Qc Name | SpkAmt | Rec Lim | Rpd Lim | Raw Result | Recov | Rpd | Flags |
|---|---|---|---|---|---|---|---|---|
| CAL-01 | CAL-01-10/03/17 | 16 | 90-110 | NA | 16.8315 | 105 | NA | |
| LCS | LCS | 400 | 75-125 | NA | 410.76875 | 103 | NA | |
| MS | AD00291-001 | 400 | 75-125 | NA | 430.80625 | 108 | NA | |
| MSD | AD00291-001 | 400 | 75-125 | 20 | 440.825 | 110 | 2.3 | |

**Analytical Method(s)**

**SW846 7.3.4**

| Sam # | Type | MB | Result | RL | Per Sol | Full Result | Titr Vol | Iod Vol | DF | Sam Wt (g) | Scrb Vol (ml) | Prep Date | Prep By | Anal Date | Anal By |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CAL-01-10/03/17 | CAL-01 | | 17 | | 100 | 16.831 | 5.8 | 10 | 1 | 250 | 250 | | | 10/03/17 | JMP |
| MB-1-10/03/17 | MB | MB-1-10/03/17 | ND | 100 | 100 | 10.019 | 9.9 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| LCS | LCS | MB-1-10/03/17 | 410 | 100 | 100 | 410.77 | 5.9 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00291-001 | MS | MB-1-10/03/17 | 430 | 100 | 73 | 430.81 | 5.7 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00291-001 | MSD | MB-1-10/03/17 | 440 | 100 | 73 | 440.82 | 5.6 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00291-001 | Sample | MB-1-10/03/17 | ND | 100 | 73 | 10.019 | 9.9 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00291-002 | Sample | MB-1-10/03/17 | ND | 100 | 80 | 20.038 | 9.8 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00292-002 | Sample | MB-1-10/03/17 | ND | 100 | 89 | 40.075 | 9.6 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00292-004 | Sample | MB-1-10/03/17 | ND | 100 | 86 | 30.056 | 9.7 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00292-006 | Sample | MB-1-10/03/17 | ND | 100 | 86 | 20.038 | 9.8 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00292-008 | Sample | MB-1-10/03/17 | ND | 100 | 85 | 10.019 | 9.9 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00292-010 | Sample | MB-1-10/03/17 | ND | 100 | 88 | 10.019 | 9.9 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00292-012 | Sample | MB-1-10/03/17 | ND | 100 | 86 | 30.056 | 9.7 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00296-012 | Sample | MB-1-10/03/17 | ND | 100 | 92 | 50.094 | 9.5 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00298-002 | Sample | MB-1-10/03/17 | ND | 100 | 92 | 20.038 | 9.8 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00316-026 | Sample | MB-1-10/03/17 | ND | 100 | 90 | 30.056 | 9.7 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00316-027 | Sample | MB-1-10/03/17 | ND | 100 | 93 | 20.038 | 9.8 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00316-028 | Sample | MB-1-10/03/17 | ND | 100 | 88 | 20.038 | 9.8 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00319-002 | Sample | MB-1-10/03/17 | ND | 100 | 91 | 40.075 | 9.6 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00331-002 | Sample | MB-1-10/03/17 | ND | 100 | 83 | 10.019 | 9.9 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00331-004 | Sample | MB-1-10/03/17 | ND | 100 | 84 | 30.056 | 9.7 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00328-001 | Sample | MB-1-10/03/17 | ND | 100 | 100 | 40.075 | 9.6 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00350-003 | Sample | MB-1-10/03/17 | ND | 100 | 90 | 10.019 | 9.9 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00350-005 | Sample | MB-1-10/03/17 | ND | 100 | 91 | 20.038 | 9.8 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |
| AD00366-001 | Sample | MB-1-10/03/17 | ND | 100 | 100 | 20.038 | 9.8 | 10 | 1 | 10 | 250 | 10/03/17 | JMP | 10/03/17 | JMP |

JMP 10/3/17

GW 10/4/17

**Flag Codes:** Ra - Recovery failed specified criteria (PVS/LCS/MS/MSD/ICV/CAL) Rp - RPD failed specified criteria.

Na - Not Applicable Nc - Not Checked ..either one or both values =ND

# Miscellaneous Data

Hampton-Clarke

# ZERO HEADSPACE EXTRACTION- SAMPLE ENTRY

| Sample ID | Vessel # | Initial Pressure | Final Pressure | Ext. Fluid # | Wt./Vol. Of Sample | Start Date | Start Time | Finish Date | Finish Time | Ext. Type * | pH of HCl preserv vial | Analyst(s) | Transfer To** | Transfer To** | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-3 10896 | #17 | 10 | 10 | EF-3 10896 | 500ml | 9/28/17 | 4:15 | 9/29/17 | 9:39 | SPLP | <2 | SP | | | |
| AD 00289 -001 | #08 | | | | 25g 500ml | | | | | | | | | | |
| -002 | #15 | | | | | | | | | | | | | | |
| -003 | #18 | | | | | | | | | | | | | | |
| -004 | #21 | | | | | | | | | | | | | | |
| -005 | #20 | | | | | | | | | | | | | | |
| -006 | #13 | | | | | | | | | | | | | | |
| -007 | #22 | | | | | | | | | | | | | | |
| -008 | #23 | | | | | | | | | | | | | | |
| -009 | #14 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| EF-1 264202 | #34 | 10 | 10 | EF-1 264202 | 500ml | 9/29/17 | 4:15 | 9/30/17 | 12:15 | TCLP | <2 | SP | | | |
| AD 00297 -001 | #28 | | | | | | | | | | | | | | |
| AD 00298 -001 | #11 | | | | | | | | | | | | | | |

*Ext. Type TCLP=T ASTM=A SPLP=S MEP = M

** Initials of person taking custody of extractions

7092827 0262

Hampton-Clarke, Inc.

# LEACHATE PREPARATION LOG
## (TCLP, SPLP)

Start Date: 10/2/17 Time 13:22 Finish Date: 10/3/17

**TCLP Ext. Fluid #1 pH: 4.89 (criteria: 4.93 ± 0.5)
**TCLP Ext. Fluid #2 pH: 2.88 (criteria: 2.88 ± 0.05)
**SPLP Ext. Fluid #3 pH: 4.20 (criteria: 4.20 ± 0.5)

| Sample # | pH (units) | pH in HCL (units) | Final pH (units) | Ext. Fluid (number) | Wt./Vol of Sample (g or mL) | Start Time | Finish Time | Filter Time | Analyst (s) | Ext. Type* | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 00162 - 002 | — | — | 7.26 | SPLP 264500 | 150g/3L | 17:00 | 9:45 | 10:15 | ER | P | Balance ID: 037 Metals & Org. |
| 00162 - 005 | — | — | 7.81 | | ↓ | | | 10:35 | | | pH Meter ID: D38168 ↓ |
| 00162 - 003 | — | — | 7.72 | | 100g/2L | | | 10:45 | | | Metals only |
| 00162 - 004 | — | — | 7.55 | | | | | 10:15 | | | Organics only. |
| 00162 - 008 | — | — | 7.31 | | | | | 11:20 | | | Metals only. |
| 00162 - 009 | — | — | 7.64 | | ↓ | | | 10:45 | ↓ | ↓ | ↓ |
| SPLP 264500 | 4.20 | — | 10.12 | ↓ | 3L | | | 10:10 | | T | Metals & Org. |
| 00291 - 001 | 6.85 | 1.56 | 5.04 | EFI 264501 | 150g/3L | | | 2:30 | | | ↓ |
| ↓ - 002 | 7.07 | 1.58 | 5.09 | | ↓ | | | 3:00 | | | |
| 00292 - 002 | 9.25 | 1.82 | 5.70 | | 100g/2L | | | 12:00 | | | Metals only. |
| - 004 | 9.66 | 1.81 | 5.75 | | | | | 12:00 | | | |
| - 006 | 9.55 | 1.82 | 5.43 | | | | | 11:40 | | | |
| - 008 | 9.74 | 1.82 | 5.22 | | | | | 11:40 | | | |
| - 010 | 9.18 | 1.81 | 5.19 | | | | | 1:20 | | | |
| ↓ - 012 | 9.21 | 1.82 | 5.61 | | | | | 1:20 | | | |
| 00296 - 012 | 8.73 | 1.69 | 5.11 | | ↓ | | | 1:30 | | | ↓ |
| 00319 - 002 | 9.61 | 1.79 | 5.59 | | 150g/3L | | | 2:30 | | | Metals & Org. |
| 00328 - 001 | 10.04 | 1.86 | 5.81 | | 100g/2L | | | 11:30 | | | Metals only. |
| 00316 - 026 | 7.87 | 1.63 | 5.03 | | | | | 11:30 | | | |
| - 027 | 7.44 | 1.62 | 5.01 | | | | | 11:30 | | | ↓ |
| ↓ - 028 | 7.81 | 1.65 | 5.02 | | ↓ | | | 11:45 | | | |
| 00370 - 003 | 8.87 | 1.68 | 5.17 | | 150g/3L | | | 1:50 | | | Metals & Org. |
| ↓ - 005 | 8.95 | 1.69 | 5.18 | | ↓ | | | 1:40 | | | ↓ |
| EFI 264501 | 4.89 | — | 5.00 | ↓ | 3L | ↓ | ↓ | 10:10 | ↓ | ↓ | |

* Ext. Type: TCLP = T (Method 1311) LAMP=L (Methods 1311 / ANSI/NEMA C78.LL 1256-2003)
SPLP = P (Method 1312) MEP=M (Method 1320)
ZHE = Z (Method 1311/1312)

** The pH of the extraction fluid must be checked prior to use and must be within limits specified above

7092827 0263

Hampton-Clarke, Inc.

# LEACHATE PREPARATION LOG
## (TCLP, SPLP)

Start Date: 10/2/17 TIME 13:22 Finish Date: 10/3/17

**TCLP Ext. Fluid #1 pH: 4.89 (criteria: 4.93 ± 0.5)
**TCLP Ext. Fluid #2 pH: _____ (criteria: 2.88 ± 0.05)
**SPLP Ext. Fluid #3 pH: _____ (criteria: 4.20 ± 0.5)

| Sample # | pH (units) | pH in HCL (units) | Final pH (units) | Ext. Fluid (number) | Wt./Vol of Sample (g or mL) | Start Time | Finish Time | Filter Time | Analyst (s) | Ext. Type* | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 00298-002 | 8.64 | 1.59 | 5.09 | Ef1264501 | 100g/2L | 17:00 | 9:45 | 10:15 | GR | T | Balance ID: 037 Metals only |
| | | | | | | | | | | | pH Meter ID: B38161 |

* Ext. Type: TCLP = T (Method 1311) LAMP=L (Methods 1311 / ANSI/NEMA C78.LL 1256-2003)
SPLP = P (Method 1312) MEP=M (Method 1320)
ZHE = Z (Method 1311/1312)

** The pH of the extraction fluid must be checked prior to use and must be within limits specified above

# Subcontracted Data

This is the last page of the data generated by Hampton-Clarke.
The following pages were submitted to HC by subcontracted laboratories.

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# ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Hampton-Clarke Veritech
175 Route 46 West
Fairfield NJ 07004

Report Date: October 23, 2017 14:39

**Project: 7092827**

Account #: 10819
Group Number: 1857935
SDG: VRU58
PO Number: 7092827
State of Sample Origin: NY

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Hampton-Clarke Veritech Attn: Reporting

Respectfully Submitted,

Lyssa M. Longenecker

Lyssa M. Longenecker
Specialist

(717) 556-7321



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## SAMPLE INFORMATION

| Client Sample Description | Sample Collection Date/Time | ELLE# |
|---|---|---|
| AD00298-002 Composite Soil | 09/28/2017 14:00 | 9242194 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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**Sample Description:** AD00298-002 Composite Soil
475 Exterior NYRecycle Comp

**Project Name:** 7092827

Submittal Date/Time: 10/03/2017 09:35
Collection Date/Time: 09/28/2017 14:00
SDG#: VRU58-01

**Hampton-Clarke Veritech**
**ELLE Sample #:** SW 9242194
**ELLE Group #:** 1857935
**Matrix: Soil**

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **Pesticides** | | **SW-846 8141B** | ug/kg | ug/kg | |
| 10594 | Ethyl Parathion | 56-38-2 | N.D. D1 | 25 | 1 |
| 10594 | Methyl Parathion | 298-00-0 | N.D. D1 | 25 | 1 |
| **Wet Chemistry** | | **SM 2540 G-1997 %Moisture Calc** | % | % | |
| 00111 | Moisture | n.a. | 11.5 | 0.50 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

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**Sample Description:** AD00298-002 Composite Soil
475 Exterior NYRecycle Comp

**Project Name:** 7092827

Submittal Date/Time: 10/03/2017 09:35
Collection Date/Time: 09/28/2017 14:00
SDG#: VRU58-01

**Hampton-Clarke Veritech**
**ELLE Sample #:** SW 9242194
**ELLE Group #:** 1857935
**Matrix: Soil**

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|
| **Dioxins/Furans** | **SW-846 8290A Feb 2007 Rev 1** | | ng/kg | ng/kg | |
| 12937 | 2378-TCDD | 1746-01-6 | 0.122 JQ | 0.108 | 1 |
| 12937 | 2378-TCDF | 51207-31-9 | 0.678 JQ | 0.108 | 1 |
| 12937 | 12378-PeCDF | 57117-41-6 | 0.761 J | 0.432 | 1 |
| 12937 | 23478-PeCDF | 57117-31-4 | 1.82 J | 0.324 | 1 |
| 12937 | 123478-HxCDF | 70648-26-9 | 1.13 J | 0.324 | 1 |
| 12937 | 123678-HxCDF | 57117-44-9 | 0.838 JQ | 0.324 | 1 |
| 12937 | 123789-HxCDF | 72918-21-9 | N.D. | 0.540 | 1 |
| 12937 | 234678-HxCDF | 60851-34-5 | 1.43 J | 0.324 | 1 |
| 12937 | 1234678-HpCDF | 67562-39-4 | 8.63 | 0.324 | 1 |
| 12937 | 1234789-HpCDF | 55673-89-7 | 0.833 J | 0.432 | 1 |
| 12937 | OCDF | 39001-02-0 | 19.3 | 0.540 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 88 | 40 - 135 |
| 13C12-12378-PeCDD | 77 | 40 - 135 |
| 13C12-123478-HxCDD | 85 | 40 - 135 |
| 13C12-123678-HxCDD | 83 | 40 - 135 |
| 13C12-123789-HxCDD | 82 | 40 - 135 |
| 13C12-1234678-HpCDD | 61 | 40 - 135 |
| 13C12-OCDD | 44 | 40 - 135 |
| 13C12-2378-TCDF | 92 | 40 - 135 |
| 13C12-12378-PeCDF | 82 | 40 - 135 |
| 13C12-23478-PeCDF | 80 | 40 - 135 |
| 13C12-123478-HxCDF | 86 | 40 - 135 |
| 13C12-123678-HxCDF | 88 | 40 - 135 |
| 13C12-234678-HxCDF | 85 | 40 - 135 |
| 13C12-123789-HxCDF | 87 | 40 - 135 |
| 13C12-1234678-HpCDF | 67 | 40 - 135 |
| 13C12-1234789-HpCDF | 58 | 40 - 135 |
| 13C12-OCDF | 43 | 40 - 135 |

***Dioxins/Furans Data Qualifiers:***

| | |
|---|---|
| *B* | *Detected in Method Blank* |
| *U* | *Undetected* |
| *J* | *Estimated concentration between Estimated Detection Limit and Minimum Reporting Level* |
| *E* | *Exceeds calibration range* |
| *C* | *Confirmed quantitation on secondary GC column* |
| *Q* | *EMPC - Estimated Maximum Possible Concentration* |
| *F* | *Interference is present* |
| *S* | *Saturation of detection signal* |

EDL = Estimated Detection Limit

**Sample Description:** **AD00298-002 Composite Soil**
**475 Exterior NYRecycle Comp**

**Project Name:** **7092827**

Submittal Date/Time: 10/03/2017 09:35
Collection Date/Time: 09/28/2017 14:00
SDG#: VRU58-01

**Hampton-Clarke Veritech**
**ELLE Sample #: SW 9242194**
**ELLE Group #: 1857935**
**Matrix: Soil**

## Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10594 | OP Pesticides in Soils | SW-846 8141B | 1 | 172770023A | 10/09/2017 20:24 | Richard A Shober | 1 |
| 11133 | OP Pest Soils Update IV Ext | SW-846 3540C | 1 | 172770023A | 10/05/2017 15:15 | Kelli M Barto | 1 |
| 12937 | Dioxins/Furans in Solids-8290 | SW-846 8290A Feb 2007 Rev 1 | 1 | 17282009 | 10/21/2017 19:41 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | SW-846 8290A Feb 2007 Rev 1 | 1 | 17282009 | 10/10/2017 08:25 | Alex L Barton | 1 |
| 00111 | Moisture | SM 2540 G-1997 %Moisture Calc | 1 | 17277820006B | 10/04/2017 09:42 | Larry E Bevins | 1 |

EDL = Estimated Detection Limit

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# Quality Control Summary

Client Name: Hampton-Clarke Veritech
Reported: 10/23/2017 14:39

Group Number: 1857935

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Method Blank

| Analysis Name | Result | MDL |
|---|---|---|
| | ug/kg | ug/kg |
| Batch number: 172770023A | Sample number(s): 9242194 | |
| Ethyl Parathion | N.D. | 22 |
| Methyl Parathion | N.D. | 22 |
| **Analysis Name** | **Result** | **EDL** |
| | ng/kg | ng/kg |
| Batch number: 17282009 | Sample number(s): 9242194 | |
| 2378-TCDD | N.D. | 0.100 |
| 2378-TCDF | N.D. | 0.100 |
| 12378-PeCDF | N.D. | 0.400 |
| 23478-PeCDF | N.D. | 0.300 |
| 123478-HxCDF | N.D. | 0.300 |
| 123678-HxCDF | N.D. | 0.300 |
| 123789-HxCDF | N.D. | 0.500 |
| 234678-HxCDF | N.D. | 0.300 |
| 1234678-HpCDF | N.D. | 0.300 |
| 1234789-HpCDF | N.D. | 0.400 |
| OCDF | N.D. | 0.500 |

## LCS/LCSD

| Analysis Name | LCS Spike Added ug/kg | LCS Conc ug/kg | LCSD Spike Added ug/kg | LCSD Conc ug/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 172770023A | Sample number(s): 9242194 | | | | | | | | |
| Ethyl Parathion | 402 | 464.33 | | | 116* | | 81-115 | | |
| Methyl Parathion | 400 | 460.93 | | | 115 | | 81-115 | | |
| | % | % | % | % | | | | | |
| Batch number: 17277820006B | Sample number(s): 9242194 | | | | | | | | |
| Moisture | 89.5 | 89.42 | | | 100 | | 99-101 | | |
| **Analysis Name** | **OPR Spike Added ng/kg** | **OPR Conc ng/kg** | **OPRD Spike Added ng/kg** | **OPRD Conc ng/kg** | **OPR %REC** | **OPRD %REC** | **OPR/OPRD Limits** | **RPD** | **RPD Max** |
| Batch number: 17282009 | Sample number(s): 9242194 | | | | | | | | |
| 2378-TCDD | 20 | 19.83 | | | 99 | | 67-158 | | |

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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# Quality Control Summary

Client Name: Hampton-Clarke Veritech
Reported: 10/23/2017 14:39

Group Number: 1857935

## OPR/OPRD (continued)

| Analysis Name | OPR Spike Added ng/kg | OPR Conc ng/kg | OPRD Spike Added ng/kg | OPRD Conc ng/kg | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 2378-TCDF | 20 | 22.05 | | | 110 | | 75-158 | | |
| 12378-PeCDF | 100 | 107.15 | | | 107 | | 80-134 | | |
| 23478-PeCDF | 100 | 101.92 | | | 102 | | 68-160 | | |
| 123478-HxCDF | 100 | 106.39 | | | 106 | | 72-134 | | |
| 123678-HxCDF | 100 | 104.22 | | | 104 | | 84-130 | | |
| 123789-HxCDF | 100 | 102.83 | | | 103 | | 78-130 | | |
| 234678-HxCDF | 100 | 102.21 | | | 102 | | 70-156 | | |
| 1234678-HpCDF | 100 | 99.64 | | | 100 | | 82-122 | | |
| 1234789-HpCDF | 100 | 103.66 | | | 104 | | 78-138 | | |
| OCDF | 200 | 215.58 | | | 108 | | 63-170 | | |

## MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc ug/kg | MS Spike Added ug/kg | MS Conc ug/kg | MSD Spike Added ug/kg | MSD Conc ug/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 172770023A | Sample number(s): 9242194 UNSPK: P241510 | | | | | | | | | |
| Ethyl Parathion | N.D. | 400 | 401.58 | 402 | 418.76 | 100 | 104 | 81-115 | 4 | 35 |
| Methyl Parathion | N.D. | 398 | 387.38 | 399 | 403.02 | 97 | 101 | 81-115 | 4 | 35 |

## Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc % | DUP Conc % | DUP RPD | DUP RPD Max |
|---|---|---|---|---|
| Batch number: 17277820006B | Sample number(s): 9242194 BKG: P235022 | | | |
| Moisture | 25.29 | 24.69 | 2 | 5 |

## Surrogate Quality Control

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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# Quality Control Summary

Client Name: Hampton-Clarke Veritech
Reported: 10/23/2017 14:39

Group Number: 1857935

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: OP Pesticides in Soils
Batch number: 172770023A

| | 2-Nitro-m-xylene-D1 | 2-Nitro-m-xylene-D2 |
|---|---|---|
| 9242194 | 92 | 92 |
| Blank | 98 | 94 |
| LCS | 111 | 106 |
| MS | 89 | 86 |
| MSD | 93 | 90 |
| Limits: | 61-142 | 61-142 |

Analysis Name: Dioxins/Furans in Solids-8290
Batch number: 17282009

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 9242194 | 88 | 77 | 85 | 83 | 82 | 61 |
| Blank | 54 | 56 | 68 | 71 | 68 | 75 |
| OPR | 50 | 57 | 63 | 65 | 62 | 67 |
| Limits: | 40-135 | 40-135 | 40-135 | 40-135 | 40-135 | 40-135 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 9242194 | 44 | 92 | 82 | 80 | 86 | 88 |
| Blank | 83 | 57 | 65 | 61 | 61 | 72 |
| OPR | 71 | 50 | 60 | 52 | 53 | 69 |
| Limits: | 40-135 | 40-135 | 40-135 | 40-135 | 40-135 | 40-135 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 9242194 | 85 | 87 | 67 | 58 | 43 |
| Blank | 66 | 66 | 96 | 61 | 67 |
| OPR | 56 | 48 | 88 | 46 | 49 |
| Limits: | 40-135 | 40-135 | 40-135 | 40-135 | 40-135 |

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

# CHAIN OF CUSTODY RECORD

A# 10819 G#1857935
S# 9242194

Hampton-Clarke, Inc.
175 US Hwy 46 West
Fairfield, New Jersey, 07004
Ph:800-426-9992 Fax:973-439-1458

| Report To: | Invoice To: | Project #: | CocID#: |
|---|---|---|---|
| Hampton-Clarke, Inc.:<br>Attn:Reporting<br>175 Route 46 West<br>Fairfield, New Jersey 07004 | Hampton-Clarke, Inc.:<br>Attn:Accounting<br>175 Route 46 West<br>Fairfield, New Jersey 07004 | 7092827 | 5558 |

**FINAL RESULTS TO: subresults@hcvlab.com**
**PRELIM/VERBAL RESULTS TO: subresults@hcvlab.com**

**EDD: NEW JERSEY HAZRESULT OR EQUIS EZEDD REQUIRED FOR ALL DATA SUBMITTALS!**

**Turn Around Time:** ~~1 week~~ 4 -days **Preliminary Due Date:** 10/9/2017
**Report Type:** NYDOH-R (REDUCED) **Hard Copy Due Date:** 10/23/2017

| Sample Number: | Client ID | Matrix: | Date Collected: | Time Collected: | Analysis Requested |
|---|---|---|---|---|---|
| AD00298-002 | 475 EXTERIOR NYRECYCLE COMP | Soil | 9/28/2017 | 2:00:00 PM | Organophosphorous Pesticides 8141:(Analysis Method:EPA 8141) |
| AD00298-002 | 475 EXTERIOR NYRECYCLE COMP | Soil | 9/28/2017 | 2:00:00 PM | Dioxins/Furans 8290:(Analysis Method:EPA 8290) |

| Relinquished By: | Accepted By: | Date: | Time: | Comments, Notes, Special Requirements, HAZARDS |
|---|---|---|---|---|
| [signature] | UPS | 10/2/17 | 1700 | EPA 8141 - Methyl / Ethyl Parathion only DTW 10/2/17<br>EPA 8290 - 2,3,7,8 TCDD & PCDF only<br>Polychlorotal dibenzo-furans |
| | [signature] | 10/3/17 | 0935 | Cooler Temp: 2.2°C |

HC Lab Use Only: Subcontracted Lab Id and Contact: Lancaster, Angela Miller, (717) 556-7260, LabID: H, 2425 New Holland Pike, , Lancaster, PA, 17601

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 196157

Group Number(s): 1857935

Client: HAMPTON-CLARKE, INC. ;

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | UPS | Arrival Timestamp: | 10/03/2017 9:35 |
| Number of Packages: | 1 | Number of Projects: | 1 |
| State/Province of Origin: | NJ | | |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | No | Sample Date/Times match COC: | Yes |
| Samples Chilled: | Yes | VOA Vial Headspace ≥ 6mm: | N/A |
| Paperwork Enclosed: | Yes | Total Trip Blank Qty: | 0 |
| Samples Intact: | Yes | Air Quality Samples Present: | No |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

*Unpacked by Ruth Shank (12390) at 12:13 on 10/03/2017*

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|---|---|---|---|---|---|---|---|
| 1 | 32170023 | 2.2 | IR | Wet | Y | Loose | N |



2425 New Holland Pike
Lancaster, PA 17605-2425



T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

## Conrad Burkholder

**From:** Stacy Hess
**Sent:** Tuesday, October 03, 2017 2:43 PM
**To:** Conrad Burkholder; !us19_dp39_Unassigned
**Subject:** RE: TAT and Data Package Question

Hi Conrad- Please enter as N-8. We notified the client that we are unable to offer an expedited TAT at this time. I'm not certain about the DP, we will have to confirm with the client. Please enter with an SDG code, and we will update with the DP scans if the client determines one is needed.

Thanks,
Stacy

-----Original Message-----
From: Conrad Burkholder
Sent: Tuesday, October 03, 2017 2:39 PM
To: !us19_dp39_Unassigned
Subject: FW: TAT and Data Package Question

Hello,

Is the TAT correct for this? Also, does this require a data package?

Thanks,
Conrad

-----Original Message-----
From: 42Scanmer@lancasterlabs.com [mailto:42Scanmer@lancasterlabs.com]
Sent: Tuesday, October 03, 2017 2:29 PM
To: Conrad Burkholder
Subject:

This E-mail was sent from "RNP0966B2" (MP 2851/LD528).

Scan Date: 10.03.2017 14:28:54 (-0400)
Queries to: 42Scanmer@lancasterlabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **BMQL** | Below Minimum Quantitation Level | **mg** | milligram(s) |
| **C** | degrees Celsius | **mL** | milliliter(s) |
| **cfu** | colony forming units | **MPN** | Most Probable Number |
| **CP Units** | cobalt-chloroplatinate units | **N.D.** | non-detect |
| **F** | degrees Fahrenheit | **ng** | nanogram(s) |
| **g** | gram(s) | **NTU** | nephelometric turbidity units |
| **IU** | International Units | **pg/L** | picogram/liter |
| **kg** | kilogram(s) | **RL** | Reporting Limit |
| **L** | liter(s) | **TNTC** | Too Numerous To Count |
| **lb.** | pound(s) | **µg** | microgram(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| **meq** | milliequivalents | **umhos/cm** | micromhos/cm |

| | |
|---|---|
| **<** | less than |
| **>** | greater than |
| **ppm** | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. |
| **ppb** | parts per billion |
| **Dry weight basis** | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. |

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# Data Qualifiers

| Qualifier | Definition |
|---|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| J (or G, I, X) | Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column >40%. The lower result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

# APPENDIX K

## Manifests for Imported Fill from New York Recycling

| Date | Manifest No. | License Plate No. | Weight (estimated) |
|---|---|---|---|
| 11/27/2017 | 51001 | 25623MK | 18 cubic yards |
| 11/27/2017 | 51002 | 25623MK | 18 cubic yards |
| 11/27/2017 | 51003 | 25623MK | 18 cubic yards |
| 11/27/2017 | 51004 | 25623MK | 18 cubic yards |
| 11/27/2017 | 51005 | 69405ME | 18 cubic yards |
| 11/27/2017 | 51006 | 69405ME | 18 cubic yards |
| 11/27/2017 | 51007 | 69405ME | 18 cubic yards |
| 11/27/2017 | 51009 | 69405ME | 18 cubic yards |
| 11/27/2017 | 51010 | 69405ME | 18 cubic yards |
| 11/27/2017 | 51011 | 69405ME | 18 cubic yards |
| 11/27/2017 | 51012 | 69405ME | 18 cubic yards |
| 11/27/2017 | 51013 | 25623MK | 18 cubic yards |
| 11/27/2017 | 51014 | 25623MK | 18 cubic yards |
| 11/27/2017 | 51016 | 25623MK | 18 cubic yards |
| | | | |
| 11/30/2017 | 51015 | 25623MK | 18 cubic yards |
| 11/30/2017 | 51030 | 25623MK | 18 cubic yards |
| 11/30/2017 | 51031 | 25623MK | 18 cubic yards |
| 11/30/2017 | 51032 | 25623MK | 18 cubic yards |
| 11/30/2017 | 51033 | 69405ME | 18 cubic yards |
| 11/30/2017 | 51034 | 69405ME | 18 cubic yards |
| 11/30/2017 | 51035 | 69405ME | 18 cubic yards |
| 11/30/2017 | 51036 | 69405ME | 18 cubic yards |
| 11/30/2017 | 51037 | 69405ME | 18 cubic yards |
| 11/30/2017 | 51038 | 69405ME | 18 cubic yards |
| 11/30/2017 | 51039 | 69405ME | 18 cubic yards |
| 11/30/2017 | 51042 | 69405ME | 18 cubic yards |
| | | | |
| 12/04/2017 | 51017 | 69405ME | 18 cubic yards |
| 12/04/2017 | 51018 | 69405ME | 18 cubic yards |
| 12/04/2017 | 51040 | 69405ME | 18 cubic yards |
| 12/04/2017 | 51046 | 69405ME | 18 cubic yards |
| 12/04/2017 | 51047 | 69405ME | 18 cubic yards |
| 12/04/2017 | 51048 | 69405ME | 18 cubic yards |
| 12/04/2017 | 51049 | 69405ME | 18 cubic yards |
| | | | |
| 12/05/2017 | 51019 | 69405ME | 18 cubic yards |
| 12/05/2017 | 51020 | 69405ME | 18 cubic yards |
| 12/05/2017 | 51021 | 69405ME | 18 cubic yards |
| 12/05/2017 | 51022 | 69405ME | 18 cubic yards |

| | | | |
|---|---|---|---|
| 12/05/2017 | 51023 | 69405ME | 18 cubic yards |
| 12/05/2017 | 51045 | 69405ME | 18 cubic yards |
| | | | |
| 12/07/2017 | 51043 | 69405ME | 18 cubic yards |
| 12/07/2017 | 51044 | 69405ME | 18 cubic yards |
| 12/07/2017 | (unknown) | 69405ME | 18 cubic yards |
| 12/07/2017 | (unknown) | 69405ME | 18 cubic yards |
| 12/07/2017 | (unknown) | 69405ME | 18 cubic yards |
| 12/07/2017 | (unknown) | 69405ME | 18 cubic yards |
| 12/07/2017 | (unknown) | 69405ME | 18 cubic yards |
| | | | |
| 12/08/2017 | 134314 | 69405ME | 18 cubic yards |
| 12/08/2017 | 134317 | 69405ME | 18 cubic yards |
| 12/08/2017 | 134327 | 69405ME | 18 cubic yards |
| 12/08/2017 | 134342 | 69405ME | 18 cubic yards |
| 12/08/2017 | 134348 | 69405ME | 18 cubic yards |
| 12/08/2017 | 134362 | 69405ME | 18 cubic yards |
| 12/08/2017 | 134369 | 69405ME | 18 cubic yards |
| | | | |
| 03/06/2018 | 51050 | 25263MK | 18 cubic yards |
| 03/06/2018 | 51051 | 25263MK | 18 cubic yards |
| 03/06/2018 | 51052 | 25263MK | 18 cubic yards |
| 03/06/2018 | 51053 | 25263MK | 18 cubic yards |
| 03/06/2018 | 51054 | 25263MK | 18 cubic yards |
| 03/06/2018 | 51055 | 25263MK | 18 cubic yards |
| | | | |
| **GRAND TOTAL** | **59 LOADS** | | **1,062 CUBIC YARDS** |

City of New York
Parks & Recreation

№ 51001

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jaime Flores Company: TEV Trucking

Address: 19 Caleb's Path Central Islip NY Phone: (631) 3131059 Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bx NY 10451

Date: 11/27/17 Time: 6:10 AM Truck License Plate No.: 25623MK State: NY

Estimated Volume Loaded: 18 cy *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fontanez Received:

**Load Identifier:** License No.: 25623 MK Load No.: 1 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Crushed Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

No 51006

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fe[illegible] Co[illegible] Company: I E V Trucking

Address: 13 Jeffe[illegible] Ave Brentwood Phone: (631) 812-1053 Fax: ( )

**Truck Loaded:** Site Name: New Ne Jo Recycling Address: 11 One[illegible] Ave Sou Shore

Date: 11/9/21 Time: 8:52 AM Truck License Plate No.: CAHOE ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: 13 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fontanato Received: 0600

**Load Identifier:** License No.: 69405 ME Load No.: 2 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51002

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jamie Fiales Company: TEV Hauling

Address: 117 Caleb's Path Central Islip NY Phone: (631) 813 1089 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St, Bx NY 10451

Date: 11/27/17 Time: 8:40AM Truck License Plate No.: 25623MK State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received:

**Load Identifier:** License No.: 25623 MK Load No.: 3 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Coarse Sand w/ Gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51005

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernando Cadena Company: I E V Trucking

Address: _____ Phone: (631) 8[illegible] Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 4 O'neil Ave Bay Shore NY

Date: 11/27/17 Time: 6:12 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results
☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 0930

**Load Identifier:** License No.: 69405 ME Load No.: 4 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown coarse Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51003

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yanic Flores Company: T L V trucking

Address: 197 Caleb's Path Central Islip ny Phone: (631) 231 1059 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bx ny 10451

Date: 11.27.17 Time: 10:06 AM Truck License Plate No.: 25623 MK State: Ny

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes ☐ No, If Yes, attach laboratory results

If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling

Address: 475 Exterior St. Bx NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1030

**Load Identifier:** License No.: 25623 MK Load No.: 5 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51009

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: _____

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx, NY 10451

Date: November 21, 2017 Time: 10 - 11 am Truck License Plate No.: 69405ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 EXTERIOR St Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1040

**Load Identifier:** License No.: 69405 ME Load No.: 6 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Coarse Sand w/ Gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51004

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yanic Flores Company: T & V Trucking

Address: 197 Caleb's Path Central Islip NY Phone: (631) 813 1059 Fax: ( )

**Truck Loaded:** Site Name: Newyork recycling Address: 475 Exterior ST BX NY 10451

Date: 11-21-17 Time: 10:57AM Truck License Plate No.: 25623MA State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results
☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1120

**Load Identifier:** License No.: 25623 MA Load No.: 7 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Coarse - Fine sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51007

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Teobaldo Cadena Company: I C V Trucks

Address: 11 O'neill Ave Bay Shore Phone: (631) 2[illegible] Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx 10451

Date: 11-27-17 Time: 11:17AM Truck License Plate No. 69405ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1140

**Load Identifier:** License No.: 69405ME Load No.: 8 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Coarse-fine Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51013

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jose Flores Company: JLV trucking

Address: 4 oneal Ave Bayshore ny Phone: 631x831059 Fax: ( )

**Truck Loaded:** Site Name: New york Recycling Address: 475 Exterior ST Bx 10451

Date: 11-27-17 Time: 10 29pM Truck License Plate No. 25623 MK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1250

**Load Identifier:** License No.: 25623 MK Load No.: 9 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.

Basic Description Of Material: Brown coarse Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51012

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jaroslaw Cadenc' Company: I & V. Trucking

Address: 41 Quail Run Bay Shore Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 1175 Exterior Street, Bronx

Date: 11-27-17 Time: 12:31pM Truck License Plate No.: _____ State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 1175 Exterior Street Bronx, Ny 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Portunato Received: 1255

**Load Identifier:** License No.: 69405 ME Load No.: 10 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51014

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jaime Flores Company: I / V Trucking

Address: 4 Coral Ave Brentwood, NY Phone: (631) 813 1059 Fax: ( )

**Truck Loaded:** Site Name: New York recycling Address: 475 Exterior ST Bx 10451

Date: 11.27.17 Time: 1:18 PM Truck License Plate No. 25623 State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1340

**Load Identifier:** License No.: 25623 MK Load No.: 11 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51011

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernando Cardona Company: J. S. V. Trucking

Address: 11 O'neill Ave Bay Shore Phone: (718) 742-0755 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx, NY 10451

Date: 11-27-17 Time: 1:25pm Truck License Plate No.: 6945ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1345

**Load Identifier:** License No.: 6AL05 ME Load No.: 12 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51016

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yunic Flores Company: I EV trucking

Address: 4 Creed Ave Bayshore NY Phone: 631813 Fax: ( )

**Truck Loaded:** Site Name: Newyork recycling Address: 475 Exterior st BX 10541

Date: 11-27-17 Time: 2:14pm Truck License Plate No: 25623 MK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fontanto Received: 1410

**Load Identifier:** License No.: 25623 MK Load No.: 13 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Crushed Stone mix gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51010

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Leonardo Cadena Company: I E V Trucking

Address: Howell Lay Shore Phone: (___) Fax: (___)

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bronx NY 10451

Date: 11-27-17 Time: 2:16PM Truck License Plate No.: 6XH 3BME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 11/15

**Load Identifier:** License No.: 69405 NE Load No.: 14 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown color Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51033

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: / Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: _____

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York [illegible] Address: 475 Exterior St. Bx NY 10451

Date: 11/20/17 Time: 6:00 PM Truck License Plate No.: _____ State: NY

Estimated Volume Loaded: _____ *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results
☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 0700

**Load Identifier:** License No.: 69405 ME Load No.: 15 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown coarse Sand w/ gravel
*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W

City of New York
Parks & Recreation

№ 51034

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: T E V Trucking

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: _____

Date: 11/5/17 Time: 6:01 AM Truck License Plate No.: _____ State: NY

Estimated Volume Loaded: _____ *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling

Address: 415 Jackson St. Bronx, NY Block/Lot: TM# 13668

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 0645

**Load Identifier:** License No.: 64405 NE Load No.: 16 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown fine coarse Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51015

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: [illegible] Company: T & V Trucking

Address: 1 Circle Ave Bay Shore NY Phone: (631) 813 5910 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bx

Date: 11.29.17 Time: [illegible] Truck License Plate No.: 745623-MK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling

Address: 475 Exterior St. Bx NY 10451 Block/Lot: TK# 133563

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 0800

**Load Identifier:** License No.: 745623 MK Load No.: 17 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown [illegible] Soil w/ crushed gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51035

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: _____

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: _____ Address: _____

Date: _____ Time: _____ Truck License Plate No.: _____ State: _____

Estimated Volume Loaded: _____ *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results
❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: New York Beverly LLC

Address: 175 Evelyn St. Bx, NY. 10454 Block/Lot: Lot #13 (pt.)

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 0845

**Load Identifier:** License No.: 69105 ME Load No.: 18 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown coarse-fine sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51036

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: _____

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 175 Evergreen Street Bronx, NY 10465

Date: 11-30-17 Time: 9:36AM Truck License Plate No.: _____ State: _____

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 175 Evergreen Street Bronx, NY 10465 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 0935

**Load Identifier:** License No.: 64095-ME Load No.: 19 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown course fine Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W-2/0587

City of New York
Parks & Recreation

№ 51037

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: _____

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street Bronx, NY 10451

Date: 11-30-17 Time: 10:37 AM Truck License Plate No.: _____ State: _____

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: 0

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1045

**Load Identifier:** License No.: G4105 ME Load No.: 20 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown coarse-fine sand w/ crushed gravel

*CRUSHED STONES/SANDY/LOAMY ETC NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51030

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yonic Flores Company: JCV Trucking

Address: 4 Hazel St Bayside Phone: (631) 212 5910 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bx

Date: 11.30.17 Time: 11:00AM Truck License Plate No. Z5623 DK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1130

**Load Identifier:** License No.: 245023 MA Load No.: 21 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown coarse fine Sand w/ crushed gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51038

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: _____

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bronx NY 10451

Date: 11-30-17 Time: 11:13AM Truck License Plate No.: _____ State: _____

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10451 Block/Lot: 0

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 11/5

**Load Identifier:** License No.: 69105 ME Load No.: 22 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown course-fine Sand w/ crushed

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51031

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jamie Flores Company: JLV Trucking

Address: 4 Great St Hopelawn Phone: 6463135910 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St

Date: 11-30-17 Time: 12:23PM Truck License Plate No.: Z5623 MK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1250

**Load Identifier:** License No.: 25623 MK Load No.: 23 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown coarse-fine Sand w/ crushed Stone

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W-2/0587

City of New York
Parks & Recreation

№ 51039

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: _____

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bronx

Date: 11-30-17 Time: 12:31PM Truck License Plate No.: _____ State: NY

Estimated Volume Loaded: 18 yd *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results
☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1300

**Load Identifier:** License No.: 64105 NE Load No.: 24 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown coarse fine Sand w/ crushed stone
*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-4520[illegible]-1 W-270587

City of New York
Parks & Recreation

№ 51032

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jaime Flores Company: T L V Trucking

Address: 40 Neal Ave Bayshore Phone: (631) 617-1859 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bx

Date: 11-30-17 Time: 1:18PM Truck License Plate No.: 2623MK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fachando Received: 1345

**Load Identifier:** License No.: 2623 MK Load No.: 25 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown sandy loam soil w/ crushed stone

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51042

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: _____

Address: _____ Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: _____ Address: _____

Date: _____ Time: _____ Truck License Plate No.: _____ State: _____

Estimated Volume Loaded: _____ *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1350

**Load Identifier:** License No.: 69405 ME Load No.: 26 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown course Sand w/ crushed stone

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

City of New York
Parks & Recreation

№ 51020

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: TRIPLE G

Address: 300 Hutchinson Pwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: ~~Turnpike Fence Post~~ NY Recycling Address: 475 Exterior Street

Date: 12/5/17 Time: 8:44Am Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes ☐ No, If Yes, attach laboratory results

If No, has fill from this site previously been accepted at ☐ Yes ☑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 1045 Block/Lot: 13401 6

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134016
**Date:** 12/05/17
**NYR Ticketer:** RAVEN

**Outbound**
**8:43 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 36
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: #51020

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:
Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51022

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: ——— Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN RIVAS
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN Rivas Company: Triple G

Address: 300 Hutchinson Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10541

Date: 12/5/17 Time: 10:55AM Truck License Plate No.: 694105 MF State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx. NY 10541 Block/Lot: 13404 7

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,




**Ticket No:** 134047
**Date:** 12/05/17
**NYR Ticketer:** RAVEN

**Outbound**
**10:55 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 38
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: #51022

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

City of New York
Parks & Recreation

№ 51023

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G.

Address: 300 Hutchinson Rwy Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx 10451

Date: 12/5/17 Time: 9:50 AM Truck License Plate No.: 609405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes ☐ No, If Yes, attach laboratory results

If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10451 Block/Lot: 2134033

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,




**Ticket No:** 134033
**Date:** 12/05/17
**NYR Ticketer:** RAVEN

**Outbound**
**9:50 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 37
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: #51023

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Juan Rivas

**Driver Signature**

City of New York
Parks & Recreation

№ 51045

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Kings
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Kings Company: Triple 6.

Address: Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: Trump Links Ferry Point Address: 475 Exterior St. Bronx, 10451

Date: 12/5/17 Time: 7:19AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10451 Block/Lot: 6133998

Owner of Excavation Site: Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site:

Current and Past Usage of Site where Loading Took Place (if known):

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Received:

**Load Identifier:** License No.: Load No.: Estimated Volume: *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material:

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Date: Sample No.:

Results Received By (Name): Date:

Sampling Results: ☐ Acceptable ☐ Unacceptable Action:

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,




**Ticket No:** 133998
**Date:** 12/05/17
**NYR Ticketer:** RAVEN

**Outbound**
**7:19 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 35
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: #51045

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Susan Russo

**Driver Signature**

VG #05-452082-1 W-270587

City of New York
Parks & Recreation

№ 51043

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: ____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN RIVAS
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN RIVAS Company: Triple G.

Address: 300 Hutchinson River pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bx NY 10451

Date: 12/7/17 Time: 6:04 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 cy *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405 ME (NY) Load No.: 1 Estimated Volume: 25T *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: soil with crushed stones

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 1

Results Received By (Name): _____ Date: _____

Sampling Results: ☑ Acceptable ☐ Unacceptable Action: using PID

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,




**Ticket No:** 134224
**Date:** 12/07/17
**NYR Ticketer:** ROGER

**Outbound**
**6:04 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 41
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: SFTS#51043

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:
Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** 

**Driver Signature**

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VG #23-452082-1 W-270587

№ 51044

City of New York
Parks & Recreation

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Kuras
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Kuras Company: Triple G.

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. NY. 1054

Date: 12/7/17 Time: 7:46AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

***Original Site where Soil was Excavated:*** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx NY 1054 Block/Lot: 2134 239

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405ME (NY) Load No.: 2 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: soil with crushed stones

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 2

Results Received By (Name): _____ Date: _____

Sampling Results: ☑ Acceptable ☐ Unacceptable Action: using PID

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134239
**Date:** 12/07/17
**NYR Ticketer:** RAVEN

**Outbound**

**7:46 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 42
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: #51044

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

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# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx NY 10541

Date: 12/7/17 Time: 9:02 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx. NY 10541 Block/Lot: 1349 49

*Owner of Excavation Site:* _____ Has Excavation Site been Tested for Contamination:

*Operator of Excavation Site:* _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405ME (NY) Load No.: 3 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Soil with crushed stones

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 3

Results Received By (Name): _____ Date: _____

Sampling Results: ☑ Acceptable ☐ Unacceptable Action: using PID

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134249
**Date:** 12/07/17
**NYR Ticketer:** RAVEN

**Outbound**
**9:02 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 43
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: DRIVER DOEST KNOW MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Juan Rivas

**Driver Signature**

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# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN RIVAS
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN RIVAS Company: Triple G.

Address: 300 Hutchinson River Pkwy. Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. NY 10541

Date: 12/7/17 Time: 10:11 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 6134257

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405ME (NY) Load No.: 4 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: soil with crushed stones
*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 4

Results Received By (Name): _____ Date: _____

Sampling Results: ☑ Acceptable ☐ Unacceptable Action: using PID

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

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**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134257
**Date:** 12/07/17
**NYR Ticketer:** RAVEN

**Outbound**
**10:11 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 44
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: DRIVER DOES'NT KNOW MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

Scanned by CamScanner

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: ___ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G.

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior street. Bronx. NY 10541

Date: 12/7/17 Time: 11:17AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

***Original Site where Soil was Excavated:*** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx. NY. 10541 Block/Lot: J 134268

*Owner of Excavation Site:* _____ Has Excavation Site been Tested for Contamination:

*Operator of Excavation Site:* _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405ME (NY) Load No.: 5 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: soil with crushed stones

*CRUSHED STONES/SANDY/LOAMY ETC NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 5

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: using PID

WHITE: Exit Gate / PINK: Driver / YELLOW. Site / BLUE: Ind. Monitor / GREEN: Site Entry

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**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134268
**Date:** 12/07/17
**NYR Ticketer:** RAVEN

**Outbound**
**11:17 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 45
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: DRIVER DOES'NT KNOW MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Susan Russ

**Driver Signature**

Scanned by CamScanner

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G.

Address: 300 Hutchinson River Pkwy Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. NY 10541

Date: 12/7/17 Time: 12:34PM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 2734 282

*Owner of Excavation Site:* _____ Has Excavation Site been Tested for Contamination:

*Operator of Excavation Site:* _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405 ME (NY) Load No.: 6 Estimated Volume 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: soil with crushed stone

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 6

Results Received By (Name): _____ Date: _____

Sampling Results: ☑ Acceptable ☐ Unacceptable Action. using PID

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Scanned by CamScanner

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134282
**Date:** 12/07/17
**NYR Ticketer:** RAVEN

**Outbound**
**12:34 PM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 46
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: DRIVER DOES'NT KNOW MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Samira Ramos

**Driver Signature**

Scanned by CamScanner

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G.

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. 1054

Date: 12/7/17 Time: 1:20PM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 2347 93

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405 ME (NY) Load No.: 7 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: soil with crushed stone

*CRUSHED STONES/SANDY/LOAMY ETC NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 7

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: using PID

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Scanned by CamScanner

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134293
**Date:** 12/07/17
**NYR Ticketer:** RAVEN

**Outbound**
**1:22 PM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 47
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: DRIVER DOES'NT KNOW MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Juan Ramos

**Driver Signature**

Scanned by CamScanner

TK#: 134317

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Jaar Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jaar Rivas Company: Triple 6

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. NY 1054

Date: 12/8/17 Time: 6:01 AM Truck License Plate No.: 64405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 134317

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Dan Bowman Received:

**Load Identifier:** License No.: 64405 ME Load No.: 1-Total-48 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Sand w/ recycled concrete 1"-1½"

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Scanned by CamScanner

TK# 134327

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN Rivas Company: Triple G.

Address: 300 Hutchinson River Pkwy Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. 10541

Date: 12/8/17 Time: 7:59AM Truck License Plate No.: 64405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 134327

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Dan Bowman Received:

**Load Identifier:** License No.: _____ Load No.: Z - Total 49 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Scanned by CamScanner

Tax# 134342

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson River Pkwy. Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street Bronx. 10451

Date: 12/8/17 Time: 9:11 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No. If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134342

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

upervisor Name: Don Bowman Received:

**oad Identifier:** License No.: _____ Load No.: 3 - Total 50 Estimated Volume: 18 *Cubic Yards*

laced in Stockpile Bin No.:

asic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

mple Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

sults Received By (Name): _____ Date: _____

mpling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Scanned by CamScanner

TXH-134348

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rios
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rios Company: Triple G

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. 10451

Date: 12/8/17 Time: 10:18AM Truck License Plate No.: 69405 MF State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY (0451 Block/Lot: 134348

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Dan Bowman Received:

**Load Identifier:** License No.: _____ Load No.: 4-Total-51 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Scanned by CamScanner

TK# 134362

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/8/17 Time: 11:28AM Truck License Plate No.: 69405 MC State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134362

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Don Bouman Received:

Load Identifier: License No.: _____ Load No.: 5-Total-52 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Scanned by CamScanner

TK# 134369

# SITE FILL TRACKING SYSTEM

**TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING**

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: [illegible] Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G.

Address: 300 Hutchinson River Pkwy. Phone: (___) Fax: (___)

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/8/17 Time: 12:43pm Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No. If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134369

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

**TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR**

Supervisor Name: Don Bauman Received:

**Load Identifier:** License No.: _____ Load No.: 6-Tota-53 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

**TO BE COMPLETED BY ENGINEERING**

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Scanned by CamScanner

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134079
**Date:** 12/05/17
**NYR Ticketer:** RAVEN

**Outbound**

**1:13 PM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836 Loads: 40
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: #51019

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:
Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134224
**Date:** 12/07/17
**NYR Ticketer:** ROGER

**Outbound**
**6:04 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836 Loads: 41
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: SFTS#51043

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:
Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Juan Rivera

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134239
**Date:** 12/07/17
**NYR Ticketer:** RAVEN

**Outbound**

**7:46 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 42
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: #51044

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134327
**Date:** 12/08/17
**NYR Ticketer:** RAVEN

**Outbound**
**7:59 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 49
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: NO MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134342
**Date:** 12/08/17
**NYR Ticketer:** RAVEN

**Outbound**

**9:11 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 50
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: NO MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134348
**Date:** 12/08/17
**NYR Ticketer:** RAVEN

**Outbound**

**10:18 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 51
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: NO MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134362
**Date:** 12/08/17
**NYR Ticketer:** RAVEN

**Outbound**

**11:28 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836 Loads: 52
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: NIO MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:
Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Juan Ruiz

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134369
**Date:** 12/08/17
**NYR Ticketer:** RAVEN

**Outbound**
**12:43 PM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 53
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: NO MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:
Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Juan Rivas

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 134317
**Date:** 12/08/17
**NYR Ticketer:** RAVEN

**Outbound**
**6:01 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 69405ME
Trucker: DJCI
Job No: 1836
Loads: 48
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: DRIVER DOES'NT KNOW MANIFEST NUMBER

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 138821
**Date:** 03/06/18
**NYR Ticketer:** RAVEN

**Outbound**
**7:06 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 25623MK
Trucker: IEV
Job No: 1836
Loads: 54
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks:

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** tito

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 138840
**Date:** 03/06/18
**NYR Ticketer:** RAVEN

**Outbound**
**8:21 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 25623MK
Trucker: IEV
Job No: 1836 Loads: 55
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks:

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 138859
**Date:** 03/06/18
**NYR Ticketer:** RAVEN

**Outbound**

**9:39 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 25623MK
Trucker: IEV
Job No: 1836
Loads: 56
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks:

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 138881
**Date:** 03/06/18
**NYR Ticketer:** RAVEN

**Outbound**

**11:22 AM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Belllport NY, 11713

**Truck Plate** 25623MK
Trucker: IEV
Job No: 1836
Loads: 57
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks:

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

New York Recycling, LLC issues this receipt solely for calculating the unit of measure of the purchased materials. Customer/Hired Hauler/Trucker is solely responsible for operating the vehicle within its permitted weight limitation and for the safe and proper pick-up, hauling and delivery of materials. Customer/Hired Hauler/Trucker shall defend and indemnify New York Recycling, LLC against and all claims arising out of a failure to: (1) Comply with permitted weight limitations; and (2) Safely Pick-Up, Haul Truck and Deliver materials. TERMS (If applicable): Net 30 Days from invoice, interest accrued at the highest rate allowable under state law, or 1 1/2 % per month, whichever is less shall be charged and paid after due date.

Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:**

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 138901
**Date:** 03/06/18
**NYR Ticketer:** RAVEN

**Outbound**

**12:56 PM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 25623MK
Trucker: IEV
Job No: 1836
Loads: 58
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: MANIFEST# 51054

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

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Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** tito

**Driver Signature**

**New York Recycling, LLC**
475 Exterior Street
Bronx, NY 10451
718-742-0755 Fax 718-742-0754,

New York Recycling, LLC

**Ticket No:** 138919
**Date:** 03/06/18
**NYR Ticketer:** RAVEN

**Outbound**
**2:03 PM**

**Customer:** 749
**Triple G Consulting Inc.**
1481 Montauk Highway

Bellport NY, 11713

**Truck Plate** 25623MK
Trucker: IEV
Job No: 1836
Loads: 59
Job Description: Trump Links Ferry Point
Job Address: 500 Hutchinson Parkway
Town/Borough: BRONX

Remarks: MANI#51055

| Material | Quantity | Unit Price | Delivery $ | Misc $ | Tax $ | Total |
|---|---|---|---|---|---|---|
| 06 Screened Fill | 18.000 YD | | | | | |

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Total Material:
Total Delivery:
Total Misc:
Total Tax:

Ticket Total:
Paid Amount:
Credit Card:
CC Auth #:

**X:** Tito

**Driver Signature**

City of New York
Parks & Recreation

№ 51001

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yanic Flores Company: TEV Trucking

Address: 197 Caleb's Path Central Islip NY Phone: (631) 9131059 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St Bx NY 10451

Date: 11/27/17 Time: 6:10 AM Truck License Plate No.: 25623MK State: NY

Estimated Volume Loaded: 18 cy *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received:

**Load Identifier:** License No.: 25623 MK Load No.: 1 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Crushed Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51002

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yanic Flores Company: IFV trucking

Address: 197 Caleb's Path Central Islip NY Phone: (631) 813 1059 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St, Bx NY 10451

Date: 11/27/17 Time: 8:40AM Truck License Plate No.: 25623MK State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received:

**Load Identifier:** License No.: 25623 MK Load No.: 3 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Coarse Sand w/ Gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51003

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yanic Flores Company: IEV trucking

Address: 97 Caleb's Path Central Islip ny Phone: (631) 831 1059 Fax: ( )

**Truck Loaded:** Site Name: Newyorkrecycling Address: 475 Exterior St Bx ny 10451

Date: 11.27.17 Time: 10:06 AM Truck License Plate No.: 25623 MK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling

Address: 475 EXTERIOR ST. BX NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1030

**Load Identifier:** License No.: 25623 MK Load No.: 5 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51004

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Vanic Flores Company: TEV trucking

Address: 197 Caleb's Path Central Islip NY Phone: (631) 813 1059 Fax: ( )

**Truck Loaded:** Site Name: Newyork Recycling Address: 475 Exterior ST Bronx NY 10451

Date: 11.27.17 Time: 10:57AM Truck License Plate No.: 25623MK State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results
❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1120

**Load Identifier:** License No.: 25623 MK Load No.: 7 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Coarse fine sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51005

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernanda Cadeca Company: I. E. V. Trucking

Address: _____ Phone: (631) 813-1059 Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 4 Oneill Ave Bay Shore NY

Date: 11/27/17 Time: 6:12AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 0430

**Load Identifier:** License No.: 64405 ME Load No.: 4 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51006

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernando Cardenas Company: I.E.V. Trucking

Address: 13 Jefferson Ave. Bentwood Phone: (631) 313-1059 Fax: (___)

**Truck Loaded:** Site Name: New York Recycling Address: H Oneill Ave Bay Shore

Date: 11/27/17 Time: 6-12 8:52 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: 13 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 0600

**Load Identifier:** License No.: 69405 ME Load No.: 2 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51007

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernando Cadena Company: I. E. V. Trucking

Address: 11 Oneill Ave Bay Shore Phone: (631) 812 1059 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx 10451

Date: 11-27-17 Time: 11:17AM Truck License Plate No.: 69405ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1140

**Load Identifier:** License No.: 69405ME Load No.: 8 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Coarse-fine Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51009

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernando Cadeac Company: I.E.V. Trucking

Address: 41 Oneil Ave. Bay Shore Phone: (631) 618 1089 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx, NY 10451

Date: November 27, 2017 Time: 10:11 am Truck License Plate No.: 69405ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 EXTERIOR St Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1040

**Load Identifier:** License No.: 69405 ME Load No.: 6 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Coarse Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51010

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernando Cadena — Company: I.E.V. Trucking

Address: 40 Neill Bay Shore — Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx, NY 10451

Date: 11-27-17 Time: 2:16PM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling L.L.C

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1445

**Load Identifier:** License No.: 69405 ME Load No.: 14 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown coarse Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51011

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernando Cuevas Company: I. F. V. Trucking

Address: 11 Oneill Ave Boy Sho Phone: (718) 742-0755 Fax: (___)

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx, NY 10451

Date: 11-27-17 Time: 1:25pM Truck License Plate No.: 69405ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1345

**Load Identifier:** License No.: 6AL105 ME Load No.: 12 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51012

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Fernando Cadena' Company: I.E.V. Trucking

Address: H Oneill Ave Bay Shore Phone: (___) _____ Fax: (___) _____

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior street. Bronx

Date: 11-27-17 Time: 12:31pM Truck License Plate No.: _____ State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx, Ny 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1255

**Load Identifier:** License No.: 69405 ME Load No.: 10 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51013

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Yunic Flores
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yunic Flores Company: IEV Trucking

Address: 4 oneal Ave Bayshore ny Phone: (631)8131059 Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior ST Bx 10451

Date: 11-27-17 Time: 12:29PM Truck License Plate No.: 25623 MK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx, NY 10451 Block/Lot: 0

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1250

**Load Identifier:** License No.: 25623 MK Load No.: 9 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51014

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Yanic Floses
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yanic Floses Company: IEV trucking

Address: 4 Oneal Ave Bayshore, ny Phone: (631) 813 1059 Fax: ( )

**Truck Loaded:** Site Name: New york recycling Address: 475 Exterior ST Bx 10451

Date: 11.27.17 Time: 1:18 PM Truck License Plate No. 25623 State: NY

Estimated Volume Loaded: 18 Cy *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fortunato Received: 1340

**Load Identifier:** License No.: 25623 MK Load No.: 11 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Course Sand w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51016

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Yanic Flores Company: IEV trucking

Address: 4 oneal ave Bayshore NY Phone: (631)813 Fax: (___)

**Truck Loaded:** Site Name: Newyork recycling Address: 475 Exterior st BX 10541

Date: 11-27-17 Time: 2:14pM Truck License Plate No. 25623 MK State: NY

Estimated Volume Loaded: 18 CY *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results

❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: John Fantuzzo Received: 1440

**Load Identifier:** License No.: 25623 MK Load No.: 13 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Crushed stone w/ gravel

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ❑ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51017

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rua
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rua Company: Triple G

Address: 300 Hutchinson Pkwy. Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/4/17 Time: 12:29PM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10451 Block/Lot: 01339 39

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51018

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: _____ Company: Triple G

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/4/07 Time: 1:24PM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx, NY 10451 Block/Lot: 2133953

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51019

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

TICKET # 134079 12/5/2017

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN RUIZ
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN RUIZ Company: Triple G.

Address: 300 Hutchinson Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx ~~NY~~ 10541

Date: 12/5/17 Time: 1:13PM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10541 Block/Lot: 0 134079

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51021

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

TICKET # 134079 12/5/2017

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rmos
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rmos Company: Triple G

Address: 300 Hutchinson Pkwy Bronx Phone: (___) Fax: (___)

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx 10541

Date: 12/5/17 Time: 12:28pM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10541 Block/Lot: 2734063

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51040

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson prwy. Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx, Ny 10451

Date: 12/4/17 Time: 5:56 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx. Ny 10451 Block/Lot: 13389 2

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51043

# SITE FILL TRACKING SYSTEM

TICKET # 134224
12/7/2017

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN RIVAS
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN RIVAS Company: Triple G.

Address: 300 Hutchinson River prwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 EXTERIOR ST BX NY 10451

Date: 12/7/17 Time: 6:04 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 cy *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results
☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: _____

Address: _____ Block/Lot: _____

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405 ME (NY) Load No.: 1 Estimated Volume: 25T *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: soil with crushed stones

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 1

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: using PID

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51044

# SITE FILL TRACKING SYSTEM

TICKET # 134239
12/7/2017

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Kings
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Kings Company: Triple G.

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. NY. 10541

Date: 12/7/17 Time: 7:46AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx NY 10541 Block/Lot: 134239

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bowman, Maser Consulting Received:

**Load Identifier:** License No.: 69405ME (NY) Load No.: 2 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: soil with crushed stones

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Don Bowman Date: 12/7/2017 Sample No.: 2

Results Received By (Name): _____ Date: _____

Sampling Results: ☑ Acceptable ☐ Unacceptable Action: using PID

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51046

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____ Jose Kuse
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Jose Kuse Company: Triple G.

Address: 300 Hutchinson PKWY Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street Bronx 10451

Date: 12/4/17 Time: 7:54AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx NY 10451 Block/Lot: 0 133898

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51047

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Sean Ruiz
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Sean Ruiz Company: Triple G.

Address: 300 Hutchinson Pkwy. Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx 10451

Date: 12/4/17 Time: 9:13AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx. NY 10451 Block/Lot: 01339 07

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51048

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Kuas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Kuas Company: Triple G.

Address: 300 Hutchinson Pkwy. Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/4/17 Time: 10:17 AM Truck License Plate No.: 69405 MC State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ❑ Yes If Yes, attach laboratory results
❑ No, If No, has fill from this site previously been accepted at ❑ Yes ❑ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx NY 10451 Block/Lot: 2133915

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ❑ No ❑ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ❑ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51049

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Ruiz Company: Triple G

Address: 300 Hutchinson Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: Trump links Ferry Point Address: 475 Exterior St. Bronx 10451

Date: 12/4/17 Time: 11:09AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx NY 10451 Block/Lot: 13395

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

TK#: 134317

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. NY 10541

Date: 12/8/17 Time: 6:01 AM Truck License Plate No.: 64405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 134317

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Dan Bowman Received:

**Load Identifier:** License No.: 64405 ME Load No.: 1-Total-48 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: Brown Sand w/ recycled concrete 1"-1½"

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

TK# 134327

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN Rios
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN Rios Company: Triple G.

Address: 300 Hutchinson River Pkwy Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. 10541

Date: 12/8/17 Time: 7:59 AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10541 Block/Lot: 34327

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Dou Bowman Received:

**Load Identifier:** License No.: _____ Load No.: 2 - Total 4/9 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

Tax# 134342

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson River Pkwy. Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. 10451

Date: 12/8/17 Time: 9:11AM Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134342

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bowman Received:

**Load Identifier:** License No.: _____ Load No.: 3-Total 50 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

TRK# 134348

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Juan Rivas
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Triple G

Address: 300 Hutchinson River Pkwy Bronx Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior Street. Bronx. 10451

Date: 12/8/17 Time: 10:18AM Truck License Plate No.: 64405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134348

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Dan Bowman Received:

**Load Identifier:** License No.: _____ Load No.: 4-Total-51 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

TK# 134362

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: _____ Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: JUAN RIVAS
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: JUAN RIVAS Company: Triple G.

Address: 300 Hutchinson River Pkwy Bronx Phone: (___) ___ Fax: (___) ___

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/8/17 Time: 11:28AM Truck License Plate No.: 69405 MC State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134362

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bouman Received:

**Load Identifier:** License No.: _____ Load No.: 5-Total-52 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

TK# 134369

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: ~~Avenue and~~ any fines or penalties imposed.

I have read and agree to comply with the above rules: _____
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Juan Rivas Company: Trip G.

Address: 300 Hutchinson River Pkwy. Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx. 10451

Date: 12/8/17 Time: 12:43pm Truck License Plate No.: 69405 ME State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street. Bronx. NY 10451 Block/Lot: 134369

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Don Bowman Received:

**Load Identifier:** License No.: _____ Load No.: 6-Tota-53 Estimated Volume: 18 *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____
*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: 12/8/17 Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☒ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51050

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: titov

*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: TOTO

Company: Triple E. consulting. INC

Address: 500 HUTCHINSON PARKWAY

Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx 10451

Date: 3/6/18 Time: 7:06AM Truck License Plate No.: 25623MK State: NJ

Estimated Volume Loaded: 18yds *Cubic Yards* Weight (if known): [redacted] *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St Block/Lot: J 138, 821

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51051

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Tito
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: TITO Company: THIPLE G. CONSULTING INC

Address: 500 HUTCHINSON PARKWAY Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: [illegible] Address: 475 Exterior St

Date: 3/6/18 Time: 8:21 A.M. Truck License Plate No: 256723MK State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

NYJR TK# 138340 ☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name:

Address: Block/Lot:

Owner of Excavation Site: Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load #

Reason for Excavation of Soil at Site:

Current and Past Usage of Site where Loading Took Place (if known):

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Received:

**Load Identifier:** License No.: Load No.: Estimated Volume: *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material:
*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Date: Sample No.:

Results Received By (Name): Date:

Sampling Results: ☐ Acceptable ☐ Unacceptable Action:

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51052

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Tito
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: Tito Company: Triple G Excavating INC.

Address: 600 Hutchinson Parkway Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St.

Date: 3/6/18 Time: 9:39 A.M. Truck License Plate No.: 76623MK State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

NYRTK# 132,359 ☐ No, If No, has fill from this site previously been accepted at

☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name:

Address: Block/Lot:

Owner of Excavation Site: Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load #

Reason for Excavation of Soil at Site:

Current and Past Usage of Site where Loading Took Place (if known):

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Received:

**Load Identifier:** License No.: Load No.: Estimated Volume: *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material:
*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Date: Sample No.:

Results Received By (Name): Date:

Sampling Results: ☐ Acceptable ☐ Unacceptable Action:

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51053

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Tito
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: TITO Company: Triple B Consulting INC

Address: 500 Hutchinson Park Way Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St.

Date: 3/6/18 Time: 11:22AM Truck License Plate No.: 25623MK State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☑ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

NYR TX# 138,881

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: Block/Lot:

Owner of Excavation Site: Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load #

Reason for Excavation of Soil at Site:

Current and Past Usage of Site where Loading Took Place (if known):

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: Received:

**Load Identifier:** License No.: Load No.: Estimated Volume: *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material:
*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): Date: Sample No.:

Results Received By (Name): Date:

Sampling Results: ☐ Acceptable ☐ Unacceptable Action:

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51054

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Tito
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: TITO Company: Triple S.

Address: 500 Hutchinson River Park. Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx 10451

Date: 3/6/18 Time: 12:56PM Truck License Plate No.: 25632MK State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☒ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior Street Bronx, NY 10451 Block/Lot: TK # 138,901

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____
*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

City of New York
Parks & Recreation

№ 51055

# SITE FILL TRACKING SYSTEM

## TO BE COMPLETED BY HAULER PRIOR TO TRUCK ENTERING

Rules (Subject to change without notice)

1. All drivers must obtain authorization at the office trailer prior to driving onto the site.
2. Loads without valid permits at the point of loading will not be accepted.
3. Drivers must clean tires/wheels of any debris, using the high pressure hose provided, prior to leaving the site. Drivers who do not comply will be charged for the cleaning of: Avenue and any fines or penalties imposed.

I have read and agree to comply with the above rules: Tito
*Driver's Signature*

**PLEASE PRINT CLEARLY**

Driver Name: TITO Company: Triple G.

Address: 500 HUTCHINSON RIVER PARKWAY Phone: ( ) Fax: ( )

**Truck Loaded:** Site Name: New York Recycling Address: 475 Exterior St. Bronx 10451

Date: 3/6/18 Time: 2:03PM Truck License Plate No.: 25623MK State: NY

Estimated Volume Loaded: 18 *Cubic Yards* Weight (if known): _____ *Pounds*

Has a Sample from this Truck Load been Tested for Contamination: ☐ Yes If Yes, attach laboratory results

☐ No, If No, has fill from this site previously been accepted at ☐ Yes ☐ No

**Original Site where Soil was Excavated:** Site Name: New York Recycling LLC

Address: 475 Exterior St. Bronx NY, 10451 Block/Lot: 3 138919

Owner of Excavation Site: _____ Has Excavation Site been Tested for Contamination:

Operator of Excavation Site: _____ ☐ No ☐ Yes If Yes, attach laboratory results or give load number with which they were previously submitted. Load # _____

Reason for Excavation of Soil at Site: _____

Current and Past Usage of Site where Loading Took Place (if known): _____

## TO BE COMPLETED BY SOIL RECEIVING SUPERVISOR

Supervisor Name: _____ Received:

**Load Identifier:** License No.: _____ Load No.: _____ Estimated Volume: _____ *Cubic Yards*

Placed in Stockpile Bin No.:

Basic Description Of Material: _____

*CRUSHED STONES/SANDY/LOAMY ETC. NOTE ANY LIQUIDS OR STAINING*

## TO BE COMPLETED BY ENGINEERING

Sample Collected By (Name): _____ Date: _____ Sample No.: _____

Results Received By (Name): _____ Date: _____

Sampling Results: ☐ Acceptable ☐ Unacceptable Action: _____

WHITE: Exit Gate / PINK: Driver / YELLOW: Site / BLUE: Ind. Monitor / GREEN: Site Entry

# APPENDIX L

# Manifests for Imported Fill from Ranco Sand & Stone

| Date | Manifest No. | | Weight (rounded off) |
|---|---|---|---|
| 09/12/2018 | Unknown (Load 1) | | 40 tons |
| | | | |
| 09/13/2018 | Unknown (Load 2) | | 40 tons |
| 09/13/2018 | 490896 (Load 3) | | 39 tons |
| | | | |
| 09/21/2018 | 488757 (Load 4) | | 40 tons |
| 09/21/2018 | Unknown (Load 5) | | 39 tons |
| 09/21/2018 | 489108 (Load 6) | | 34 tons |
| | | | |
| 09/24/2018 | 489111 (Load 7) | | 35 tons |
| 09/24/2018 | Unknown (Load 8) | | 38 tons |
| | | | |
| 09/28/2018 | Unknown (Load 9) | | 40 tons |
| 09/28/2018 | Unknown (Load 10) | | 40 tons |
| | | | |
| 10/02/2018 | 490895 (Load 11) | | 41 tons |
| 10/02/2018 | 490898 (Load 12) | | 38 tons |
| 10/02/2018 | 488183 (Load 13) | | 39 tons |
| 10/02/2018 | 489115 (Load 14) | | 35 tons |
| | | | |
| 10/04/2018 | 48877? (Load 16) | | 39 tons |
| 10/04/2018 | 481957 (Load 15) | | 39 tons |
| 10/04/2018 | 488174 (Load 17) | | 41 tons |
| | | | |
| 10/08/2018 | 488175 (Load 18) | | 37 tons |
| 10/08/2018 | 312110 (Load 19) | | 38 tons |
| 10/08/2018 | 488790 (Load 20) | | 39 tons |
| 10/08/2018 | Unknown (Load 21) | | 41 tons |
| 10/08/2018 | Unknown (Load 22) | | 38 tons |
| | | | |
| 10/10/2018 | 489141 (Load 23) | | 33 tons |
| 10/10/2018 | 488761 (Load 24) | | 38 tons |
| 10/10/2018 | 491073 (Load 25) | | 37 tons |
| | | | |
| 10/12/2018 | 488759 (Load 26) | | 39 tons |
| 10/12/2018 | 491071 (Load 27) | | 38 tons |
| **GRAND TOTAL** | **27 LOADS** | | **690 CUBIC YARDS (using 1.5 tons per cubic yard)** |

LOAD #7

Almar Supplies
248-22 Brookville Blvd
Rosedale, NY 11422

489111

VIA AL MAR 9-24 20 18

M RANCO SAND

TRUMP AT FERRY PT PARK

| Truck # 88 | Ticket # | Driver HENRY E |
|---|---|---|
| Concrete Sand | | |
| Fine Sand | 456333 | 35.02 TONS |
| Asphalt Sand | | |
| Ll Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire - Hrs.

Accepted by

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

LOAD #7

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 456333
Date 09/24/2018
Phone (631)874-3939
Fax (631)874-3563

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 5

Truck: ALMA-88 ALMAR TRUCK #88
Material: COVER COVER MATERIAL

Gross: 105380 lb Scale 1 Out 7:56 am
Tare: 35340 lb
Net: 70040 lb
35.02 tn

Weigh Master:

Driver: Henri E #88

TRUMP AT FERRY POINT PARK

LOAD # 9

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 456327
Date 09/24/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD,NY 11763

Loads: 4

Truck: ALMA-10 ALMAR TRUCK #10
Material: COVER COVER MATERIAL

Gross: 113440 lb Scale 1 Out 7:36 am
Tare: 37360 lb
Net: 76080 lb
38.04 tn

Weigh Master: AC

Driver:

TRUMP AT FERRY POINT PARK

10

LOAD # 10

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 456594
Date 09/26/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD,NY 11763

Loads: 7

Truck: ALMA-49 ALMAR TRUCK #49
Material: COVER COVER MATERIAL

Gross: 115480 lb Scale 1 Out 4:54 am
Tare: 35400 lb
Net: 80080 lb
40.04 tn

Weigh Master: AC

Driver:

TRUMP AT FERRY POINT PARK

Load # 10

Almar Supplies

248-22 Brookville Blvd
Rosedale, NY 11422

490895

VIA

M

9-28 20

to trump twr

| Truck # | Ticket # | Driver |
|---|---|---|
| Concrete Sand | | |
| Fine Sand | ✓ | |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire Hrs.

Accepted by X A Martin

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load # 11

Ranco Sand & Stone
151 South Street
Manorville, NY 11949

Ticket # 458747
Date 10/02/2018
Phone (631)874-3939
Fax (631)874-3653

BELLISIMO CONSTRUCTION
8 CLUSTER PINE STREET

Order No.

MEDFORD, NY 11763

Loads 12

Truck ALMA 3
Material COVER

ALMAR TRUCK #3
COVER MATERIAL

Gross 114600 lb Scale 1 Out 5:13 am
Tare 33160 lb

Net 81440 lb
40.72 tn

Weigh Master AC

Driver

TRUMP AT FERRY POINT PARK

Almar Supplies Load #10

490898

248-24 Brookville Blvd
Rosedale, NY 11422

VIA _____ 10-2 20 18

M _____ To Trump Links

| Truck # | Ticket # | Driver |
|---|---|---|
| 49 | | Emerald |

| | |
|---|---|
| Concrete Sand | |
| Fine Sand | |
| Asphalt Sand | |
| LI Gravel | |
| 3/4 Crushed Stone | |
| 3/8 Crushed Stone | |
| Stone | |
| Topsoil | |
| Fill | |
| Regular Blend | |
| Dot Blend | |
| Removal | |

On Hire _____ Hrs.

Accepted by _____

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load #12

Load #13

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 456742
Date 10/02/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 10

Truck : ALMA-49 ALMAR TRUCK #49
Material: COVER COVER MATERIAL

Gross: 110920 lb Scale 1 Out 4:56 am
Tare: 35400 lb
Net: 75520 lb
37.76 tn

Weigh Master: AC

Driver:

TRUMP AT FERRY POINT PARK

Almar Supplies LOAD #13

248-22 Brookville Blvd
Rosedale, NY 11422

488183/4

VIA Almar

10-02 20 18

M Ron Russo

To Bellissimo construction

Free Paint

| Truck # 68 | Ticket # | Driver Ronni |
|---|---|---|
| Concrete Sand | | 39.24 ton |
| Fine Sand | | |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire Hrs.

Accepted by

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load #13

Rambo Sand & Stone
151 South Street
Manorville, NY 11949

Ticket# 456746
Date 10/02/2018
Phone (631)874-3939
Fax (631)874-3563

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No.: 1

MEDFORD,NY 11763

Loads: 1

Truck: ALMA-68
Material: COVER

ALMAR TRUCK #68
COVER MATERIAL

Gross: 115200 lb Scale 1 Out 5:10 am
Tare: 36720 lb
Net: 78480 lb
39.24 tn

Weigh Master:

Driver: Ronni

TRUMP AT FERRY POINT PARK

M & B ENTERPRISES (516) 623-0891

Ref. No: G 949401865

LOAD # 14

# Almar Supplies

248-22 Brookville Blvd
Rosedale, NY 11422

489115

VIA

10-2-18

M Front Point - TRUMP-PER
with stone

| Truck # 34 | Ticket # | Driver Front Point |
|---|---|---|
| Concrete Sand | | ALMA# 456743 |
| Fine Sand | | |
| Asphalt Sand | | 34.97 TONS |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire Hrs.

Accepted by

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 456749
Date 10/02/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No.: 1

MEDFORD,NY 11763

Loads: 13

Truck: ALMA-34
Material: COVER ALMAR TRUCK #34 COVERMATERIAL

Gross 100360 lb Scale 1 Out 5:16 am
Tare 39420 lb
Net 60940 lb
34.97 tn

WeighMaster: AC

Driver:

TRUMP AT PERRY POINT PARK

M & B ENTERPRISES (516) 623-0891 Ref. No: G 94945

# Almar Supplies

248-22 Brookville Blvd
Rosedale, NY 11422

48877

VIA _____ 10-4 20 1

M _____

| Truck # | Ticket # | Driver |
|---|---|---|
| Concrete Sand | | |
| Fine Sand | | |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire _____ Hrs.

Accepted by _____

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

LOAD # 16

Ranco Sand & Stone
151 South Street
Manorville, NY 11949

Ticket# 456891
Date 10/04/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD, NY 11763

Order No: 1

Loads: 14

Truck: ALMA-49 ALMAR TRUCK #49
Material: COVER COVER MATERIAL

Gross: 113900 lb Scale 1 Out 4:54 am
Tare: 35400 lb
Net: 78500 lb
39.25 tn

Weigh Master: AC

Driver:

TRUMP AT FERRY POINT PARK

481957

**Almar Supplies**
5705 47th Street
Maspeth, New York 11378

VIA _____ 20__

M Ferry Point Golf Course
TRUMP - WHITE STONE

| Truck # 34 | Ticket # | Driver GIOVANNI |
|---|---|---|
| Concrete Sand | | |
| Fine Sand | RANCO # | |
| Asphalt Sand | | |
| LI Gravel | TONS | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |
| On Hire | Hrs. | |

cepted by _____

L PAYMENT MUST BE REMITTED FOR THE ABOVE
OR TIME WITHOUT QUESTION IF THIS IS SIGNED

LOAD #15

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 456892
Date 10/04/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 15

Truck: ALMA-34 ALMAR TRUCK #34
Material: COVER COVER MATERIAL

Gross: 116760 lb Scale 1 Out 4:58 am
Tare: 39420 lb
Net: 77340 lb
38.67 tn

Weigh Master: AC

Driver:

TRUMP AT FERRY POINT PARK

# Almar Supplies

248-22 Brookville Blvd
Rosedale, NY 11422

488174

VIA Almar

10-04 20 18

M FROM. RANCO
TO TRUMP AT FERRY POINT PAR

| Truck # 68 | Ticket # WEBTIC | Driver RON |
|---|---|---|
| Concrete Sand | | 40.73 ton |
| Fine Sand | | |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire Hrs.

Accepted by

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 456896
Date 10/04/2018
Phone (631)874-3930
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD,NY 11763

Loads 16

Truck ALMA-68 ALMAR TRUCK #68
Material COVER COVER MATERIAL

Gross 118180 lb Scale 1
Tare 36720 lb

Out 5:10 am

Net 81460 lb
40.73 tn

Weigh Master: ADL

Driver: Ron

TRUMP AT FERRY POINT PARK

Co Rd #17

488175

Almar Supplies
248-22 Brookville Blvd
Rosedale, NY 11422

VIA Almar 10-09-18 20 18

M Trump Fence TO: FERRY Point PARK

| Truck # 68 | Ticket # 457043 | Driver Ronny |
|---|---|---|
| Concrete Sand | | 37.34 ton |
| Fine Sand | | |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |
| On Hire | Hrs. | |
| Accepted by | | |

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load #18

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 457043
Date 10/09/2018
Phone (631)874-3939
Fax (631)874-3563

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 18

Truck : ALMA-68 ALMAR TRUCK #68
Material: COVER COVER MATERIAL

Gross: 111400 lb Scale 1 Out 5:19 am
Tare: 36720 lb
Net: 74680 lb
37.34 tn

Weigh Master: AC

Driver: Ronny Jean

TRUMP AT FERRY POINT PARK

312110

DELUXE FOR BUSINESS 1-800-888-6327 Ref. No: G 3124073

# Almar Supplies

5705 47th Street
Maspeth, New York 11378

VIA _____ 10/8 20 18

M TRUMP GOLF COURSE

WHITESTONE BRIDGE

| | Truck # 34 | Ticket # | Driver (Johnny) |
|---|---|---|---|
| Concrete Sand | | | |
| Fine Sand | | RANCO # 457040 | |
| Asphalt Sand | | | |
| LI Gravel | | Tons 37.93 | |
| 3/4 Crushed Stone | | | |
| 3/8 Crushed Stone | | | |
| Stone | | | |
| Topsoil | | | |
| Fill | | | |
| Regular Blend | | | |
| Dot Blend | | | |
| Removal | | | |

On Hire _____ Hrs.

Accepted by _____

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load #18

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 457046
Date 10/08/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No : 1

Loads : 19

Truck : ALMA-34 ALMAR TRUCK #34
Material: COVER COVER MATERIAL

Gross: 115280 lb Scale 1 Out 5:30 am
Tare: 39420 lb
Net: 75860 lb
37.93 tn

Weigh Master: AC

Driver:

TRUMP AT FERRY POINT PARK

Ref. No: G 949401865

M & B ENTERPRISES (516) 623-0891

# Almar Supplies

248-22 Brookville Blvd
Rosedale, NY 11422

488790

VIA _____ 10-8 20 18

M _____

| Truck # | Ticket # | Driver |
|---|---|---|
| | | |

| | |
|---|---|
| Concrete Sand | |
| Fine Sand | |
| Asphalt Sand | |
| LI Gravel | |
| 3/4 Crushed Stone | |
| 3/8 Crushed Stone | |
| Stone | |
| Topsoil | |
| Fill | |
| Regular Blend | |
| Dot Blend | |
| Removal | |

On Hire _____ Hrs.

Accepted by _____

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SO

Load # 20

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 457035
Date 10/08/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 17

Truck : ALMA-49 ALMAR TRUCK #49
Material: COVER COVER MATERIAL

Gross: 114040 lb Scale 1 Out 4:55 am
Tare: 35400 lb
Net: 78640 lb
39.32 tn

Weigh Master: Al

Driver:

TRUMP AT FERRY POINT PARK

Load # 21

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 457047
Date 10/08/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD,NY 11763

Loads: 20

Truck: ALMA-3 ALMAR TRUCK #3
Material: COVER COVER MATERIAL

Gross: 114660 lb Scale 1 Out 5:33 am
Tare: 33160 lb
Net: 81500 lb
40.75 tn

Weigh Master: AC

Driver: RRy

TRUMP AT FERRY POINT PARK

Marc Gallucci

Load # 22

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 457079
Date 10/08/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD,NY 11763

Loads: 21

Truck: ALMA-37 ALMAR TRUCK #37
Material: COVER COVER MATERIAL

Gross: 114620 lb MAN WT Out 11:48 am
Tare: 38120 lb
Net: 76500 lb
38.25 tn

Weigh Master: AC

Driver: Robert

TRUMP AT FERRY POINT PARK

Load #6 Almar Supplies 489108

248-22 Brookville Blvd
Rosedale, NY 11422

VIA Al Mark 1-21-18 20

M Bellisimo Const Island

TRUMP FERRY POINT PARK

| Truck # 88 | Ticket # | Driver Henri E |
|---|---|---|
| Concrete Sand | | |
| Fine Sand | 458251 | 34.10 tons |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire _____ Hrs.

Accepted by _____

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load #6

Load #6

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 458251
Date 09/21/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 3

Truck: ALMA-88 ALMAR TRUCK #88
Material: COVER COVER MATERIAL

Gross 103540 lb MAN WT Out 8:01 am
Tare 35340 lb
Net 68200 lb
34.10 tn

Weigh Master: AG

Driver: Henri E #88

TRUMP AT FERRY POINT PARK

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 455720
Date 09/12/2018
Phone (631)874-3939
Fax (631)874-3553

TRUMP AT FERRY POINT
700 HUTCHINSON RIVER PKWY

BRONX,NY 10465

Order No: 1

Loads: 64

Truck : ALMA-88 ALMAR TRUCK #88
Material: COVER COVER MATERIAL

Gross 114640 lb Scale 1 Out 7:45 am
Tare 35340 lb
Net 79500 lb
39.75 tn

Weigh Master: AC

Driver:

SOURCE# 10-99F TEST# 03AF109

LOAD 1

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 455773
Date 09/13/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 1

Truck : ALMA-88 ALMAR TRUCK #88
Material: COVER COVER MATERIAL

Gross 114480 lb Scale 1 Out 5:21 am
Tare 35340 lb
Net 79140 lb
39.57 tn

Weigh Master: AC

Driver:

TRUMP AT FERRY POINT PARK

LOAD 2

Almar Supplies

248-22 Brookville Blvd
Rosedale, NY 11422

490896

VIA LOAD #3

9-13 20 18

M D Ranco

L Trump-P

| Truck # | Ticket # | Driver |
|---|---|---|
| 49 | | Donald |
| Concrete Sand | | |
| Fine Sand | ✓ | |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire Hrs.

Accepted by

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

LOAD #3

Mac Allister

LOAD #3

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket # 455769
Date 09/13/2018
Phone (631)874-3939
Fax (631)874-3563

ALMAR SUPPLIES INC
248-22 BROOKVILLE BLVD

Order No: 1

ROSEDALE,NY 11422

Loads 37.365

Truck ALMA-49 ALMAR TRUCK #49 Gross 113600 lb Scale 1 Out 4:57 am
Material SCS STATE CONCRETE SAND Tare 35400 lb

Net 78100 lb
39.05 tn

Weigh Master AG

Driver

SOURCE# 10-98F TEST# 08AF104

LOAD #5

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 456245
Date 09/21/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD,NY 11763

Loads: 2

Truck : ALMA-10 ALMAR TRUCK #10
Material: COVER COVER MATERIAL

Gross: 114740 lb Scale 1 Out 5:27 am
Tare: 37360 lb
Net: 77380 lb
38.69 tn

Weigh Master: AC

Driver:

TRUMP AT FERRY POINT PARK

10

load #4

Ranco Sand & Stone
151 South Street
Manorville,NY 11949 #4

Ticket# 456236
Date 09/21/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD,NY 11763

Loads: 1

Truck : ALMA-49 ALMAR TRUCK #49
Material: COVER COVER MATERIAL

Gross: 115640 lb Scale 1 Out 4:55 am
Tare: 35400 lb
Net: 80240 lb
40.12 tn

Weigh Master: AG

Driver:

TRUMP AT FERRY POINT PARK

load #4

Almar Supplies
248-22 Brookville Blvd
Rosedale, NY 11422

488757

VIA

M 20

| Truck # | Ticket # | Driver |
|---|---|---|
| | | |

| | | | |
|---|---|---|---|
| Concrete Sand | | 3/4 Crushed Stone | load #4 |
| Fine Sand | | 3/8 Crushed Stone | |
| Asphalt Sand | | Stone | |
| LI Gravel | | Topsoil | |
| | | Fill | |
| | | Regular Blend | |
| | | Dot Blend | |
| | | Removal | |
| | | On Hire | |

Accepted by _____ Hrs.

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load # 23

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 457202
Date 10/10/2018
Phone (631)874-3939
Fax (631)874-3563

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 24

Truck: ALMA-5 ALMAR TRUCK #5
Material: COVER COVER MATERIAL

Gross: 102120 lb MAN WT Out 5:15 am
Tare: 35200 lb
Net: 66920 lb
33.46 tn

Weigh Master:

Driver:

TRUMP AT FERRY POINT PARK

Max Zeller

Almar Supplies Load # 23
248-22 Brookville Blvd
Rosedale, NY 11422
489141

M&B ENTERPRISES (516) 623-0991 Ref. No.: G 949401865

VIA

M Ferry Point Trump Golf 10/10 20 18
Bronx Whitestone

| | Truck # | Ticket # | Driver |
|---|---|---|---|
| Concrete Sand | | | |
| Fine Sand | 05 | RANCO # 457202 | GUSTAVO |
| Asphalt Sand | | | |
| LI Gravel | | 5015 33.46 | |
| 3/4 Crushed Stone | | | |
| 3/8 Crushed Stone | | | |
| Stone | | | |
| Topsoil | | | |
| Fill | | | |
| Regular Blend | | | |
| Dot Blend | | | |
| Removal | | | |
| | | | |
| On Hire | Hrs. | | |

Accepted by

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Almar Supplies LOAD #24

488761

248-22 Brookville Blvd
Rosedale, NY 11422

VIA _____

10-1-18 20__

M _____

| Truck # | Ticket # | Driver |
|---|---|---|
| Concrete Sand | | |
| Fine Sand | | |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire _____ Hrs.

Accepted by _____

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load #24

Rance Sand & Stone
151 South Street
Nanuet, NY 11048

Ticket# 457197
Date 10/10/2018
Phone (631)874-3930
Fax (631)874-3553

BELLISMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD, NY 11763

Loads: 23

Truck ALMA-49 ALMAR TRUCK #49
Material COVER COVER MATERIAL

Gross 112100 lb MANUAL Out 4:56 am
Tare 35400 lb
Net 76700 lb
38.35 tn

Weigh Master

Driver

TRUMP AT FERRY POINT PARK

Almar Supplies
248-22 Brookville Blvd.
Rosedale, NY 11422

LOAD #25

491073

VIA ALMAR 10-10 20__

M FROM RANCO SAND

TO TRUMP AT FERRY POINT PARK

Truck # 92 | Ticket # 457211 | Driver HENRY C

| | |
|---|---|
| Concrete Sand | |
| Fine Sand | 37. TONS |
| Asphalt Sand | |
| Ll Gravel | |
| 3/4 Crushed Stone | |
| 3/8 Crushed Stone | |
| Stone | |
| Topsoil | |
| Fill | |
| Regular Blend | |
| Dot Blend | |
| Removal | |

On Hire Hrs.

Accepted by

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Load #25

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 457211
Date 10/10/2019
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No: 1

MEDFORD,NY 11763

Loads: 25

Truck: ALMA-92 ALMAR TRUCK #92
Material: COVER COVER MATERIAL

Gross: 112420 lb MAN WT Out 7:41 am
Tare: 38240 lb
Net: 74180 lb
37.09 tn

Weigh Master:

Driver: Henry C #92

TRUMP AT FERRY POINT PARK

Almar Supplies LOAD #26

488759

248-22 Brookville Blvd
Rosedale, NY 11422

VIA _____

_____ 20____

M _____

| Truck # | Ticket # | Driver |
|---|---|---|
| Concrete Sand | | |
| Fine Sand | | |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire _____ Hrs.

Accepted by _____

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Ranco Sand & Stone
151 South Street
Manorville,NY 11949

Ticket# 457352
Date 10/12/2018
Phone (631)874-3939
Fax (631)874-3563

BELLISMO CONSTRUCTION
8 CLUSTERPINE STREET

Order No.: 1

MEDFORD,NY 11763

Loads: 26

Truck ALMA-49 ALMAR TRUCK #49
Material COVER COVER MATERIAL

Gross 113420 lb MAN WT Out 4:
Tare 35400 lb

Net 78020 lb
39.01 tn

Weigh Master AE

Driver

TRUMP AT FERRY POINT PARK

Almar Supplies LOAD # 1

491071

248-22 Brookville Blvd
Rosedale, NY 11422

VIA ALMAC

10-12 20 18

M FROM RANCO SAND

TO TRUMPET FERRY POINT PARK

| Truck # 92 | Ticket # | Driver HENRYE |
|---|---|---|
| Concrete Sand | | |
| Fine Sand | 457380 | 38.44 TONS |
| Asphalt Sand | | |
| LI Gravel | | |
| 3/4 Crushed Stone | | |
| 3/8 Crushed Stone | | |
| Stone | | |
| Topsoil | | |
| Fill | | |
| Regular Blend | | |
| Dot Blend | | |
| Removal | | |

On Hire Hrs.

Accepted by

FULL PAYMENT MUST BE REMITTED FOR THE ABOVE YARDAGE OR TIME WITHOUT QUESTION IF THIS IS SIGNED

Ranco Sand & Stone
161 South Street
Manorville,NY 11949

Ticket# 457360
Date 10/12/2018
Phone (631)874-3939
Fax (631)874-3553

BELLISIMO CONSTRUCTION
6 CLUSTERPINE STREET

MEDFORD,NY 11763

Order No: 1

Loads: 27

Truck : ALMA-92 ALMAR TRUCK #92
Material: COVER COVER MATERIAL

| | | | | | |
|---|---|---|---|---|---|
| Gross: | 115120 | lb | MAN WT | Out | 5:45 am |
| Tare: | 38240 | lb | | | |
| Net: | 76880 | lb | | | |
| | 38.44 | tn | | | |

Weigh Master: AC

Driver: Henri E #92

TRUMP AT FERRY POINT PARK

LOAD #27

# APPENDIX M

## Minutes of Weekly Construction Progress Meetings

JCS Construction Group, Inc.

# Meeting #1

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** Review Submittal Log | | | | | |
| 3.2 | 1 | Kitchen Equipment | John Gruber **(Trump Ferry Point LLC)**, Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** Review changing the design team to Sam Tell. We need to get this approved and in process | | | | | |
| 3.3 | 1 | South Ramp | John Gruber **(Trump Ferry Point LLC)**, Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** Review location of the south ramp at loading doc. initiate any redesign | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 1 | Roof Trusses | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** Review and release truss design | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 1 | HVAC Redesign | John Gruber **(Trump Ferry Point LLC)** | | High | Open |
| | **Description:** Has FP been release for new design? What is the timing on new bid docs? | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:** Review two week look ahead. | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 1 | Drainage | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** | | | | | |

JCS Construction Group, Inc.

# Meeting #3

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 08/16/2017 **MEETING TIME:** 10:00 AM - Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**
Weekly Site meetings

**ATTACHMENTS:**

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Kevin Dwyer | French & Parrello Associates | Tel: (732) 312-9800 | kevin.dwyer@fpaengineers.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Jess Licata | JCS Construction Group, Inc. | Tel: (203) 485-9612 | jess@jcsconstructiongroup.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Phiip Gauffreau | Maser Consulting P.A. | Tel: | pgauffreau@maserconsulting.com |
| Robert Zelley | Maser Consulting P.A. | Tel: | rzelley@maserconsulting.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

### DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 2.1 | 1 | Stock Pile | Justin Shaw (JCS Construction Group, Inc.) | | | Open |
| | **Description:** Review current stock piles and confirm approach for securing them. | | | | | |
| 2.2 | 2 | Tarping of the Stock Pile | Caitlin Pontrella | | | Open |
| | **Description:** Woodard and Curran has requested we tarp the stock pile. Plans show we need to seed the pile if it will be present for more than 30 days. We do not have tarping it in our contract. Need a direction. | | | | | |

JCS | Construction Group, Inc.

# Meeting #3

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone (Hart Howerton) | | | Open |
| | **Description:** Review Submittal Log | | | | | |
| 3.2 | 1 | Kitchen Equipment | John Gruber (Trump Ferry Point LLC), Ron Rainone (Hart Howerton) | | | Open |
| | **Description:** Review changing the design team to Sam Tell. We need to get this approved and in process | | | | | |
| 3.3 | 1 | South Ramp | John Gruber (Trump Ferry Point LLC), Ron Rainone (Hart Howerton) | | | Open |
| | **Description:** Review location of the south ramp at loading dock, initiate any redesign | | | | | |
| 3.6 | 1 | Bluestone | Ron Rainone (Hart Howerton) | | | Open |
| | **Description:** Currently waiting on approved samples. | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 1 | Roof Trusses | Ron Rainone (Hart Howerton) | | | Open |
| | **Description:** Review and release truss design | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 1 | HVAC Redesign | John Gruber (Trump Ferry Point LLC) | | High | Open |
| | **Description:** Has FP been release for new design? What is the timing on new bid docs? | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw (JCS Construction Group, Inc.) | | | Open |
| | **Description:** Review two week look ahead. | | | | | |

JCS | Construction Group, Inc.

# Meeting #3

| Civil | | | | | | |
|---|---|---|---|---|---|---|
| **No** | **Meeting Origin** | **Title** | **Assignment** | **Due Date** | **Priority** | **Status** |
| 7.1 | 1 | Drainage | Ron Rainone (Hart Howerton) | | | Open |
| | **Description:** We would like to look into bringing all building drainage to the existing system in the parking lot to avoid any disturbance to the Golf Course. We also have issues with the existing structures and their ability to implement the design intent. | | | | | |

JCS Construction Group, Inc.

# Meeting #9

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 09/27/2017 **MEETING TIME:** 10:00 AM - Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**
Weekly Site meetings

**ATTACHMENTS:**

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Jess Licata | JCS Construction Group, Inc. | Tel: (203) 485-9612 | jess@jcsconstructiongroup.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Robert Zelley | Maser Consulting P.A. | Tel: | rzelley@maserconsulting.com |
| Arthur Fisher | Sam Tell Companies | Tel: | afisher@samtell.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:**<br>Ownership is responsible for getting all changes approved by City Hall and Parks Dept.<br>CP suggests not to present PDC with piecemeal submissions but three separate packages: roof, exterior elevation, and kitchen.<br>If the potential exterior awning for outside kitchen area is a temporary, seasonal structure, then it becomes a non-issue, does not need to be approved by PDC. | | | | | |

### DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Description:**<br>Has FP been release for new design? What is the timing on new bid docs? | | | | | |
| 5.3 | 6 | Vapor Pipe Locations | Ron Rainone **(Hart Howerton)**, Kevin Dwyer **(French & Parrello Associates)** | 09/ 11/ 2017 | | Open |
| | **Description:**<br>We need final direction on the elevations of the pipe sleeves and where we can penetrate the walls or haunch of the slab. | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| 6.2 | 6 | Delays | Ron Rainone **(Hart Howerton)** | 09/ 11/ 2017 | | Open |
| | **Description:**<br>At this time I am putting in writing that there will be a significant change forthcoming to the contractual completion dates and associated documents. The current contract states dates assuming a start date equal to the signing date of the contract. The actual start date was months later. we have also encountered delays relative to site conditions as well as delays in responses for remediation work. I will circulate an official memo for Rons review and approval per Article II of our contract. | | | | | |
| 6.3 | 8 | Permits | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Ownership obtained a revised Earthwork permit reflecting change to Project Super. | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 1 | Drainage | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>We would like to look into bringing all building drainage to the existing system in the parking lot to avoid any disturbance to the Golf Course. We also have issues with the existing structures and their ability to implement the design intent. | | | | | |
| 7.2 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction. | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.1 | 9 | PCCO #003 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JCS need PCCO #003 approved and signed for the changes to the SSDS system so it can be ordered and installed in the coming weeks. Any delay to that would potentially cause serious delays related to weather and the liquid boot. These changes are related to the 6/6/17 changes by DEC. | | | | | |
| | **Attachments:** | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Sep 26, 2017 at 04:10 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 35 | 0 | Additional Fill Material | | Open | JCS Construction Group, Inc. | | Justin Shaw | 09/26/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/26/2017 | | 10/10/2017 | |
| **28 3502** METHANE GAS DETECTION AND ALARM | 34 | 0 | Methane Detection Package | Product Information | Open | EAI North | | Zarah Thanasides | 09/21/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/21/2017 | | 10/05/2017 | |
| *No Spec Section* | 33 | 0 | Couplings | | Open | A&M Warshaw Plumbing & Heating | | Cristine Bruno | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/21/2017 | | 10/05/2017 | |
| *No Spec Section* | 32 | 0 | Charlotte No-Hub Cast Iron Pipe | Product Information | Open | A&M Warshaw Plumbing & Heating | | Cristine Bruno | 09/21/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/21/2017 | | 10/05/2017 | |
| *No Spec Section* | 31 | 0 | Soil Analytical Reports | Product Information | Open | Triple G | | Eric Garrido | 09/15/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/16/2017 | | 09/30/2017 | |
| *No Spec Section* | 30 | 0 | Ejector Pump and Pit | | Open | JCS Construction Group, Inc. | | Justin Shaw | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/13/2017 | | 09/27/2017 | |
| *No Spec Section* | 28 | 0 | Wood Stain Samples | Sample | Open | JCS Millshop | | James Falk | | Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | For Record Only<br>Pending | 08/30/2017<br>09/12/2017 | 09/05/2017 | 09/13/2017 | |
| **06 4100** Architectural Wood Casework | 26 | 1 | Exterior Column | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/14/2017 | | 09/28/2017 | |
| **31 6216.16** Steel H Piles | 22 | 1 | Pile ID Plan | Shop Drawing | Open | Triple G | | Eric Garrido | 09/06/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/21/2017 | | 10/05/2017 | |
| **31 6216.16** Steel H Piles | 22 | 0 | Pile ID Plan | Shop Drawing | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/31/2017 | | 08/14/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 0 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | | James Falk | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |
| **08 1400** Wood Doors | 18 | 0 | Interior Doors | Shop Drawing | Open | Church Door | | Chuck Sweetman | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |
| *No Spec Section* | 11 | 1 | SSDS Blower Package | | Open | EAI North | | Zarah Thanasides | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/21/2017 | | 10/05/2017 | |
| **03 3000** Cast-In-Place Concrete | 7 | 2 | Anchor Bolt Layout and Details | Plans | Open | Schiavo Steel Co. Inc. | 05/25/2017 | Bart Schiavo | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 08/15/2017 | | 08/29/2017 | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Sep 26, 2017 at 04:07 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

# RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | Ferry Point Bar Request for Dimension Confirmation | Open | JCS Millshop | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | 09/25/2017 | Fiona Rooney | 09/28/2017 | | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | | | | | Falk, James (JCS Millshop) |
| 44 | Drain pipe in cover layer | Open | JCS Construction Group, Inc. | Rainone, Ron (Hart Howerton) | 09/25/2017 | Fiona Rooney | 09/28/2017 | | Rainone, Ron (Hart Howerton) | | | | | None |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | | | | Wiles, Craig (JCS Millshop) |
| 27 | Grade Beam Sleeve Question to GC | Open | A&M Warshaw Plumbing & Heating | Shaw, Justin (JCS Construction Group, Inc.) | 08/11/2017 | Fiona Rooney | 08/14/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Hart Howerton) | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumbing & Heating | Rainone, Ron (Hart Howerton) | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction Group, Inc. | Pusser, Brittany (JCS Construction Group, Inc.) | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS Construction Group, Inc.) | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS | Construction Group, LLC

TWO-WEEK LOOK AHEAD

September 27th 2017

**Project Name: Ferry Point** **Job # 16-031** **Weekly Project Meeting Wednesday 10AM**

| ACTIVITY | Week 1 | | | | | | | Week 2 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE: | Mon 9/25 | Tu 9/26 | Wed 9/27 | Th 9/28 | Fri 9/29 | Sat 9/30 | Sun 9/31 | Mon 10/01 | Tu 10/2 | Wed 10/03 | Thu 10/4 | Fri 10/5 | Sat 10/6 | Sun 10/7 | |
| Forms/Rebar | x | x | x | x | x | x | | x | x | x | x | x | | | Sleeves/Forming/Stripping |
| Concrete | | | | x | | | | | | | | | | | Cheek walls (one pour) |
| Backfilling | x | x | x | x | x | x | | x | x | x | x | x | | | Compacting |
| Utilities | | | | | | | | x | x | x | x | x | | | Drainage/Utilities/Roughings |
| Inspections | | | | | | | | | | | | x | | | Plumbing/Electrical |
| | | | | | | | | | | | | | | | JCS will notify Parks, Maser and W&C 48 hours prior to EAI starting |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

JCS Construction Group, Inc.

# Meeting #10

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 09/27/2017 **MEETING TIME:** 10:00 AM - 10:31 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**
Weekly Site meetings

**ATTACHMENTS:**

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Robert Zelley | Maser Consulting P.A. | Tel: | rzelley@maserconsulting.com |
| Arthur Fisher | Sam Tell Companies | Tel: | afisher@samtell.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |

**Description:**
Ownership is responsible for getting all changes approved by City Hall and Parks Dept.
CP suggests not to present PDC with piecemeal submissions but three separate packages: roof, exterior elevation, and kitchen.
If the potential exterior awning for outside kitchen area is a temporary, seasonal structure, then it becomes a non-issue, does not need to be approved by PDC.

JCS Construction Group, Inc.

# Meeting #10

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 2.1 | 1 | Stock Pile | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:** Review current stock piles and confirm approach for securing them. | | | | | |

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** Review Submittal Log | | | | | |
| 3.6 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | On Hold |
| | **Description:** Currently waiting on approved samples. | | | | | |
| 3.7 | 7 | Roof Trusses | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** JCS requests additional securing detail on the wood stringers. JCS to send RFI about the Simpson ties that have a maximum impact of 5/16"<br>JCS to send RFI regarding the detail shown on the truss shops calling for rigid insulation on the bottom of the trusses but there is no corresponding drawing or note in the plans to show this. | | | | | |
| 3.8 | 7 | Kitchen | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** - As drawn by Jim Bailey, the New Exterior Bar/Kitchen design doesn't work because the column line is 11' from the building and isn't in Hart Howerton's design scope. AF to provide pricing to determine whether HH, JCS, and Ownership wants to proceed. | | | | | |
| 3.9 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** JCS Millshop requires at least 2 weeks after reciept of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |

| | |
|---|---|
| | **Description:**<br>Review two week look ahead. |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 1 | Drainage | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>We would like to look into bringing all building drainage to the existing system in the parking lot to avoid any disturbance to the Golf Course. We also have issues with the existing structures and their ability to implement the design intent. | | | | | |
| 7.2 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction. | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Oct 3, 2017 at 04:10 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 38 | 0 | Drainage Materials | | Open | JCS Construction Group, Inc. | | Justin Shaw | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/02/2017 | | 10/16/2017 | |
| *No Spec Section* | 31 | 0 | Soil Analytical Reports | Product Information | Open | Triple G | | Eric Garrido | 09/15/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/16/2017 | | 09/30/2017 | |
| *No Spec Section* | 28 | 1 | Wood Stain Samples | Sample | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 10/03/2017<br>10/03/2017 | | 10/17/2017 | |
| **06 4100**<br>Architectural Wood Casework | 26 | 1 | Exterior Column | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/14/2017 | | 09/28/2017 | |
| **06 4100**<br>Architectural Wood Casework | 19 | 0 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | | James Falk | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |
| **08 1400**<br>Wood Doors | 18 | 0 | Interior Doors | Shop Drawing | Open | Church Door | | Chuck Sweetman | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |
| **03 3000**<br>Cast-In-Place Concrete | 7 | 2 | Anchor Bolt Layout and Details | Plans | Open | Schiavo Steel Co. Inc. | 05/25/2017 | Bart Schiavo | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 08/15/2017 | | 08/29/2017 | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Oct 3, 2017 at 04:13 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

# RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | Wine Dispenser | Open | JCS Millshop | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | 09/26/2017 | Fiona Rooney | 09/29/2017 | | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Interior Bar | | | | Falk, James (JCS Millshop) |
| 44 | Drain pipe in cover layer | Open | JCS Construction Group, Inc. | Rainone, Ron (Hart Howerton) | 09/25/2017 | Fiona Rooney | 09/28/2017 | | Rainone, Ron (Hart Howerton) | | | | | None |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | | | | Wiles, Craig (JCS Millshop) |
| 27 | Grade Beam Sleeve Question to GC | Open | A&M Warshaw Plumbing & Heating | Shaw, Justin (JCS Construction Group, Inc.) | 08/11/2017 | Fiona Rooney | 08/14/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Hart Howerton) | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumbing & Heating | Rainone, Ron (Hart Howerton) | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction Group, Inc. | Pusser, Brittany (JCS Construction Group, Inc.) | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS Construction Group, Inc.) | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS Construction Group, Inc.

# Meeting #11

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 10/11/2017 **MEETING TIME:** 10:00 AM - 10:30 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**
Weekly Site meetings

**ATTACHMENTS:**
Project Meeting.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:**<br>Ownership is responsible for getting all changes approved by City Hall and Parks Dept.<br>CP suggests not to present PDC with piecemeal submissions but three separate packages: roof, exterior elevation, and kitchen.<br>If the potential exterior awning for outside kitchen area is a temporary, seasonal structure, then it becomes a non-issue, does not need to be approved by PDC. | | | | | |

### DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

### Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Description:**<br>Review Submittal Log | | | | | |
| 3.6 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | On Hold |
| | **Description:**<br>Currently waiting on approved samples. | | | | | |
| 3.7 | 7 | Roof Trusses | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS requests additional securing detail on the wood stringers. JCS to send RFI about the Simpson ties that have a maximum impact of 5/16"<br>JCS to send RFI regarding the detail shown on the truss shops calling for rigid insulation on the bottom of the trusses but there is no corresponding drawing or note in the plans to show this.<br><br>JS: detail pertaining to through-bolts (versus welded bolts) | | | | | |
| 3.9 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after reciept of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| 3.10 | 10 | SSDS | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS is doing the gravel and EAI North is doing the piping. Pipe is going to be set on top of the gravel and will dip for the pits. Pipe is on top of the knee walls and the only depression from there is for the pits, so JCS can set the grade now with the stone sumped for depressions. Start backfilling on Friday/Monday. SSDS work to start Wednesday (10/10)<br>Chases for pipes are completed, all the sleeves for the SSDS are the black sleeves going through the haunches. Other sleeves that are trenched out on site are for the sewer lateral, which the plumbers are coming tomorrow (10/5) to start and the electricians are running their stuff now too. Most of the stuff after the electricians can go above the haunch walls. | | | | | |
| 3.11 | 10 | Beverages | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Location of Beverages | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 10 | Anchor Bolts | | | | Open |
| | **Description:**<br>On 9/27, per site walkthrough, JCS and RR of HH noticed that GGG was using the wrong plans. The correct plans were then given to them for a second time. | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |

JCS Construction Group, Inc.

# Meeting #11

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 1 | Drainage | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>We would like to look into bringing all building drainage to the existing system in the parking lot to avoid any disturbance to the Golf Course. We also have issues with the existing structures and their ability to implement the design intent. | | | | | |
| 7.2 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction. | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.1 | 11 | PCCO #004 | John Gruber **(Trump Ferry Point LLC)** | 10/ 11/ 2017 | | Open |
| | **Description:**<br>Change order to supply additional 1x10 nominal exterior molding for the column base and AZM-217 for the column base cap. | | | | | |
| | **Attachments:**<br>PCCO #004.pdf | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Oct 10, 2017 at 12:36 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 41 | 0 | Anchor Bolt Remedy | | Open | Triple G | | Christopher James | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/09/2017 | | 10/23/2017 | |
| **07 3126** Simulated Slate Roofing | 40 | 0 | Ecostar Submittal Package | | Open | J&C Building Renovations LLC | | Cezary Bartosiewicz | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/09/2017 | | 10/23/2017 | |
| *No Spec Section* | 39 | 0 | Sika | | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/06/2017 | | 10/20/2017 | |
| *No Spec Section* | 31 | 0 | Soil Analytical Reports | Product Information | Open | Triple G | | Eric Garrido | 09/15/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/16/2017 | | 09/30/2017 | |
| *No Spec Section* | 28 | 1 | Wood Stain Samples | Sample | Open | JCS Millshop | | James Falk | | Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Void<br>Pending | 10/03/2017<br>10/03/2017 | 10/03/2017 | 10/17/2017 | |
| **08 5200** Wood Windows | 23 | 1 | Window Shop Drawings | | Open | Pella Windows and Doors | | Robb DeWitt | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/10/2017 | | 10/24/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 0 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | | James Falk | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |
| **08 1400** Wood Doors | 18 | 0 | Interior Doors | Shop Drawing | Open | Church Door | | Chuck Sweetman | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Oct 10, 2017 at 12:36 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

# RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | Coupula | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 10/09/2017 | Fiona Rooney | 10/12/2017 | | Rainone, Ron (Hart Howerton) | | | 06 - Carpentry-06110 - Wood Framing - Wood Framing | | Wiles, Craig (JCS Millshop) |
| 50 | Access Panel | Open | JCS Construction Group, Inc. | Rainone, Ron (Hart Howerton) | 10/09/2017 | Fiona Rooney | 10/12/2017 | | Rainone, Ron (Hart Howerton) | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Lead | Open | JCS Construction Group, Inc. | Rainone, Ron (Hart Howerton) | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Hart Howerton) | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 47 | Wine Dispenser | Open | JCS Millshop | Rainone, Ron (Hart Howerton) Sullivan, Giavona (The Trump Organization) | 09/26/2017 | Fiona Rooney | 09/29/2017 | | Rainone, Ron (Hart Howerton) Sullivan, Giavona (The Trump Organization) | Interior Bar | | | | Falk, James (JCS Millshop) |
| 44 | Drain pipe in cover layer | Open | JCS Construction Group, Inc. | Rainone, Ron (Hart Howerton) | 09/25/2017 | Fiona Rooney | 09/28/2017 | | Rainone, Ron (Hart Howerton) | | | | | None |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | | | | Wiles, Craig (JCS Millshop) |
| 27 | Grade Beam Sleeve Question to GC | Open | A&M Warshaw Plumbing & Heating | Shaw, Justin (JCS Construction Group, Inc.) | 08/11/2017 | Fiona Rooney | 08/14/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Hart Howerton) | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumbing & Heating | Rainone, Ron (Hart Howerton) | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction Group, Inc. | Pusser, Brittany (JCS Construction Group, Inc.) | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS Construction Group, Inc.) | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS | Construction Group, LLC

# TWO-WEEK LOOK AHEAD

October 10th 2017

**Project Name: Ferry Point** **Job # 16-031** **Weekly Project Meeting Wednesday 10AM**

| ACTIVITY | Week 1 | | | | | | | Week 2 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE: | M 10/09 | T 10/10 | W 10/11 | T 10/12 | F 10/13 | S 10/14 | S 10/15 | M 10/16 | T 10/17 | W 10/18 | T 10/19 | F 10/20 | S 10/21 | S 10/22 | |
| Forms | | x | x | x | x | x | | x | x | x | x | x | | | Backfill/Rebar/Concrete |
| Utilities | | x | x | x | x | x | | x | x | | | | | | |
| Backfilling | x | x | x | x | x | x | x | x | x | x | x | x | | | Compacting/Stone |
| Inspections | | | | | | | | | x | | | | | | Plumbing |
| EAI | | | | | | | | x | x | x | x | x | x | | |
| Inspections | | | | | | | | | x | | | | | | Plumbing/Rebar/Concrete |
| | | | | | | | | x | x | x | x | x | x | | Mobilize/Erect |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

44 Homestead Avenue, Stamford, CT 06902 t:(203) 485-9612 f:(203) 724-8884

JCS Construction Group, Inc.

# Meeting #13

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 10/25/2017 **MEETING TIME:** 10:00 AM - Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

10.18.17 Project Meeting B.m4a 10.18.17 Project Meeting A.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Evan Comilloni | | Tel: | ecomilloni@woodardcurran.com |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Terry Young | | Tel: | teryryoung@msn.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:**<br>Ownership is responsible for getting all changes approved by City Hall and Parks Dept. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Parks has submittal package. Ron sent a description and explanation to Parks on why we had to do everything, along with Ownership's letter. Waiting on submittal status and response.<br><br>Timing for response from Parks is unknown. Detailed Bid Set for bar grill roof, all revised i | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | tems. All equipment is pretty much what was in the drawings that JCS has already received. Exception: the 6-burner stove stop has been replaced with a 4 burner. Size of the outside sink was condensed to accommodate decrease in size from 13 to 11 feet. Hand sink is known, but would we need a three-compartment sink? Engineer to advise but per RR, as long as all dishes are sterilized inside building only handwash is needed. JCS needs to know whether there is going to be a grease trap going outside, three-compartment. JG requests a call with Sam Tell to sort out issues, but ownership needs to determine the extent of their outside scope. Pair of cold plates, refrigeration unit for the island, storage, drain boards…<br><br>JCS needs to know whether the floor drain going into the grease line or not.<br><br>Per JR, there will not be a three-compartment sink in outdoor bar. Theoretically, being that there is cooking going on in that area, someone could dispose of grease in the handwash sink, but the ultimate determination is the engineer's call.<br><br>Sam Tell and JCS to put together some budgetary numbers for this scope.<br><br>Front stairs are built per the changed (and, as of yet, unapproved) drawings so if PDC decides that they don't like that, we are going to have to do something about that. Per JG, and embellished by RR in his submittal to PDC, these changes were made based on the abundance of safety concerns.<br><br>Driveway and Exterior Bar will require a formal submission, most likely in mid-November. Drainage changes and other smaller changes do not require formal submission review by Parks. Parks provide suggestions versus a flat no. There will be a formal letter/endorsement by Parks accompanying the submission. Ownership hopes to have something to give to Caitlin for the driveway in under a week. Per CP, be thorough in explanation because if changes are logical they are more likely to pass. | | | | | |
| 1.2 | 11 | Earthwork | Dave Keil **(Maser Consulting P.A.)** | | | Open |
| | **Description:**<br>Compaction tests and Soil test results | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>JCS did receive the plumbing permit from the DOB. Backfilling is ongoing.<br>Regarding the Shaping layer test results, Maser is still waiting on the Dioxin and Furon analyses, which will be available on the 24th.<br><br>Maser has not yet released their final letter on Soil Compaction to F&P but anticipates doing so today. Nothing to worry about in Maser's opinion. Team to push for an approval because we are beyond the point of return when it comes to this stone. JG to get on a call with Joe Tierney at F&P after the meeting. 88% to 98% compaction results.<br><br>Maser requests documentation on the quality of the stone that is being shipped from the quarry. | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Open architectural submittals to be returned by RR between 10/23 and 10/25.<br><br>Ejector pit, alternate grease trap submittals have been sent to engineers. | | | | | |
| 3.2 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Currently waiting on approved samples. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Civil: JS to obtain 1'x1' samples of cleft bluestone so that JG can approve based on a "true representation of the color" in order to determine which supplier to use. JG wants the stone to come from a single quarry, so that the mineral makeup and size of the stone is uniform, the wear and tear/color and installation is consistent throughout. Final approval on stone to come from Eric. | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after reciept of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>JG is anticipating the delivery of a wood stain control sample<br><br>RR's only comment on Millwork drawings will be that the overall width of the bar to be in accordance with the size that he made the false-wall. Other than that, all Millwork is to be reviewed/signed off on by JG/GS.<br><br>Where JF made the 60" ADA space at the bar, RR will provide a spec on the code-required knee space beneath so that the die-wall can be brought back a little further in that area. | | | | | |
| 3.4 | 10 | SSDS | Ron Rainone **(Hart Howerton)** | | | Closed |
| | **Description:**<br>JCS is doing the gravel and EAI North is doing the piping. Pipe is going to be set on top of the gravel and will dip for the pits. Pipe is on top of the knee walls and the only depression from there is for the pits, so JCS can set the grade now with the stone sumped for depressions. Start backfilling on Friday/Monday. SSDS work to start Wednesday (10/10)<br>Chases for pipes are completed, all the sleeves for the SSDS are the black sleeves going through the haunches. Other sleeves that are trenched out on site are for the sewer lateral, which the plumbers are coming tomorrow (10/5) to start and the electricians are running their stuff now too. Most of the stuff after the electricians can go above the haunch walls. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:** *(None)* | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 13 | Roof Trusses | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS requests additional securing detail on the wood stringers. JCS to send RFI about the Simpson ties that have a maximum impact of 5/16"<br>JS: detail pertaining to through-bolts (versus welded bolts)<br>JCS requires direction from F&P | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Woodard and Curran conferenced in: SSDS pit is not yet on schedule. JCS just got the required information from the structural engineer and will put a schedule together.<br>Schedule: JCS will redo two-week look ahead now that we have some structural direction from F&P. Backfilling, plumbing, electrical underground, drainage, concrete and anchor bolt repairs are ongoing; we will schedule surveyors and inspections as soon as possible | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.2 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Hernan has yet to respond to the question of DOB-approved electrical drawings. JCS is still waiting on civil, landscaping, structural, landscaping or electrical. The title block sheet still does not accurately reflect the current drawings. JG called Hernan during the meeting with no response. | | | | | |
| 7.3 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Front drive: JS would like to buy all hardscape material in one shot. JS requests entry driveway plans (based on potential exterior changes) to determine how to set up the site. Would be ideal to work our way out of the site so that after steel goes up we can set grades, JCS needs to know what height to set the grade.<br>The proposed changes need to be approved by PDC, the cost needs to be approved by Eric. JG to do tissue sketch, for which Hart Howerton is not responsible because this is a landscape and civil drawing change and this all going to cost more money. No catch basins in the way if we open up the bottom. Bag drop, extra electrical and all of the stuff that is not currently on drawings, which JR and JG advised Eric would be an extra charge.<br>JS inquired how we will be proceeding with these types of changes: are we doing drawings, are we doing RFIs, are we doing things on the fly? JG says that he will draw a tissue sketch to give to PDC prior to spending the money to reengineer.<br>Per conversation between JS & F&P, JCS will submit based on plans and then modify the submittals based on site conditions. Submittals to be marked up after the fact. | | | | | |
| 7.4 | 12 | Pro Shop | | | | Open |
| | **Description:**<br>Interior Design | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Terry Young working between Gia and Tanya on the fixture and retail needs of the design of the Pro-Shop. The current floor plan is the only For Construction drawing of the Pro Shop, and Ownership bought JCS based on installing all the perimeter fixtures in the POS station. Plan is to have a combination of metal and millwork. The metal supplier is one that TY/GS have worked with previously on other Pro Shops. The concept involves freestanding millwork that anchors on the wall, going about 12' high, discussing potential of | | | | | |

| | |
|---|---|
| | a rolling ladder going across a fixed shelf at about 8' and another 4' of shelving on top of that. Fixture finish still to be determined. Per JG, we cannot go over the dollar value assigned to the Pro Shop without GS going in front of Eric and requesting additional funds.<br><br>JCS' scope includes anything that would be attached to a wall and the cash wrap station. Free standing floor fixtures are predominantly metal with the exception of wooden tables. This metal is not in JCS' scope. Integrated millwork that attaches to the wall with some flexibility. TY can send drawings. TY had been working with JF at JCSMS, who has the original schematic drawings for the Pro Shop which was designed to look like the Bar. Interior design team to simplify the details but use the same wood.<br><br>Would be ideal to have JCS build the millwork component. JF's perimeter drawings to be the driving force of design and construction, TY to insert what he wants into these Millwork shop drawings, rather than the opposite. JG to be cc'd on all correspondence. TY/GS' drawings for Interior Layout and elevations are almost complete for this. Eric would not want the mirrors cladded on the columns in the Pro Shop to obscure the view. Cladding Columns in white raised millwork panels. TY to provide JF with any details and dimensions that he would need to input into his drawings. |

JCS | Construction Group, LLC

TWO-WEEK LOOK AHEAD

October 18th 2017

**Project Name: Ferry Point** **Job # 16-031** Weekly Project Meeting Thursday 10AM

| ACTIVITY | Week 1 | | | | | | | Week 2 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE: | Mon. 10/23 | Tues. 10/24 | Wed. 10/25 | Thurs. 10/26 | Fri. 10/27 | Sat. 10/28 | Sun. 10/29 | Mon. 10/30 | Tues 10/31 | Wed. 11/01 | Thurs. 11/02 | Fri. 11/03 | Sat. 11/04 | Sun. 11/05 | |
| Rebar | | | x | x | | | | | | | | | | | Patio |
| Utilities | | x | x | x | x | x | | x | x | x | | | | | Plumbing |
| Backfilling | x | x | x | x | x | x | | x | x | x | x | x | x | | Stone |
| Inspections | | | | | x | | | | x | | | x | | | Plumbing |
| Steel | | | | x | | | | | | | | | | | Survey |
| EAI | | | | | | | | x | x | x | x | x | | | Complete by 11/04 |
| Concrete | | | | | | | | x | | | | | | | Patio |
| Maser | | | x | | x | | | x | | | | | | | Rebar/Repairs/Concrete |
| | | | | | | | | | | | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Oct 24, 2017 at 03:50 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 45 | 0 | Palight | Product Information | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/23/2017 | | 11/06/2017 | |
| *No Spec Section* | 43 | 0 | Proposed Alternate Grease Trap | | Open | A&M Warshaw Plumbing & Heating | 10/19/2017 | Cristine Bruno | 10/16/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/16/2017 | | 10/30/2017 | |
| *No Spec Section* | 42 | 0 | Submittal for Sakarete Repairs | | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | | | 10/25/2017 | |
| **07 3126** Simulated Slate Roofing | 40 | 0 | Ecostar Submittal Package | | Open | J&C Building Renovations LLC | | Cezary Bartosiewicz | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/09/2017 | | 10/23/2017 | |
| *No Spec Section* | 31 | 0 | Soil Analytical Reports | Product Information | Open | Triple G | | Eric Garrido | 09/15/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 09/16/2017 | | 09/30/2017 | |
| *No Spec Section* | 30 | 1 | Ejector Pump and Pit | Shop Drawing | Open | JCS Construction Group, Inc. | 10/18/2017 | Justin Shaw | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/13/2017 | | 10/27/2017 | |
| **05 3100** Steel Decking | 29 | 1 | Deck Drawings | Shop Drawing | Open | Schiavo Steel Co. Inc. | | Bart Schiavo | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/20/2017 | | 11/03/2017 | |
| *No Spec Section* | 28 | 1 | Wood Stain Samples | Sample | Open | JCS Millshop | | James Falk | | Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton) Sullivan, Giavona (The Trump Organization) | Void Pending | 10/03/2017 10/03/2017 | 10/03/2017 | 10/17/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 2 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 10/25/2017 | James Falk | | Ron Rainone (Hart Howerton) Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton) Sullivan, Giavona (The Trump Organization) | Pending Pending | | | 11/03/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 0 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | | James Falk | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |
| **08 1400** Wood Doors | 18 | 0 | Interior Doors | Shop Drawing | Open | Church Door | | Chuck Sweetman | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Oct 24, 2017 at 04:07 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

# RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | Access Panel | Open | JCS Construction Group, Inc. | Rainone, Ron (Hart Howerton) | 10/09/2017 | Fiona Rooney | 10/12/2017 | | Rainone, Ron (Hart Howerton) | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Lead | Open | JCS Construction Group, Inc. | Rainone, Ron (Hart Howerton) | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Hart Howerton) | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | | | | Wiles, Craig (JCS Millshop) |
| 27 | Grade Beam Sleeve Question to GC | Open | A&M Warshaw Plumbing & Heating | Shaw, Justin (JCS Construction Group, Inc.) | 08/11/2017 | Fiona Rooney | 08/14/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Hart Howerton) | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Hart Howerton) | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumbing & Heating | Rainone, Ron (Hart Howerton) | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JCS Construction Group, Inc.) | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction Group, Inc. | Pusser, Brittany (JCS Construction Group, Inc.) | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS Construction Group, Inc.) | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS Construction Group, Inc.

# Meeting #14

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 11/01/2017 **MEETING TIME:** 10:00 AM - Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

10.25.17 Project Meeting.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Evan Comilloni | | Tel: | ecomilloni@woodardcurran.com |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Melissa Noto | | Tel: | mnoto@trumporg.com |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

## Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:** Ownership is responsible for getting all changes approved by City Hall and Parks Dept. | | | | | |
| | **Previous Meeting Minutes:** **10/25/2017:** *(None)* | | | | | |
| 1.2 | 11 | Earthwork | Dave Keil **(Maser Consulting P.A.)** | | | Open |
| | **Description:** | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Compaction tests and Soil test results | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>DK received the shaping materials test results during the meeting. Preliminary glance looks ok. JCS will get report from Maser and forward to W&C | | | | | |
| 1.3 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JG brought Sponzilli's the first-round draft of landscape drawing, LP-1. New design will allow for functional, safer traffic flow and increased ADA compliance at driveway. Undecided where the bag drop will be. This drawing has been sent to Ron. On first glance, Joe Conforti of NYC Parks agrees that this is a more functional design but will need to bring it to PDC for formal approval. Trump to take one more step on their end then they will push it back to landscape architect to do a more formal presentation that will then go to PDC. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:** *(None)* | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:** *(None)* | | | | | |
| 3.2 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Currently waiting on approved samples. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Back paving area: JCS will not set the catch basin for now, will determine location later. Elevation issue is, as of yet, unresolved. Staging area for carts is undetermined.<br>Exterior changes include: Grill, Bar, Back of Clubhouse/staging area, venting, roof changes and locations, grill is now going underneath the overhang, Horseshoe bar ties into the columns and has been approved by Eric Trump | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after reciept of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Exterior bar to be white painted Azek. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Wood Finish:<br>Oak control sample provided by GS, Millshop can now provide samples for color selection, which will go to Eric Trump for final approval.<br>• Fire retardant wood will change finish color. Does code for NYC require this? Per GS, she is legally required to write this in her specs, but it just has to abide by local code. Whoever is doing the case goods will figure that out. Per JS and JS, because the building is sprinklered this is unnecessary.<br>• Interior designer no longer wants walnut, does not care what species it is, defers to JG<br>Plain sawn white oak stained to match color of sample given to JCS, whichever species of wood doesn't matter to GS. GS wants full grain. Will not be going with full fill, so the specs provided will be revised and distributed by EOD. Once GS determines spec, this will be the control sample for all wood. | | | | | |
| 3.5 | 13 | Stone Tops | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>There is no extra material at Ivanka's. GS brought with her the Calcutta stone sample.<br>Per JG, Breccia being held in Italy for the locker rooms.<br>GS rejected the 2 synthetic marble samples provided by JG. Synthetic is a quartz material, considerably cheaper, durable, doesn't have the salt and peppering that one gets with Calcutta, considerably cheaper alternative. Outdoor stone/Marble spec would be used for front bar, back bar, cash wrap/check-in, all tops in pro-shop. JG's concern is the durability. GS suggests a protective membrane, but this will peel over time. GS will initial the Calcutta. Chip in marble is a safety/liability. GS prefers waterfall edge if she can get ET to approve. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:** *(None)* | | | | | |
| 3.6 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Description:**<br>GS received sections from HH and measured chandeliers to fit 18' ceilings.<br>Ballroom ceilings and Grill Room ceilings are 18'.<br>Hang chandeliers on highest coffer/beam of the ceilings<br>Specified chandeliers are $15K per quote acquired by Melissa Noto and weigh 750 lbs. The trusses will not support this weight. The flat ceilings in the pro shop can support the weight but the ceilings in the other locations may not.<br>176 lbs (3x) Chandeliers will come with a threaded rod, secure with air craft cable to prevent the fixture from coming loose. Spread a Kindorf inside a gem box, threaded rod through the gem box and run the aircraft cable with the wires into the ceiling.<br>GS spoke to Isabella at HH who confirmed that HH is not contracted to do any interior fit out work, as per plans and specs, so there are no RCPs.<br>JF has created the roof and ceiling details.<br>Interior columns are big enough to hang chandeliers, all they need to be is big enough to hold a gem box.<br>Pro Shop chandeliers to be Schonbek.<br>Need to have a section in the ceiling that is removable so that the HVAC equipment can be accessed as needed.<br>Per JG, instead of an access panel, Justin will design something that can come apart fairly easily so that it doesn't impact the location of the fixtures. This fixture will be 60" by 60" by 60". | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:** *(None)* | | | | | |
| 3.7 | 13 | Coordination PLans | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Since HH isn't contracted to do elevations, the Millwork shop drawings show the locations and look of the crown moldings which were sent to GS for approval (still pending, as GS needs to set up Procore account to approve/markup submittals and access all drawings and RFIs). GS to markup Millwork bar shops to reflect the locations and coordination of GFI wired lamps.<br>GS to provide a sample of bar lamp.<br>Per GS/JG, electrical contractor to use millwork drawings as his plans for wiring the GFI at the bar.<br>GS and JCS to create a laundry list of items that need to be specified, and what is needed from either side, as the coordination plans are not in anybody's scope and this has not been talked about.<br>As per their previous experiences in Trump projects, it will fall on GS & JG to get the coordination issues squared away. Submittal workflow will move from RR to JG/GS.<br>GS/JG to sign off on Millwork drawings. Markups to include every detail from epoxy, drink rail, USB ports, etc. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**10/25/2017:** *(None)* | | | | | |
| 3.8 | 13 | Carpet | Giavona Sullivan **(The Trump Organization)**,<br>John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Carpet installation, GS and JG specify double stick. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:** *(None)* | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 13 | Roof Trusses | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS requests additional securing detail on the wood stringers. JCS to send RFI about the Simpson ties that have a maximum impact of 5/16"<br>JS: detail pertaining to through-bolts (versus welded bolts)<br>JCS requires direction from F&P | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Jim Falk sent out drawings for cupola trusses, which JS sent to RR for initial approval. After RR provides feedback, JS will send these out as official. Basically, if we remove the top chord and make them all a 3x8 and then extend it all the way through ad then scab on ½" plywood to make up the difference in the truss width and then gusset the two together then we have at least a full rafter tail on the entire thing, then we don't have to do different connections.<br>Connection detail for plate locations and bolt locations is approximately 4000 holes, and would require framer to shoot the Hilti nails into the steel, mark it, countersink and drill a hole to put a bolt on it. RR said last week to countersink the plate but this is not a viable solution. | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Rebar guys didn't show up due to forecasted rain, which will potentially push back Maser's rebar inspection.<br>Still waiting on F&P to release compaction approval. Friday plumbing inspections, Wednesday EAI is starting work | | | | | |

| Civil | | | | | | |
|---|---|---|---|---|---|---|
| **No** | **Meeting Origin** | **Title** | **Assignment** | **Due Date** | **Priority** | **Status** |
| 7.2 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction. | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Hernan has yet to respond to the question of DOB-approved electrical drawings. JCS is still waiting on civil, landscaping, structural, landscaping or electrical. The title block sheet still does not accurately reflect the current drawings. JG and JR called Hernan during 10/18 meeting with no response. | | | | | |
| 7.3 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Front drive: JS would like to buy all hardscape material in one shot. JS requests entry driveway plans (based on potential exterior changes) to determine how to set up the site. Would be ideal to work our way out of the site so that after steel goes up we can set grades, JCS needs to know what height to set the grade.<br>The proposed changes need to be approved by PDC, the cost needs to be approved by Eric. JG to do tissue sketch, for which Hart Howerton is not responsible because this is a landscape and civil drawing change and this all going to cost more money. No catch basins in the way if we open up the bottom. Bag drop, extra electrical and all of the stuff that is not currently on drawings, which JR and JG advised Eric would be an extra charge.<br>JS inquired how we will be proceeding with these types of changes: are we doing drawings, are we doing RFIs, are we doing things on the fly? JG says that he will draw a tissue sketch to give to PDC prior to spending the money to reengineer.<br>Per conversation between JS & F&P, JCS will submit based on plans and then modify the submittals based on site conditions. Submittals to be marked up after the fact. | | | | | |
| 7.4 | 12 | Pro Shop | | | | Open |
| | **Description:**<br>Interior Design | | | | | |
| | **Previous Meeting Minutes:**<br>**10/25/2017:**<br>Millwork drawings to be reviewed and marked up for approval by GS and JG | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Oct 31, 2017 at 04:13 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | Access Panel | Open | JCS Construction ... | Rainone, Ron (Har... | 10/09/2017 | Fiona Rooney | 10/12/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Lead | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Har... | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JC... | | | | | Wiles, Craig (JCS Millshop) |
| 27 | Grade Beam Sleeve Question to GC | Open | A&M Warshaw Plumb... | Shaw, Justin (JCS... | 08/11/2017 | Fiona Rooney | 08/14/2017 | | Rooney, Fiona (JC... | | | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumb... | Rainone, Ron (Har... | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JC... | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

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## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 47 | 0 | Typical Molding Details | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 10/30/2017<br>10/30/2017 | | 11/13/2017 | |
| *No Spec Section* | 46 | 0 | Typical Trim Detail for Columns and Ceiling | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 10/30/2017<br>10/30/2017 | | 11/13/2017 | |
| *No Spec Section* | 42 | 0 | Submittal for Sakarete Repairs | | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | | | 10/25/2017 | |
| **07 3126** Simulated Slate Roofing | 40 | 1 | Ecostar Submittal Package | Product Information | Open | J&C Building Renovations LLC | | Cezary Bartosiewicz | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/30/2017 | | 11/13/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 2 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 10/25/2017 | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | | | 11/03/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 0 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | | James Falk | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |

JCS Construction Group, Inc.

# Meeting #15

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 11/08/2017 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

11.1.17 Project Meeting.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Evan Comilloni | | Tel: | ecomilloni@woodardcurran.com |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Melissa Noto | | Tel: | mnoto@trumporg.com |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:**<br>Ownership is responsible for getting all changes approved by City Hall and Parks Dept. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>Regarding outdoor grill, we will need to pipe to old location and new location in case PDC says no to proposed plans. Ron to forward files to F&P and then Hernan will get those plans approved by the City. JG does not want to wait for PDC approval before sending these to the city. | | | | | |

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|---|---|---|---|---|---|---|
| | | | | | | |
| 1.2 | 11 | Earthwork | Dave Keil **(Maser Consulting P.A.)** | | | Open |
| | **Description:**<br>Compaction tests and Soil test results | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>Everything for W&C has been satisfied. We have fill and compaction approvals, everything soil related has been approved<br>Underslab SSDS piping scheduled for Thursday so if W&C wants to be here they need to have someone onsite to do witness. Maser is going to be present throughout the process. EAI is also laying the pipes. Maser to send out DFPs per usual for Parks & W&C to review.<br>Shaping layer material: Material to be brought in as needed so as not to jam-up the site. Trucking manifest for each load of soil signed by driver, source generator, Maser to sign manifest stating that they did a PID scan and a visual scan. W&C to provide a manifest template to Maser. | | | | | |
| 1.3 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JG brought Sponzilli's the first-round draft of landscape drawing, LP-1. New design will allow for functional, safer traffic flow and increased ADA compliance at driveway. Undecided where the bag drop will be. This drawing has been sent to Ron. On first glance, Joe Conforti of NYC Parks agrees that this is a more functional design but will need to bring it to PDC for formal approval. Trump to take one more step on their end then they will push it back to landscape architect to do a more formal presentation that will then go to PDC. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:** *(None)* | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:** *(None)* | | | | | |
| 3.2 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Currently waiting on larger samples from the supplier | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:** *(None)* | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after reciept of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |

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|---|---|---|---|---|---|---|
| | | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>GS' sample is reddish while the inspiration pictures are a darker brown/mocha.<br>Soffit Detail: JG provided a contact for Melton Classics who can cast corbels if necessary. Chuck Hicks: (770) 963-3060 mike@meltonclassics.com<br>Typical Millshop Details: GS' comments Instead of beadboard GS wants V-Groove. Either MDF or poplar board. This can just be flipped over to show the V-Groove. Corbel rejected. JG to review submittals with GS today and get that back to JCS. | | | | | |
| 3.5 | 13 | Stone Tops | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>There is no extra material at Ivanka's. GS brought with her the Calcutta stone sample.<br>Per JG, Breccia being held in Italy for the locker rooms.<br>GS rejected the 2 synthetic marble samples provided by JG. Synthetic is a quartz material, considerably cheaper, durable, doesn't have the salt and peppering that one gets with Calcutta, considerably cheaper alternative. Outdoor stone/Marble spec would be used for front bar, back bar, cash wrap/check-in, all tops in pro-shop. JG's concern is the durability. GS suggests a protective membrane, but this will peel over time. GS will initial the Calcutta. Chip in marble is a safety/liability. GS prefers waterfall edge if she can get ET to approve. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>Final specification still needed. | | | | | |
| 3.6 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Description:**<br>GS received sections from HH and measured chandeliers to fit 18' ceilings.<br>Ballroom ceilings and Grill Room ceilings are 18'.<br>Hang chandeliers on highest coffer/beam of the ceilings<br>Specified chandeliers are $15K per quote acquired by Melissa Noto and weigh 750 lbs. The trusses will not support this weight. The flat ceilings in the pro shop can support the weight but the ceilings in the other locations may not.<br>176 lbs (3x) Chandeliers will come with a threaded rod, secure with air craft cable to prevent the fixture from coming loose. Spread a Kindorf inside a gem box, threaded rod through the gem box and run the aircraft cable with the wires into the ceiling.<br>GS spoke to Isabella at HH who confirmed that HH is not contracted to do any interior fit out work, as per plans and specs, so there are no RCPs.<br>JF has created the roof and ceiling details.<br>Interior columns are big enough to hang chandeliers, all they need to be is big enough to hold a gem box.<br>Pro Shop chandeliers to be Schonbek.<br>Need to have a section in the ceiling that is removable so that the HVAC equipment can be accessed as needed.<br>Per JG, instead of an access panel, Justin will design something that can come apart fairly easily so that it doesn't impact the location of the fixtures. This fixture will be 60" by 60" by 60". | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>Final specification still needed. | | | | | |
| 3.7 | 13 | Coordination PLans | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Since HH isn't contracted to do elevations, the Millwork shop drawings show the locations and look of the crown moldings which were sent to GS for approval (still pending, as GS needs to set up Procore account to approve/markup submittals and access all drawings and RFIs). GS to markup Millwork bar shops to reflect the locations and coordination of GFI wired lamps.<br>GS to provide a sample of bar lamp.<br>Per GS/JG, electrical contractor to use millwork drawings as his plans for wiring the GFI at the bar.<br>GS and JCS to create a laundry list of items that need to be specified, and what is needed from either side, as the coordination plans are not in anybody's scope and this has not been talked about.<br>As per their previous experiences in Trump projects, it will fall on GS & JG to get the coordination issues squared away. Submittal workflow will move from RR to JG/GS.<br>GS/JG to sign off on Millwork drawings. Markups to include every detail from epoxy, drink rail, USB ports, etc. | | | | | |

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|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**11/01/2017:** *(None)* | | | | | |
| 3.8 | 13 | Carpet | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Carpet installation, GS and JG specify double stick. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>Final specification still needed. | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 13 | Roof Trusses | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS requests additional securing detail on the wood stringers. JCS to send RFI about the Simpson ties that have a maximum impact of 5/16"<br>JS: detail pertaining to through-bolts (versus welded bolts)<br>JCS requires direction from F&P | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>Connection detail for the tube steel plate. As it is, we would have to shoot everything 12" on center, countersink, and then drill a main hole through the countersunk hole, which is 3 steps to do a one-step thing. The tops of the beams are okay—they will be bolted. JCS to issue an official RFI pertaining to the tube steel specifically. Staggered 12" on center (per details on S-500.00).<br><br>JCS to obtain 2009 code compliant calculations for the cupula changes from the manufacturer.<br><br>No one is providing the permanent bracing plan, this has not been requested as a submittal form the engineers. | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 14 | Plumbing Fixtures | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JG is meeting with Kohler rep immediately after this meeting to discuss plumbing fixtures. Will be using floor mounted flush valve toilets. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:** *(None)* | | | | | |
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |

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| | **Previous Meeting Minutes:**<br>**11/01/2017:** *(None)* |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>Maser spoke to manufacturer of liquid boot who said that the boot can be poured at 35F and rising.<br>JS might try to box the bar and kitchen areas because we need to have that inspected and we cant put the plumbing in for it now until the inspection on Friday so we cannot do the plumbing until Monday. | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.2 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>Hernan Rojas brought a set of drawings stamped by the DOB. DOB does not require stamped electrical drawings onsite because the electrician files his own plans with the DOB and pulls his own permits with the city, which are then approved separately from the rest of the drawings/scope.<br>Sprinkler, Public Assembly and Fire Alarm to be filed separately.<br>Whatever civil drawings we may have were a part of the original drawings that included a basement. These plans have changed since we received approval from DOB, JG to determine how to go about having the revisions approved/submitted.<br>Still need Structural and Civil from HR.<br>Two-week turn around for drawings that have not been received by the DOB. Steel erection is scheduled for the 15th and inspections will need to be called in for the end of the month.<br>Civil, structural, plumbing, electrical, sprinkler, HVAC. RR to print the full-sized set and bill JR from the electronic copy HR sent to JR. | | | | | |
| 7.3 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**11/01/2017:**<br>JR and JG to go over the exterior redesign one more time, incorporating ET's comments and then have Sponzilli redraw it. Need to create some kind of podium and determine the material (wood frame vs. masonry, canvas vs. hard roof?) and location. Need to bring power and communications out there, where IT closet is currently located, put two 2" adjacent to that and bring it out to podium from there for lighting, computer and maybe heating. Maybe need 2-3 circuits. | | | | | |
| 7.4 | 12 | Pro Shop | | | | Open |
| | **Description:**<br>Interior Design | | | | | |

| | |
|---|---|
| | **Previous Meeting Minutes:**<br>**11/01/2017:** *(None)* |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Nov 7, 2017 at 03:51 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | Access Panel | Open | JCS Construction ... | Rainone, Ron (Har... | 10/09/2017 | Fiona Rooney | 10/12/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Lead | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Har... | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JC... | | | | | Wiles, Craig (JCS Millshop) |
| 27 | Grade Beam Sleeve Question to GC | Open | A&M Warshaw Plumb... | Shaw, Justin (JCS... | 08/11/2017 | Fiona Rooney | 08/14/2017 | | Rooney, Fiona (JC... | | | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumb... | Rainone, Ron (Har... | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JC... | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Nov 7, 2017 at 03:51 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 47 | 0 | Typical Molding Details | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 10/30/2017<br>10/30/2017 | | 11/13/2017 | |
| *No Spec Section* | 46 | 0 | Typical Trim Detail for Columns and Ceiling | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 10/30/2017<br>10/30/2017 | | 11/13/2017 | |
| *No Spec Section* | 42 | 0 | Submittal for Sakarete Repairs | | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | | | 10/25/2017 | |
| **07 3126**<br>Simulated Slate Roofing | 40 | 1 | Ecostar Submittal Package | Product Information | Open | J&C Building Renovations LLC | | Cezary Bartosiewicz | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/30/2017 | | 11/13/2017 | |
| **06 4100**<br>Architectural Wood Casework | 19 | 2 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 10/25/2017 | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | | | 11/03/2017 | |
| **06 4100**<br>Architectural Wood Casework | 19 | 0 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | | James Falk | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |

Kevin Dwyer
732 312-5502
908 705 1613

JCS Construction Group, Inc.

# Meeting #16

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

Kevin, dwyer @ fpa engineers.com

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 11/08/2017 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Project Meeting 11-8-17.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Evan Comilloni | | Tel: | ecomilloni@woodardcurran.com |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Melissa Noto | | Tel: | mnoto@trumporg.com |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |

**Description:**
Ownership is responsible for getting all changes approved by City Hall and Parks Dept.

**Previous Meeting Minutes:**

**11/15/2017:**
Final package of rear outside changes have been sent to Parks, the front has not been submitted to Parks.\

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.2 | 11 | Earthwork | Dave Keil **(Maser Consulting P.A.)** | | | Open |
| | **Description:**<br>Compaction tests and Soil test results | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>Maser to continue to send erosion control reports along with DFRs.<br>W&C and Maser have not received the letter from F&P.<br>W&C owes Maser templates for soil manifests. Soil not needed onsite at this time. Will be delivered as needed.<br>Maser's reports on SSDS should continue to document any and all deviations from drawings, re3dline drawings/as-builts. Sign off on deviations from F&P as the original designer of the SSDS. This will be in the cert report but it is not something that Maser is certifying.<br>JG and DK to coordinate this with F&P. | | | | | |
| 1.3 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JG brought Sponzilli's the first-round draft of landscape drawing, LP-1. New design will allow for functional, safer traffic flow and increased ADA compliance at driveway. Undecided where the bag drop will be. This drawing has been sent to Ron. On first glance, Joe Conforti of NYC Parks agrees that this is a more functional design but will need to bring it to PDC for formal approval. Trump to take one more step on their end then they will push it back to landscape architect to do a more formal presentation that will then go to PDC. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>ET is going to be onsite on Friday. JS can meet with ownership and ET to discuss location of transformer in relation to the turning circle and associated elevations. | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>Window shops have been resubmitted, should be a quick turnaround because there was only a minor change in the resubmission. Three egress doors (104B, 103C, 101A) need to have ADA sills and require 3rd party certification or leave it as is sign off on JCS not being responsible for wind loads. need to have ownership determine how to proceed with sills as often ADA sills present the hazard of rain water to enter building, | | | | | |
| 3.2 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Currently waiting on larger samples from the supplier | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:** *(None)* | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Description:**<br>JCS Millshop requires at least 2 weeks after reciept of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>Interior millwork sample of flat-sawn ash has an open cathedral grain and, per JG, looks similar to the furniture used throughout other Trump properties so will mostly be approved. | | | | | |
| 3.5 | 13 | Stone Tops | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>There is no extra material at Ivanka's. GS brought with her the Calcutta stone sample.<br>Per JG, Breccia being held in Italy for the locker rooms.<br>GS rejected the 2 synthetic marble samples provided by JG. Synthetic is a quartz material, considerably cheaper, durable, doesn't have the salt and peppering that one gets with Calcutta, considerably cheaper alternative. Outdoor stone/Marble spec would be used for front bar, back bar, cash wrap/check-in, all tops in pro-shop. JG's concern is the durability. GS suggests a protective membrane, but this will peel over time. GS will initial the Calcutta. Chip in marble is a safety/liability. GS prefers waterfall edge if she can get ET to approve. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>Final specification still needed. | | | | | |
| 3.6 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Description:**<br>GS received sections from HH and measured chandeliers to fit 18' ceilings.<br>Ballroom ceilings and Grill Room ceilings are 18'.<br>Hang chandeliers on highest coffer/beam of the ceilings<br>Specified chandeliers are $15K per quote acquired by Melissa Noto and weigh 750 lbs. The trusses will not support this weight. The flat ceilings in the pro shop can support the weight but the ceilings in the other locations may not.<br>176 lbs (3x) Chandeliers will come with a threaded rod, secure with air craft cable to prevent the fixture from coming loose. Spread a Kindorf inside a gem box, threaded rod through the gem box and run the aircraft cable with the wires into the ceiling.<br>GS spoke to Isabella at HH who confirmed that HH is not contracted to do any interior fit out work, as per plans and specs, so there are no RCPs.<br>JF has created the roof and ceiling details.<br>Interior columns are big enough to hang chandeliers, all they need to be is big enough to hold a gem box.<br>Pro Shop chandeliers to be Schonbek.<br>Need to have a section in the ceiling that is removable so that the HVAC equipment can be accessed as needed.<br>Per JG, instead of an access panel, Justin will design something that can come apart fairly easily so that it doesn't impact the location of the fixtures. This fixture will be 60" by 60" by 60". | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>Final specification still needed. | | | | | |
| 3.7 | 13 | Coordination PLans | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Since HH isn't contracted to do elevations, the Millwork shop drawings show the locations and look of the crown moldings which were sent to GS for approval (still pending, as GS needs to set up Procore account to approve/markup submittals and access all drawings and RFIs). GS to markup Millwork bar shops to reflect the locations and coordination of GFI wired lamps.<br>GS to provide a sample of bar lamp.<br>Per GS/JG, electrical contractor to use millwork drawings as his plans for wiring the GFI at the bar.<br>GS and JCS to create a laundry list of items that need to be specified, and what is needed from either side, as the coordination plans are not in anybody's scope and this has not been talked about.<br>As per their previous experiences in Trump projects, it will fall on GS & JG to get the coordination issues squared away. Submittal workflow will move from RR to JG/GS.<br>GS/JG to sign off on Millwork drawings. Markups to include every detail from epoxy, drink rail, USB ports, etc. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**11/15/2017:** *(None)* | | | | | |
| 3.8 | 13 | Carpet | Giavona Sullivan **(The Trump Organization)**,<br>John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Carpet installation, GS and JG specify double stick. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>Final specification still needed. | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 13 | Roof Trusses | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS requests additional securing detail on the wood stringers. JCS to send RFI about the Simpson ties that have a maximum impact of 5/16"<br>JS: detail pertaining to through-bolts (versus welded bolts)<br>JCS requires direction from F&P | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>Cupula framing issue: everything aesthetic solution that JCS sends to design team as a means of remedying the off-center rafters is returned with an off-center structural review/notes. Original design didn't work, new designs work from a structural standpoint but not aesthetic. JCS submitted an on-center option. Truss manufacturer will not certify trusses that are not designed by their team. | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 14 | Plumbing Fixtures | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JG is meeting with Kohler rep immediately after this meeting to discuss plumbing fixtures. Will be using floor mounted flush valve toilets. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:**<br>Plumbing fixtures will be left in warehouse and delivered to site in JCS' care as needed. | | | | | |
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/15/2017:** *(None)* | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:** Review two week look ahead. 3-4 Weeks | | | | | |
| | **Previous Meeting Minutes:** **11/15/2017:** Liquid boot installation has begun. Boot, pouring back slab and wall adjacent to the loading dock, steel tentatively still schedule for next week. Rest of the slab is still scheduled for next week as well, along with all stairs but pouring the ramps is on hold due to potential changes in elevations. Assume the back grade is not changing, although JR might want to change it, Grades still not established for cart paths to be installed per JG 11/14/17 Wood framing is ongoing. There will potential hold ups if submittals are not reviewed and returned by the proper parties in a timely fashion. | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.2 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** JCS has yet to receive Civil drawings For Construction. | | | | | |
| | **Previous Meeting Minutes:** **11/15/2017:** *(None)* | | | | | |
| 7.3 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:** Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:** **11/15/2017:** JR and JG to go over the exterior redesign one more time, incorporating ET's comments and then have Sponzilli redraw it. Need to create some kind of podium and determine the material (wood frame vs. masonry, canvas vs. hard roof?) and location. Need to bring power and communications out there, where IT closet is currently located, put two 2" adjacent to that and bring it out to podium from there for lighting, computer and maybe heating. Maybe need 2-3 circuits. | | | | | |
| 7.4 | 12 | Pro Shop | | | | Open |
| | **Description:** Interior Design | | | | | |
| | **Previous Meeting Minutes:** **11/15/2017:** *(None)* | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Nov 14, 2017 at 03:45 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **06 4100** Architectural Wood Casework | 48 | 0 | Exterior Pilasters | Shop Drawing | Open | JCS Millshop | | James Falk | | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 11/08/2017 | | 11/22/2017 | |
| **06 4100** Architectural Wood Casework | 47 | 0 | Typical Molding Details | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 10/30/2017<br>10/30/2017 | | 11/13/2017 | |
| **06 4100** Architectural Wood Casework | 46 | 0 | Typical Trim Detail for Columns and Ceiling | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 10/30/2017<br>10/30/2017 | | 11/13/2017 | |
| *No Spec Section* | 42 | 0 | Submittal for Sakarete Repairs | | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | | | 10/25/2017 | |
| **07 3126** Simulated Slate Roofing | 40 | 1 | Ecostar Submittal Package | Product Information | Open | J&C Building Renovations LLC | | Cezary Bartosiewicz | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 10/30/2017 | | 11/13/2017 | |
| **08 5200** Wood Windows | 23 | 2 | Window Shop Drawings | Shop Drawing | Open | Pella Windows and Doors | | Robb DeWitt | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 11/08/2017 | | 11/22/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 2 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 10/25/2017 | James Falk | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 11/14/2017<br>11/14/2017 | | 11/03/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 0 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | | James Falk | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |
| **08 1400** Wood Doors | 18 | 1 | Interior Doors | Shop Drawing | Open | Church Door | 11/28/2017 | Chuck Sweetman | 11/13/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 11/13/2017 | | 11/27/2017 | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Nov 14, 2017 at 03:50 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | Translucent Glass Panels | Open | | Rainone, Ron (Har... | 11/10/2017 | Justin Shaw | 11/13/2017 | | Shaw, Justin (JCS... | | | | | None |
| 54 | Rise and Run Dimensions Requested | Open | Triple G | Rainone, Ron (Har... | 11/08/2017 | Fiona Rooney | 11/11/2017 | | Rooney, Fiona (JC... | | | | | Garrido, Eric (Triple G) |
| 53 | CFM Roof Framing Connection | Open | JCS Construction ... | Rainone, Ron (Har... | 11/07/2017 | Justin Shaw | 11/10/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 51 | Coupula | Open | JCS Millshop | Rainone, Ron (Har... | 10/09/2017 | Fiona Rooney | 10/12/2017 | | Rooney, Fiona (JC... | | | 06 - Carpentry-06110 - Wood Framing - Wood Framing | | Wiles, Craig (JCS Millshop) |
| 50 | Access Panel | Open | JCS Construction ... | Rainone, Ron (Har... | 10/09/2017 | Fiona Rooney | 10/12/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Leaders | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Har... | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JC... | | | | | Wiles, Craig (JCS Millshop) |
| 27 | Grade Beam Sleeve Question to GC | Open | A&M Warshaw Plumb... | Shaw, Justin (JCS... | 08/11/2017 | Fiona Rooney | 08/14/2017 | | Rooney, Fiona (JC... | | | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumb... | Rainone, Ron (Har... | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JC... | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS Construction Group, Inc.

SMOKE TEST
FRIDAY
12/8

# Meeting #19

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 11/29/2017 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Project Meeting 11.29.17.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Evan Comilloni | | Tel: | ecomilloni@woodardcurran.com |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Melissa Noto | | Tel: | mnoto@trumporg.com |
| Caitlin Pontrella | | Tel: (212) 360-3471 | caitlin.pontrella@parks.nyc.gov |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

## Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |

**Description:**
Ownership is responsible for getting all changes approved by City Hall and Parks Dept.

**Previous Meeting Minutes:**

**11/29/2017:**
Front entrance was discussed. RR to add his notes for JG to submit to ET. Sponzilli to provide an updated CAD drawing and F&P to modify grades. RR to coordinate.
RR to provide revised locations and details on railing, ramps, stairs based on PDC comments.

| | | | | | | |
|---|---|---|---|---|---|---|
| | Trump to determine how to screen windows, how to proceed with exterior bar glazing.<br>Trump to determine access to septic tank, ejector pump | | | | | |
| 1.2 | 11 | Earthwork | Dave Keil **(Maser Consulting P.A.)** | | | Open |
| | **Description:**<br>Compaction tests and Soil test results | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>DK to send a copy of his working manifest to W&C for review and approval since it doesn't look like W&C will be able to provide in time. | | | | | |
| 1.3 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JG brought Sponzilli's the first-round draft of landscape drawing, LP-1. New design will allow for functional, safer traffic flow and increased ADA compliance at driveway. Undecided where the bag drop will be. This drawing has been sent to Ron. On first glance, Joe Conforti of NYC Parks agrees that this is a more functional design but will need to bring it to PDC for formal approval. Trump to take one more step on their end then they will push it back to landscape architect to do a more formal presentation that will then go to PDC. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 2.1 | 18 | SSDS Update | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS needed to cut back and correct some areas of the anchor bolts, needed to cut and fold back the membrane in these locations. EAI to fold it back and respray at a later date.<br>Smoke test to be done after steel. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |
| 3.2 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Currently waiting on larger samples from the supplier | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>All sandstone is from one lot. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | How much is full color thermal vs full color cleft?<br>How much is blue stone cleft vs bluestone thermal? | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after reciept of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |
| 3.5 | 13 | Stone Tops | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>There is no extra material at Ivanka's. GS brought with her the Calcutta stone sample.<br>Per JG, Breccia being held in Italy for the locker rooms.<br>GS rejected the 2 synthetic marble samples provided by JG. Synthetic is a quartz material, considerably cheaper, durable, doesn't have the salt and peppering that one gets with Calcutta, considerably cheaper alternative. Outdoor stone/Marble spec would be used for front bar, back bar, cash wrap/check-in, all tops in pro-shop. JG's concern is the durability. GS suggests a protective membrane, but this will peel over time. GS will initial the Calcutta. Chip in marble is a safety/liability. GS prefers waterfall edge if she can get ET to approve. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>Final specification still needed. | | | | | |
| 3.6 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Description:**<br>GS received sections from HH and measured chandeliers to fit 18' ceilings.<br>Ballroom ceilings and Grill Room ceilings are 18'.<br>Hang chandeliers on highest coffer/beam of the ceilings<br>Specified chandeliers are $15K per quote acquired by Melissa Noto and weigh 750 lbs: The trusses will not support this weight. The flat ceilings in the pro shop can support the weight but the ceilings in the other locations may not.<br>176 lbs (3x) Chandeliers will come with a threaded rod, secure with air craft cable to prevent the fixture from coming loose. Spread a Kindorf inside a gem box, threaded rod through the gem box and run the aircraft cable with the wires into the ceiling.<br>GS spoke to Isabella at HH who confirmed that HH is not contracted to do any interior fit out work, as per plans and specs, so there are no RCPs.<br>JF has created the roof and ceiling details.<br>Interior columns are big enough to hang chandeliers, all they need to be is big enough to hold a gem box.<br>Pro Shop chandeliers to be Schonbek.<br>Need to have a section in the ceiling that is removable so that the HVAC equipment can be accessed as needed.<br>Per JG, instead of an access panel, Justin will design something that can come apart fairly easily so that it doesn't impact the location of the fixtures. This fixture will be 60" by 60" by 60". | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>Final specification still needed. | | | | | |
| 3.8 | 13 | Carpet | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Carpet installation, GS and JG specify double stick. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>Final specification still needed. | | | | | |
| 3.9 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>Final specification still needed on hardware. | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 14 | Plumbing Fixtures | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JG is meeting with Kohler rep immediately after this meeting to discuss plumbing fixtures. Will be using floor mounted flush valve toilets. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |

JCS | Construction Group, Inc.

# Meeting #19

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.2 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |
| 7.3 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |
| 7.4 | 12 | Pro Shop | | | | Open |
| | **Description:**<br>Interior Design | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Dec 5, 2017 at 04:36 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 52 | 0 | Brick | Product Information | Open | Gault Stone | | Bryan Williamson | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 12/05/2017 | | 12/19/2017 | |
| *No Spec Section* | 42 | 0 | Submittal for Sakarete Repairs | | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | | | 10/25/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 3 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 12/06/2017 | James Falk | 11/29/2017 | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 11/29/2017<br>11/29/2017 | | 12/13/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 0 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | | James Falk | 07/24/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 07/24/2017 | | 08/07/2017 | |
| **08 1400** Wood Doors | 18 | 1 | Interior Doors | Shop Drawing | Open | Church Door | 11/28/2017 | Chuck Sweetman | 11/13/2017 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 11/13/2017 | | 11/27/2017 | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Dec 5, 2017 at 04:36 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | Translucent Glass Panels | Open | | Sullivan, Giavona... | 11/10/2017 | Justin Shaw | 11/13/2017 | | Sullivan, Giavona... | | | | | None |
| 49 | Leaders | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Har... | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JC... | | | | | Wiles, Craig (JCS Millshop) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumb... | Rainone, Ron (Har... | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JC... | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS | Construction Group, LLC

# TWO-WEEK LOOK AHEAD

December 5th 2017

**Project Name: Ferry Point** **Job # 16-031** **Weekly Project Meeting Wednesday 10AM**

| ACTIVITY | Week 1 | | | | | | | Week 2 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE: | M 12/04 | T 12/05 | W 12/06 | T 12/07 | F 12/08 | S 12/09 | S 12/10 | M 12/11 | T 12/12 | W 12/13 | T 12/14 | F 12/15 | S 12/16 | S 12/17 | |
| REBAR | | | | | | | | x | x | x | | | | | |
| CONCRETE | | | | | | | | | | | | x | | | |
| BACKFILLING | x | x | x | x | x | x | | | | | | | | | |
| STEEL | | | x | x | x | x | | x | x | | | | | | |
| EAI | | | | | x | | | | | | | | | | repair/smoke test |
| MASER | x | x | | | | | | | | x | | x | | | rebar/concrete/backfill |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

JCS Construction Group, Inc.

# Meeting #20

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 12/13/2017 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Project Meeting 12-6-17 1.m4a Project Meeting 12-6-17 2.m4a Project Meeting 12-6-17 3.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Kay Zias | | Tel: | kay.zias@parks.nyc.gov |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:**<br>Ownership is responsible for getting all changes approved by City Hall and Parks Dept. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>JCS has yet to receive these drawings for Construction/Pricing | | | | | |
| 1.2 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Mahogany wood was decided upon<br>The size of the crown molding will need to be increased in size in some areas from a 6" to an 8", larger molding will be foam/plastic, not be MDF.<br>Shops were reviewed. Gia to provide JCS with redlines to revise and resubmit.<br>The reuse of current cash drawers was discussed. | | | | | |
| 3.4 | 13 | Stone Tops | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Calcutta v. Synthetic<br>Installation differences<br>Quantities | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>Final specification still needed. | | | | | |
| 3.5 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>Final specification still needed.<br>Gia needs to specify a fixture in order for the structural engineer to provide a detail for support<br>ET wants a chandelier hanging from the cupola: JCS needs spec, and structural detail | | | | | |
| 3.6 | 13 | Carpet | Giavona Sullivan **(The Trump Organization)**,<br>John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Carpet installation, GS and JG specify double stick. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>Final specification still needed. | | | | | |
| 3.7 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>Final specification still needed on hardware. | | | | | |
| 3.8 | 12 | Pro Shop | | | | Open |
| | **Description:**<br>Interior Design | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:** *(None)* | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction.<br><br>Final Grades still not established | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>JCS is still waiting on this. | | | | | |
| 7.2 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**11/29/2017:**<br>JCS has yet to receive these drawings for Construction/Pricing | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Dec 12, 2017 at 04:10 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | Cupola Items | Open | | Rainone, Ron (Har... | 12/08/2017 | Justin Shaw | 12/11/2017 | | Shaw, Justin (JCS... | | | | Yes (Unknown) | None |
| 55 | Translucent Glass Panels | Open | | Sullivan, Giavona... | 11/10/2017 | Justin Shaw | 11/13/2017 | | Shaw, Justin (JCS... | | | | | None |
| 53 | CFM Roof Framing Connection | Open | JCS Construction ... | Rainone, Ron (Har... | 11/07/2017 | Justin Shaw | 11/10/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Leaders | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Har... | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JC... | | | | | Wiles, Craig (JCS Millshop) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 14 | Load Letter | Open | A&M Warshaw Plumb... | Rainone, Ron (Har... | 07/05/2017 | Fiona Rooney | 07/08/2017 | | Rooney, Fiona (JC... | | 15 days | | | Bruno, Cristine (A&M Warshaw Plumbing & Heating) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS Construction Group, Inc.

# Meeting #21

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 01/03/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Project Meeting 12.13.2017 2.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Kay Zias | | Tel: | kay.zias@parks.nyc.gov |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:**<br>Ownership is responsible for getting all changes approved by City Hall and Parks Dept. | | | | | |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>JCS has yet to receive these drawings for Construction/Pricing | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | JCS is no longer able to support another round of drafting without an approved change order for design costs as 6 revisions have already been provided.<br>Finished fronts on equipment is not feasible.<br>Ownership will be reusing the existing cash wraps. Requests that the liquor shelves be packed forward.<br>Jim Falk to detail the base of column and how cash drawer will be integrated.<br>JCS requests that the Interior Design team elect a single representative to be the point of contact for submittal review, RFI and design-related items. It was determined that GS would be this point of contact. | | | | | |
| 3.4 | 13 | Stone Tops | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>GS to purchase.<br>Quantities: Tile and slab counts for bar, bathrooms, locker rooms<br>3" Waterfall on all tops | | | | | |
| 3.5 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>Final specification still needed.<br>Gia needs to specify a fixture in order for the structural engineer to provide a detail for support<br>ET wants a chandelier hanging from the cupola: JCS needs spec, and structural detail | | | | | |
| 3.6 | 13 | Carpet | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Carpet installation, GS and JG specify double stick. | | | | | |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>Final specification still needed. | | | | | |
| 3.7 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>Final specification still needed on hardware as well as the finish type for all door submittals | | | | | |
| 3.8 | 12 | Pro Shop | | | | Open |
| | **Description:**<br>Interior Design | | | | | |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>Pro-shop will remain as is until further notice | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>Final specifications still needed | | | | | |
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>JCS has yet to receive these drawings. | | | | | |
| 5.3 | 20 | Lighting | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Lighting Plan | | | | | |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>Lighting plan will not be changed, due to time and cost of change orders. | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**12/13/2017:** *(None)* | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction.<br><br>Final Grades still not established | | | | | |
| | **Previous Meeting Minutes:**<br>**12/13/2017:**<br>JCS is still waiting on this. | | | | | |
| 7.2 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Jan 2, 2018 at 04:11 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | Cupola Items | Open | | Rainone, Ron (Har... | 12/08/2017 | Justin Shaw | 12/11/2017 | | Shaw, Justin (JCS... | | | | Yes (Unknown) | None |
| 55 | Translucent Glass Panels | Open | | Sullivan, Giavona... | 11/10/2017 | Justin Shaw | 11/13/2017 | | Shaw, Justin (JCS... | | | | | None |
| 53 | CFM Roof Framing Connection | Open | JCS Construction ... | Rainone, Ron (Har... | 11/07/2017 | Justin Shaw | 11/10/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Leaders | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Har... | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JC... | | | | | Wiles, Craig (JCS Millshop) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS | Construction Group, Inc.

# Meeting #22

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 01/03/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**
Project Meeting 1.3.2018.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Kay Zias | | Tel: | kay.zias@parks.nyc.gov |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:**<br>Ownership is responsible for getting all changes approved by City Hall and Parks Dept. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Per Joe Conforti, Sheena has no commitment on DEC submission.<br>No outright issues from Parks about changes<br>JC of DEC: Changes seem logical. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.2 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JCS has yet to receive these drawings for Construction/Pricing | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 2.1 | 18 | SSDS Update | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>EAI to remobilize at the end of February to do the rough piping of the SSDS<br>JS confirmed with W&C that the changes to the SSDS determined during the construction of the Construction of the new Clubhosue will be picked up in the work done by EAI in other work thgroughout the Park.<br>SL suggests coordinating mobilization of EAi .<br>SL informs that the because there is no sitework or earth disturbance being done maser can scale down their presence onsite to one inspection per month if we put down hay mulch or tarp during the winter<br>Less expensive to keep Maser on weekly and not put down temporary stabilization because hay mulch would destroy the course. | | | | | |

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log<br>Ejector Pump drawings needs sign-off on in order to order basin and pump ASAP as this is a long lead time item. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JG to follow up with F&P on ejector pump | | | | | |
| 3.2 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>24x24 samples have been shipped by supplier. JG will ask ET which stone he wants. | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after receipt of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>RFI #19 is still open<br>Samples, bar revisions and new pricing still open. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3.4 | 13 | Stone Tops | Giavona Sullivan **(The Trump Organization)** | | | Closed |
| | **Previous Meeting Minutes:**<br>**01/03/2018:** *(None)* | | | | | |
| 3.5 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Supports in the coffers for chandelier, as of now we are working with non-structural coffers.<br>In order to hang chandeliers in dining room JCS to add structural 2x laying on the bottom chord that we can run a threaded rod into it.<br>Will need locations later but proceed with structural.<br>Chandelier to hang from Cupola still open. | | | | | |
| 3.6 | 13 | Carpet | Giavona Sullivan **(The Trump Organization)**,<br>John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Carpet installation, GS and JG specify double stick. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Final specification and quantities still needed. | | | | | |
| 3.7 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Final specification still needed on hardware as well as the finish type for all door submittals | | | | | |
| 3.8 | 12 | Pro Shop | | | | Open |
| | **Description:**<br>Interior Design | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Pro-shop will remain as is until further notice and approved pricing based on ID concept renderings | | | | | |
| 3.10 | 19 | Drawings for Exterior Changes | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JCS has yet to receive these drawings for Construction/Pricing and will be building the back bar as per drawings received to date | | | | | |
| 3.11 | 19 | Exterior Door Hardware | Giavona Sullivan **(The Trump Organization)** | | | Open |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JCS has yet to receive these specs. | | | | | |
| 3.12 | 20 | Cash Drop | Joe Roediger | 12/ 20/ 2017 | | Open |
| | **Description:**<br>Jewelry store-style cash-drop at comptroller's office | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Ownership to provide detail for pricing | | | | | |
| 3.13 | 20 | Radar at Cupola | Joe Roediger | 12/ 20/ 2017 | | Open |
| | **Description:**<br>Requirements will be provided by 12/20/2018 (AV, LV and what the roofer needs) | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>RFI #56 Cupola Items: These details will need to be provided by Owner and this RFI shall remain open until it is completed. L shaped bracket on underside of soffit coming off the rafter tail. Power: regular 1 10, Cable is regular CAT6<br>We will run the wire up exterior sleeve and hide it. | | | | | |
| 3.14 | 21 | Brick | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JCS to obtain less uniform/more tumbled looking brick | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:** *(None)* | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 21 | RFI #53 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Bar room ceiling connection detail needed. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:** *(None)* | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 14 | Plumbing Fixtures | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Final specifications still needed | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JCS has yet to receive these drawings. | | | | | |
| 5.3 | 20 | Lighting | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Lighting Plan | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Lighting plan will not be changed per previous meeting 12/13/17, due to time and cost of change orders, the change order received from GS on 12/20/2017 show additional sconces (see PCCO #012) | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:** *(None)* | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction.<br><br>Final Grades still not established | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JCS is still waiting on this. | | | | | |
| 7.2 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |

| | |
|---|---|
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JCS has yet to receive these drawings for Construction/Pricing |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.2 | 20 | PCCO #012 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Wall Sconces | | | | | |
| | **Attachments:**<br>PCCO #012.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JG passed on to GS' . The change to original lighting will require another round of Energy Calcs by F&P. | | | | | |
| 8.3 | 20 | PCCO #011 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Millwork Samples | | | | | |
| | **Attachments:**<br>PCCO #011.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>JG passed on to GS' | | | | | |
| 8.4 | 20 | PCCO #010 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Changes to Cupola Framing Materials | | | | | |
| | **Attachments:**<br>PCCO #010.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/03/2018:**<br>Reduced by JCS, open. | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Jan 9, 2018 at 06:43 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 56 | 0 | Light GA Connections | Document | Open | JCS Construction Group, Inc. | 01/02/2018 | Fiona Rooney | 12/28/2017 | Fiona Rooney (JCS Construction Group, Inc.) | Rainone, Ron (Hart Howerton) | Rejected | 12/28/2017 | 01/05/2018 | 01/11/2018 | |
| *No Spec Section* | 54 | 1 | Pro Shop Drawings | Shop Drawing | Open | JCS Millshop | 12/22/2017 | James Falk | 12/15/2017 | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 12/15/2017 | | 12/29/2017 | |
| *No Spec Section* | 52 | 0 | Brick | Product Information | Open | Gault Stone | | Bryan Williamson | | Fiona Rooney (JCS Construction Group, Inc.) | Rainone, Ron (Hart Howerton) | Approved As Noted | 12/05/2017 | 12/19/2017 | 12/19/2017 | |
| *No Spec Section* | 42 | 0 | Submittal for Sakarete Repairs | | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | | | 10/25/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 5 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 01/04/2018 | James Falk | 01/04/2018 | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 01/04/2018 | | 01/18/2018 | |
| **08 1400** Wood Doors | 18 | 2 | Interior Doors | Shop Drawing | Open | Church Door | 11/28/2017 | Chuck Sweetman | | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 12/08/2017 | | 12/22/2017 | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Jan 9, 2018 at 06:43 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | Cupola Items | Open | | Rainone, Ron (Har... | 12/08/2017 | Justin Shaw | 12/11/2017 | | Shaw, Justin (JCS... | | | | Yes (Unknown) | None |
| 55 | Translucent Glass Panels | Open | | Sullivan, Giavona... | 11/10/2017 | Justin Shaw | 11/13/2017 | | Shaw, Justin (JCS... | | | | | None |
| 53 | CFM Roof Framing Connection | Open | JCS Construction ... | Rainone, Ron (Har... | 11/07/2017 | Justin Shaw | 11/10/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Leaders | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Har... | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JC... | | | | | Wiles, Craig (JCS Millshop) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS | Construction Group, Inc.

# Meeting #23

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 01/17/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Project Meeting 10-10-2018 1.m4a Project Meeting 1-10-18 2.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Kay Zias | | Tel: | kay.zias@parks.nyc.gov |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

## Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:** Ownership is responsible for getting all changes approved by City Hall and Parks Dept. | | | | | |
| | **Previous Meeting Minutes:** **01/10/2018:** *(None)* | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.2 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>JCS has yet to receive these drawings for Construction/Pricing | | | | | |
| 1.3 | 22 | Permits | Joe Roediger | | | Open |
| | **Description:**<br>Ownership to do this: | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Who submits to the Board of Health? Is a Cabaret Permit permit required? Public Assembly? | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 2.1 | 18 | SSDS Update | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>No SSDS update. | | | | | |
| 2.2 | 22 | Maser | Dave Keil **(Maser Consulting P.A.)** | | | Open |
| | **Description:**<br>Maser to email DFRs to Kay and Steve.<br>Soil importation is on hold until winter breaks. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Maser to email DFRs to Kay and Steve.<br>Soil importation is on hold until winter breaks. | | | | | |

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Ejector Pump needs to be signed off on by F&P<br>Molding details provided, to be reviewed by GS on Friday. GS to determine location (highlight an RCP) and typical detail for all interior trim. Interactions of trim to be worked out in the field. | | | | | |
| 3.2 | 1 | Bluestone | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:** | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | ET selected Bluestone thermal | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>24x24 samples were requested. To be presented to ET on Friday. | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after receipt of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:** *(None)* | | | | | |
| 3.5 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Description:**<br>Chandelier in Cupola: Logistics, cost, design: This was eliminated but JCS will still provide structural support in case Ownership wants a chandelier in the future.<br>Decided on ballroom chandeliers, PCCO pending detail by ID/HH. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>In order to hang chandeliers in dining room JCS to add structural 2x laying on the bottom chord that we can run a threaded rod into it. Will need locations later but proceed with structural.GS to markup a RCP with locations of chandeliers<br>Chandelier to hang from Cupola to be discussed with ET on Friday 1/12/18 | | | | | |
| 3.6 | 13 | Carpet | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Final specification and quantities still needed. | | | | | |
| 3.7 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Final specification still needed on hardware as well as the finish type for all door submittals<br>Changes to door scope via 10/26/17 markups will be reviewed by JCS and presented as a CO. | | | | | |
| 3.8 | 12 | Pro Shop | | | | |
| | **Description:**<br>Interior Design: Pro-Shop shop drawings are rejected. Per ET the checkout cash-wrap will be m<br>the right side, so as to protect direct line of site/view of the bridge. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>To be discussed with ET on Friday. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3.10 | 19 | Drawings for Exterior Changes | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Exterior changes were approved by Parks but JCS has yet to receive these drawings for Construction/Pricing and will be building the back bar as per drawings received to date. The only change that Parks made was to the roof, which will be enclosed and have an inline fan because Parks didn't want to see the two vent holes. RR to provide updated drawings illustrating the exterior changes. | | | | | |
| 3.11 | 19 | Exterior Door Hardware | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/10/2018:** *(None)* | | | | | |
| 3.12 | 20 | Cash Drop | Joe Roediger | 12/ 20/ 2017 | | Open |
| | **Description:**<br>Jewelry store-style cash-drop at comptroller's office | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Ownership to provide detail for pricing | | | | | |
| 3.13 | 20 | Radar at Cupola | Joe Roediger | 12/ 20/ 2017 | | Open |
| | **Description:**<br>Requirements will be provided by 12/20/2018 (AV, LV and what the roofer needs) | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:** *(None)* | | | | | |
| 3.14 | 21 | Brick | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>JCS to obtain less uniform/more tumbled looking brick | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>JCS to obtain less uniform/more tumbled looking brick to be presented to ET for approval | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 21 | RFI #53 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Bar room ceiling connection detail needed. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>JCS has yet to receive this detail | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 14 | Plumbing Fixtures | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Final specifications still needed | | | | | |
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Hernan to reiterate what he needs from Joe/F&P/HH/JCS: sprinkler hydraulic calculations from vendors.<br>JCS was hoping to buy HVAC & Sprinkler together but all of the bids we have received show the expensive BMS system, which was VE'd. Drawings need to be revised by F&P to reflect the reduction and simplification of scope. Suggestion of conference call between F&P, TO, HH & JCS.<br>Changes to HVAC venting on enclosed roof at exterior also needs to be detailed in drawings. | | | | | |
| 5.3 | 20 | Lighting | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Lighting Plan | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>GS to provide JG with specs on the additional 27 sconces who will then submit to F&P to ensure energy code compliance. If energy code is a non-issue, JCS may bring price down. | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:** *(None)* | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Description:**<br>JCS has yet to receive Civil drawings For Construction.<br><br>Final Grades still not established | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>JCS is still waiting on this. | | | | | |
| 7.2 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>JCS has yet to receive these drawings for Construction/Pricing. Front entry is still several weeks away from approval. The submission is several weeks away from being approved by DEC/DPW. | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.2 | 20 | PCCO #012 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Wall Sconces | | | | | |
| | **Attachments:**<br>PCCO #012.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>GS to provide the specs and details for the addition of 27 sconces so that JG can send to F&P to determine if energy recalculations are needed. This item will remain open until that time. | | | | | |
| 8.3 | 20 | PCCO #011 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Millwork Samples | | | | | |
| | **Attachments:**<br>PCCO #011.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>This CO will remain open and will encompass all millwork changes, including: interior trim, bar, pro-shop, locker rooms, drafting, excessive samples required in absence of control samples. | | | | | |
| 8.4 | 20 | PCCO #010 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Changes to Cupola Framing Materials | | | | | |

| | |
|---|---|
| | **Attachments:**<br>PCCO #010.pdf |
| | **Previous Meeting Minutes:**<br>**01/10/2018:**<br>Reduced by JCS, open. |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Jan 16, 2018 at 05:38 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62 | Stair Plans | Open | Triple G | Rainone, Ron (Har... | 01/16/2018 | Fiona Rooney | 01/17/2018 | | Rooney, Fiona (JC... | | | | | Garrido, Eric (Triple G) |
| 61 | Elevations and Detail requested | Open | Triple G | Rainone, Ron (Har... | 01/16/2018 | Fiona Rooney | 01/19/2018 | | Rainone, Ron (Har... | | | | | GGG, tommy (Triple G) |
| 60 | Window Framing | Open | JCS Construction ... | Rainone, Ron (Har... | 01/15/2018 | Justin Shaw | 01/18/2018 | | Rainone, Ron (Har... | | | | | None |
| 59 | Missing Beam for Trusses | Open | French & Parrello... | Rainone, Ron (Har... | 01/10/2018 | Fiona Rooney | 01/13/2018 | | Rainone, Ron (Har... | At grid line F11 | 5 days | | Yes (Unknown) | None |
| 56 | Cupola Items | Open | | Rainone, Ron (Har... | 12/08/2017 | Justin Shaw | 12/11/2017 | | Shaw, Justin (JCS... | | | | Yes (Unknown) | None |
| 55 | Translucent Glass Panels | Open | | Sullivan, Giavona... | 11/10/2017 | Justin Shaw | 11/13/2017 | | Shaw, Justin (JCS... | | | | | None |
| 53 | CFM Roof Framing Connection | Open | JCS Construction ... | Rainone, Ron (Har... | 11/07/2017 | Justin Shaw | 11/10/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Leaders | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 41 | Roof Trusses | Open | JCS Millshop | Rainone, Ron (Har... | 09/15/2017 | Fiona Rooney | 09/18/2017 | | Rooney, Fiona (JC... | | | | | Wiles, Craig (JCS Millshop) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Jan 16, 2018 at 05:38 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
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## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 58 | 0 | Plumbing Shops | Shop Drawing | Open | A&M Warshaw Plumbing & Heating | | Cristine Bruno | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 01/10/2018 | | 01/24/2018 | |
| **06 4100** Architectural Wood Casework | 57 | 0 | Cove Molding Details | Sample | Open | JCS Millshop | | James Falk | | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 01/10/2018 | | 01/24/2018 | |
| *No Spec Section* | 56 | 0 | Light GA Connections | Document | Open | JCS Construction Group, Inc. | 01/02/2018 | Fiona Rooney | 12/28/2017 | Fiona Rooney (JCS Construction Group, Inc.) | Rainone, Ron (Hart Howerton) | Rejected | 12/28/2017 | 01/05/2018 | 01/11/2018 | |
| *No Spec Section* | 54 | 1 | Pro Shop Drawings | Shop Drawing | Open | JCS Millshop | 12/22/2017 | James Falk | 12/15/2017 | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 12/15/2017 | | 12/29/2017 | |
| *No Spec Section* | 52 | 1 | Brick | Sample | Open | Gault Stone | | Bryan Williamson | | Ron Rainone (Hart Howerton)<br>Giavona Sullivan (The Trump Organization) | Rainone, Ron (Hart Howerton)<br>Sullivan, Giavona (The Trump Organization) | Pending<br>Pending | 01/16/2018<br>01/16/2018 | | 01/17/2018 | |
| **06 4100** Architectural Wood Casework | 47 | 2 | Typical Molding Details | Shop Drawing | Open | JCS Millshop | | James Falk | | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | | | 01/24/2018 | |
| *No Spec Section* | 42 | 0 | Submittal for Sakarete Repairs | | Open | Triple G | | Eric Garrido | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | | | 10/25/2017 | |
| **06 4100** Architectural Wood Casework | 19 | 5 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 01/04/2018 | James Falk | 01/04/2018 | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 01/04/2018 | | 01/18/2018 | |
| **08 1400** Wood Doors | 18 | 2 | Interior Doors | Shop Drawing | Open | Church Door | 11/28/2017 | Chuck Sweetman | | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 12/08/2017 | | 12/22/2017 | |

JCS Construction Group, Inc.

# Meeting #24

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 01/24/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**
Project Meeting #23 1-17-18.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Kay Zias | | Tel: | kay.zias@parks.nyc.gov |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Description:**<br>Ownership is responsible for getting all changes approved by City Hall and Parks Dept. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>JCS is still waiting on the drawings for construction, Joe Roediger is still waiting on Parks to submit something to him. | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | • Bar Hardware<br>• Locker Room Concepts<br>• Plumbing Shops<br>• Cove Molding Details<br>• Typical Molding Details GS to provide highlighted plan for desired location and detail for desired dimensions<br>• Millwork Drawings (Bar Shops R8)<br>• Interior Doors | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after receipt of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>Locker Concepts<br>Bar finish sample rejected but no alternative provided<br>Proshop drawings to be revised per ET comments<br>Bar Drawings are open | | | | | |
| 3.5 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>Chandelier in Cupola: Logistics, cost, design: This was eliminated but JCS will still provide structural support in case Ownership wants a chandelier in the future.<br>Decided on ballroom chandeliers, PCCO pending detail by ID/HH | | | | | |
| 3.6 | 13 | Carpet | Giavona Sullivan **(The Trump Organization)**,<br>John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>Final quantities still needed. | | | | | |
| 3.7 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>Final specification still needed on hardware as well as the finish type for all door submittals<br>Changes to door scope via 10/26/17 markups will be reviewed by JCS and presented as a CO. | | | | | |
| 3.8 | 12 | Pro Shop | | | | Open |
| | **Description:**<br>Interior Design: Pro-Shop shop drawings are rejected. Per ET the checkout cash-wrap will be moved from the center of the room to the right side, so as to protect direct line of site/view of the bridge. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4.1 | 21 | RFI #53 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Bar room ceiling connection detail needed. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>JCS has yet to receive this detail | | | | | |
| 4.2 | 23 | Missing Beam | Ron Rainone **(Hart Howerton)** | 01/ 24/ 2018 | | Open |
| | **Description:**<br>See RFI #59 | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:** *(None)* | | | | | |
| 4.3 | 23 | Truss Issues | Ron Rainone **(Hart Howerton)** | 01/ 26/ 2018 | High | Open |
| | **Description:**<br>T5B<br>T64 | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>Issues related to these trusses were discussed, further investigation to be done in feild | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 14 | Plumbing Fixtures | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>Final specifications still needed | | | | | |
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>JCS has yet to receive these updates reflecting the changes to HVAC venting on enclosed roof at exterior. | | | | | |
| 5.3 | 20 | Lighting | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Lighting Plan | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Wall Sconces | | | | | |
| | **Attachments:**<br>PCCO #012.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:** *(None)* | | | | | |
| 8.3 | 20 | PCCO #011 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Attachments:**<br>PCCO #011.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:**<br>Millwork Bar Change Order | | | | | |
| 8.4 | 20 | PCCO #010 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Changes to Cupola Framing Materials | | | | | |
| | **Attachments:**<br>PCCO #010.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/17/2018:** *(None)* | | | | | |

- Daily Report by
Weekly Erosion Control Report
- Drawing of SOS Rock
Location Modifications
- SOS Separate to Assume
NW 2 Lifts.

JCS Construction Group, Inc.

# Meeting #25

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 01/31/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:** Current Status of:
Any additional Submittal of SOS Plan Required?

**ATTACHMENTS:**

Project Meeting #24 1-24-18.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Kay Zias | | Tel: | kay.zias@parks.nyc.gov |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Courtney Lyver | The Trump Organization | Tel: | clyver@trumpgolflinks.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

## Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |

**Description:**
Approved by Parks:

1. Relocation of outdoor kitchen on North Terrace;
2. Addition of V-groove paneled screen wall, which will be 4'-6" tall across its length, and rectilinear in profile;
3. Addition of 4" x 12" subway tile, in white sample color submitted for review, on southern wall of outdoor kitchen;

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**01/24/2018:** *(None)* | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after receipt of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>• Locker Concepts<br>• Bar finish sample rejected but no alternative provided<br>• ProShop drawings to be revised per ET comments. JCS to issue a false ProShop submittal revision so that GS can respond with Terry's ProShop design response.<br>• Bar Drawings are open<br>• Cove detail: double cove is 1 5/8, does this require two pieces of grounds? This submittal will remain open until JCS receives the highlighted plan with three different colors from GS.<br>• JCS to reissue the unanswered/open cove Submittal SK1-5 dated 11/28/17<br>• Stainless Steel footrail<br>• GS to pick out knobs and pulls & add this as a response to submittal #60. | | | | | |
| 3.5 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>Chandelier in Cupola: Logistics, cost, design: This was eliminated but JCS will still provide structural support in case Ownership wants a chandelier in the future.<br>Decided on ballroom chandeliers, PCCO pending detail by ID/HH | | | | | |
| 3.6 | 13 | Carpet | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>Final quantities still needed. | | | | | |
| 3.7 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>Final specification still needed on hardware as well as the finish type for all door submittals<br>Changes to door scope via 10/26/17 markups will be reviewed by JCS and presented as a CO. | | | | | |
| 3.8 | 12 | Pro Shop | | | | Open |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>Interior Design: Pro-Shop shop drawings are rejected. Per ET the checkout cash-wrap will be moved from the center of the room to the right side, so as to protect direct line of site/view of the bridge. GS to provide new design to JCS for pricing and shop drawings | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 21 | RFI #53 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Bar room ceiling connection detail needed. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>JCS has yet to receive this detail | | | | | |
| 4.2 | 23 | Missing Beam | Ron Rainone **(Hart Howerton)** | 01/ 24/ 2018 | | Open |
| | **Description:**<br>See RFI #59 | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>JCS still waiting on this | | | | | |
| 4.3 | 23 | Truss Issues | Ron Rainone **(Hart Howerton)** | 01/ 26/ 2018 | High | Open |
| | **Description:**<br>T5B<br>T64 | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>Further investigation to be done in feild | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 14 | Plumbing Fixtures | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>JCS was told that they would receive this detail by EOW | | | | | |
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>JCS has yet to receive these updates reflecting the changes to HVAC venting on enclosed roof at exterior. Hernan Rojas to attend next week's meeting. | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.2 | 20 | PCCO #012 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Wall Sconces | | | | | |
| | **Attachments:**<br>PCCO #012.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>Will remain open for final spec/energy calculation deliberations | | | | | |
| 8.3 | 20 | PCCO #011 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Attachments:**<br>PCCO #011.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>Millwork Bar Change Order to remain open for approval | | | | | |
| 8.4 | 20 | PCCO #010 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Changes to Cupola Framing Materials | | | | | |
| | **Attachments:**<br>PCCO #010.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:**<br>Will remain open for approval. | | | | | |
| 8.5 | 24 | PCCO #014 | John Gruber **(Trump Ferry Point LLC)** | 01/ 23/ 2018 | High | Open |
| | **Description:**<br>PCCO for Door Changes via 10/26/17 redlines by HH. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/24/2018:** *(None)* | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Jan 30, 2018 at 06:04 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

# RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | Dining room | Open | Atkins Construction | Rainone, Ron (Har... | 01/26/2018 | Mark Smithson | 01/29/2018 | | Smithson, Mark (J... | | | | | Smithson, Mark (JCS Construction Group, Inc.) |
| 59 | Missing Beam for Trusses | Open | French & Parrello... | Rainone, Ron (Har... | 01/10/2018 | Fiona Rooney | 01/13/2018 | | Rooney, Fiona (JC... | At grid line F11 | 5 days | | Yes (Unknown) | None |
| 56 | Cupola Items | Open | | Rainone, Ron (Har... | 12/08/2017 | Justin Shaw | 12/11/2017 | | Shaw, Justin (JCS... | | | | Yes (Unknown) | None |
| 55 | Translucent Glass Panels | Open | | Sullivan, Giavona... | 11/10/2017 | Justin Shaw | 11/13/2017 | | Shaw, Justin (JCS... | | | | | None |
| 53 | CFM Roof Framing Connection | Open | JCS Construction ... | Rainone, Ron (Har... | 11/07/2017 | Justin Shaw | 11/10/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 49 | Leaders | Open | JCS Construction ... | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | | Falk, James (JCS Millshop) |
| 3 | Door Hardware | Open | JCS Construction ... | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | | Shaw, Justin (JCS Construction Group, Inc.) |

JCS | Construction Group, Inc.

# Meeting #26

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 02/07/2018 **MEETING TIME:** 1:00 PM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:** SSDS meeting of 2/12/2018

**ATTACHMENTS:** SPMMS Quo for soil improvement

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |

**Description:**
Approved by Parks:

1. Relocation of outdoor kitchen on North Terrace;
2. Addition of V-groove paneled screen wall, which will be 4'-6" tall across its length, and rectilinear in profile;
3. Addition of 4" x 12" subway tile, in white sample color submitted for review, on southern wall of outdoor kitchen;
4. Revision of dormer above outdoor kitchen to include intake and exhaust louvers.
5. Alteration of entry stairs at West Elevation to run straight instead of being accessible at an angle;

| | | | | | | |
|---|---|---|---|---|---|---|
| | 6. Removal of plan bump-out at exterior wall behind Bar in Grill Room;<br>7. Change from Anderson A-Series windows to Pella Windows;<br>8. Change of operable doors (between gridlines F.5 and F.12, 5.1 and 5.5) to fixed units;<br>9. Introduction of interior "black-out" panels behind specified windows at Bar and in Mechanical and Electrical room | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>JCS to obtain pricing on items 1-6, 8-9<br>Team discussed means by which the blacked out windows would be lit, which is necessary to know before blacking out the windows.<br>JG/GS to issue this detail within the lighting package.<br>Lighting consultant should be brought onto team.<br>JCS to find out if Sam Tell will file for the ansel system on their own, or provide documents to Hernan to file<br>JCS received subway tile control sample | | | | | |
| 1.2 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>The front entry way is still not approved | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 2.1 | 18 | SSDS Update | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>SSDS to come back in the next couple weeks, simultaneous to rough-ins. | | | | | |
| 2.2 | 22 | Maser | Dave Keil **(Maser Consulting P.A.)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>**Civil:**<br>Maser to email DFRs to Kay and Steve. | | | | | |

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:** *(None)* | | | | | |
| 3.3 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after receipt of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>Verbal approval on interior trim<br>Footrail approved<br>GS provided JCS with a new control sample for interior millwork<br>Locker room wood to be stain grade not paint grade<br>JG and GS to present and discuss ProShop pricing and Bar change order with ET tomorrow as he has been traveling for the past two weeks | | | | | |
| 3.5 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>JG and GS to provide engineered lighting package for pricing | | | | | |
| 3.6 | 13 | Carpet | Giavona Sullivan **(The Trump Organization)**,<br>John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>Final quantities still needed. | | | | | |
| 3.7 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>Carried over from 1/24/18:<br>Final specification still needed on hardware as well as the finish type for all door submittals<br>Changes to door scope via 10/26/17 markups will be reviewed by JCS and presented as a CO. | | | | | |
| 3.8 | 12 | Pro Shop | | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>JCS awaits ProShop Pricing approval in order to proceed | | | | | |
| 3.10 | 19 | Drawings for Exterior Changes | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>Received | | | | | |
| 3.11 | 19 | Exterior Door Hardware | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>Final specification still needed | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3.13 | 20 | Radar at Cupola | Joe Roediger | 12/ 20/ 2017 | | Open |
| | **Description:**<br>Requirements will be provided by 12/20/2018 (AV, LV and what the roofer needs) | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:** *(None)* | | | | | |
| 3.14 | 21 | Brick | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:** *(None)* | | | | | |
| 3.15 | 23 | Attic Windows | Ron Rainone **(Hart Howerton)** | 01/ 31/ 2018 | | Open |
| | **Description:**<br>See RFI #64 | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>Pending resolution of lighting issue | | | | | |
| 3.16 | 24 | Appliance Revisions | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Final Specifications/Changes still needed | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>JCS to ascertain whether Sam Tell will file for their ansul system or provide Hernan Rojas with the documents to file for them | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 21 | RFI #53 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Bar room ceiling connection detail needed. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:** *(None)* | | | | | |
| 4.2 | 23 | Missing Beam | Ron Rainone **(Hart Howerton)** | 01/ 24/ 2018 | | Open |
| | **Description:**<br>See RFI #59 | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:** *(None)* | | | | | |
| 4.3 | 23 | Truss Issues | Ron Rainone **(Hart Howerton)** | 01/ 26/ 2018 | High | Open |

| | |
|---|---|
| | **Description:**<br>T5B<br>T64 |
| | **Previous Meeting Minutes:**<br>**01/31/2018:** *(None)* |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 14 | Plumbing Fixtures | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>JCS was told that they would receive this detail by EOW | | | | | |
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:** *(None)* | | | | | |
| 5.3 | 20 | Lighting | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Lighting Plan | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>- GS to provide JG with specs on the additional 27 sconces who will then submit to F&P to ensure energy code compliance. If energy code is a non-issue, JCS may bring price down.<br>- Bollards<br>- Uplighting on exterior<br>- Final lighting package still needed<br>- Attic/blackout window lighting<br>- Ceiling mounted fixtures | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>Plumbing (waiting on Fixture schedule)<br>Electric Roughs<br>Mason ongoing | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |

**Description:**
JCS has yet to receive Civil drawings For Construction.

Final Grades still not established

**Previous Meeting Minutes:**

**01/31/2018:**
JCS is still waiting on this.

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.2 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |

**Description:**
Additional/Changes to Design and Scope

**Previous Meeting Minutes:**

**01/31/2018:**
JCS has yet to receive these drawings for Construction/Pricing. Front entry is still several weeks away from approval. The submission is several weeks away from being approved by DEC/DPW

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.2 | 20 | PCCO #012 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |

**Description:**
Wall Sconces

**Attachments:**

**Previous Meeting Minutes:**

**01/31/2018:**
Will remain open for final spec/energy calculation deliberations

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.3 | 20 | PCCO #011 | John Gruber **(Trump Ferry Point LLC)** | | | Open |

**Attachments:**

**Previous Meeting Minutes:**

**01/31/2018:**
Millwork Bar Change Order to remain open for approval

| | | | | | | |
|---|---|---|---|---|---|---|
| 8.4 | 20 | PCCO #010 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Changes to Cupola Framing Materials | | | | | |
| | **Attachments:** | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>• Will remain open for approval. | | | | | |
| 8.5 | 24 | PCCO #014 | John Gruber **(Trump Ferry Point LLC)** | 01/ 23/ 2018 | High | Open |
| | **Description:**<br>PCCO for Door Changes via 10/26/17 redlines by HH. | | | | | |
| | **Previous Meeting Minutes:**<br>**01/31/2018:**<br>• Will remain open for approval. | | | | | |

JCS Construction Group Inc

Printed on Wed Feb 7, 2018 at 11:37 am EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **06 6500** Simulated Wood Trim | 65 | 0 | Exterior Corbels | Shop Drawing | Open | JCS Millshop | | James Falk | | John Gruber (Trump Ferry Point LLC)<br>Ron Rainone (Hart Howerton) | Gruber, John (Trump Ferry Point LLC)<br>Rainone, Ron (Hart Howerton) | Pending<br>Pending | 02/05/2018<br>02/05/2018 | | 02/07/2018 | |
| **07 2100** Thermal Insulation | 64 | 0 | Fiberglass Insulation | Product Manual | Open | JCS Construction Group, Inc. | 02/07/2018 | Fiona Rooney | 02/05/2018 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 02/05/2018 | | 02/07/2018 | |
| **07 2100** Thermal Insulation | 62 | 0 | Rigid Insulation | Product Information | Open | JCS Construction Group, Inc. | 02/07/2018 | Fiona Rooney | 02/05/2018 | Fiona Rooney (JCS Construction Group, Inc.) | Rainone, Ron (Hart Howerton) | Approved As Noted | 02/05/2018 | 02/07/2018 | 02/07/2018 | |
| *No Spec Section* | 61 | 0 | Denseglass Sheathing | Product Information | Open | JCS Construction Group, Inc. | 02/07/2018 | Fiona Rooney | 02/05/2018 | Fiona Rooney (JCS Construction Group, Inc.) | Rainone, Ron (Hart Howerton) | Approved As Noted | 02/05/2018 | 02/06/2018 | 02/07/2018 | |
| | | | | | | | | | | | | | | | | |
| **06 4100** Architectural Wood Casework | 19 | 6 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 01/04/2018 | James Falk | | John Gruber (Trump Ferry Point LLC) | Sullivan, Giavona (The Trump Organization)<br>Gruber, John (Trump Ferry Point LLC) | Approved As Noted<br>Pending | 01/23/2018 | 01/24/2018 | 02/07/2018 | |

JCS Construction Group Inc

Printed on Wed Feb 7, 2018 at 11:36 am EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

# RFI LOG

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | Plumbing Fixtures | Open | A&M Warshaw Plumb... | Gruber, John (Tru... | 02/06/2018 | Fiona Rooney | 02/09/2018 | | Gruber, John (Tru... | | | | | Warshaw, Mike (A&M Warshaw Plumbing & Heating) |

**Q:** Fiona Rooney Sent Tue Feb 6, 2018 at 08:48 am EST
Please send the missing items in the plumbing schedule. This includes the water fountain, urinal and mop sink, and please go over the full package and make sure nothing else is missing.

| # | Subject | Status | Responsible Contractor | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact | Received From |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68 | Lighting Plan | Open | JCS Construction ... | Gruber, John (Tru... | 02/06/2018 | Fiona Rooney | 02/09/2018 | | Gruber, John (Tru... | | Yes (Unknown) | | Yes (Unknown) | Rooney, Fiona (JCS Construction Group, Inc.) |

Fiona Rooney Sent Tue Feb 6, 2018 at 08:46 am EST
Please advise on the status of the lighting plan:

**Q:**
Interior:
Lighting detail for blacked out windows
Sconces
Ceiling-mounted fixtures

Exterior: Bollards
Uplighting on building facade

**Q:** Mark Smithson Sent Fri Jan 26, 2018 at 10:46 am EST
Please provide detail for the cross section in the 4 locations.

**A:** Ron Rainone (Hart Howerton) Responded Tue Jan 30, 2018 at 10:02 pm UTC
See attached sketches for the requested Dining Room Ceiling Details. Work these details with submittal package 46.2 provided by JCS.

**Q:** Justin Shaw Sent Fri Dec 8, 2017 at 12:03 pm EST
At yesterday's meeting a chandelier hanging from cupola was discussed as was mounting of a camera outside on the top. I believe both of these will need to be detailed and cleared by structural engineer.

**A:** Justin Shaw (JCS Construction Group, Inc.) Responded Fri Dec 8, 2017 at 10:59 pm UTC
These details will need to be provided by Owner and this RFI shall remain open until it is completed. Thanks

**A:** Ron Rainone (Hart Howerton) Responded Fri Dec 8, 2017 at 09:50 pm UTC
Please provide sketch of desired location of chandelier, hanging type and whether it will be on a motor (otherwise forget about changing bulbs). Also provide fixture product cut, dimensions and weight. The camera detailing is not our dicipline and needs to be done by A/V or security vendor.

**Q:** Justin Shaw Sent Tue Nov 7, 2017 at 04:05 pm EST
Please provide a connection detail from the C joists to the metal framing for the upper roof area.

**A:** Justin Shaw (JCS Construction Group, Inc.) Responded Wed Dec 6, 2017 at 06:23 pm UTC
I mean bar room ceiling.

**A:** Ron Rainone (Hart Howerton) Responded Fri Nov 10, 2017 at 05:26 pm UTC
See attached response from structural engineer.

INSTALLED NEW SILT FENCE

JCS Construction Group, Inc.

# Meeting #27

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 02/14/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Project Meeting 26 (1-3).m4a Project Meeting 26 (3-3).m4a Project Meeting 26 (2-3).m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Ahmed Elmekati | | Tel: | aelmekati@maserconsulting.com |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| Mark Smithson | JCS Construction Group, Inc. | Tel: (203) 485-9612 | mark@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |

**Description:**
Approved by Parks:

1. Relocation of outdoor kitchen on North Terrace;
2. Addition of V-groove paneled screen wall, which will be 4'-6" tall across its length, and rectilinear in profile;
3. Addition of 4" x 12" subway tile, in white sample color submitted for review, on southern wall of outdoor kitchen;
4. Revision of dormer above outdoor kitchen to include intake and exhaust louvers.
5. Alteration of entry stairs at West Elevation to run straight instead of being accessible at an angle;

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>Bar<br>Back bar<br>Lighting and hardware submissions<br><br>Pro Shop<br>One-single transaction desk-mahogany finish<br>One-back of check in desk-mahogany finish<br>One-double height 24' long men's clothing display-mahogany finish<br>Two-hat etageres with drawers-decorative two tone painted finish<br>Four-accessory etageres with drawers-decorative two tone painted finish<br>Two-shoe tables with no drawers- decorative two tone painted finish<br>Three-nested table sets (two tables per nest) - decorative two tone painted finish<br>Two-club fixtures- decorative two tone painted finish<br>Pro office shelving-details to be determined<br>Built in dressing room bench-details to be determined<br><br>Locker Rooms<br>Attendant area<br>Women's shower area<br>Women's north wall<br>Men's south wall<br><br>Exterior<br>Solid PVC louver<br>Flared gable lower fronts | | | | | | |
| 3.3 | 13 | Chandeliers/Fixtures | | | | | Open |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>JG and GS to provide engineered lighting package for pricing | | | | | | |
| 3.4 | 13 | Carpet | Giavona Sullivan **(The Trump Organization)**,<br>John Gruber **(Trump Ferry Point LLC)** | | | | Open |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>Final quantities still needed. | | | | | | |
| 3.5 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | | |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>Carried over from 1/24/18:<br>Final specification still needed on hardware as well as the finish type for all door submittals<br>Changes to door scope via 10/26/17 markups will be reviewed by JCS and presented as a CO. | | | | | | |
| 3.6 | 12 | Pro Shop | | | | | Open |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>Per JS, RR to provide additional details | | | | | |
| 4.3 | 23 | Truss Issues | Ron Rainone **(Hart Howerton)** | 01/ 26/ 2018 | Medium | Open |
| | **Description:**<br>T5B<br>T64 | | | | | |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>Ongoing | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>JCS is still waiting on this. | | | | | |
| 5.3 | 20 | Lighting | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Lighting Plan | | | | | |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>- GS to provide JG with specs on the additional 27 sconces who will then submit to F&P to ensure energy code compliance. If energy code is a non-issue, JCS may bring price down.<br>- Bollards<br>- Uplighting on exterior<br>- Final lighting package still needed<br>- Attic/blackout window lighting<br>- Ceiling mounted fixtures<br><br>Per JG, hi hats will remain per plan and not be replaced with ceiling mounted fixtures per prior discussion.<br><br>There is no plan to get an interior lighting consultant or revised RCPs. | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Description:**<br>Wall Sconces | | | | | |
| | **Attachments:**<br>PCCO #012.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>Will remain open for final spec/energy calculation deliberations | | | | | |
| 8.3 | 20 | PCCO #011 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Attachments:**<br>PCCO #011.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>Millwork Bar Change Order to remain open for approval | | | | | |
| 8.4 | 20 | PCCO #010 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Changes to Cupola Framing Materials | | | | | |
| | **Attachments:**<br>PCCO #010.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>Will remain open for approval. | | | | | |
| 8.5 | 24 | PCCO #014 | John Gruber **(Trump Ferry Point LLC)** | 01/ 23/ 2018 | High | Open |
| | **Description:**<br>PCCO for Door Changes via 10/26/17 redlines by HH. | | | | | |
| | **Previous Meeting Minutes:**<br>**02/07/2018:**<br>• Will remain open for approval. | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Feb 13, 2018 at 04:47 pm EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **07 7200** Roof Accessories | 70 | 0 | PD10 Snowguards | Product Information | Open | J&C Building Renovations LLC | | Cezary Bartosiewicz | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 02/12/2018 | | 02/14/2018 | |
| **06 4100** Architectural Wood Casework | 69 | 0 | Louvered Panel | Shop Drawing | Open | JCS Millshop | | James Falk | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 02/12/2018 | | 02/16/2018 | |
| *No Spec Section* | 60 | 0 | Bar Hardware | Product Information | Open | JCS Millshop | 01/26/2018 | James Falk | 01/23/2018 | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization)<br>Rainone, Ron (Hart Howerton) | Pending<br>Pending | 01/23/2018 | | 01/26/2018 | |
| **06 4100** Architectural Wood Casework | 19 | 6 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 01/04/2018 | James Falk | | John Gruber (Trump Ferry Point LLC) | Sullivan, Giavona (The Trump Organization)<br>Gruber, John (Trump Ferry Point LLC) | Approved As Noted<br>Pending | 01/23/2018 | 01/24/2018 | 02/07/2018 | |
| **09 3033** Stone Tiling | 16 | 2 | Bluestone Patio Stone | Document | Open | WESTCHESTER MASONRY DEPOT | | | | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 02/13/2018 | | 02/16/2018 | |

JCS | Construction Group, LLC

# TWO-WEEK LOOK AHEAD

February 14th 2018

**Project Name: Ferry Point** **Job # 16-031** **Weekly Project Meeting Wednesday 10AM**

| ACTIVITY | Week 1 | | | | | | | Week 2 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE: | Mon 2/12 | Tues 2/13 | Wed 2/14 | Thu 2/15 | Fri 2/16 | Sat 2/17 | Sun 2/18 | Mon 2/19 | Tues 2/20 | Wed 2/21 | Thu 2/22 | Fri 2/23 | Sat 2/24 | Sun 2/25 | |
| Rebar | x | | | | | | | x | | x | | | | | Ramps |
| Concrete | x | | | | | | | x | | | | | | | Front entry/ Maser scheduled |
| Plumbing | x | x | x | x | x | | | x | x | x | x | x | | | Roughings |
| Electric | x | x | x | x | x | | | x | x | x | x | x | | | Roughings |
| Roof | x | x | x | x | x | x | | x | x | | x | x | x | | |
| Framing | x | x | x | x | x | x | | x | x | x | x | x | x | | Cupola, dining room, interior, windows |
| Mason | x | x | x | x | x | x | | x | x | x | x | x | x | | Patio area |
| EAI | | | | | | | | | | | | | | | |

44 Homestead Avenue, Stamford, CT 06902 t:(203) 485-9612 f:(203) 724-3884

JCS Construction Group, Inc.

# Meeting #29

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 02/28/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Project Meeting 28.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Quinton Davis | Maser Consulting P.A. | Tel: | qdavis@maserconsulting.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |

**Previous Meeting Minutes:**

**02/21/2018:**
This item will remain open until Mockup of Window Blackout detail is complete: there is no lighting behind the windows AS YET due to absence of any lighting plan, RCP, energy calculations etc.
Will radar installation require PDC approval?

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.2 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Per JG, after Materials and design for the front entry are approved by PDC, the TO will commission an EXTERIOR lighting plan.<br>Open Items Include:<br>Drainage<br>Belgian Blok<br>Path Dimensions/Turning Radius<br>Grades<br>Lighting Plan | | | | | |

## DEC

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 2.1 | 18 | SSDS Update | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Previous changes to SSDS system were resolved via RFI and PCCO #013. All deviations from approved shops will be indicated in as-builts. | | | | | |
| 2.2 | 22 | Maser | Dave Keil **(Maser Consulting P.A.)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>All Maser to email DFRs to Kay and Steve. | | | | | |

## Architectural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 3.1 | 1 | Submittals | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>Review Submittal Log | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:** *(None)* | | | | | |
| 3.2 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after receipt of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Bar<br>Back bar<br>Lighting and hardware submissions<br><br>Locker Rooms<br>Attendant area<br>Women's shower area | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Women's north wall<br>Men's south wall<br><br>Exterior<br>Solid PVC louver | | | | | |
| 3.3 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>GS to provide dimensioned ceiling plan for chandelier locations | | | | | |
| 3.4 | 13 | Carpet | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:** *(None)* | | | | | |
| 3.5 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Interior Door scope and submittal to be revised per changes by TO. | | | | | |
| 3.6 | 12 | Pro Shop | | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Proshop has been removed from JCS scope and will be backed out of contract via credit PCCO | | | | | |
| 3.7 | 19 | Drawings for Exterior Changes | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>JCS awaits PDC approval and direction on landscape. | | | | | |
| 3.8 | 19 | Exterior Door Hardware | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Final specification still needed | | | | | |
| 3.10 | 23 | Attic Windows | Ron Rainone **(Hart Howerton)** | 01/ 31/ 2018 | | Open |
| | **Description:**<br>See RFI #64 | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**02/21/2018:** *(None)* | | | | | |
| 3.11 | 24 | Appliance Revisions | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Final Specifications/Changes still needed.<br><br>JCS received Shop Drawings, waiting on kitchen change order package to be broken out by Sam Tell | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Per Arthur Fisher, there are upcoming changes. TO to clarify | | | | | |
| 3.12 | 29 | Foil/FSK-Faced vs Unfaced Batting | Ron Rainone **(Hart Howerton)** | 02/ 28/ 2018 | | Open |
| | **Description:**<br>The drawings do not call for Foil Faced but per:<br>Spec Section: 07 2100 - Thermal Insulation Submittal #: 64.0 Title: Fiberglass Insulation<br>FSK: Additional $14,0000.00<br>Foil:Additional $10,000.00 | | | | | |
| | **Attachments:**<br>300 Hutchinson FSK River Parkway Bronx, New York 10465. (Arl.- 3-7.5).pdf 300 Hutchinson Foil River Parkway Bronx, New York 10465. (Arl.- 3-7.5).pdf | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 4.1 | 21 | RFI #53 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Bar room ceiling connection detail needed. | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>JCS is still waiting on this. | | | | | |
| 4.2 | 23 | Missing Beam | Ron Rainone **(Hart Howerton)** | 01/ 24/ 2018 | | Open |
| | **Description:**<br>See RFI #59 | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Per JS, RR to provide additional details | | | | | |
| 4.3 | 23 | Truss Issues | Ron Rainone **(Hart Howerton)** | 01/ 26/ 2018 | Medium | Open |
| | **Description:**<br>T5B<br>T64 | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**02/21/2018:** *(None)* | | | | | |
| 4.4 | 27 | Roof Bump Out | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>See attached photo | | | | | |
| | **Attachments:**<br>54075827858__EEE54269-2E7B-43E7-89D4-610711281954.jpeg | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:** *(None)* | | | | | |

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>JCS is still waiting on this. | | | | | |
| 5.3 | 20 | Lighting | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Description:**<br>Lighting Plan | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:** *(None)* | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:** *(None)* | | | | | |
| 6.2 | 26 | Schedule Delay | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | 02/ 01/ 2018 | High | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:** | | | | | |

| | |
|---|---|
| | All open change orders and lack of approvals on the follow will incur corresponding schedule delays:<br>Interior doors package<br>Dining room ceiling<br>Bar<br>Lighting plan: JG to send comprehensive delineation of the lighting plan scope by TO and JCS. Including specs for recessed downlights. Which fixtures are by owner? Does the quantity stay the same? Added lights will be $105/recessed and $70/box labor if TO provides fixture.<br><br>According to JG, the plan is to hold all change orders until the team has one, comprehensive change order "package" (ie: HVAC, doors, millwork, PDC exterior package, lighting plan, etc) to present to ET for approval. As pointed out by JR, this desire to adhere to protocol will exacerbate delays in schedule |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Due to open Exterior PDC submission, JCS has yet to receive Civil drawings For Construction and final Grades are still not established | | | | | |
| 7.2 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Due to open Exterior PDC submission, JCS has yet to receive these drawings for Construction/Pricing. | | | | | |
| 7.3 | 27 | Telecom | John Gruber **(Trump Ferry Point LLC)** | 02/ 21/ 2018 | | Open |
| | **Description:**<br>Earthwork | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Backcharge for damage to conduit to be backcharged to Atlas. JCS received one of two invoices for the BC. Credit to be issued through PCCO.<br>American Integrated Security Group was in attendance to discuss the radar at cupola and consult on suggested means of pricing, powering and installing this item.<br>Lightning Protection is desired by TO and requires the use of the highest point, which is the desired location for the radar due to maximum visibility, but the lightning Protection is pointless if not at peak.<br>Is threaded rod enough support for lightning protection? | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.2 | 20 | PCCO #012 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Interior Lighting | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Attachments:**<br>PCCO #012.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>JCS received a partial lighting plan from TO showing desired locations.<br>No energy calculations have been provided as of today because, per JG engineered lighting plan is not required if we are replacing in kind but we are not because there are additional lights at the bar, at the proshop ceiling, recessed downlights, window backlighting, etc. | | | | | |
| 8.3 | 20 | PCCO #011 | John Gruber (**Trump Ferry Point LLC**) | | | Open |
| | **Attachments:**<br>PCCO #011.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Millwork Bar Change Order to remain open for approval | | | | | |
| 8.4 | 20 | PCCO #010 | John Gruber (**Trump Ferry Point LLC**) | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Changes to Cupola Framing Materials | | | | | |
| | **Attachments:**<br>PCCO #010.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Will remain open for approval. | | | | | |
| 8.5 | 24 | PCCO #014 | John Gruber (**Trump Ferry Point LLC**) | 01/ 23/ 2018 | High | Open |
| | **Description:**<br>PCCO for Door Changes | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Will remain open for further shop drawings review and potential reduction of scope. | | | | | |
| 8.6 | 27 | PCCO #15 | Joe Roediger | 02/ 21/ 2018 | | Open |
| | **Description:**<br>APPROVED | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:** *(None)* | | | | | |
| 8.7 | 27 | PCCO #016 | John Gruber (**Trump Ferry Point LLC**) | 02/ 21/ 2018 | | Open |
| | **Description:**<br>Changes to the Dormer per A3.02 | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>APPROVED | | | | | |
| 8.8 | 27 | PCCO #017 | John Gruber **(Trump Ferry Point LLC)** | 02/ 21/ 2018 | | Open |
| | **Description:**<br>Lighting Protection | | | | | |
| | **Previous Meeting Minutes:**<br>**02/21/2018:**<br>Will remain open for approval. | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Wed Feb 28, 2018 at 09:58 am EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Received From | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Door Hardware | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Falk, James (JCS Millshop) | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | |
| 49 | Leaders | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | |
| 53 | CFM Roof Framing Connection | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Rainone, Ron (Har... | 11/07/2017 | Justin Shaw | 11/10/2017 | | Shaw, Justin (JCS... | | | | |
| 56 | Cupola Items | Open | | None | Rainone, Ron (Har... | 12/08/2017 | Justin Shaw | 12/11/2017 | | Shaw, Justin (JCS... | | | | Yes (Unknown) |
| 59 | Missing Beam for Trusses | Open | French & Parrello... | None | Rainone, Ron (Har... | 01/10/2018 | Fiona Rooney | 01/13/2018 | | Rooney, Fiona (JC... | At grid line F11 | 5 days | | Yes (Unknown) |
| 68 | Lighting Plan | Open | JCS Construction ... | Rooney, Fiona (JCS Construction Group, Inc.) | Gruber, John (Tru... | 02/06/2018 | Fiona Rooney | 02/09/2018 | | Rooney, Fiona (JC... | | Yes (Unknown) | | Yes (Unknown) |
| 72 | electric RFI | Open | Linphill Electric... | Perez, Eddie (Linphill Electrical Contractors) | Gruber, John (Tru... | 02/21/2018 | Fiona Rooney | 02/24/2018 | | Gruber, John (Tru... | | | | |
| 73 | Rowlock | Open | | None | Rainone, Ron (Har... | 02/21/2018 | Fiona Rooney | 02/24/2018 | | Rainone, Ron (Har... | | | | |
| 75 | Trump Links Gas Usage | Open | A&M Warshaw Plumb... | Bruno, Cristine (A&M Warshaw Plumbing & Heating) | Rainone, Ron (Har... | 02/26/2018 | Fiona Rooney | 03/01/2018 | | Rainone, Ron (Har... | | | | |
| 76 | Exterior Trim Louver | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Rainone, Ron (Har... | 02/28/2018 | Fiona Rooney | 03/03/2018 | | Rainone, Ron (Har... | | | | |
| 77 | Foil/FSK-Faced vs Unfaced Batting | Open | Energy Spray Syst... | None | Rainone, Ron (Har... | 02/28/2018 | Fiona Rooney | 03/03/2018 | | Rainone, Ron (Har... | | | | Yes (Unknown) |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Wed Feb 28, 2018 at 09:57 am EST

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 72 | 0 | Captive Aire | | Open | Sam Tell Companies | 03/02/2018 | Arthur Fisher | 02/23/2018 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 02/23/2018 | | 03/09/2018 | |
| *No Spec Section* | 60 | 0 | Bar Hardware | Product Information | Open | JCS Millshop | 01/26/2018 | James Falk | 01/23/2018 | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization)<br>Rainone, Ron (Hart Howerton) | Pending<br>Pending | 01/23/2018 | | 01/26/2018 | |
| *No Spec Section* | 59 | 1 | Locker Room Concepts | Shop Drawing | Open | JCS Millshop | 02/28/2018 | James Falk | | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 02/21/2018 | | 02/28/2018 | |
| **06 4100** Architectural Wood Casework | 19 | 6 | Millwork Drawings | Shop Drawing | Open | JCS Millshop | 01/04/2018 | James Falk | | John Gruber (Trump Ferry Point LLC) | Sullivan, Giavona (The Trump Organization)<br>Gruber, John (Trump Ferry Point LLC) | Approved As Noted<br>Pending | 01/23/2018 | 01/24/2018 | 02/07/2018 | |

JCS Construction Group, Inc.

# Meeting #31

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 03/14/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Project Meeting #30.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Quinton Davis | Maser Consulting P.A. | Tel: | qdavis@maserconsulting.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>Approved by PDC<br>JCS needs the placement for slab and stone at the gazebo now in order to install pull box from the planting bed for conduit now | | | | | |
| 1.2 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>GS to provide Gemini weight, and support spec | | | | | |
| 3.4 | 13 | Carpet | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>3600 SF PCCO for plank flooring install vs carpet<br><br>Does ownership require shoe molding? | | | | | |
| 3.5 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>JG will provide a color coded plan using schedule to show door #s, lock type and swing. JCS sent TO the door schedule. | | | | | |
| 3.7 | 19 | Drawings for Exterior Changes | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>Since last week's deadline of 2/28, TO received approval from PDC.<br>JG sent the approval to F&P and should have grading and civil today.<br><br>Lightolier sent something to JG late 3/7<br><br>The sidewalks, bollards and lighting are on LP-1. | | | | | |
| 3.8 | 19 | Exterior Door Hardware | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>JG to provide hardware spec and color coded plan using schedule to show door #s, lock type and swing for exterior package.<br>The door to coat closet is NOT a dutch door. | | | | | |
| 3.10 | 23 | Attic Windows | Ron Rainone **(Hart Howerton)** | 01/ 31/ 2018 | | Open |
| | **Description:**<br>See RFI #64 | | | | | |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>This item will remain open until Mockup of Window Blackout detail is complete: there is no lighting behind the windows AS YET due to absence of any lighting plan, RCP, energy calculations etc. | | | | | |

| | |
|---|---|
| | **Description:**<br>See item 1.2, 3.10, 8.2 |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>JG to give bollard counts to Lightolier |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>Dirt infilling this week | | | | | |
| 6.2 | 26 | Schedule Delay | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | 02/ 01/ 2018 | High | Open |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>Waiting on Sam Tell Change order<br>Waiting on final grades/civil drawings per PDC submittal<br>Waiting on pricing for changes on Interior Doors | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>As of 3/7/2018: F&P to begin the grading and drainage plan. | | | | | |
| | **Previous Meeting Minutes:**<br>**02/08/2018:**<br>Due to open Exterior PDC submission, JCS has yet to receive Civil drawings For Construction and final Grades are still not established but TO expects to be able to deliver these to JCS today | | | | | |
| 7.2 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**02/08/2018:** | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8.5 | 30 | PCCO #019 | John Gruber **(Trump Ferry Point LLC)** | 03/ 07/ 2018 | | Open |
| | **Description:**<br>Labor Associated with Plank Floor Install | | | | | |
| | **Attachments:**<br>PCCO #019 Labor Associated with Plank Floor Install.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**02/08/2018:** *(None)* | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Mar 13, 2018 at 03:19 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## All Submittals

| Spec Section | # | Rev. | Title | Type | Status | Responsible Contractor | Submit By | Received From | Received Date | Ball In Court | Approvers | Response | Sent Date | Returned Date | Final Due Date | Distributed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *No Spec Section* | 76 | 0 | Trane | | Open | COHO HVAC, INC | 03/20/2018 | Danny Yilmaz | 03/13/2018 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 03/13/2018 | | 03/20/2018 | |
| *No Spec Section* | 75 | 0 | Distribution Components | | Open | Linphill Electrical Contractors | 03/19/2018 | Floyd Caiazzo | 03/12/2018 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 03/12/2018 | | 03/19/2018 | |
| **11000** Equipment | 73 | 0 | Equipment Cut Book | Product Information | Open | Sam Tell Companies | 03/07/2018 | Arthur Fisher | 03/02/2018 | Kevin Dwyer (French & Parrello Associates)<br>Ron Rainone (Hart Howerton) | Dwyer, Kevin (French & Parrello Associates)<br>Rainone, Ron (Hart Howerton) | Pending<br>Pending | 03/05/2018<br>03/05/2018 | | 03/07/2018 | |
| *No Spec Section* | 72 | 0 | Captive Aire | | Open | Sam Tell Companies | 03/02/2018 | Arthur Fisher | 02/23/2018 | Ron Rainone (Hart Howerton) | Rainone, Ron (Hart Howerton) | Pending | 02/23/2018 | | 03/09/2018 | |
| *No Spec Section* | 60 | 0 | Bar Hardware | Product Information | Open | JCS Millshop | 01/26/2018 | James Falk | 01/23/2018 | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization)<br>Rainone, Ron (Hart Howerton) | Pending<br>Pending | 01/23/2018 | | 01/26/2018 | |
| *No Spec Section* | 59 | 1 | Locker Room Concepts | Shop Drawing | Open | JCS Millshop | 02/28/2018 | James Falk | | Giavona Sullivan (The Trump Organization) | Sullivan, Giavona (The Trump Organization) | Pending | 02/21/2018 | | 02/28/2018 | |

JCS Construction Group, Inc.

# Meeting #33

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 04/04/2018 **MEETING TIME:** 10:00 AM - 12:00 PM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Meeting 31.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Quinton Davis | Maser Consulting P.A. | Tel: | qdavis@maserconsulting.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |

**Previous Meeting Minutes:**

**03/29/2018:**
03/14/18:
Approved by PDC
JCS needs the placement for slab and stone at the gazebo now in order to install pull box from the planting bed for conduit now
What is the cover detail for planting bed?
Pre-package top soil does not require testing.
Backfill with shaping layer to sub grade of -1ft, pour 1ft sand on top of that, dig a 2x2 hole and backfill with bagged material to top of sand does not require Maser or IEM present, W&C requests heads up to be in compliance with Parks requirements.

| | | | | | | |
|---|---|---|---|---|---|---|
| | TO to specify Television Mounting Bracket | | | | | |
| 3.3 | 13 | Chandeliers/Fixtures | | | | Open |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>GS to provide Gemini weight, and support spec | | | | | |
| 3.4 | 13 | Carpet | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>3600 SF PCCO for plank flooring install vs carpet<br>Will address the need for shoe molding after install of flooring | | | | | |
| 3.5 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>JG will provide a color coded plan using schedule to show door #s, lock type and swing. JCS sent TO the door schedule. | | | | | |
| 3.6 | 19 | Drawings for Exterior Changes | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>Since last week's deadline of 2/28, TO received approval from PDC.<br>JG sent the approval to F&P and should have has grading and civil plans two weeks ago per JG<br>Lightolier sent something to JG late 3/7 (WHAT WAS THIS?)<br>The sidewalks, bollards and lighting are on LP-1 which JCS Has not received to date | | | | | |
| 3.7 | 19 | Exterior Door Hardware | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>JG to provide hardware spec and color coded plan using schedule to show door #s, lock type and swing for exterior package. | | | | | |
| 3.8 | 23 | Attic Windows | Ron Rainone **(Hart Howerton)** | 01/ 31/ 2018 | | Open |
| | **Description:**<br>See RFI #64 | | | | | |
| | **Previous Meeting Minutes:**<br>**03/29/2018:** *(None)* | | | | | |
| 3.9 | 29 | Foil/FSK-Faced vs Unfaced Batting | Ron Rainone **(Hart Howerton)** | 02/ 28/ 2018 | | On Hold |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**03/29/2018:** *(None)* | | | | | |
| 6.2 | 26 | Schedule Delay | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | 02/ 01/ 2018 | High | Open |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>Waiting on final grades/civil drawings per PDC submittal | | | | | |

## Civil

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 7.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Description:**<br>As of 3/7/2018: F&P to begin the grading and drainage plan. JCS top work off of site plan that F&P provides. | | | | | |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>Due to open Exterior PDC submission, JCS has yet to receive Civil drawings For Construction and final Grades are still not established. TO expecTED to be able to deliver these to JCS 2 weeks ago. | | | | | |
| 7.2 | 12 | Front Driveway | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Additional/Changes to Design and Scope | | | | | |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>Due to open Exterior PDC submission, JCS has yet to receive these drawings for Construction/Pricing. | | | | | |

## Change Orders

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 8.1 | 20 | PCCO #010 | John Gruber **(Trump Ferry Point LLC)** | 01/ 02/ 2018 | High | Open |
| | **Description:**<br>Changes to Cupola Framing Materials | | | | | |
| | **Attachments:**<br>PCCO #010.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**03/29/2018:**<br>Will remain open for approval. | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue Apr 3, 2018 at 02:29 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Received From | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Door Hardware | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | |
| 19 | JCS Millshop RFI #1 | Open | JCS Millshop | Falk, James (JCS Millshop) | Rainone, Ron (Har... | 07/31/2017 | Fiona Rooney | 08/03/2017 | | Rainone, Ron (Har... | | | | |
| 49 | Leaders | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Rainone, Ron (Har... | 10/06/2017 | Fiona Rooney | 10/09/2017 | | Rainone, Ron (Har... | | | | |
| 53 | CFM Roof Framing Connection | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Rainone, Ron (Har... | 11/07/2017 | Justin Shaw | 11/10/2017 | | Shaw, Justin (JCS... | | | | |
| 56 | Cupola Items | Open | | None | Rainone, Ron (Har... | 12/08/2017 | Justin Shaw | 12/11/2017 | | Shaw, Justin (JCS... | | | | Yes (Unknown) |
| 59 | Missing Beam for Trusses | Open | French & Parrello... | None | Rainone, Ron (Har... | 01/10/2018 | Fiona Rooney | 01/13/2018 | | Rooney, Fiona (JC... | At grid line F11 | 5 days | | Yes (Unknown) |
| 72 | electric RFI | Open | Linphill Electric... | Perez, Eddie (Linphill Electrical Contractors) | Gruber, John (Tru... | 02/21/2018 | Fiona Rooney | 02/24/2018 | | Rooney, Fiona (JC... | | Yes (Unknown) | | |
| 75 | Trump Links Gas Usage | Open | A&M Warshaw Plumb... | Bruno, Cristine (A&M Warshaw Plumbing & Heating) | Rainone, Ron (Har... | 02/26/2018 | Fiona Rooney | 03/01/2018 | | Rooney, Fiona (JC... | | | | |

JCS Construction Group, Inc.

# Meeting #35

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 04/18/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

Meeting 34.m4a

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Quinton Davis | Maser Consulting P.A. | Tel: | qdavis@maserconsulting.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>Curb PCCO open | | | | | |
| 1.2 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**04/11/2018:** | | | | | |

2012-018 M2 Samuels

| | | | | | | |
|---|---|---|---|---|---|---|
| | JCS awaiting TO approval to proceed on plank flooring | | | | | |
| 3.4 | 16 | Doors and Hardware | Giavona Sullivan **(The Trump Organization)** | 11/ 23/ 2017 | | Open |
| | **Description:**<br>Interior Doors<br>Hardware | | | | | |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>Door delivery first week of May | | | | | |
| 3.5 | 19 | Exterior Door Hardware | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>JG to provide hardware spec and color coded plan using schedule to show door #s, lock type and swing for exterior package | | | | | |
| 3.6 | 23 | Attic Windows | Ron Rainone **(Hart Howerton)** | 01/ 31/ 2018 | | Open |
| | **Description:**<br>See RFI #64 | | | | | |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>This item will remain open until Mockup of Window Blackout detail is complete: there is no lighting behind the windows AS YET due to absence of any lighting plan, RCP, energy calculations etc. | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.2 | 14 | Plumbing Drawings | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Amended Plumbing drawings need to be signed and sealed and submitted for processing by DOB. Design team needs to bubble changes. | | | | | |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>JCS has yet to receive these drawings. | | | | | |
| 5.3 | 20 | Electrical | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>FA Plan Review Objection, TO/Hernan to resolve. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Description:**<br>Interior Lighting | | | | | |
| | **Attachments:**<br>PCCO #012.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>Will remain open for approval. | | | | | |
| 8.3 | 30 | PCCO #019 | John Gruber **(Trump Ferry Point LLC)** | 03/ 07/ 2018 | | Open |
| | **Description:**<br>Labor Associated with Plank Floor Install | | | | | |
| | **Attachments:**<br>PCCO #019 Labor Associated with Plank Floor Install.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>Will remain open for approval. | | | | | |
| 8.4 | 31 | PCCO #020 | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Description:**<br>Lower Urinal | | | | | |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>Will remain open for approval. | | | | | |
| 8.5 | 33 | PCCO #21 | John Gruber **(Trump Ferry Point LLC)** | 04/ 04/ 2018 | | Open |
| | **Description:**<br>Low Volatge Installation | | | | | |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>Will remain open for approval. | | | | | |
| 8.6 | 33 | PCCO #022 | John Gruber **(Trump Ferry Point LLC)** | 04/ 05/ 2018 | | Open |
| | **Description:**<br>Reinstall Underlayment | | | | | |
| | **Previous Meeting Minutes:**<br>**04/11/2018:**<br>Will remain open for approval. | | | | | |
| 8.7 | 33 | PCCO #023 | John Gruber **(Trump Ferry Point LLC)** | 04/ 10/ 2018 | | Open |
| | **Description:** | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Wed Apr 18, 2018 at 07:45 am EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Received From | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | Sam Tell RFI 1 | Open | Sam Tell Companies | LoBianco, John (Sam Tell Companies) | Rainone, Ron (Har... | 04/05/2018 | Fiona Rooney | 04/08/2018 | | Rooney, Fiona (JC... | | | | |
| 75 | Trump Links Gas Usage | Open | A&M Warshaw Plumb... | Bruno, Cristine (A&M Warshaw Plumbing & Heating) | Rainone, Ron (Har... | 02/26/2018 | Fiona Rooney | 03/01/2018 | | Rooney, Fiona (JC... | | | | |
| 72 | electric RFI | Open | Linphill Electric... | Perez, Eddie (Linphill Electrical Contractors) | Gruber, John (Tru... | 02/21/2018 | Fiona Rooney | 02/24/2018 | | Rooney, Fiona (JC... | | Yes (Unknown) | | |
| 59 | Missing Beam for Trusses | Open | French & Parrello... | None | Rainone, Ron (Har... | 01/10/2018 | Fiona Rooney | 01/13/2018 | | Rooney, Fiona (JC... | At grid line F11 | 5 days | | Yes (Unknown) |
| 3 | Door Hardware | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | |

EARTHWORK
PARKING LOT MATERIAL
BEING MOVED TODAY
SHOULD BE FINISHED THIS WEEK

JCS | Construction Group, Inc.

# Meeting #38

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

AT FOR AUTO MARKS
VARIOUS

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Minutes

**MEETING DATE:** 05/16/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**NOTES:**

**ATTACHMENTS:**

**ATTENDEES:**

| Name | Company | Phone Number | Email | Attendance |
|---|---|---|---|---|
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov | Absent |
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov | Absent |
| Steven Lauria | | Tel: | slauria@woodardcurran.com | Conference |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com | Present |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com | Present |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com | Present |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com | Present |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com | For Distribution Only |
| Quinton Davis | Maser Consulting P.A. | Tel: | qdavis@maserconsulting.com | Absent |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com | Absent |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com | Absent |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com | Absent |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com | Present |

**Parks**

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Previous Meeting Minutes:** **05/02/2018:** *(None)* | | | | | |
| 1.2 | 13 | Landscape | John Gruber **(Trump Ferry Point LLC)** | | | Open |

These meeting minutes are believed to be an accurate reflection of those items discussed and the conclusions that were reached during the referenced meeting.
Please contact JCS Construction Group Inc if there are any discrepancies or questions with the content of these minutes.

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Previous Meeting Minutes:**<br>**05/02/2018:**<br>JG to provide hardware spec and color coded plan using schedule to show door #s, lock type and swing for exterior package | | | | | |
| 3.4 | 23 | Attic Windows | Ron Rainone **(Hart Howerton)** | 01/ 31/ 2018 | | Open |
| | **Description:**<br>See RFI #64 | | | | | |
| | **Official Documented Meeting Minutes:**<br>This item will remain open until Mockup of Window Blackout detail is complete: there is no lighting behind the windows AS YET due to absence of any lighting plan, RCP, energy calculations etc. | | | | | |
| | **Previous Meeting Minutes:**<br>**05/02/2018:**<br>This item will remain open until Mockup of Window Blackout detail is complete: there is no lighting behind the windows AS YET due to absence of any lighting plan, RCP, energy calculations etc. | | | | | |
| 3.5 | 38 | Trex Rail Height | Ron Rainone **(Hart Howerton)** | 05/ 17/ 2018 | | Open |
| | **Description:**<br>Is it acceptable to 39" rail height vs 42"? WHAT IS CODE ???? | | | | | |

## Structural

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|

## MEP

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 5.1 | 37 | Permit Applications | Arthur Fisher **(Sam Tell Companies)** | 05/ 09/ 2018 | High | Open |
| | **Official Documented Meeting Minutes:**<br>Sam Tell to file duct permits, VFA and HH to amend permit application per plan. | | | | | |
| | **Previous Meeting Minutes:**<br>**05/02/2018:** *(None)* | | | | | |
| 5.2 | 20 | Electrical | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**05/02/2018:**<br>Lighting Scope is unclear | | | | | |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Official Documented Meeting Minutes:**<br>- Lighting Plan<br>- Fire Alarm | | | | | |

These meeting minutes are believed to be an accurate reflection of those items discussed and the conclusions that were reached during the referenced meeting.

Please contact JCS Construction Group Inc if there are any discrepancies or questions with the content of these minutes.

| | | | | | | |
|---|---|---|---|---|---|---|
| 8.3 | 35 | PCCO #024 | John Gruber **(Trump Ferry Point LLC)** | 05/ 16/ 2018 | High | Open |
| | **Description:**<br>New Sprinkler Design | | | | | |
| | **Attachments:**<br>PCCO #024.pdf | | | | | |
| | **Previous Meeting Minutes:**<br>**05/02/2018:**<br>Under review pending submittal response | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Wed May 16, 2018 at 09:24 am EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Received From | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | Trump Links Gas Usage | Open | A&M Warshaw Plumb... | Bruno, Cristine (A&M Warshaw Plumbing & Heating) | Rainone, Ron (Har... | 02/26/2018 | Fiona Rooney | 03/01/2018 | | Rooney, Fiona (JC... | | | | |
| 72 | electric RFI | Open | Linphill Electric... | Perez, Eddie (Linphill Electrical Contractors) | Gruber, John (Tru... | 02/21/2018 | Fiona Rooney | 02/24/2018 | | Rooney, Fiona (JC... | | Yes (Unknown) | | |
| 59 | Missing Beam for Trusses | Open | French & Parrello... | None | Rainone, Ron (Har... | 01/10/2018 | Fiona Rooney | 01/13/2018 | | Rooney, Fiona (JC... | At grid line F11 | 5 days | | Yes (Unknown) |
| 3 | Door Hardware | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | |

JCS Construction Group, Inc.

# Meeting #40

JCS Construction Group Inc
44 Homestead Ave.
Stamford, Connecticut 06902
Phone: (203) 485-9612

**Project:** 16-031 - Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## Construction Meeting Agenda

**MEETING DATE:** 05/23/2018 **MEETING TIME:** 10:00 AM - 11:00 AM Eastern Time (US & Canada)

**MEETING LOCATION:** Ferry Point Site

**OVERVIEW:**

**ATTACHMENTS:**

**ATTENDEES:**

| Name | Company | Phone Number | Email |
|---|---|---|---|
| Matt Calamari | | Tel: | mcalamari@trumporg.com |
| David Cerron | | Tel: (212) 360-3457 | david.cerron@parks.nyc.gov |
| Joe Conforti | | Tel: | joe.conforti@parks.nyc.gov |
| Steven Lauria | | Tel: | slauria@woodardcurran.com |
| Ron Leiberman | | Tel: | rlieberman@trumporganization.com |
| Scott Palma | | Tel: | prplumbing@aol.com |
| Joe Roediger | | Tel: (718) 414-1560 | jroediger@trumpgolflinks.com |
| Ron Rainone | Hart Howerton | Tel: (212) 683-5631 | rrainone@harthowerton.com |
| Fiona Rooney | JCS Construction Group, Inc. | Tel: (203) 485-9612 ext. 158 | fiona@jcsconstructiongroup.com |
| Justin Shaw | JCS Construction Group, Inc. | Tel: (203) 485-9612 | justin@jcsconstructiongroup.com |
| James Falk | JCS Millshop | Tel: (203) 485-9612 ext. 153 | james@jcsconstructiongroup.com |
| Quinton Davis | Maser Consulting P.A. | Tel: | qdavis@maserconsulting.com |
| Dave Keil | Maser Consulting P.A. | Tel: | dkeil@maserconsulting.com |
| Arthur Fisher | Sam Tell Companies | Tel: | afisher@samtell.com |
| Giavona Sullivan | The Trump Organization | Tel: | gsullivan@trumporg.com |
| Brandon Torre | The Trump Organization | Tel: | btorre@trumpgolflinks.com |
| John Gruber | Trump Ferry Point LLC | Tel: (908) 296-6025 | jgruber@trumporg.com |

### Parks

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 1.1 | 8 | Exterior Changes | Joe Roediger | | | Open |
| | **Previous Meeting Minutes:**<br>**05/16/2018:** *(None)* | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **TREX**<br>RR to determine if the standard 36" Trex railings can be used instead of the specified 42" height. RR responded saying that the conditions as built do not require the 42" rail by code so the 36" stock railing kits are acceptable. | | | | | |
| 3.2 | 9 | Millwork | Ron Rainone **(Hart Howerton)** | | | On Hold |
| | **Description:**<br>JCS Millshop requires at least 2 weeks after receipt of control sample and final approved interior drawings in order to create the next round of shops for approval. Upon approval, fabrication will begin. | | | | | |
| | **Previous Meeting Minutes:**<br>**05/16/2018:** *(None)* | | | | | |
| 3.3 | 19 | Exterior Door Hardware | Giavona Sullivan **(The Trump Organization)** | | | Open |
| | **Previous Meeting Minutes:**<br>**05/16/2018:**<br>Exterior lanterns, shower seats, grab bars are all onsite. Plumbing trim not delivered but is avail. All Interior hardware by Omni including closers are due Thursday or Friday. Exterior is mainly push-pulls, mortise locks and closers and are being delivered in the next couple of days. Carpenters to install four hinges per the metal doors. JG to check on Von Dubran. | | | | | |
| 3.4 | 23 | Attic Windows | Ron Rainone **(Hart Howerton)** | 01/ 31/ 2018 | | Open |
| | **Description:**<br>See RFI #64 | | | | | |
| | **Previous Meeting Minutes:**<br>**05/16/2018:**<br>The window treatments for the blackout windows: curtains have been installed, JG to put up a temporary light to determine how to proceed with permanent fixtures but will likely proceed with porcelain socket.=. This item will remain open until Mock-up of Window Blackout detail is complete: there is no lighting behind the windows AS YET due to absence of any lighting plan, RCP, energy calculations etc.<br><br>Per JG, we can add the lights at a later date because we do not need the attic windows illuminated right away and once we get the approval we can proceed | | | | | |
| 3.5 | 39 | Masonry | John Gruber **(Trump Ferry Point LLC)** | | | Open |
| | **Previous Meeting Minutes:**<br>**05/16/2018:**<br>Bluestone Patio:<br>Exterior Landscape, siding grading, seams of the bluestone needs to get cut and ground down.<br>MC does not like the bluestone installation because of the irregular, thickness of the seams and surfaces, etc.; this couldn't be helped because of the nature of the source from which the stone was quarried. Seams need to be sawed down.<br>Masons to cut the thickness of the stone down (and hadn't been onsite due to 90% thunderstorms predicted). | | | | | |
| 3.6 | 39 | Carpentry | | | | Open |
| | **Description:**<br>Window Trim detail: The reveal is approved, mockup was poor, lack of consistency on the trim dimensions look odd (1x4 all the way around and then a stool with the 1x2 and 1x6). The TO should provide a trim detail. Carpenters need to tighten up their miters. | | | | | |

| | |
|---|---|
| | **Description:**<br>Sprinkler and Duct are the only trades that need to be working overtime/making use of extended hours HVAC equipment to be delivered to site before 5/18/2018. Bentzi to do layout when equipment,<br>Regarding the hatch above the mezzanine, since this is not a coordinated design by the engineers, will need to be laid out on the mezzanine and lasered up to determine locations of mechanical equipment on roof.<br>Kitchen equipment can be delivered, preformed metal curbs to sit on EPDM<br>Hatch in Proshop (JCS doesn't have detail for this, how does TO want this done? Previously discussed option of not doing the roof hatch and cutting the roof as needed if we need to get equipment out. Need to cut a 4x5 hole to get the equipment in, so the same hole would serve to remove the equipment as needed later on, but this would also result in an enormous hole in the ceiling and they do not make 5x5 access panels that are attractive for this purpose.<br>Perhaps JCS can fabricate a custom access panel for the oversized hatch door? |
| | **Previous Meeting Minutes:**<br>**05/16/2018:** *(None)* |

## Schedule

| No | Meeting Origin | Title | Assignment | Due Date | Priority | Status |
|---|---|---|---|---|---|---|
| 6.1 | 9 | For Construction Drawings | Ron Rainone **(Hart Howerton)** | | | Open |
| | **Previous Meeting Minutes:**<br>**05/16/2018:** *(None)* | | | | | |
| 6.2 | 1 | Two Week Look Ahead | Justin Shaw **(JCS Construction Group, Inc.)** | | | Open |
| | **Description:**<br>Review two week look ahead. | | | | | |
| | **Previous Meeting Minutes:**<br>**05/16/2018:**<br>Sam Tell: Stainless Steel Fab, Refrigeration<br>Electricians<br>Ductwork<br><br>Roofer: Shingling, Flashing<br><br>Carpenters: Trim in grill/bar room, Taping Painting, framing for Proshop diffusers, closing up walls, back door trim<br><br>Masonry: Belgium Block/Bluestone | | | | | |
| 6.3 | 26 | Schedule Delay | John Gruber **(Trump Ferry Point LLC)**,<br>Giavona Sullivan **(The Trump Organization)** | 02/ 01/ 2018 | High | On Hold |
| | **Previous Meeting Minutes:**<br>**05/16/2018:**<br>Per the AOR, this is a 16 to 18 month project.<br><br>Sam Tell: The stainless custom fabrication will be delivered Wednesday May 23rd 2018.<br><br>There are critical path open items in TO's court that must be resolved, Hard to deliver a hardline schedule if we cant identify our sprinkler system. | | | | | |

JCS Construction Group, Inc.

JCS Construction Group Inc

Printed on Tue May 22, 2018 at 01:54 pm EDT

Job #: 16-031 Trump Golf Links at Ferry Point
500 Hutchinson River Parkway
Bronx, New York 10465

## RFI LOG

| # | Subject | Status | Responsible Contractor | Received From | Assignee | Date Initiated | RFI Manager | Due Date | Closed Date | Ball In Court | Location | Schedule Impact | Cost Code | Cost Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | Trump Links Gas Usage | Open | A&M Warshaw Plumb... | Bruno, Cristine (A&M Warshaw Plumbing & Heating) | Rainone, Ron (Har... | 02/26/2018 | Fiona Rooney | 03/01/2018 | | Rooney, Fiona (JC... | | | | |
| 72 | electric RFI | Open | Linphill Electric... | Perez, Eddie (Linphill Electrical Contractors) | Gruber, John (Tru... | 02/21/2018 | Fiona Rooney | 02/24/2018 | | Rooney, Fiona (JC... | | Yes (Unknown) | | |
| 59 | Missing Beam for Trusses | Open | French & Parrello... | None | Rainone, Ron (Har... | 01/10/2018 | Fiona Rooney | 01/13/2018 | | Rooney, Fiona (JC... | At grid line F11 | 5 days | | Yes (Unknown) |
| 3 | Door Hardware | Open | JCS Construction ... | Shaw, Justin (JCS Construction Group, Inc.) | Pusser, Brittany ... | 05/08/2017 | Justin Shaw | 05/11/2017 | | Shaw, Justin (JCS... | | | | |

# APPENDIX N

## Hampton-Clarke Project No. 8081617 Report dated September 14, 2018

Hampton-Clarke
Analytical & Field Services

175 ROUTE 46 WEST, UNIT D · FAIRFIELD, NJ 07004
2 MADISON ROAD, FAIRFIELD, NJ 07004
800-426-9992 · 973-244-9770
FAX: 973-244-9787
WWW.HCVLAB.COM

# Project: Trump Links

**Client PO:** Not Available

**Report To:** Maser Consulting
50 Chestnut Ridge Rd.
Suite 101
Montvale, NJ 07645

Attn: Dave Keil

**Received Date:** 8/16/2018

**Report Date:** 9/14/2018

**Deliverables:** NYDOH-R

**Lab ID:** AD05999

**Lab Project No:** 8081617

This report is a true report of results obtained from our tests of this material. The report relates only to those samples received and analyzed by the laboratory. All results meet the requirements of the NELAC Institute standards. Laboratory reports may not be reproduced, except in full, without the written approval of the laboratory.

In lieu of a formal contract document, the total aggregate liability of Hampton-Clarke to all parties shall not exceed Hampton-Clarke's total fee for analytical services rendered.

**Robin Cousineau - Quality Assurance Director** OR **Jean Revolus - Laboratory Director**

NJ (07071) NY (ELAP11408) CT (PH-0671)
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Hampton-Clarke
WBE/DBE/SBE 800-426-9992

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8081617_SUB.pdf

# Sample Summary

**Client:** Maser Consulting
**Project:** Trump Links

**HC Project #:** 8081617

| Lab# | SampleID | Matrix | Collection Date | Receipt Date |
|---|---|---|---|---|
| AD05999-001 | SS-1 | Soil | 8/15/2018 | 8/16/2018 |
| AD05999-002 | SS-2 | Soil | 8/15/2018 | 8/16/2018 |

# HC Case Narrative

**Client:** Maser Consulting
**Project:** Trump Links

**HC Project:** 8081617

*This case narrative is in the form of an exception report. Method specific and/or QA/QC anomalies related to this report only are detailed below.*

## Volatile Organic Analysis:

Methylene chloride was recovered in sample AD05999-001 due to possible laboratory contamination.

The Method Blank Spike for batch 70991 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

The Matrix Spike and Matrix Spike Duplicate for batch 70991 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

## TCLP Volatile Organic Analysis:

The Method Blank Spike for batch 70993 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

The MS/MSD RPD, Matrix Spike and Matrix Spike Duplicate for batch 70993 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

## Base Neutral/Acid Extractable Analysis:

The Method Blank Spike for batch 69957 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

The MS/MSD RPD, Matrix Spike and Matrix Spike Duplicate for batch 69957 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

## PCB Analysis:

Data conforms to method requirements.

## Pesticide Analysis:

Data conforms to method requirements.

## Herbicide Analysis:

Data conforms to method requirements.

## Metals Analysis:

The Matrix Spike and Matrix Spike Duplicate for batches 70604 and 70605 had recoveries outside QC limits. Please refer to the applicable Form 5/7 for the recoveries.

The RPD between the QC sample and the Method Replicate had recoveries outside QC limits in batch 70604. Please refer to the applicable Form 6/9 for the recoveries.

The serial dilution for batches 70604 and 70605 is outside QC limits for one or more analytes. Please refer to the applicable Form 6/9 for the recoveries.

## TCLP Metals Analysis:

Data conforms to method requirements.

## Wet Chemistry Analysis:

Data conforms to method requirements.

## Subcontracted Analysis:

Please refer to attached subcontracted laboratory report. Sample AD05999-001 was submitted to Pace Analytical for TCDD Scan (1613) analysis and PCDD/PCDF (8290) analysis.

Please refer to attached subcontracted laboratory report. Sample AD05999-001 was submitted to TestAmerica for Parathion (8141) analysis.

Robin Cousineau
Quality Assurance Director

Or

Jean Revolus
Laboratory Director

9/17/2018
Date

# HC Executive Summary

**Client:** Maser Consulting

**HC Project #:** 8081617

**Project:** Trump Links

**Lab#: AD05999-001** **Sample ID: SS-1**

| Analyte | Units | RL | Result | Analytical Method |
|---|---|---|---|---|
| Aluminum | mg/kg | 210 | 610 | EPA 6010D |
| Calcium | mg/kg | 1100 | 1100 | EPA 6010D |
| Iron | mg/kg | 210 | 1400 | EPA 6010D |
| Magnesium | mg/kg | 530 | 730 | EPA 6010D |
| Manganese | mg/kg | 11 | 18 | EPA 6010D |
| Arsenic | mg/kg | 0.21 | 0.39 | EPA 6020B |
| Methylene chloride | mg/kg | 0.0046 | 0.0053 | EPA 8260C |

# HC Report of Analysis

**Client:** Maser Consulting
**Project:** Trump Links

**HC Project #:** 8081617

**Sample ID:** SS-1
**Lab#:** AD05999-001
**Matrix:** Soil

**Collection Date:** 8/15/2018
**Receipt Date:** 8/16/2018

### % Solids SM2540G

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| % Solids | 1 | percent | | 95 |

### 2,3,7,8-TCDD Scan

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 2,3,7,8-TCDD | 1 | ng/kg | 0.92 | ND |

### Chlorinated Herbicides 8151

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 2,4,5-T | 1 | mg/kg | 0.011 | ND |
| 2,4-D | 1 | mg/kg | 0.011 | ND |
| Silvex | 1 | mg/kg | 0.011 | ND |

### Cyanide (Soil/Waste) 9012B

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Cyanide | 1 | mg/kg | 0.25 | ND |

### Mercury (Soil/Waste) 7471B

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Mercury | 1 | mg/kg | 0.088 | ND |

### Mercury (TCLP) 7470A

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Mercury | 1 | mg/l | 0.00050 | ND |

### Organochlorine Pesticides 8081

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| a-Chlordane | 1 | mg/kg | 0.0053 | ND |
| Aldrin | 1 | mg/kg | 0.0053 | ND |
| Alpha-BHC | 1 | mg/kg | 0.0011 | ND |
| beta-BHC | 1 | mg/kg | 0.0011 | ND |
| Chlordane (Technical) | 1 | mg/kg | 0.026 | ND |
| Chlordane (Total) | 1 | mg/kg | 0.0053 | ND |
| delta-BHC | 1 | mg/kg | 0.0053 | ND |
| Dieldrin | 1 | mg/kg | 0.0011 | ND |
| Endosulfan I | 1 | mg/kg | 0.0053 | ND |
| Endosulfan II | 1 | mg/kg | 0.0053 | ND |
| Endosulfan Sulfate | 1 | mg/kg | 0.0053 | ND |
| Endrin | 1 | mg/kg | 0.0053 | ND |
| Endrin Aldehyde | 1 | mg/kg | 0.0053 | ND |
| Endrin Ketone | 1 | mg/kg | 0.0053 | ND |
| gamma-BHC | 1 | mg/kg | 0.0011 | ND |
| Heptachlor | 1 | mg/kg | 0.0053 | ND |
| Heptachlor Epoxide | 1 | mg/kg | 0.0053 | ND |
| Methoxychlor | 1 | mg/kg | 0.0053 | ND |
| p,p'-DDD | 1 | mg/kg | 0.0026 | ND |
| p,p'-DDE | 1 | mg/kg | 0.0026 | ND |
| p,p'-DDT | 1 | mg/kg | 0.0026 | ND |
| Toxaphene | 1 | mg/kg | 0.026 | ND |
| y-Chlordane | 1 | mg/kg | 0.0053 | ND |

**Sample ID:** SS-1 **Collection Date:** 8/15/2018
**Lab#:** AD05999-001 **Receipt Date:** 8/16/2018
**Matrix:** Soil

### Organophosphorous Pesticides 8141

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Parathion | 1 | ug/kg | 5.2 | ND |

### PCB 8082

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Aroclor (Total) | 1 | mg/kg | 0.026 | ND |
| Aroclor-1016 | 1 | mg/kg | 0.026 | ND |
| Aroclor-1221 | 1 | mg/kg | 0.026 | ND |
| Aroclor-1232 | 1 | mg/kg | 0.026 | ND |
| Aroclor-1242 | 1 | mg/kg | 0.026 | ND |
| Aroclor-1248 | 1 | mg/kg | 0.026 | ND |
| Aroclor-1254 | 1 | mg/kg | 0.026 | ND |
| Aroclor-1260 | 1 | mg/kg | 0.026 | ND |
| Aroclor-1262 | 1 | mg/kg | 0.026 | ND |
| Aroclor-1268 | 1 | mg/kg | 0.026 | ND |

### PCDD & PCDF (8290)

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| PCDD & PCDF | 1 | ng/kg | 0.92 | ND |

### Semivolatile Organics (no search) 8270

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 1 | mg/kg | 0.035 | ND |
| 2,4-Dichlorophenol | 1 | mg/kg | 0.0088 | ND |
| 2,4-Dinitrophenol | 1 | mg/kg | 0.11 | ND |
| 2,6-Dinitrotoluene | 1 | mg/kg | 0.035 | ND |
| 2-Chlorophenol | 1 | mg/kg | 0.035 | ND |
| 2-Methylnaphthalene | 1 | mg/kg | 0.035 | ND |
| 2-Methylphenol | 1 | mg/kg | 0.0088 | ND |
| 2-Nitroaniline | 1 | mg/kg | 0.035 | ND |
| 2-Nitrophenol | 1 | mg/kg | 0.035 | ND |
| 3&4-Methylphenol | 1 | mg/kg | 0.0088 | ND |
| 3,3'-Dichlorobenzidine | 1 | mg/kg | 0.035 | ND |
| 3-Nitroaniline | 1 | mg/kg | 0.035 | ND |
| 4-Chloro-3-methylphenol | 1 | mg/kg | 0.035 | ND |
| 4-Chloroaniline | 1 | mg/kg | 0.0088 | ND |
| 4-Nitrophenol | 1 | mg/kg | 0.035 | ND |
| Acenaphthene | 1 | mg/kg | 0.035 | ND |
| Acenaphthylene | 1 | mg/kg | 0.035 | ND |
| Aniline | 1 | mg/kg | 0.0088 | ND |
| Anthracene | 1 | mg/kg | 0.035 | ND |
| Benzo[a]anthracene | 1 | mg/kg | 0.035 | ND |
| Benzo[a]pyrene | 1 | mg/kg | 0.035 | ND |
| Benzo[b]fluoranthene | 1 | mg/kg | 0.035 | ND |
| Benzo[g,h,i]perylene | 1 | mg/kg | 0.035 | ND |
| Benzo[k]fluoranthene | 1 | mg/kg | 0.035 | ND |
| Benzoic acid | 1 | mg/kg | 0.18 | ND |
| bis(2-Ethylhexyl)phthalate | 1 | mg/kg | 0.035 | ND |
| Butylbenzylphthalate | 1 | mg/kg | 0.035 | ND |
| Chrysene | 1 | mg/kg | 0.035 | ND |
| Dibenzo[a,h]anthracene | 1 | mg/kg | 0.035 | ND |
| Dibenzofuran | 1 | mg/kg | 0.0088 | ND |
| Diethylphthalate | 1 | mg/kg | 0.035 | ND |
| Dimethylphthalate | 1 | mg/kg | 0.035 | ND |
| Di-n-butylphthalate | 1 | mg/kg | 0.0088 | ND |
| Di-n-octylphthalate | 1 | mg/kg | 0.035 | ND |

**Sample ID:** SS-1 **Collection Date:** 8/15/2018
**Lab#:** AD05999-001 **Receipt Date:** 8/16/2018
**Matrix:** Soil

| | | | | |
|---|---|---|---|---|
| Fluoranthene | 1 | mg/kg | 0.035 | ND |
| Fluorene | 1 | mg/kg | 0.035 | ND |
| Hexachlorobenzene | 1 | mg/kg | 0.035 | ND |
| Indeno[1,2,3-cd]pyrene | 1 | mg/kg | 0.035 | ND |
| Isophorone | 1 | mg/kg | 0.035 | ND |
| Naphthalene | 1 | mg/kg | 0.0088 | ND |
| Nitrobenzene | 1 | mg/kg | 0.035 | ND |
| Pentachlorophenol | 1 | mg/kg | 0.075 | ND |
| Phenanthrene | 1 | mg/kg | 0.035 | ND |
| Phenol | 1 | mg/kg | 0.035 | ND |
| Pyrene | 1 | mg/kg | 0.035 | ND |

**Sulfur Content ASTM D1552**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Sulfur Content | 1 | % | 0.15 | ND |

**TAL Metals 6010D**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Aluminum** | **1** | **mg/kg** | **210** | **610** |
| Barium | 1 | mg/kg | 11 | ND |
| **Calcium** | **1** | **mg/kg** | **1100** | **1100** |
| Chromium | 1 | mg/kg | 5.3 | ND |
| Cobalt | 1 | mg/kg | 2.6 | ND |
| Copper | 1 | mg/kg | 5.3 | ND |
| **Iron** | **1** | **mg/kg** | **210** | **1400** |
| Lead | 1 | mg/kg | 5.3 | ND |
| **Magnesium** | **1** | **mg/kg** | **530** | **730** |
| **Manganese** | **1** | **mg/kg** | **11** | **18** |
| Nickel | 1 | mg/kg | 5.3 | ND |
| Potassium | 1 | mg/kg | 530 | ND |
| Sodium | 1 | mg/kg | 260 | ND |
| Vanadium | 1 | mg/kg | 11 | ND |
| Zinc | 1 | mg/kg | 11 | ND |

**TAL Metals 6020B**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Antimony | 1 | mg/kg | 0.84 | ND |
| **Arsenic** | **1** | **mg/kg** | **0.21** | **0.39** |
| Beryllium | 1 | mg/kg | 0.21 | ND |
| Cadmium | 1 | mg/kg | 0.42 | ND |
| Selenium | 1 | mg/kg | 2.1 | ND |
| Silver | 1 | mg/kg | 0.21 | ND |
| Thallium | 1 | mg/kg | 0.42 | ND |

**TCLP Metals 6010D**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Arsenic | 1 | mg/l | 0.10 | ND |
| Barium | 1 | mg/l | 0.25 | ND |
| Cadmium | 1 | mg/l | 0.050 | ND |
| Chromium | 1 | mg/l | 0.10 | ND |
| Lead | 1 | mg/l | 0.050 | ND |
| Selenium | 1 | mg/l | 0.10 | ND |
| Silver | 1 | mg/l | 0.050 | ND |

**TCLP Volatiles 8260**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1 | mg/l | 0.0010 | ND |
| 1,2-Dichloroethane | 1 | mg/l | 0.00050 | ND |

**Sample ID:** SS-1 **Collection Date:** 8/15/2018
**Lab#:** AD05999-001 **Receipt Date:** 8/16/2018
**Matrix:** Soil

| | | | | |
|---|---|---|---|---|
| 1,4-Dichlorobenzene | 1 | mg/l | 0.0010 | ND |
| 2-Butanone | 1 | mg/l | 0.0010 | ND |
| Benzene | 1 | mg/l | 0.00050 | ND |
| Carbon tetrachloride | 1 | mg/l | 0.0010 | ND |
| Chlorobenzene | 1 | mg/l | 0.0010 | ND |
| Chloroform | 1 | mg/l | 0.0010 | ND |
| Tetrachloroethene | 1 | mg/l | 0.0010 | ND |
| Trichloroethene | 1 | mg/l | 0.0010 | ND |
| Vinyl chloride | 1 | mg/l | 0.0010 | ND |

**Volatile Organics (no search) 8260**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1,1-Trichloroethane | 2.18 | mg/kg | 0.0046 | ND |
| 1,1,2,2-Tetrachloroethane | 2.18 | mg/kg | 0.0046 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.18 | mg/kg | 0.0046 | ND |
| 1,1-Dichloroethane | 2.18 | mg/kg | 0.0046 | ND |
| 1,1-Dichloroethene | 2.18 | mg/kg | 0.0046 | ND |
| 1,2,3-Trichloropropane | 2.18 | mg/kg | 0.0046 | ND |
| 1,2,4-Trichlorobenzene | 2.18 | mg/kg | 0.0046 | ND |
| 1,2-Dichlorobenzene | 2.18 | mg/kg | 0.0046 | ND |
| 1,2-Dichloroethane | 2.18 | mg/kg | 0.0046 | ND |
| 1,3-Dichlorobenzene | 2.18 | mg/kg | 0.0046 | ND |
| 1,3-Dichloropropane | 2.18 | mg/kg | 0.0046 | ND |
| 1,4-Dichlorobenzene | 2.18 | mg/kg | 0.0046 | ND |
| 2,2-Dichloropropane | 2.18 | mg/kg | 0.0046 | ND |
| 2-Butanone | 2.18 | mg/kg | 0.0046 | ND |
| 4-Methyl-2-pentanone | 2.18 | mg/kg | 0.0046 | ND |
| Acetone | 2.18 | mg/kg | 0.023 | ND |
| Benzene | 2.18 | mg/kg | 0.0023 | ND |
| Carbon disulfide | 2.18 | mg/kg | 0.0046 | ND |
| Carbon tetrachloride | 2.18 | mg/kg | 0.0046 | ND |
| Chlorobenzene | 2.18 | mg/kg | 0.0046 | ND |
| Chloroethane | 2.18 | mg/kg | 0.0046 | ND |
| Chloroform | 2.18 | mg/kg | 0.0046 | ND |
| cis-1,2-Dichloroethene | 2.18 | mg/kg | 0.0046 | ND |
| cis-1,3-Dichloropropene | 2.18 | mg/kg | 0.0046 | ND |
| Dibromochloromethane | 2.18 | mg/kg | 0.0046 | ND |
| Ethylbenzene | 2.18 | mg/kg | 0.0023 | ND |
| m&p-Xylenes | 2.18 | mg/kg | 0.0023 | ND |
| **Methylene chloride** | **2.18** | **mg/kg** | **0.0046** | **0.0053** |
| o-Xylene | 2.18 | mg/kg | 0.0023 | ND |
| Tetrachloroethene | 2.18 | mg/kg | 0.0046 | ND |
| Toluene | 2.18 | mg/kg | 0.0023 | ND |
| Trichloroethene | 2.18 | mg/kg | 0.0046 | ND |
| Vinyl chloride | 2.18 | mg/kg | 0.0046 | ND |
| Xylenes (Total) | 2.18 | mg/kg | 0.0023 | ND |

# HC Reporting Limit Definitions/Data Qualifiers

## REPORTING DEFINITIONS

**DF** = Dilution Factor

**MDL** = Method Detection Limit

**RL*** = Reporting Limit

**ND** = Not Detected

**RT** = Retention Time

**NA** = Not Applicable

**Samples with elevated Reporting Limits (RLs) as a result of a dilution may not achieve client reporting limits in some cases. The elevated RLs are unavoidable consequences of sample dilution required to quantitate target analytes that exceed the calibration range of the instrument.*

## DATA QUALIFIERS

**A-** Indicates that the Tentatively Identified Compound (TIC) is suspected to be an aldol-condensation product. These compounds are by-products of acetone and methylene chloride used in the extraction process.

**B-** Indicates analyte was present in the Method Blank and sample.

**d-** For Pesticide and PCB analysis, the concentration between primary and secondary columns is greater than 40%. The lower concentration is generally reported.

**E-** Indicates the concentration exceeded the upper calibration range of the instrument.

**J-** Indicates the value is estimated because it is either a Tentatively Identified Compound (TIC) or the reported concentration is greater than the MDL but less than the RL. For samples results between the MDL and RL there is a possibility of false positives or misidentification at the quantitation levels. Additionally, the acceptance criteria for QC samples may not be met.

**R-** Retention Time is out.

**Y-** Indicates a contaminant found in the blank at less than 10% of the concentration of a contaminant found in the sample.

# Laboratory Chronicle

**Client:** Maser Consulting
**Project:** Trump Links

**HC Project #:** 8081617

**Lab#: AD05999-001** **Sample ID: SS-1**

| Test Code | Prep Method | Prep Date | By | Analytical Method | Analysis Date | By |
|---|---|---|---|---|---|---|
| % Solids SM2540G | | | | SM 2540G | 8/17/18 00:00 | jessica |
| 2,3,7,8-TCDD Scan | EPA 1613 | | | EPA 1613 | 8/25/18 00:00 | Pace Analytical |
| Chlorinated Herbicides 8151 | | 08/17/18 06:30 | jkr | EPA 8151A | 8/20/18 13:40 | MLC/MS/ZM |
| Cyanide (Soil/Waste) 9012B | | 08/17/18 | jessica | EPA 9012B | 8/17/18 12:01 | JMP |
| Mercury (Soil/Waste) 7471B | EPA 7471B | 08/21/18 10:45 | aadewusi | EPA 7471B | 8/23/18 16:37 | CJA |
| Mercury (TCLP) 7470A | EPA 7470A | 08/21/18 10:00 | BAdeola | EPA 7470A | 8/23/18 11:21 | CJA |
| Organochlorine Pesticides 8081 | 3510C/3550C | 08/23/18 06:30 | jkr | EPA 8081B | 8/24/18 05:45 | MS/MLC/ZM |
| Organophosphorous Pesticides 8141 | | 08/22/18 11:30 | | EPA 8141 | 8/23/18 07:30 | TestAmerica |
| PCB 8082 | 3510C/3550C | 08/23/18 06:30 | jkr | EPA 8082A | 8/23/18 16:39 | MS/ZM/MLC |
| PCDD & PCDF (8290) | | | | EPA 8290 | 8/25/18 00:00 | Pace Analytical |
| Semivolatile Organics (no search) 8270 | 3510C/3550C | 08/22/18 04:23 | jprevilon | EPA 8270D | 8/22/18 14:49 | AH/JB |
| Sulfur Content ASTM D1552 | | 08/23/18 | dp/jw | ASTM D-1552 | 8/23/18 11:48 | dp/jw |
| TAL Metals 6010D | 3005&10/3050 | 08/21/18 10:45 | aadewusi | EPA 6010D | 8/24/18 07:35 | OA |
| TAL Metals 6010D | 3005&10/3050 | 08/21/18 10:45 | aadewusi | EPA 6010D | 8/24/18 02:05 | OA |
| TAL Metals 6020B | 3005&10/3050 | 08/21/18 10:45 | aadewusi | EPA 6020B | 8/24/18 01:20 | SRB |
| TCLP Metals 6010D | 3005&10/3050 | 08/21/18 10:00 | BAdeola | EPA 6010D | 8/21/18 20:42 | OA |
| TCLP Metals Extraction 1311 | EPA 1311 | 08/20/18 16:40 | Ramos | | 8/21/18 11:32 | Ramos |
| TCLP Volatiles 8260 | EPA 5030C | | | EPA 8260C | 8/22/18 16:27 | WP |
| TCLP Zero Headspace Extraction | EPA 1311 | 08/21/18 00:43 | jprevilon | | | |
| Volatile Organics (no search) 8260 | EPA5030/5035 | | | EPA 8260C | 8/22/18 07:45 | WP |

# Chain of Custody

8081617 0012

**Hampton-Clarke, Inc. (WBE/DBE/SBE)**
175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
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Hampton-Clarke WBE/DBE/SBE 800-426-9992
*A Women-Owned, Disadvantaged, Small Business Enterprise*

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

# CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 808/617

Page 1 of 1

## 3) Reporting Requirements (Please Circle)

| Turnaround | Report Type | Electronic Data Deliv. |
|---|---|---|
| When Available: | Summary | NJ Hazsite |
| 1 Business Day (100%)* | Results + QC (Waste) | Excel Reg. NJ / NY / PA |
| 2 Business Days (75%)* | Reduced: | EnviroData |
| 3 Business Days (50%)* | [ ] NJ [ ] NY | EQuIS: |
| 4 Business Days (35%)* | [ ] PA [ ] Other___ | [ ] 4-File [ ] EZ |
| 5 Business Days (25%) | NJ Full / NY ASP CatB | [ ] NYDEC |
| 6 Business Days (Stand.) | NY ASP CatA | [ ] Region 2 or 5 |
| Other: | | Other: |

* Expedited TAT Not Always Available. Please Check with Lab.

## Customer Information

1a) Customer: Maser Consulting
Address: 50 Chestnut Ridge Road
Montvale, NJ
1b) Email/Cell/Fax/Ph: (201) 930-2515
1c) Send Invoice to: D. Keil
1d) Send Report to: D. Keil

## Project Information

2a) Project: Trumpline Realty Assoc. - Manchester, NJ
2b) Project Mgr: D. Keil
2c) Project Location (City/State): 151 Sharp Street Manchester, NJ
2d) Quote/PO # (If Applicable):

**Matrix Codes**
DW - Drinking Water S - Soil A - Air
GW - Ground Water SL - Sludge
WW - Waste Water OL - Oil
OT - Other (please specify under item 9, Comments)

FOR LAB USE ONLY ↓

Batch # A005999

===> Check If Contingent ===>

7) Analysis (specify methods & parameter lists)

<=== Check If Contingent <===

| Lab Sample # | 4) Customer Sample ID | 5) Matrix | 6) Sample Date | 6) Sample Time | Sample Type Composite (C) | Sample Type Grab (G) | VOC | SVOC | TCLP | BNA, PAH, HAP | PCB | TAL Metal + Co | TCLP Metal, S | 2,3,7,8 TCDD | PCDF (1613) | OP Pest Parathion only | 8) # of Bottles None | MeOH | En Core | NaOH | HCl | H2SO4 | HNO3 | Other: Comp Grab | 9) Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -001 | SS-1 | S | 8/15/18 | 1410 | | X | X | X | X | X | X | X | X | X | X | X | 5 | | | | | | | 3 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| -002 | SS-2 | S | 8/15/18 | 1415 | | | | | | | | | | | | | 5 | | | | | | | 3 | HOLD |

| 10) Relinquished by: | Accepted by: | Date | Time |
|---|---|---|---|
| | | 8-16-18 | 1:58 |
| | | 8-16-18 | 12:33 |

11) Sampler (print name): Date:

**Additional Notes**

**Comments, Notes, Special Requirements, HAZARDS**

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2.3°

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

# CONDITION UPON RECEIPT

Batch Number AD05999 Entered By: Frantz
Date Entered 8/16/2018 1:07:00 PM

| | | |
|---|---|---|
| 1 | Yes | Is there a corresponding COC included with the samples? |
| 2 | Yes | Are the samples in a container such as a cooler or Ice chest? |
| 3 | No | Are the COC seals intact? |
| 4 | T0056 | <--- Thermometer ID. Please specify the Temperature inside the container (in degC).<br>3.3 |
| 5 | Yes | Are the samples refrigerated (where required)/have they arrived on ice? |
| 6 | Yes | Are the samples within the holding times for the parameters listed on the COC? IF no, list parameters and samples: |
| 7 | Yes | Are all of the sample bottles intact? If no, specify sample numbers broken/leaking |
| 8 | Yes | Are all of the sample labels or numbers legible? If no specify: |
| 9 | Yes | Do the contents match the COC? If no, specify |
| 10 | Yes | Is there enough sample sent for the analyses listed on the COC? If no, specify: |
| 11 | Yes | Are samples preserved correctly? |
| 12 | Yes | Was temperature blank present (Place comment below if not)? If not was temperature of samples verified? |
| 13 | NA | Other comments ...Specify |
| 14 | NA | Corrective actions (Specify item number and corrective action taken). |

# Internal Chain of Custody

| Lab#: | DateTime: | Loc or User | Bot Nu | A/M | Analysis |
|---|---|---|---|---|---|
| AD05999-001 | 08/16/18 12:55 | FRAN | 0 | M | Received |
| AD05999-001 | 08/16/18 13:07 | FRAN | 0 | M | Login |
| AD05999-001 | 08/16/18 13:22 | F19 | 1 | A | NONE |
| AD05999-001 | 08/21/18 19:59 | WP | 1 | A | VOA |
| AD05999-001 | 08/16/18 13:22 | F19 | 2 | A | NONE |
| AD05999-001 | 08/16/18 13:22 | R21 | 3 | A | NONE |
| AD05999-001 | 08/16/18 19:16 | WP | 3 | A | VOA |
| AD05999-001 | 08/16/18 20:31 | R31 | 3 | A | NONE |
| AD05999-001 | 08/16/18 13:14 | R12 | 4 | A | NONE |
| AD05999-001 | 08/16/18 13:14 | R12 | 5 | A | NONE |
| AD05999-001 | 08/16/18 13:14 | R12 | 6 | A | NONE |
| AD05999-001 | 08/16/18 23:09 | PA | 6 | A | mix |
| AD05999-001 | 08/16/18 23:09 | R12 | 6 | A | NONE |
| AD05999-001 | 08/17/18 06:07 | JKR | 6 | A | HERB |
| AD05999-001 | 08/17/18 07:08 | JMP | 6 | A | solids |
| AD05999-001 | 08/17/18 08:28 | JMP | 6 | A | cn |
| AD05999-001 | 08/17/18 11:12 | R12 | 6 | A | NONE |
| AD05999-001 | 08/20/18 16:10 | RAMO | 6 | A | tclp |
| AD05999-001 | 08/20/18 16:11 | RAMO | 6 | A | r12 |
| AD05999-001 | 08/20/18 23:51 | R12 | 6 | A | NONE |
| AD05999-001 | 08/20/18 23:51 | JP | 6 | A | tclp-zhe |
| AD05999-001 | 08/21/18 09:40 | AM | 6 | M | TDSI/HG |
| AD05999-001 | 08/21/18 11:44 | R12 | 6 | A | NONE |
| AD05999-001 | 08/22/18 04:23 | JP | 6 | A | bna |
| AD05999-001 | 08/22/18 04:24 | R12 | 6 | A | NONE |
| AD05999-001 | 08/22/18 16:31 | DP | 6 | A | SULFUR |
| AD05999-001 | 08/22/18 18:00 | R12 | 6 | A | NONE |
| AD05999-001 | 08/23/18 06:21 | JKR | 6 | A | p/p |
| AD05999-001 | 08/23/18 08:23 | R12 | 6 | M | NONE |
| AD05999-001 | 08/16/18 13:14 | R12 | 7 | A | NONE |
| AD05999-001 | 08/16/18 13:14 | R12 | 8 | A | NONE |
| AD05999-002 | 08/16/18 12:55 | FRAN | 0 | M | Received |
| AD05999-002 | 08/16/18 13:07 | FRAN | 0 | M | Login |
| AD05999-002 | 08/16/18 13:14 | R12 | 1 | A | NONE |
| AD05999-002 | 08/16/18 13:14 | R12 | 2 | A | NONE |
| AD05999-002 | 08/16/18 13:14 | R12 | 3 | A | NONE |
| AD05999-002 | 08/16/18 13:14 | R12 | 4 | A | NONE |
| AD05999-002 | 08/16/18 13:22 | F19 | 5 | A | NONE |
| AD05999-002 | 08/16/18 13:22 | R21 | 6 | A | NONE |
| AD05999-002 | 08/16/18 19:16 | WP | 6 | A | VOA |
| AD05999-002 | 08/16/18 20:31 | R31 | 6 | A | NONE |
| AD05999-002 | 08/16/18 13:22 | F19 | 7 | A | NONE |
| AD05999-002 | 08/21/18 19:59 | WP | 7 | A | VOA |
| AD05999-002 | 08/16/18 13:14 | R12 | 8 | A | NONE |

| Lab#: | DateTime: | Loc or User | Bot Nu | A/M | Analysis |
|---|---|---|---|---|---|

Samples marked as received are stored in coolers or refrigerator R12, or R24 at 4 deg C until Login

# Volatile Data

# Form1

ORGANICS VOLATILE REPORT

Sample Number: AD05999-001
Client Id: SS-1
Data File: 8M20100.D
Analysis Date: 08/22/18 07:45
Date Rec/Extracted: 08/16/18-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Soil
Initial Vol: 2.29g
Final Vol: NA
Dilution: 2.18
Solids: 95

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.0046 | U | 75-15-0 | Carbon Disulfide | 0.0046 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.0046 | U | 56-23-5 | Carbon Tetrachloride | 0.0046 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluor | 0.0046 | U | 108-90-7 | Chlorobenzene | 0.0046 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.0046 | U | 75-00-3 | Chloroethane | 0.0046 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.0046 | U | 67-66-3 | Chloroform | 0.0046 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.0046 | U | 156-59-2 | cis-1,2-Dichloroethene | 0.0046 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0046 | U | 10061-01-5 | cis-1,3-Dichloropropene | 0.0046 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0046 | U | 124-48-1 | Dibromochloromethane | 0.0046 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.0046 | U | 100-41-4 | Ethylbenzene | 0.0023 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0046 | U | 79601-23-1 | m&p-Xylenes | 0.0023 | U |
| 142-28-9 | 1,3-Dichloropropane | 0.0046 | U | **75-09-2** | **Methylene Chloride** | **0.0046** | **0.0053** |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0046 | U | 95-47-6 | o-Xylene | 0.0023 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.0046 | U | 127-18-4 | Tetrachloroethene | 0.0046 | U |
| 78-93-3 | 2-Butanone | 0.0046 | U | 108-88-3 | Toluene | 0.0023 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 0.0046 | U | 79-01-6 | Trichloroethene | 0.0046 | U |
| 67-64-1 | Acetone | 0.023 | U | 75-01-4 | Vinyl Chloride | 0.0046 | U |
| 71-43-2 | Benzene | 0.0023 | U | 1330-20-7 | Xylenes (Total) | 0.0023 | U |

Worksheet #: 477187

***Total Target Concentration*** 0.0053

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

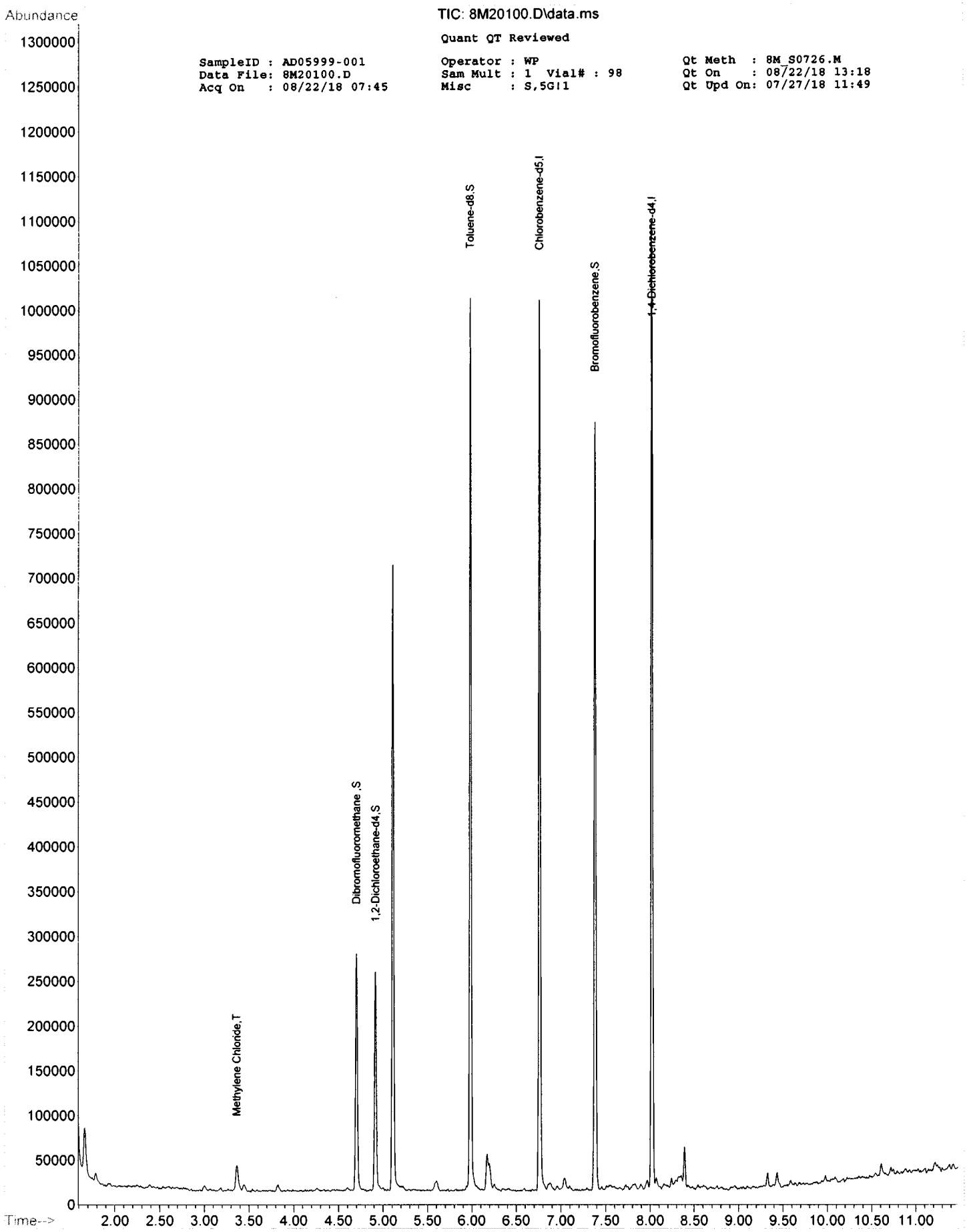
Quantitation Report (QT Reviewed)

SampleID : AD05999-001 Operator : WP Qt Meth : 8M_S0726.M
Data File: 8M20100.D Sam Mult : 1 Vial# : 98 Qt On : 08/22/18 13:18
Acq On : 08/22/18 07:45 Misc : S,5G!1 Qt Upd On: 07/27/18 11:49

Data Path : G:\GcMsData\2018\GCMS_8\Data\0822-18\
Qt Path : G:\GcMsData\2018\GCMS_8\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 5.111 | 96 | 456453 | 30.00 | ug/l | 0.00 |
| 52) Chlorobenzene-d5 | 6.761 | 117 | 427439 | 30.00 | ug/l | 0.00 |
| 70) 1,4-Dichlorobenzene-d4 | 8.021 | 152 | 224276 | 30.00 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.700 | 111 | 124387 | 31.53 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 105.10% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.915 | 67 | 65120 | 28.89 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 96.30% | | | |
| 66) Toluene-d8 | 5.983 | 98 | 490372 | 29.31 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 97.70% | | | |
| 76) Bromofluorobenzene | 7.381 | 174 | 167316 | 31.32 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 104.40% | | | |
| Target Compounds | | | | | | Qvalue |
| 15) Methylene Chloride | 3.362 | 84 | 12923 | 2.2960 | ug/l | 84 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 8M20100.D\data.ms
Quant QT Reviewed
SampleID : AD05999-001
Data File: 8M20100.D
Acq On : 08/22/18 07:45
Operator : WP
Sam Mult : 1 Vial# : 98
Misc : S,5G!1
Qt Meth : 8M_S0726.M
Qt On : 08/22/18 13:18
Qt Upd On: 07/27/18 11:49
Methylene Chloride,T
Dibromofluoromethane ,S
1,2-Dichloroethane-d4,S
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I
Time-->

# Form1

ORGANICS VOLATILE REPORT

Sample Number: DAILY BLANK
Client Id:
Data File: 8M20083.D
Analysis Date: 08/22/18 01:52
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Soil
Initial Vol: 5g
Final Vol: NA
Dilution: 1.00
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.0020 | U | 75-15-0 | Carbon Disulfide | 0.0020 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.0020 | U | 56-23-5 | Carbon Tetrachloride | 0.0020 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluor | 0.0020 | U | 108-90-7 | Chlorobenzene | 0.0020 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.0020 | U | 75-00-3 | Chloroethane | 0.0020 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.0020 | U | 67-66-3 | Chloroform | 0.0020 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.0020 | U | 156-59-2 | cis-1,2-Dichloroethene | 0.0020 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0020 | U | 10061-01-5 | cis-1,3-Dichloropropene | 0.0020 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0020 | U | 124-48-1 | Dibromochloromethane | 0.0020 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.0020 | U | 100-41-4 | Ethylbenzene | 0.0010 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0020 | U | 79601-23-1 | m&p-Xylenes | 0.0010 | U |
| 142-28-9 | 1,3-Dichloropropane | 0.0020 | U | 75-09-2 | Methylene Chloride | 0.0020 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0020 | U | 95-47-6 | o-Xylene | 0.0010 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.0020 | U | 127-18-4 | Tetrachloroethene | 0.0020 | U |
| 78-93-3 | 2-Butanone | 0.0020 | U | 108-88-3 | Toluene | 0.0010 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 0.0020 | U | 79-01-6 | Trichloroethene | 0.0020 | U |
| 67-64-1 | Acetone | 0.010 | U | 75-01-4 | Vinyl Chloride | 0.0020 | U |
| 71-43-2 | Benzene | 0.0010 | U | | | | |

Worksheet #: 477187

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT/LSC Reviewed)

SampleID : DAILY BLANK
Data File: 8M20083.D
Acq On : 08/22/18 01:52

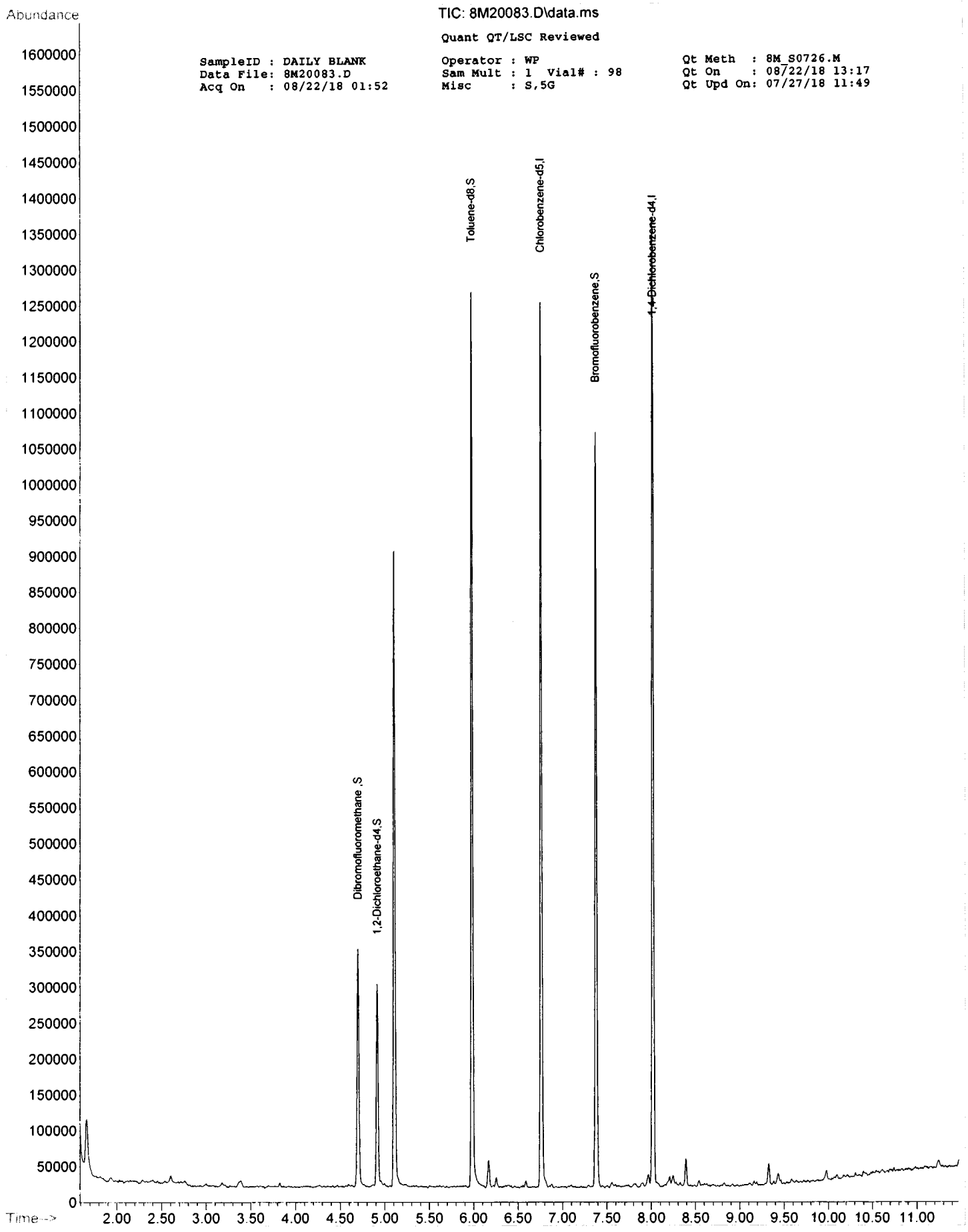
Operator : WP
Sam Mult : 1 Vial# : 98
Misc : S,5G

Qt Meth : 8M_S0726.M
Qt On : 08/22/18 13:17
Qt Upd On: 07/27/18 11:49

Data Path : G:\GcMsData\2018\GCMS_8\Data\0822-18\
Qt Path : G:\GcMsData\2018\GCMS_8\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 5.111 | 96 | 581280 | 30.00 | ug/l | 0.00 |
| 52) Chlorobenzene-d5 | 6.761 | 117 | 542609 | 30.00 | ug/l | 0.00 |
| 70) 1,4-Dichlorobenzene-d4 | 8.021 | 152 | 287567 | 30.00 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.700 | 111 | 150981 | 30.05 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 100.17% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.915 | 67 | 76252 | 26.56 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 88.53% | | | |
| 66) Toluene-d8 | 5.983 | 98 | 620343 | 29.21 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 97.37% | | | |
| 76) Bromofluorobenzene | 7.381 | 174 | 214709 | 31.34 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 104.47% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


TIC: 8M20083.D\data.ms
Quant QT/LSC Reviewed
SampleID : DAILY BLANK
Data File: 8M20083.D
Acq On : 08/22/18 01:52
Operator : WP
Sam Mult : 1 Vial# : 98
Misc : S,5G
Qt Meth : 8M_S0726.M
Qt On : 08/22/18 13:17
Qt Upd On: 07/27/18 11:49
Abundance
Time-->
Dibromofluoromethane,S
1,2-Dichloroethane-d4,S
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I

# FORM2

## Surrogate Recovery

Method: EPA 8260C

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column1 S2 Recov | Column1 S3 Recov | Column1 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8M20083.D | DAILY BLANK | S | 08/22/18 01:52 | 1 | | 100 | 89 | 97 | 104 | | |
| 8M20100.D | AD05999-001 | S | 08/22/18 07:45 | 1 | | 105 | 96 | 98 | 104 | | |
| 8M20084.D | AD06068-002 | S | 08/22/18 02:13 | 1 | | 103 | 95 | 98 | 106 | | |
| 8M20087.D | MBS70991 | S | 08/22/18 03:15 | 1 | | 104 | 96 | 100 | 103 | | |
| 8M20088.D | AD06068-002(MS) | S | 08/22/18 03:36 | 1 | | 100 | 91 | 100 | 104 | | |
| 8M20089.D | AD06068-002(MSD) | S | 08/22/18 03:57 | 1 | | 104 | 92 | 100 | 104 | | |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8260C

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=Dibromofluoromethane | 30 | 63-140 |
| S2=1,2-Dichloroethane-d4 | 30 | 63-143 |
| S3=Toluene-d8 | 30 | 68-122 |
| S4=Bromofluorobenzene | 30 | 64-129 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70991

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 8M20087.D | MBS70991 | 8/22/2018 3:15:00 AM |
| Non Spike(If applicable): | | |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Soil | QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 76.9615 | 0 | 50 | 154 * | 20 | 130 |
| Dichlorodifluoromethane | 1 | 27.4529 | 0 | 50 | 55 | 20 | 130 |
| Chloromethane | 1 | 37.9321 | 0 | 50 | 76 | 20 | 130 |
| Bromomethane | 1 | 50.8322 | 0 | 50 | 102 | 20 | 130 |
| Vinyl Chloride | 1 | 44.4689 | 0 | 50 | 89 | 20 | 130 |
| Chloroethane | 1 | 49.9237 | 0 | 50 | 100 | 20 | 130 |
| Trichlorofluoromethane | 1 | 47.568 | 0 | 50 | 95 | 20 | 130 |
| Ethyl ether | 1 | 45.1077 | 0 | 50 | 90 | 50 | 130 |
| Furan | 1 | 41.322 | 0 | 50 | 83 | 50 | 130 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 61.4754 | 0 | 50 | 123 | 50 | 130 |
| Methylene Chloride | 1 | 50.2304 | 0 | 50 | 100 | 50 | 130 |
| Acrolein | 1 | 213.075 | 0 | 200 | 107 | 20 | 130 |
| Acrylonitrile | 1 | 48.2674 | 0 | 50 | 97 | 20 | 130 |
| Iodomethane | 1 | 46.8678 | 0 | 50 | 94 | 50 | 130 |
| Acetone | 1 | 207.2282 | 0 | 200 | 104 | 20 | 130 |
| Carbon Disulfide | 1 | 43.1451 | 0 | 50 | 86 | 50 | 130 |
| t-Butyl Alcohol | 1 | 215.3735 | 0 | 200 | 108 | 20 | 130 |
| n-Hexane | 1 | 62.5012 | 0 | 50 | 125 | 50 | 130 |
| Di-isopropyl-ether | 1 | 47.7478 | 0 | 50 | 95 | 50 | 130 |
| 1,1-Dichloroethene | 1 | 43.7357 | 0 | 50 | 87 | 50 | 130 |
| Methyl Acetate | 1 | 44.1116 | 0 | 50 | 88 | 50 | 130 |
| Methyl-t-butyl ether | 1 | 54.8978 | 0 | 50 | 110 | 50 | 130 |
| 1,1-Dichloroethane | 1 | 46.3209 | 0 | 50 | 93 | 50 | 130 |
| trans-1,2-Dichloroethene | 1 | 49.9898 | 0 | 50 | 100 | 50 | 130 |
| Ethyl-t-butyl ether | 1 | 48.5135 | 0 | 50 | 97 | 50 | 130 |
| cis-1,2-Dichloroethene | 1 | 47.3622 | 0 | 50 | 95 | 50 | 130 |
| Bromochloromethane | 1 | 45.7627 | 0 | 50 | 92 | 50 | 130 |
| 2,2-Dichloropropane | 1 | 48.0523 | 0 | 50 | 96 | 50 | 130 |
| Ethyl acetate | 1 | 46.2276 | 0 | 50 | 92 | 50 | 130 |
| 1,4-Dioxane | 1 | 2370.052 | 0 | 2500 | 95 | 50 | 130 |
| 1,1-Dichloropropene | 1 | 47.6335 | 0 | 50 | 95 | 50 | 130 |
| Chloroform | 1 | 48.8442 | 0 | 50 | 98 | 50 | 130 |
| Cyclohexane | 1 | 46.9564 | 0 | 50 | 94 | 50 | 130 |
| 1,2-Dichloroethane | 1 | 47.3 | 0 | 50 | 95 | 50 | 130 |
| 2-Butanone | 1 | 40.8492 | 0 | 50 | 82 | 20 | 130 |
| 1,1,1-Trichloroethane | 1 | 48.4876 | 0 | 50 | 97 | 50 | 130 |
| Carbon Tetrachloride | 1 | 49.2392 | 0 | 50 | 98 | 50 | 130 |
| Vinyl Acetate | 1 | 44.3328 | 0 | 50 | 89 | 50 | 130 |
| Bromodichloromethane | 1 | 50.3582 | 0 | 50 | 101 | 50 | 130 |
| Methylcyclohexane | 1 | 49.5675 | 0 | 50 | 99 | 50 | 130 |
| Dibromomethane | 1 | 56.4587 | 0 | 50 | 113 | 50 | 130 |
| 1,2-Dichloropropane | 1 | 48.3909 | 0 | 50 | 97 | 50 | 130 |
| Trichloroethene | 1 | 51.0408 | 0 | 50 | 102 | 50 | 130 |
| Benzene | 1 | 49.7673 | 0 | 50 | 100 | 50 | 130 |
| tert-Amyl methyl ether | 1 | 51.7294 | 0 | 50 | 103 | 50 | 130 |
| Iso-propylacetate | 1 | 46.4086 | 0 | 50 | 93 | 50 | 130 |
| Methyl methacrylate | 1 | 46.3444 | 0 | 50 | 93 | 50 | 130 |
| Dibromochloromethane | 1 | 52.5871 | 0 | 50 | 105 | 50 | 130 |
| 2-Chloroethylvinylether | 1 | 51.1047 | 0 | 50 | 102 | 50 | 130 |
| cis-1,3-Dichloropropene | 1 | 49.0302 | 0 | 50 | 98 | 50 | 130 |
| trans-1,3-Dichloropropene | 1 | 49.0118 | 0 | 50 | 98 | 50 | 130 |
| Ethyl methacrylate | 1 | 43.4706 | 0 | 50 | 87 | 50 | 130 |
| 1,1,2-Trichloroethane | 1 | 51.8441 | 0 | 50 | 104 | 50 | 130 |
| 1,2-Dibromoethane | 1 | 51.0392 | 0 | 50 | 102 | 50 | 130 |
| 1,3-Dichloropropane | 1 | 49.3212 | 0 | 50 | 99 | 50 | 130 |
| 4-Methyl-2-Pentanone | 1 | 44.9309 | 0 | 50 | 90 | 20 | 130 |
| 2-Hexanone | 1 | 44.7344 | 0 | 50 | 89 | 20 | 130 |
| Tetrachloroethene | 1 | 51.9843 | 0 | 50 | 104 | 50 | 130 |
| Toluene | 1 | 48.5555 | 0 | 50 | 97 | 50 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 51.6021 | 0 | 50 | 103 | 50 | 130 |
| Chlorobenzene | 1 | 50.5313 | 0 | 50 | 101 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70991

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 42.2683 | 0 | 50 | 85 | 50 | 130 |
| n-Amyl acetate | 1 | 46.3392 | 0 | 50 | 93 | 50 | 130 |
| Bromoform | 1 | 53.5031 | 0 | 50 | 107 | 20 | 130 |
| Ethylbenzene | 1 | 48.1418 | 0 | 50 | 96 | 50 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 48.817 | 0 | 50 | 98 | 50 | 130 |
| Styrene | 1 | 51.8278 | 0 | 50 | 104 | 50 | 130 |
| m&p-Xylenes | 1 | 93.7666 | 0 | 100 | 94 | 50 | 130 |
| o-Xylene | 1 | 48.1452 | 0 | 50 | 96 | 50 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 42.7325 | 0 | 50 | 85 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 50.257 | 0 | 50 | 101 | 50 | 130 |
| 1,4-Dichlorobenzene | 1 | 49.8714 | 0 | 50 | 100 | 50 | 130 |
| 1,2-Dichlorobenzene | 1 | 50.6428 | 0 | 50 | 101 | 50 | 130 |
| Isopropylbenzene | 1 | 51.9369 | 0 | 50 | 104 | 50 | 130 |
| Cyclohexanone | 1 | 135.3124 | 0 | 250 | 54 | 50 | 130 |
| Camphene | 1 | 50.1343 | 0 | 50 | 100 | 50 | 130 |
| 1,2,3-Trichloropropane | 1 | 46.5732 | 0 | 50 | 93 | 50 | 130 |
| 2-Chlorotoluene | 1 | 51.0095 | 0 | 50 | 102 | 50 | 130 |
| p-Ethyltoluene | 1 | 49.7328 | 0 | 50 | 99 | 50 | 130 |
| 4-Chlorotoluene | 1 | 50.3975 | 0 | 50 | 101 | 50 | 130 |
| n-Propylbenzene | 1 | 51.3161 | 0 | 50 | 103 | 50 | 130 |
| Bromobenzene | 1 | 47.7132 | 0 | 50 | 95 | 50 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 49.1388 | 0 | 50 | 98 | 50 | 130 |
| Butyl methacrylate | 1 | 41.4628 | 0 | 50 | 83 | 50 | 130 |
| t-Butylbenzene | 1 | 52.4169 | 0 | 50 | 105 | 50 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 49.6298 | 0 | 50 | 99 | 50 | 130 |
| sec-Butylbenzene | 1 | 54.1206 | 0 | 50 | 108 | 50 | 130 |
| 4-Isopropyltoluene | 1 | 53.6949 | 0 | 50 | 107 | 50 | 130 |
| n-Butylbenzene | 1 | 51.1531 | 0 | 50 | 102 | 50 | 130 |
| p-Diethylbenzene | 1 | 52.8101 | 0 | 50 | 106 | 50 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 53.164 | 0 | 50 | 106 | 50 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 48.3497 | 0 | 50 | 97 | 50 | 130 |
| Camphor | 1 | 494.0095 | 0 | 500 | 99 | 50 | 130 |
| Hexachlorobutadiene | 1 | 56.2797 | 0 | 50 | 113 | 50 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 50.9872 | 0 | 50 | 102 | 50 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 50.2243 | 0 | 50 | 100 | 50 | 130 |
| Naphthalene | 1 | 45.6262 | 0 | 50 | 91 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70991

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 8M20088.D | AD06068-002(MS) | 8/22/2018 3:36:00 AM |
| Non Spike(If applicable): | 8M20084.D | AD06068-002 | 8/22/2018 2:13:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8260C | Matrix: Soil | QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 56.9887 | 0 | 50 | 114 | 20 | 130 |
| Dichlorodifluoromethane | 1 | 29.3449 | 0 | 50 | 59 | 20 | 130 |
| Chloromethane | 1 | 41.8806 | 0 | 50 | 84 | 20 | 130 |
| Bromomethane | 1 | 58.6029 | 0 | 50 | 117 | 20 | 130 |
| Vinyl Chloride | 1 | 49.2003 | 0 | 50 | 98 | 20 | 130 |
| Chloroethane | 1 | 55.2193 | 0 | 50 | 110 | 20 | 130 |
| Trichlorofluoromethane | 1 | 51.9224 | 0 | 50 | 104 | 20 | 130 |
| Ethyl ether | 1 | 49.5373 | 0 | 50 | 99 | 50 | 130 |
| Furan | 1 | 44.8261 | 0 | 50 | 90 | 50 | 130 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 65.9722 | 0 | 50 | 132* | 50 | 130 |
| Methylene Chloride | 1 | 54.1705 | 0 | 50 | 108 | 50 | 130 |
| Acrolein | 1 | 182.3843 | 0 | 200 | 91 | 20 | 130 |
| Acrylonitrile | 1 | 50.5578 | 0 | 50 | 101 | 20 | 130 |
| Iodomethane | 1 | 52.8838 | 0 | 50 | 106 | 50 | 130 |
| Acetone | 1 | 226.7201 | 0 | 200 | 113 | 20 | 130 |
| Carbon Disulfide | 1 | 48.0785 | 0 | 50 | 96 | 50 | 130 |
| t-Butyl Alcohol | 1 | 237.0333 | 0 | 200 | 119 | 20 | 130 |
| n-Hexane | 1 | 66.6697 | 0 | 50 | 133* | 50 | 130 |
| Di-isopropyl-ether | 1 | 51.2061 | 0 | 50 | 102 | 50 | 130 |
| 1,1-Dichloroethene | 1 | 47.8302 | 0 | 50 | 96 | 50 | 130 |
| Methyl Acetate | 1 | 82.3903 | 0 | 50 | 165* | 50 | 130 |
| Methyl-t-butyl ether | 1 | 59.4109 | 0 | 50 | 119 | 50 | 130 |
| 1,1-Dichloroethane | 1 | 51.5734 | 0 | 50 | 103 | 50 | 130 |
| trans-1,2-Dichloroethene | 1 | 54.8616 | 0 | 50 | 110 | 50 | 130 |
| Ethyl-t-butyl ether | 1 | 51.6902 | 0 | 50 | 103 | 50 | 130 |
| cis-1,2-Dichloroethene | 1 | 49.3658 | 0 | 50 | 99 | 50 | 130 |
| Bromochloromethane | 1 | 49.6425 | 0 | 50 | 99 | 50 | 130 |
| 2,2-Dichloropropane | 1 | 51.9358 | 0 | 50 | 104 | 50 | 130 |
| Ethyl acetate | 1 | 19.8675 | 0 | 50 | 40* | 50 | 130 |
| 1,4-Dioxane | 1 | 2558.537 | 0 | 2500 | 102 | 50 | 130 |
| 1,1-Dichloropropene | 1 | 51.9853 | 0 | 50 | 104 | 50 | 130 |
| Chloroform | 1 | 52.9946 | 0 | 50 | 106 | 50 | 130 |
| Cyclohexane | 1 | 50.7481 | 0 | 50 | 101 | 50 | 130 |
| 1,2-Dichloroethane | 1 | 51.0174 | 0 | 50 | 102 | 50 | 130 |
| 2-Butanone | 1 | 48.5254 | 0 | 50 | 97 | 20 | 130 |
| 1,1,1-Trichloroethane | 1 | 53.1834 | 0 | 50 | 106 | 50 | 130 |
| Carbon Tetrachloride | 1 | 54.0378 | 0 | 50 | 108 | 50 | 130 |
| Vinyl Acetate | 1 | 31.0428 | 0 | 50 | 62 | 50 | 130 |
| Bromodichloromethane | 1 | 56.3104 | 0 | 50 | 113 | 50 | 130 |
| Methylcyclohexane | 1 | 53.633 | 0 | 50 | 107 | 50 | 130 |
| Dibromomethane | 1 | 61.5686 | 0 | 50 | 123 | 50 | 130 |
| 1,2-Dichloropropane | 1 | 53.2107 | 0 | 50 | 106 | 50 | 130 |
| Trichloroethene | 1 | 57.8309 | 0 | 50 | 116 | 50 | 130 |
| Benzene | 1 | 54.7419 | 0 | 50 | 109 | 50 | 130 |
| tert-Amyl methyl ether | 1 | 55.6052 | 0 | 50 | 111 | 50 | 130 |
| Iso-propylacetate | 1 | 37.4531 | 0 | 50 | 75 | 50 | 130 |
| Methyl methacrylate | 1 | 65.6528 | 0 | 50 | 131* | 50 | 130 |
| Dibromochloromethane | 1 | 59.1551 | 0 | 50 | 118 | 50 | 130 |
| 2-Chloroethylvinylether | 1 | 55.9552 | 0 | 50 | 112 | 50 | 130 |
| cis-1,3-Dichloropropene | 1 | 55.1819 | 0 | 50 | 110 | 50 | 130 |
| trans-1,3-Dichloropropene | 1 | 54.0948 | 0 | 50 | 108 | 50 | 130 |
| Ethyl methacrylate | 1 | 33.5091 | 0 | 50 | 67 | 50 | 130 |
| 1,1,2-Trichloroethane | 1 | 57.0844 | 0 | 50 | 114 | 50 | 130 |
| 1,2-Dibromoethane | 1 | 56.3886 | 0 | 50 | 113 | 50 | 130 |
| 1,3-Dichloropropane | 1 | 55.126 | 0 | 50 | 110 | 50 | 130 |
| 4-Methyl-2-Pentanone | 1 | 50.0993 | 0 | 50 | 100 | 20 | 130 |
| 2-Hexanone | 1 | 49.9659 | 0 | 50 | 100 | 20 | 130 |
| Tetrachloroethene | 1 | 58.2675 | 0 | 50 | 117 | 50 | 130 |
| Toluene | 1 | 53.6774 | 0 | 50 | 107 | 50 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 57.8443 | 0 | 50 | 116 | 50 | 130 |
| Chlorobenzene | 1 | 56.2063 | 0 | 50 | 112 | 50 | 130 |

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# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70991

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 19.2672 | 0 | 50 | 39* | 50 | 130 |
| n-Amyl acetate | 1 | 21.3994 | 0 | 50 | 43* | 50 | 130 |
| Bromoform | 1 | 59.1282 | 0 | 50 | 118 | 20 | 130 |
| Ethylbenzene | 1 | 53.5893 | 0 | 50 | 107 | 50 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 50.6469 | 0 | 50 | 101 | 50 | 130 |
| Styrene | 1 | 57.3114 | 0 | 50 | 115 | 50 | 130 |
| m&p-Xylenes | 1 | 104.0683 | 0 | 100 | 104 | 50 | 130 |
| o-Xylene | 1 | 53.1828 | 0 | 50 | 106 | 50 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 45.6739 | 0 | 50 | 91 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 55.3176 | 0 | 50 | 111 | 50 | 130 |
| 1,4-Dichlorobenzene | 1 | 55.2841 | 0 | 50 | 111 | 50 | 130 |
| 1,2-Dichlorobenzene | 1 | 55.0526 | 0 | 50 | 110 | 50 | 130 |
| Isopropylbenzene | 1 | 57.3009 | 0 | 50 | 115 | 50 | 130 |
| Cyclohexanone | 1 | 238.1614 | 0 | 250 | 95 | 50 | 130 |
| Camphene | 1 | 53.4539 | 0 | 50 | 107 | 50 | 130 |
| 1,2,3-Trichloropropane | 1 | 51.7972 | 0 | 50 | 104 | 50 | 130 |
| 2-Chlorotoluene | 1 | 55.866 | 0 | 50 | 112 | 50 | 130 |
| p-Ethyltoluene | 1 | 54.3407 | 0 | 50 | 109 | 50 | 130 |
| 4-Chlorotoluene | 1 | 54.8847 | 0 | 50 | 110 | 50 | 130 |
| n-Propylbenzene | 1 | 55.8298 | 0 | 50 | 112 | 50 | 130 |
| Bromobenzene | 1 | 52.0821 | 0 | 50 | 104 | 50 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 53.6035 | 0 | 50 | 107 | 50 | 130 |
| Butyl methacrylate | 1 | 33.9985 | 0 | 50 | 68 | 50 | 130 |
| t-Butylbenzene | 1 | 56.7766 | 0 | 50 | 114 | 50 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 53.5593 | 0 | 50 | 107 | 50 | 130 |
| sec-Butylbenzene | 1 | 57.9635 | 0 | 50 | 116 | 50 | 130 |
| 4-Isopropyltoluene | 1 | 58.4368 | 0 | 50 | 117 | 50 | 130 |
| n-Butylbenzene | 1 | 55.2672 | 0 | 50 | 111 | 50 | 130 |
| p-Diethylbenzene | 1 | 57.416 | 0 | 50 | 115 | 50 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 57.4098 | 0 | 50 | 115 | 50 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 56.8676 | 0 | 50 | 114 | 50 | 130 |
| Camphor | 1 | 599.5587 | 0 | 500 | 120 | 50 | 130 |
| Hexachlorobutadiene | 1 | 60.2011 | 0 | 50 | 120 | 50 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 54.8222 | 0 | 50 | 110 | 50 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 53.8702 | 0 | 50 | 108 | 50 | 130 |
| Naphthalene | 1 | 50.1948 | 0 | 50 | 100 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70991

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 8M20089.D | AD06068-002(MSD) | 8/22/2018 3:57:00 AM |
| Non Spike(If applicable): | 8M20084.D | AD06068-002 | 8/22/2018 2:13:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8260C | Matrix: Soil | QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 58.2636 | 0 | 50 | 117 | 20 | 130 |
| Dichlorodifluoromethane | 1 | 29.9739 | 0 | 50 | 60 | 20 | 130 |
| Chloromethane | 1 | 42.7818 | 0 | 50 | 86 | 20 | 130 |
| Bromomethane | 1 | 58.508 | 0 | 50 | 117 | 20 | 130 |
| Vinyl Chloride | 1 | 49.8328 | 0 | 50 | 100 | 20 | 130 |
| Chloroethane | 1 | 55.5148 | 0 | 50 | 111 | 20 | 130 |
| Trichlorofluoromethane | 1 | 52.859 | 0 | 50 | 106 | 20 | 130 |
| Ethyl ether | 1 | 49.7563 | 0 | 50 | 100 | 50 | 130 |
| Furan | 1 | 44.9434 | 0 | 50 | 90 | 50 | 130 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 67.3384 | 0 | 50 | 135* | 50 | 130 |
| Methylene Chloride | 1 | 54.5581 | 0 | 50 | 109 | 50 | 130 |
| Acrolein | 1 | 187.3566 | 0 | 200 | 94 | 20 | 130 |
| Acrylonitrile | 1 | 52.7185 | 0 | 50 | 105 | 20 | 130 |
| Iodomethane | 1 | 54.6758 | 0 | 50 | 109 | 50 | 130 |
| Acetone | 1 | 234.7971 | 0 | 200 | 117 | 20 | 130 |
| Carbon Disulfide | 1 | 48.9467 | 0 | 50 | 98 | 50 | 130 |
| t-Butyl Alcohol | 1 | 242.0818 | 0 | 200 | 121 | 20 | 130 |
| n-Hexane | 1 | 71.597 | 0 | 50 | 143* | 50 | 130 |
| Di-isopropyl-ether | 1 | 51.8054 | 0 | 50 | 104 | 50 | 130 |
| 1,1-Dichloroethene | 1 | 48.1898 | 0 | 50 | 96 | 50 | 130 |
| Methyl Acetate | 1 | 81.2909 | 0 | 50 | 163* | 50 | 130 |
| Methyl-t-butyl ether | 1 | 60.6036 | 0 | 50 | 121 | 50 | 130 |
| 1,1-Dichloroethane | 1 | 52.2435 | 0 | 50 | 104 | 50 | 130 |
| trans-1,2-Dichloroethene | 1 | 54.8148 | 0 | 50 | 110 | 50 | 130 |
| Ethyl-t-butyl ether | 1 | 53.017 | 0 | 50 | 106 | 50 | 130 |
| cis-1,2-Dichloroethene | 1 | 49.6774 | 0 | 50 | 99 | 50 | 130 |
| Bromochloromethane | 1 | 50.7596 | 0 | 50 | 102 | 50 | 130 |
| 2,2-Dichloropropane | 1 | 51.8884 | 0 | 50 | 104 | 50 | 130 |
| Ethyl acetate | 1 | 20.7133 | 0 | 50 | 41* | 50 | 130 |
| 1,4-Dioxane | 1 | 2657.906 | 0 | 2500 | 106 | 50 | 130 |
| 1,1-Dichloropropene | 1 | 52.6172 | 0 | 50 | 105 | 50 | 130 |
| Chloroform | 1 | 53.712 | 0 | 50 | 107 | 50 | 130 |
| Cyclohexane | 1 | 52.0963 | 0 | 50 | 104 | 50 | 130 |
| 1,2-Dichloroethane | 1 | 50.9194 | 0 | 50 | 102 | 50 | 130 |
| 2-Butanone | 1 | 48.8575 | 0 | 50 | 98 | 20 | 130 |
| 1,1,1-Trichloroethane | 1 | 53.6358 | 0 | 50 | 107 | 50 | 130 |
| Carbon Tetrachloride | 1 | 54.1957 | 0 | 50 | 108 | 50 | 130 |
| Vinyl Acetate | 1 | 31.5629 | 0 | 50 | 63 | 50 | 130 |
| Bromodichloromethane | 1 | 55.259 | 0 | 50 | 111 | 50 | 130 |
| Methylcyclohexane | 1 | 55.4569 | 0 | 50 | 111 | 50 | 130 |
| Dibromomethane | 1 | 62.3189 | 0 | 50 | 125 | 50 | 130 |
| 1,2-Dichloropropane | 1 | 52.7289 | 0 | 50 | 105 | 50 | 130 |
| Trichloroethene | 1 | 58.8387 | 0 | 50 | 118 | 50 | 130 |
| Benzene | 1 | 54.9117 | 0 | 50 | 110 | 50 | 130 |
| tert-Amyl methyl ether | 1 | 55.948 | 0 | 50 | 112 | 50 | 130 |
| Iso-propylacetate | 1 | 38.7684 | 0 | 50 | 78 | 50 | 130 |
| Methyl methacrylate | 1 | 66.8482 | 0 | 50 | 134* | 50 | 130 |
| Dibromochloromethane | 1 | 59.7088 | 0 | 50 | 119 | 50 | 130 |
| 2-Chloroethylvinylether | 1 | 55.9037 | 0 | 50 | 112 | 50 | 130 |
| cis-1,3-Dichloropropene | 1 | 55.4169 | 0 | 50 | 111 | 50 | 130 |
| trans-1,3-Dichloropropene | 1 | 54.3358 | 0 | 50 | 109 | 50 | 130 |
| Ethyl methacrylate | 1 | 34.0164 | 0 | 50 | 68 | 50 | 130 |
| 1,1,2-Trichloroethane | 1 | 58.3607 | 0 | 50 | 117 | 50 | 130 |
| 1,2-Dibromoethane | 1 | 56.9333 | 0 | 50 | 114 | 50 | 130 |
| 1,3-Dichloropropane | 1 | 55.4269 | 0 | 50 | 111 | 50 | 130 |
| 4-Methyl-2-Pentanone | 1 | 50.7778 | 0 | 50 | 102 | 20 | 130 |
| 2-Hexanone | 1 | 50.2456 | 0 | 50 | 100 | 20 | 130 |
| Tetrachloroethene | 1 | 60.5614 | 0 | 50 | 121 | 50 | 130 |
| Toluene | 1 | 54.1547 | 0 | 50 | 108 | 50 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 59.0313 | 0 | 50 | 118 | 50 | 130 |
| Chlorobenzene | 1 | 56.7882 | 0 | 50 | 114 | 50 | 130 |

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# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70991

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 20.4081 | 0 | 50 | 41* | 50 | 130 |
| n-Amyl acetate | 1 | 22.9415 | 0 | 50 | 46* | 50 | 130 |
| Bromoform | 1 | 59.4641 | 0 | 50 | 119 | 20 | 130 |
| Ethylbenzene | 1 | 53.6768 | 0 | 50 | 107 | 50 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 51.7182 | 0 | 50 | 103 | 50 | 130 |
| Styrene | 1 | 57.1592 | 0 | 50 | 114 | 50 | 130 |
| m&p-Xylenes | 1 | 105.6726 | 0 | 100 | 106 | 50 | 130 |
| o-Xylene | 1 | 53.4813 | 0 | 50 | 107 | 50 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 46.5813 | 0 | 50 | 93 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 55.9383 | 0 | 50 | 112 | 50 | 130 |
| 1,4-Dichlorobenzene | 1 | 55.0325 | 0 | 50 | 110 | 50 | 130 |
| 1,2-Dichlorobenzene | 1 | 55.3585 | 0 | 50 | 111 | 50 | 130 |
| Isopropylbenzene | 1 | 58.0502 | 0 | 50 | 116 | 50 | 130 |
| Cyclohexanone | 1 | 243.0123 | 0 | 250 | 97 | 50 | 130 |
| Camphene | 1 | 55.6087 | 0 | 50 | 111 | 50 | 130 |
| 1,2,3-Trichloropropane | 1 | 51.9822 | 0 | 50 | 104 | 50 | 130 |
| 2-Chlorotoluene | 1 | 56.2034 | 0 | 50 | 112 | 50 | 130 |
| p-Ethyltoluene | 1 | 54.9377 | 0 | 50 | 110 | 50 | 130 |
| 4-Chlorotoluene | 1 | 55.2873 | 0 | 50 | 111 | 50 | 130 |
| n-Propylbenzene | 1 | 57.0384 | 0 | 50 | 114 | 50 | 130 |
| Bromobenzene | 1 | 52.1442 | 0 | 50 | 104 | 50 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 54.7092 | 0 | 50 | 109 | 50 | 130 |
| Butyl methacrylate | 1 | 34.5499 | 0 | 50 | 69 | 50 | 130 |
| t-Butylbenzene | 1 | 58.5689 | 0 | 50 | 117 | 50 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 54.1267 | 0 | 50 | 108 | 50 | 130 |
| sec-Butylbenzene | 1 | 59.7959 | 0 | 50 | 120 | 50 | 130 |
| 4-Isopropyltoluene | 1 | 60.0813 | 0 | 50 | 120 | 50 | 130 |
| n-Butylbenzene | 1 | 57.0399 | 0 | 50 | 114 | 50 | 130 |
| p-Diethylbenzene | 1 | 59.5518 | 0 | 50 | 119 | 50 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 59.2938 | 0 | 50 | 119 | 50 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 58.5065 | 0 | 50 | 117 | 50 | 130 |
| Camphor | 1 | 613.6182 | 0 | 500 | 123 | 50 | 130 |
| Hexachlorobutadiene | 1 | 61.9501 | 0 | 50 | 124 | 50 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 55.8948 | 0 | 50 | 112 | 50 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 54.4538 | 0 | 50 | 109 | 50 | 130 |
| Naphthalene | 1 | 51.4899 | 0 | 50 | 103 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## RPD Data Laboratory Limits
### QC Batch: MBS70991

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 8M20089.D | AD06068-002(MSD) | 8/22/2018 3:57:00 AM |
| Duplicate(If applicable): | 8M20088.D | AD06068-002(MS) | 8/22/2018 3:36:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8260C  Matrix: Soil  QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 58.2636 | 56.9887 | 2.2 | 30 |
| Dichlorodifluoromethane | 1 | 29.9739 | 29.3449 | 2.1 | 30 |
| Chloromethane | 1 | 42.7818 | 41.8806 | 2.1 | 30 |
| Bromomethane | 1 | 58.508 | 58.6029 | 0.16 | 30 |
| Vinyl Chloride | 1 | 49.8328 | 49.2003 | 1.3 | 40 |
| Chloroethane | 1 | 55.5148 | 55.2193 | 0.53 | 30 |
| Trichlorofluoromethane | 1 | 52.859 | 51.9224 | 1.8 | 30 |
| Ethyl ether | 1 | 49.7563 | 49.5373 | 0.44 | 30 |
| Furan | 1 | 44.9434 | 44.8261 | 0.26 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 67.3384 | 65.9722 | 2 | 30 |
| Methylene Chloride | 1 | 54.5581 | 54.1705 | 0.71 | 30 |
| Acrolein | 1 | 187.3566 | 182.3843 | 2.7 | 30 |
| Acrylonitrile | 1 | 52.7185 | 50.5578 | 4.2 | 30 |
| Iodomethane | 1 | 54.6758 | 52.8838 | 3.3 | 30 |
| Acetone | 1 | 234.7971 | 226.7201 | 3.5 | 30 |
| Carbon Disulfide | 1 | 48.9467 | 48.0785 | 1.8 | 30 |
| t-Butyl Alcohol | 1 | 242.0818 | 237.0333 | 2.1 | 30 |
| n-Hexane | 1 | 71.597 | 66.6697 | 7.1 | 30 |
| Di-isopropyl-ether | 1 | 51.8054 | 51.2061 | 1.2 | 30 |
| 1,1-Dichloroethene | 1 | 48.1898 | 47.8302 | 0.75 | 40 |
| Methyl Acetate | 1 | 81.2909 | 82.3903 | 1.3 | 30 |
| Methyl-t-butyl ether | 1 | 60.6036 | 59.4109 | 2 | 30 |
| 1,1-Dichloroethane | 1 | 52.2435 | 51.5734 | 1.3 | 40 |
| trans-1,2-Dichloroethene | 1 | 54.8148 | 54.8616 | 0.09 | 30 |
| Ethyl-t-butyl ether | 1 | 53.017 | 51.6902 | 2.5 | 30 |
| cis-1,2-Dichloroethene | 1 | 49.6774 | 49.3658 | 0.63 | 30 |
| Bromochloromethane | 1 | 50.7596 | 49.6425 | 2.2 | 30 |
| 2,2-Dichloropropane | 1 | 51.8884 | 51.9358 | 0.09 | 30 |
| Ethyl acetate | 1 | 20.7133 | 19.8675 | 4.2 | 30 |
| 1,4-Dioxane | 1 | 2657.906 | 2558.537 | 3.8 | 30 |
| 1,1-Dichloropropene | 1 | 52.6172 | 51.9853 | 1.2 | 30 |
| Chloroform | 1 | 53.712 | 52.9946 | 1.3 | 40 |
| Cyclohexane | 1 | 52.0963 | 50.7481 | 2.6 | 30 |
| 1,2-Dichloroethane | 1 | 50.9194 | 51.0174 | 0.19 | 40 |
| 2-Butanone | 1 | 48.8575 | 48.5254 | 0.68 | 40 |
| 1,1,1-Trichloroethane | 1 | 53.6358 | 53.1834 | 0.85 | 30 |
| Carbon Tetrachloride | 1 | 54.1957 | 54.0378 | 0.29 | 40 |
| Vinyl Acetate | 1 | 31.5629 | 31.0428 | 1.7 | 30 |
| Bromodichloromethane | 1 | 55.259 | 56.3104 | 1.9 | 30 |
| Methylcyclohexane | 1 | 55.4569 | 53.633 | 3.3 | 30 |
| Dibromomethane | 1 | 62.3189 | 61.5686 | 1.2 | 30 |
| 1,2-Dichloropropane | 1 | 52.7289 | 53.2107 | 0.91 | 30 |
| Trichloroethene | 1 | 58.8387 | 57.8309 | 1.7 | 40 |
| Benzene | 1 | 54.9117 | 54.7419 | 0.31 | 40 |
| tert-Amyl methyl ether | 1 | 55.948 | 55.6052 | 0.61 | 30 |
| Iso-propylacetate | 1 | 38.7684 | 37.4531 | 3.5 | 30 |
| Methyl methacrylate | 1 | 66.8482 | 65.6528 | 1.8 | 30 |
| Dibromochloromethane | 1 | 59.7088 | 59.1551 | 0.93 | 30 |
| 2-Chloroethylvinylether | 1 | 55.9037 | 55.9552 | 0.09 | 30 |
| cis-1,3-Dichloropropene | 1 | 55.4169 | 55.1819 | 0.42 | 30 |
| trans-1,3-Dichloropropene | 1 | 54.3358 | 54.0948 | 0.44 | 30 |
| Ethyl methacrylate | 1 | 34.0164 | 33.5091 | 1.5 | 30 |
| 1,1,2-Trichloroethane | 1 | 58.3607 | 57.0844 | 2.2 | 30 |
| 1,2-Dibromoethane | 1 | 56.9333 | 56.3886 | 0.96 | 30 |
| 1,3-Dichloropropane | 1 | 55.4269 | 55.126 | 0.54 | 30 |
| 4-Methyl-2-Pentanone | 1 | 50.7778 | 50.0993 | 1.3 | 30 |
| 2-Hexanone | 1 | 50.2456 | 49.9659 | 0.56 | 30 |
| Tetrachloroethene | 1 | 60.5614 | 58.2675 | 3.9 | 40 |
| Toluene | 1 | 54.1547 | 53.6774 | 0.89 | 40 |
| 1,1,1,2-Tetrachloroethane | 1 | 59.0313 | 57.8443 | 2 | 30 |
| Chlorobenzene | 1 | 56.7882 | 56.2063 | 1 | 40 |
| n-Butyl acrylate | 1 | 20.4081 | 19.2672 | 5.8 | 30 |
| n-Amyl acetate | 1 | 22.9415 | 21.3994 | 7 | 30 |

# Form3
## RPD Data Laboratory Limits
### QC Batch: MBS70991

| | | | | | |
|---|---|---|---|---|---|
| Bromoform | 1 | 59.4641 | 59.1282 | 0.57 | 30 |
| Ethylbenzene | 1 | 53.6768 | 53.5893 | 0.16 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | 51.7182 | 50.6469 | 2.1 | 30 |
| Styrene | 1 | 57.1592 | 57.3114 | 0.27 | 30 |
| m&p-Xylenes | 1 | 105.6726 | 104.0683 | 1.5 | 30 |
| o-Xylene | 1 | 53.4813 | 53.1828 | 0.56 | 30 |
| trans-1,4-Dichloro-2-butene | 1 | 46.5813 | 45.6739 | 2 | 30 |
| 1,3-Dichlorobenzene | 1 | 55.9383 | 55.3176 | 1.1 | 30 |
| 1,4-Dichlorobenzene | 1 | 55.0325 | 55.2841 | 0.46 | 40 |
| 1,2-Dichlorobenzene | 1 | 55.3585 | 55.0526 | 0.55 | 40 |
| Isopropylbenzene | 1 | 58.0502 | 57.3009 | 1.3 | 30 |
| Cyclohexanone | 1 | 243.0123 | 238.1614 | 2 | 30 |
| Camphene | 1 | 55.6087 | 53.4539 | 4 | 30 |
| 1,2,3-Trichloropropane | 1 | 51.9822 | 51.7972 | 0.36 | 30 |
| 2-Chlorotoluene | 1 | 56.2034 | 55.866 | 0.6 | 30 |
| p-Ethyltoluene | 1 | 54.9377 | 54.3407 | 1.1 | 30 |
| 4-Chlorotoluene | 1 | 55.2873 | 54.8847 | 0.73 | 30 |
| n-Propylbenzene | 1 | 57.0384 | 55.8298 | 2.1 | 40 |
| Bromobenzene | 1 | 52.1442 | 52.0821 | 0.12 | 30 |
| 1,3,5-Trimethylbenzene | 1 | 54.7092 | 53.6035 | 2 | 30 |
| Butyl methacrylate | 1 | 34.5499 | 33.9985 | 1.6 | 30 |
| t-Butylbenzene | 1 | 58.5689 | 56.7766 | 3.1 | 30 |
| 1,2,4-Trimethylbenzene | 1 | 54.1267 | 53.5593 | 1.1 | 30 |
| sec-Butylbenzene | 1 | 59.7959 | 57.9635 | 3.1 | 40 |
| 4-Isopropyltoluene | 1 | 60.0813 | 58.4368 | 2.8 | 30 |
| n-Butylbenzene | 1 | 57.0399 | 55.2672 | 3.2 | 30 |
| p-Diethylbenzene | 1 | 59.5518 | 57.416 | 3.7 | 30 |
| 1,2,4,5-Tetramethylbenzene | 1 | 59.2938 | 57.4098 | 3.2 | 30 |
| 1,2-Dibromo-3-Chloropropane | 1 | 58.5065 | 56.8676 | 2.8 | 30 |
| Camphor | 1 | 613.6182 | 599.5587 | 2.3 | 30 |
| Hexachlorobutadiene | 1 | 61.9501 | 60.2011 | 2.9 | 30 |
| 1,2,4-Trichlorobenzene | 1 | 55.8948 | 54.8222 | 1.9 | 30 |
| 1,2,3-Trichlorobenzene | 1 | 54.4538 | 53.8702 | 1.1 | 30 |
| Naphthalene | 1 | 51.4899 | 50.1948 | 2.5 | 30 |

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: DAILY BLANK
Blank Data File: 8M20083.D
Matrix: Soil

Blank Analysis Date: 08/22/18 01:52
Blank Extraction Date: NA
(If Applicable)
Method: EPA 8260C

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD05999-001 | 8M20100.D | 08/22/18 07:45 |
| AD06068-002(MSD | 8M20089.D | 08/22/18 03:57 |
| AD06068-002(MS) | 8M20088.D | 08/22/18 03:36 |
| MBS70991 | 8M20087.D | 08/22/18 03:15 |
| AD06068-002 | 8M20084.D | 08/22/18 02:13 |

# Form 5

**Tune Name:** BFB TUNE
**Instrument:** GCMS 8
**Data File:** 8M18958.D
**Analysis Date:** 07/26/18 17:03
**Method:** EPA 8260C

**Tune Scan/Time Range:** Average of 7.359 to 7.375 min

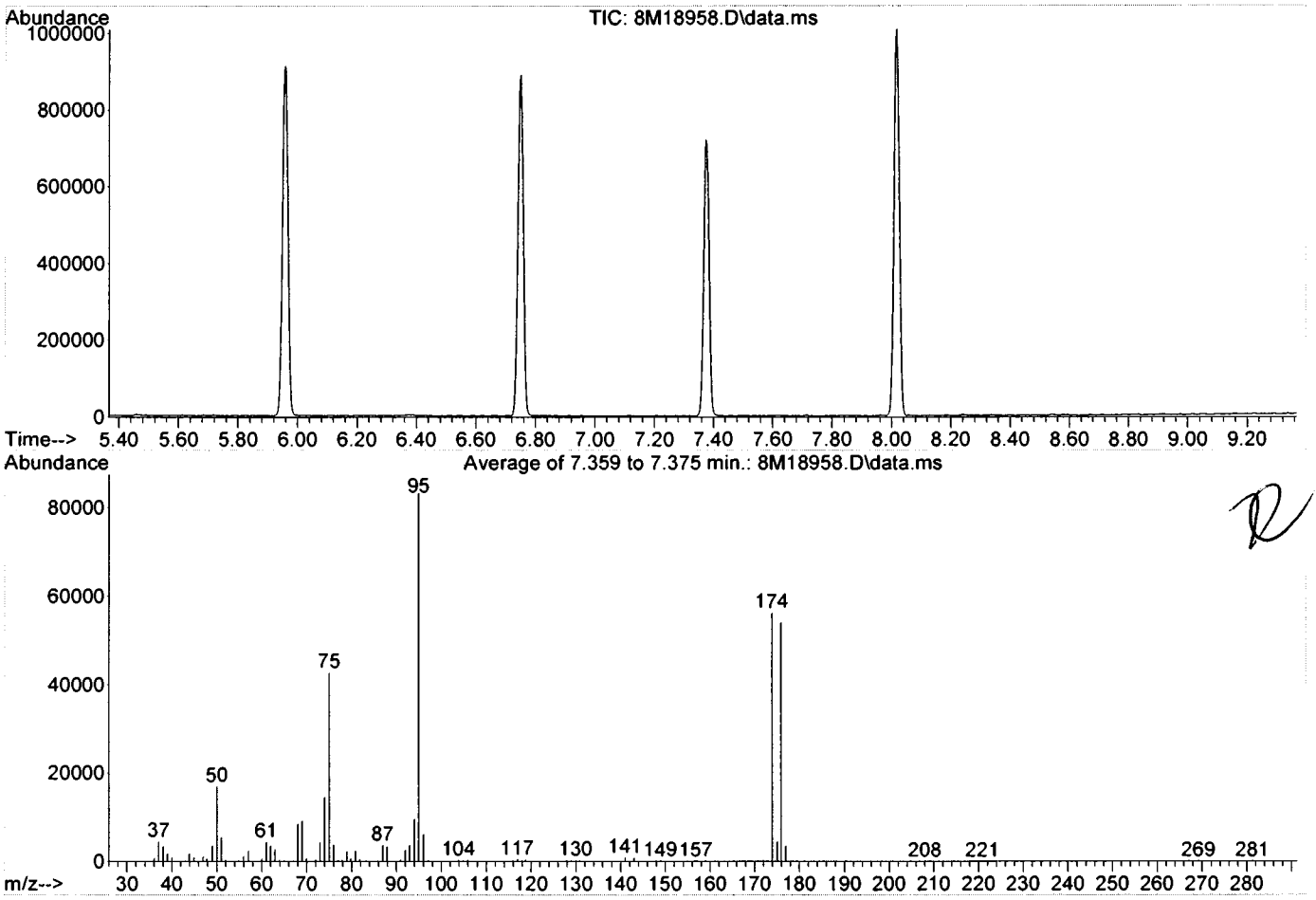
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 20.4 | 17022 | PASS |
| 75 | 95 | 30 | 60 | 51.3 | 42786 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 83458 | PASS |
| 96 | 95 | 5 | 9 | 7.4 | 6166 | PASS |
| 173 | 174 | 0.00 | 2 | 0.3 | 147 | PASS |
| 174 | 95 | 50 | 100 | 67.4 | 56241 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 4583 | PASS |
| 176 | 174 | 95 | 101 | 96.1 | 54047 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 3562 | PASS |

| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 8M18960.D | CAL @ 0.5 PPB | 07/26/18 17:39 |
| 8M18961.D | CAL @ 1 PPB | 07/26/18 18:00 |
| 8M18962.D | CAL @ 2 PPB | 07/26/18 18:21 |
| 8M18963.D | CAL @ 5 PPB | 07/26/18 18:42 |
| 8M18964.D | CAL @ 20 PPB | 07/26/18 19:02 |
| 8M18965.D | CAL @ 50 PPB | 07/26/18 19:23 |
| 8M18966.D | CAL @ 500 PPB | 07/26/18 19:44 |
| 8M18969.D | CAL @ 250 PPB | 07/26/18 20:46 |
| 8M18972.D | CAL @ 100 PPB | 07/26/18 21:48 |
| 8M18975.D | ICV | 07/26/18 22:50 |
| 8M18979.D | daily blank | 07/27/18 00:13 |

Data Path : G:\GcMsData\2018\GCMS_8\Data\07-2618\
Data File : 8M18958.D
Acq On : 26 Jul 2018 17:03
Operator : SG
Sample : BFB TUNE
Misc : S,5G
ALS Vial : 26 Sample Multiplier: 1

Integration File: RTEINT.P

Method : G:\GcMsData\2018\GCMS_8\MethodQt\8M_S0707.M
Title : @GCMS_8,ug,624,8260
Last Update : Mon Jul 09 11:12:07 2018




Spectrum Information: Average of 7.359 to 7.375 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 20.4 | 17022 | PASS |
| 75 | 95 | 30 | 60 | 51.3 | 42786 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 83458 | PASS |
| 96 | 95 | 5 | 9 | 7.4 | 6166 | PASS |
| 173 | 174 | 0.00 | 2 | 0.3 | 147 | PASS |
| 174 | 95 | 50 | 100 | 67.4 | 56241 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 4583 | PASS |
| 176 | 174 | 95 | 101 | 96.1 | 54047 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 3562 | PASS |

# Form 5

**Tune Name:** BFB TUNE **Data File:** 8M20078.D
**Instrument:** GCMS 8 **Analysis Date:** 08/22/18 00:09
**Method:** EPA 8260C
**Tune Scan/Time Range:** Average of 7.362 to 7.397 min

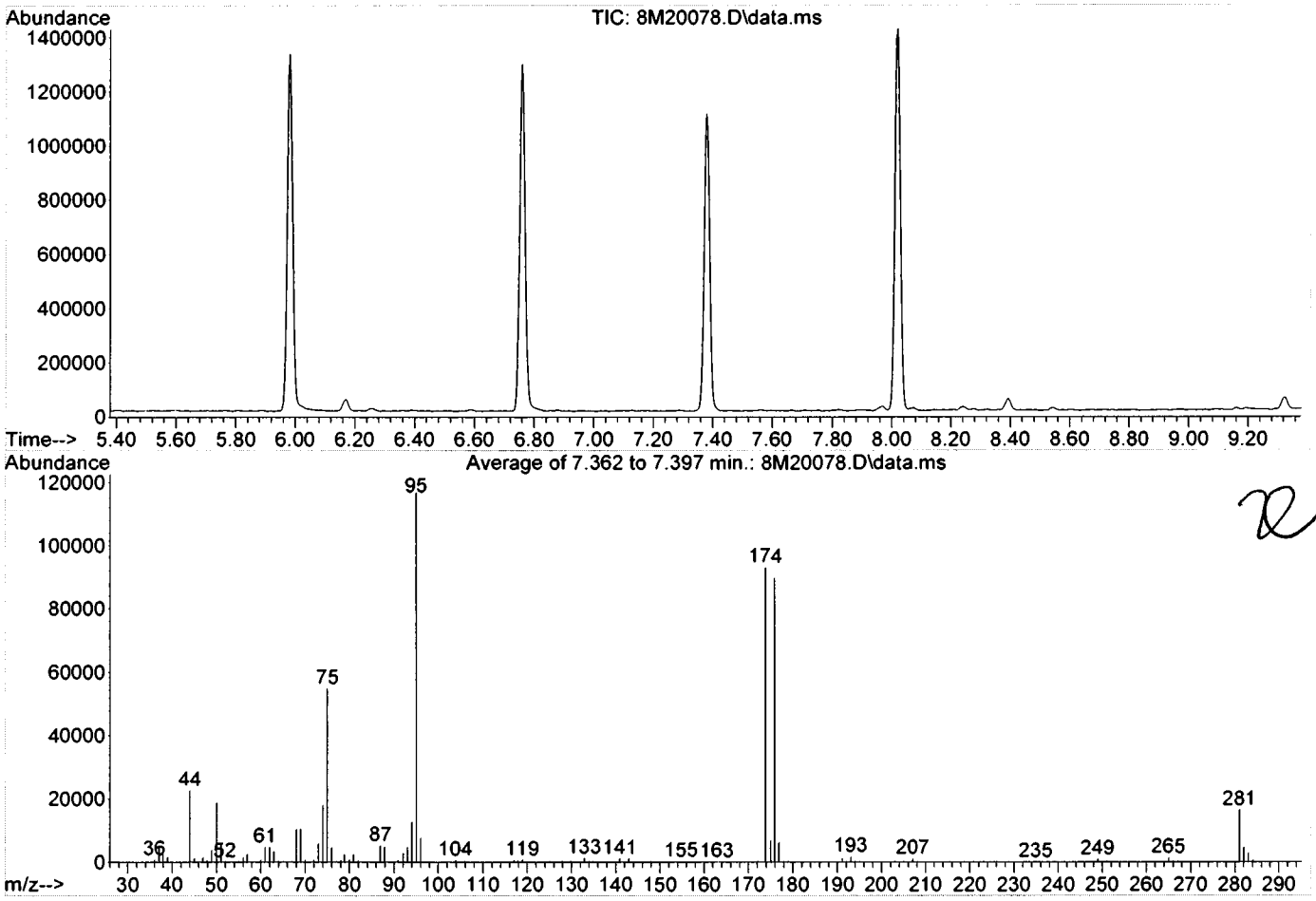
| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.1 | 18859 | PASS |
| 75 | 95 | 30 | 60 | 47.0 | 54914 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 116836 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 7836 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 79.8 | 93193 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 6974 | PASS |
| 176 | 174 | 95 | 101 | 96.4 | 89857 | PASS |
| 177 | 176 | 5 | 9 | 7.1 | 6407 | PASS |

| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 8M20079.D | 50 PPB | 08/22/18 00:29 |
| 8M20080.D | CAL @ 50 PPB | 08/22/18 00:50 |
| 8M20081.D | BLK | 08/22/18 01:11 |
| 8M20082.D | BLK | 08/22/18 01:32 |
| 8M20083.D | DAILY BLANK | 08/22/18 01:52 |
| 8M20084.D | AD06068-002 | 08/22/18 02:13 |
| 8M20085.D | AD05993-006 | 08/22/18 02:34 |
| 8M20086.D | AD05993-007 | 08/22/18 02:55 |
| 8M20087.D | MBS70991 | 08/22/18 03:15 |
| 8M20088.D | AD06068-002(MS) | 08/22/18 03:36 |
| 8M20089.D | AD06068-002(MSD | 08/22/18 03:57 |
| 8M20090.D | BLK | 08/22/18 04:18 |
| 8M20091.D | AD05993-008 | 08/22/18 04:38 |
| 8M20092.D | AD05993-009 | 08/22/18 04:59 |
| 8M20093.D | AD05993-010 | 08/22/18 05:20 |
| 8M20094.D | AD05993-011 | 08/22/18 05:41 |
| 8M20095.D | AD05993-012 | 08/22/18 06:01 |
| 8M20096.D | AD05993-013 | 08/22/18 06:22 |
| 8M20097.D | AD05993-014 | 08/22/18 06:43 |
| 8M20098.D | AD06019-004 | 08/22/18 07:04 |
| 8M20099.D | AD06019-005 | 08/22/18 07:24 |
| 8M20100.D | AD05999-001 | 08/22/18 07:45 |
| 8M20101.D | AD05999-002 | 08/22/18 08:06 |
| 8M20102.D | AD06051-001 | 08/22/18 08:27 |
| 8M20103.D | AD06051-002 | 08/22/18 08:48 |
| 8M20104.D | AD06051-003 | 08/22/18 09:08 |
| 8M20105.D | AD06051-004 | 08/22/18 09:29 |
| 8M20106.D | AD06051-005 | 08/22/18 09:50 |
| 8M20107.D | AD06065-001 | 08/22/18 10:11 |
| 8M20108.D | AD06051-001 | 08/22/18 10:32 |
| 8M20109.D | AD06051-002 | 08/22/18 10:52 |
| 8M20110.D | AD06051-003 | 08/22/18 11:13 |
| 8M20111.D | AD06051-004 | 08/22/18 11:34 |
| 8M20112.D | AD06051-005 | 08/22/18 11:55 |
| 8M20113.D | BLK | 08/22/18 12:16 |

Data Path : G:\GcMsData\2018\GCMS_8\Data\0822-18\
Data File : 8M20078.D
Acq On : 22 Aug 2018 00:09
Operator : WP
Sample : BFB TUNE
Misc : S,5G
ALS Vial : 98 Sample Multiplier: 1

Integration File: RTEINT.P

Method : G:\GcMsData\2018\GCMS_8\MethodQt\8M_S0726.M
Title : @GCMS_8,ug,624,8260
Last Update : Fri Jul 27 11:46:31 2018




Spectrum Information: Average of 7.362 to 7.397 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.1 | 18859 | PASS |
| 75 | 95 | 30 | 60 | 47.0 | 54914 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 116836 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 7836 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 79.8 | 93193 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 6974 | PASS |
| 176 | 174 | 95 | 101 | 96.4 | 89857 | PASS |
| 177 | 176 | 5 | 9 | 7.1 | 6407 | PASS |

8081617 0036

# Form 6
## Initial Calibration

Method: EPA 8260C

Instrument: GCMS_8

| Level # | Data File | Cal Identifier | Analysis Date/Time | Level # | Data File | Cal Identifier | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 8M18964.D | CAL @ 20 PPB | 07/26/18 19:02 | 2 | 8M18963.D | CAL @ 5 PPB | 07/26/18 18:42 |
| 3 | 8M18962.D | CAL @ 2 PPB | 07/26/18 18:21 | 4 | 8M18965.D | CAL @ 50 PPB | 07/26/18 19:23 |
| 5 | 8M18972.D | CAL @ 100 PPB | 07/26/18 21:48 | 6 | 8M18969.D | CAL @ 250 PPB | 07/26/18 20:46 |
| 7 | 8M18966.D | CAL @ 500 PPB | 07/26/18 19:44 | 8 | 8M18961.D | CAL @ 1 PPB | 07/26/18 18:00 |
| 9 | 8M18960.D | CAL @ 0.5 PPB | 07/26/18 17:39 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 0 | Avg | 0.4318 | 0.4212 | 0.4828 | 0.4372 | 0.4434 | 0.4655 | 0.4517 | ----- | ----- | 0.448 | 1.71 | 1.00 | 1.00 | 4.7 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Dichlorodifluorometha | 1 | 0 | Avg | 0.4372 | 0.4579 | 0.5291 | 0.4639 | 0.4834 | 0.4841 | 0.4681 | ----- | ----- | 0.475 | 1.69 | 1.00 | 1.00 | 6.1 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Chloromethane | 1 | 0 | Avg | 0.4800 | 0.4818 | 0.5117 | 0.4870 | 0.5250 | 0.5389 | 0.4915 | ----- | ----- | 0.502 | 1.86 | 0.998 | 1.00 | 4.6 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromomethane | 1 | 0 | Avg | 0.2067 | 0.2319 | 0.2733 | 0.2178 | 0.2463 | 0.2703 | 0.2381 | ----- | ----- | 0.241 | 2.24 | 0.996 | 0.999 | 10 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Vinyl Chloride | 1 | 0 | Avg | 0.4371 | 0.4196 | 0.4834 | 0.4529 | 0.4954 | 0.5084 | 0.4645 | ----- | ----- | 0.466 | 1.95 | 0.998 | 1.00 | 6.9 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Chloroethane | 1 | 0 | Avg | 0.2429 | 0.2421 | 0.2663 | 0.2410 | 0.2622 | 0.2704 | 0.2370 | ----- | ----- | 0.252 | 2.32 | 0.995 | 0.999 | 5.6 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Trichlorofluoromethan | 1 | 0 | Avg | 0.5132 | 0.5319 | 0.6790 | 0.5243 | 0.5626 | 0.5595 | 0.5239 | ----- | ----- | 0.556 | 2.54 | 0.999 | 1.00 | 10 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethyl ether | 1 | 0 | Avg | 0.3179 | 0.3206 | 0.3188 | 0.3135 | 0.3324 | 0.3459 | 0.3292 | ----- | ----- | 0.326 | 2.77 | 0.999 | 1.00 | 3.4 | 0.50 a | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Furan | 1 | 0 | Avg | 0.6556 | 0.6582 | 0.6754 | 0.6635 | 0.6764 | 0.6987 | 0.6694 | ----- | ----- | 0.671 | 2.81 | 1.00 | 1.00 | 2.2 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,1,2-Trichloro-1,2,2-tr | 1 | 0 | Avg | 0.1931 | 0.1948 | 0.2464 | 0.1989 | 0.2165 | 0.2122 | 0.2014 | ----- | ----- | 0.209 | 2.96 | 0.999 | 1.00 | 8.9 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Methylene Chloride | 1 | 0 | Avg | 0.3596 | 0.3543 | 0.3915 | 0.3536 | 0.3719 | 0.3865 | 0.3718 | ----- | ----- | 0.370 | 3.37 | 1.00 | 1.00 | 4.1 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Acrolein | 1 | 0 | Avg | 0.0647 | 0.0604 | 0.0625 | 0.0612 | 0.0625 | 0.0659 | 0.0630 | ----- | ----- | 0.0629 | 2.88 | 0.999 | 1.00 | 3.1 | | 100.0 | 25.00 | 10.00 | 250.0 | 500.0 | 1250. | 2500. | | |
| Acrylonitrile | 1 | 0 | Avg | 0.1341 | 0.1317 | 0.1461 | 0.1317 | 0.1343 | 0.1420 | 0.1365 | ----- | ----- | 0.137 | 3.56 | 1.00 | 1.00 | 4.0 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Iodomethane | 1 | 0 | Qua | 0.2644 | 0.1823 | 0.1448 | 0.3105 | 0.3403 | 0.3809 | 0.3571 | ----- | ----- | 0.283 | 3.11 | 0.999 | 0.999 | 32 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Acetone | 1 | 0 | Qua | 0.1172 | 0.1163 | 0.1911 | 0.1090 | 0.1080 | 0.1123 | 0.1061 | ----- | ----- | 0.123 | 3.00 | 0.999 | 1.00 | 25 | 0.10 | 100.0 | 25.00 | 10.00 | 250.0 | 500.0 | 1250. | 2500. | | |
| Carbon Disulfide | 1 | 0 | Avg | 1.0635 | 1.0883 | 1.3721 | 1.0778 | 1.1517 | 1.1475 | 1.0819 | ----- | ----- | 1.14 | 3.18 | 0.999 | 1.00 | 9.5 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| t-Butyl Alcohol | 1 | 0 | Avg | 0.0503 | 0.0487 | 0.0648 | 0.0475 | 0.0496 | 0.0526 | 0.0493 | ----- | ----- | 0.0519 | 3.43 | 0.999 | 1.00 | 11 | | 100.0 | 25.00 | 10.00 | 250.0 | 500.0 | 1250. | 2500. | | |
| n-Hexane | 1 | 0 | Avg | 0.3105 | 0.3033 | 0.4457 | 0.3124 | 0.3272 | 0.3254 | 0.3102 | ----- | ----- | 0.334 | 3.82 | 0.999 | 1.00 | 15 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Di-isopropyl-ether | 1 | 0 | Avg | 1.1460 | 1.1032 | 1.1855 | 1.1716 | 1.1746 | 1.2111 | 1.1556 | ----- | ----- | 1.16 | 3.99 | 0.999 | 1.00 | 2.9 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,1-Dichloroethene | 1 | 0 | Avg | 0.5304 | 0.5172 | 0.6395 | 0.5318 | 0.5551 | 0.5593 | 0.5442 | ----- | ----- | 0.554 | 2.97 | 1.00 | 1.00 | 7.3 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Methyl Acetate | 1 | 0 | Avg | 0.4050 | 0.4126 | 0.4500 | 0.3851 | 0.3878 | 0.4012 | 0.3869 | ----- | ----- | 0.404 | 3.27 | 1.00 | 1.00 | 5.6 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Methyl-t-butyl ether | 1 | 0 | Avg | 0.8573 | 0.8212 | 0.8356 | 0.8617 | 0.8903 | 0.9348 | 0.9134 | 0.8257 | ----- | 0.868 | 3.59 | 1.00 | 1.00 | 4.8 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1-Dichloroethane | 1 | 0 | Avg | 0.6733 | 0.6683 | 0.7427 | 0.6797 | 0.6885 | 0.7232 | 0.6859 | ----- | ----- | 0.695 | 3.95 | 0.999 | 1.00 | 4.0 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| trans-1,2-Dichloroethe | 1 | 0 | Avg | 0.3328 | 0.3541 | 0.3880 | 0.3382 | 0.3608 | 0.3662 | 0.3485 | ----- | ----- | 0.356 | 3.60 | 0.999 | 1.00 | 5.2 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethyl-t-butyl ether | 1 | 0 | Avg | 1.0423 | 1.0401 | 1.0310 | 1.0620 | 1.0883 | 1.1327 | 1.0858 | ----- | ----- | 1.07 | 4.27 | 1.00 | 1.00 | 3.4 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| cis-1,2-Dichloroethene | 1 | 0 | Avg | 0.6459 | 0.6377 | 0.6697 | 0.6477 | 0.6556 | 0.6782 | 0.6553 | ----- | ----- | 0.656 | 4.39 | 1.00 | 1.00 | 2.1 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromochloromethane | 1 | 0 | Avg | 0.3205 | 0.3241 | 0.3489 | 0.3193 | 0.3164 | 0.3223 | 0.3163 | ----- | ----- | 0.324 | 4.56 | 1.00 | 1.00 | 3.5 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2,2-Dichloropropane | 1 | 0 | Avg | 0.5231 | 0.5276 | 0.6026 | 0.5315 | 0.5339 | 0.5591 | 0.5441 | ----- | ----- | 0.546 | 4.40 | 1.00 | 1.00 | 5.1 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethyl acetate | 1 | 0 | Avg | 0.4258 | 0.4112 | 0.4174 | 0.4091 | 0.4084 | 0.4284 | 0.4163 | ----- | ----- | 0.417 | 4.42 | 1.00 | 1.00 | 1.9 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,4-Dioxane | 1 | 0 | Qua | 0.0047 | 0.0046 | 0.0078 | 0.0046 | 0.0048 | 0.0050 | 0.0047 | ----- | ----- | 0.00521 | 5.51 | 0.999 | 1.00 | 22 | | 1000. | 250.0 | 100.0 | 2500. | 5000. | 1250 | 2500 | | |
| 1,1-Dichloropropene | 1 | 0 | Avg | 0.4764 | 0.4854 | 0.5703 | 0.4875 | 0.5078 | 0.5065 | 0.4932 | ----- | ----- | 0.504 | 4.83 | 1.00 | 1.00 | 6.2 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Chloroform | 1 | 0 | Avg | 0.6247 | 0.6274 | 0.7479 | 0.6289 | 0.6449 | 0.6638 | 0.6346 | ----- | ----- | 0.653 | 4.60 | 0.999 | 1.00 | 6.7 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Dibromofluoromethan | 1 | 0 | Avg | 0.2557 | 0.2580 | 0.2561 | 0.2598 | 0.2634 | 0.2603 | 0.2642 | 0.2545 | 0.2613 | 0.259 | 4.70 | -1 | -1 | 1.3 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Cyclohexane | 1 | 0 | Avg | 0.4851 | 0.4757 | 0.6316 | 0.5121 | 0.5341 | 0.5156 | 0.5046 | ----- | ----- | 0.523 | 4.78 | 1.00 | 1.00 | 9.9 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dichloroethane-d4 | 1 | 0 | Avg | 0.1497 | 0.1511 | 0.1532 | 0.1472 | 0.1423 | 0.1428 | 0.1438 | 0.1502 | 0.1528 | 0.148 | 4.91 | -1 | -1 | 2.9 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| 1,2-Dichloroethane | 1 | 0 | Avg | 0.4824 | 0.4874 | 0.5278 | 0.4733 | 0.4711 | 0.4881 | 0.4941 | ----- | ----- | 0.489 | 4.96 | 1.00 | 1.00 | 3.9 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2-Butanone | 1 | 0 | Avg | 0.1787 | 0.1746 | 0.2081 | 0.1738 | 0.1753 | 0.1840 | 0.1735 | ----- | ----- | 0.181 | 4.39 | 0.999 | 1.00 | 6.9 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,1,1-Trichloroethane | 1 | 0 | Avg | 0.5433 | 0.5502 | 0.6201 | 0.5515 | 0.5703 | 0.5817 | 0.5606 | ----- | ----- | 0.568 | 4.73 | 1.00 | 1.00 | 4.6 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Carbon Tetrachloride | 1 | 0 | Avg | 0.4387 | 0.4150 | 0.4879 | 0.4589 | 0.4838 | 0.4919 | 0.4865 | ----- | ----- | 0.466 | 4.84 | 1.00 | 1.00 | 6.4 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Vinyl Acetate | 1 | 0 | Avg | 0.9059 | 0.8634 | 0.8931 | 0.9190 | 0.9165 | 0.9597 | 0.9444 | ----- | ----- | 0.915 | 3.98 | 1.00 | 1.00 | 3.5 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromodichloromethan | 1 | 0 | Avg | 0.4655 | 0.4503 | 0.4949 | 0.4716 | 0.4859 | 0.5089 | 0.5083 | ----- | ----- | 0.484 | 5.59 | 1.00 | 1.00 | 4.6 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |

*Flags*

*a - failed the min rf criteria*

*c - failed the minimum correlation coeff criteria(if applicable)*

*Note:* Avg Rsd: 7.36

*Corr 1 = Correlation Coefficient for linear Eq.*

*Corr 2 = Correlation Coefficient for quad Eq.*

*Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.*

8081617 0037

# Form 6
## Initial Calibration

Method: EPA 8260C

Instrument: GCMS_8

| Level # | Data File: | Cal Identifier: | Analysis Date/Time | Level # | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 8M18964.D | CAL @ 20 PPB | 07/26/18 19:02 | 2 | 8M18963.D | CAL @ 5 PPB | 07/26/18 18:42 |
| 3 | 8M18962.D | CAL @ 2 PPB | 07/26/18 18:21 | 4 | 8M18965.D | CAL @ 50 PPB | 07/26/18 19:23 |
| 5 | 8M18972.D | CAL @ 100 PPB | 07/26/18 21:48 | 6 | 8M18969.D | CAL @ 250 PPB | 07/26/18 20:46 |
| 7 | 8M18966.D | CAL @ 500 PPB | 07/26/18 19:44 | 8 | 8M18961.D | CAL @ 1 PPB | 07/26/18 18:00 |
| 9 | 8M18960.D | CAL @ 0.5 PPB | 07/26/18 17:39 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | 1 | 0 | Avg | 0.5237 | 0.4896 | 0.5790 | 0.5336 | 0.5726 | 0.5573 | 0.5432 | ----- | ----- | 0.543 | 5.44 | 1.00 | 1.00 | 5.7 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Dibromomethane | 1 | 0 | Avg | 0.1867 | 0.1809 | 0.1923 | 0.1857 | 0.1979 | 0.2065 | 0.2029 | ----- | ----- | 0.193 | 5.51 | 1.00 | 1.00 | 4.9 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dichloropropane | 1 | 0 | Avg | 0.3843 | 0.3917 | 0.4315 | 0.3848 | 0.3983 | 0.4130 | 0.4070 | ----- | ----- | 0.402 | 5.45 | 1.00 | 1.00 | 4.2 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Trichloroethene | 1 | 0 | Avg | 0.3258 | 0.3277 | 0.4010 | 0.3332 | 0.3530 | 0.3647 | 0.3538 | ----- | ----- | 0.351 | 5.32 | 1.00 | 1.00 | 7.5 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Benzene | 1 | 0 | Avg | 1.4285 | 1.4427 | 1.6501 | 1.4197 | 1.4492 | 1.4359 | 1.2235 | 1.5791 | ----- | 1.45 | 4.96 | 0.993 | 1.00 | 8.6 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| tert-Amyl methyl ether | 1 | 0 | Avg | 0.9974 | 0.9642 | 0.9517 | 0.9969 | 1.0105 | 1.0329 | 0.9827 | ----- | ----- | 0.991 | 5.00 | 0.999 | 1.00 | 2.8 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Iso-propylacetate | 1 | 0 | Avg | 0.8718 | 0.8704 | 0.8603 | 0.8603 | 0.8412 | 0.8543 | 0.7881 | ----- | ----- | 0.850 | 4.96 | 0.998 | 1.00 | 3.4 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Methyl methacrylate | 1 | 0 | Avg | 0.4766 | 0.4657 | 0.4444 | 0.4626 | 0.4458 | 0.4534 | 0.4289 | ----- | ----- | 0.454 | 5.48 | 0.999 | 1.00 | 3.5 | 0.50 a | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Dibromochloromethan | 1 | 0 | Avg | 0.3533 | 0.3587 | 0.3623 | 0.3627 | 0.3786 | 0.3952 | 0.3900 | ----- | ----- | 0.372 | 6.45 | 1.00 | 1.00 | 4.4 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2-Chloroethylvinylethe | 1 | 0 | Avg | 0.2422 | 0.2321 | 0.2511 | 0.2457 | 0.2515 | 0.2598 | 0.2502 | ----- | ----- | 0.248 | 5.73 | 1.00 | 1.00 | 3.5 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| cis-1,3-Dichloropropen | 1 | 0 | Avg | 0.6321 | 0.6395 | 0.6624 | 0.6446 | 0.6499 | 0.6569 | 0.6261 | ----- | ----- | 0.645 | 5.83 | 0.999 | 1.00 | 2.0 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| trans-1,3-Dichloroprop | 1 | 0 | Avg | 0.5851 | 0.5592 | 0.6535 | 0.5919 | 0.5898 | 0.6009 | 0.5851 | ----- | ----- | 0.595 | 6.12 | 1.00 | 1.00 | 4.8 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethyl methacrylate | 1 | 0 | Avg | 0.4407 | 0.4272 | 0.4588 | 0.4368 | 0.4340 | 0.4435 | 0.4357 | ----- | ----- | 0.440 | 6.14 | 1.00 | 1.00 | 2.3 | 0.50 a | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,1,2-Trichloroethane | 1 | 0 | Avg | 0.3198 | 0.3297 | 0.3517 | 0.3188 | 0.3256 | 0.3291 | 0.3214 | ----- | ----- | 0.328 | 6.22 | 1.00 | 1.00 | 3.4 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dibromoethane | 1 | 0 | Avg | 0.3211 | 0.3238 | 0.3470 | 0.3205 | 0.3314 | 0.3373 | 0.3318 | 0.3501 | ----- | 0.333 | 6.52 | 1.00 | 1.00 | 3.4 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,3-Dichloropropane | 1 | 0 | Avg | 0.5949 | 0.5911 | 0.6436 | 0.5842 | 0.5975 | 0.6037 | 0.5858 | ----- | ----- | 0.600 | 6.32 | 1.00 | 1.00 | 3.4 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 4-Methyl-2-Pentanone | 1 | 0 | Avg | 0.4347 | 0.4291 | 0.4455 | 0.4292 | 0.4284 | 0.4369 | 0.4131 | ----- | ----- | 0.431 | 5.90 | 0.999 | 1.00 | 2.3 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2-Hexanone | 1 | 0 | Avg | 0.3328 | 0.3143 | 0.3112 | 0.3150 | 0.3154 | 0.3180 | 0.3052 | ----- | ----- | 0.316 | 6.34 | 1.00 | 1.00 | 2.7 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Tetrachloroethene | 1 | 0 | Avg | 0.2586 | 0.2635 | 0.3130 | 0.2629 | 0.2778 | 0.2730 | 0.2598 | ----- | ----- | 0.273 | 6.32 | 0.999 | 1.00 | 7.0 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Toluene-d8 | 1 | 0 | Avg | 1.1907 | 1.1750 | 1.1997 | 1.1841 | 1.1706 | 1.1581 | 1.1196 | 1.1824 | 1.1878 | 1.17 | 5.98 | -1 | -1 | 2.0 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Toluene | 1 | 0 | Avg | 0.9011 | 0.9349 | 1.1418 | 0.9097 | 0.9370 | 0.9175 | 0.8445 | 1.2159 | ----- | 0.975 | 6.02 | 0.998 | 1.00 | 13 | 0.40 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,1,2-Tetrachloroeth | 1 | 0 | Avg | 0.3231 | 0.3247 | 0.3685 | 0.3263 | 0.3403 | 0.3492 | 0.3425 | ----- | ----- | 0.339 | 6.81 | 1.00 | 1.00 | 4.8 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Chlorobenzene | 1 | 0 | Avg | 0.9594 | 0.9866 | 1.1775 | 0.9697 | 0.9834 | 0.9743 | 0.9082 | ----- | ----- | 0.994 | 6.78 | 0.999 | 1.00 | 8.6 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| n-Butyl acrylate | 1 | 0 | Avg | 1.5934 | 1.5568 | 1.6717 | 1.5358 | 1.6123 | 1.6062 | 1.4363 | ----- | ----- | 1.57 | 7.02 | 0.997 | 1.00 | 4.7 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| n-Amyl acetate | 1 | 0 | Avg | 1.3804 | 1.3676 | 1.4464 | 1.3211 | 1.3279 | 1.3245 | 1.2067 | ----- | ----- | 1.34 | 7.14 | 0.998 | 1.00 | 5.5 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromoform | 1 | 0 | Avg | 0.4076 | 0.4115 | 0.4536 | 0.4116 | 0.4527 | 0.4689 | 0.4481 | ----- | ----- | 0.436 | 7.22 | 0.999 | 1.00 | 5.8 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Ethylbenzene | 1 | 0 | Avg | 0.7458 | 0.7781 | 0.9067 | 0.7284 | 0.7954 | 0.7824 | 0.7077 | 1.0242 | ----- | 0.809 | 6.82 | 0.997 | 1.00 | 13 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,2,2-Tetrachloroeth | 1 | 0 | Avg | 0.8936 | 0.8742 | 0.9974 | 0.8367 | 0.8820 | 0.8711 | 0.8215 | ----- | ----- | 0.882 | 7.44 | 0.999 | 1.00 | 6.4 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Bromofluorobenzene | 1 | 0 | Avg | 0.7117 | 0.7131 | 0.7344 | 0.6936 | 0.7322 | 0.7251 | 0.6865 | 0.7218 | 0.7129 | 0.715 | 7.38 | -1 | -1 | 2.3 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Styrene | 1 | 0 | Avg | 1.8892 | 1.9093 | 2.1727 | 1.8656 | 1.9856 | 1.9469 | 1.6571 | ----- | ----- | 1.92 | 7.10 | 0.993 | 1.00 | 8.0 | 0.30 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| m&p-Xylenes | 1 | 0 | Qua | 1.1408 | 1.1618 | 1.4413 | 1.1002 | 1.1590 | 1.1072 | 0.8951 | 1.6935 | 2.0471 | 1.31 | 6.88 | 0.988 | 1.00 | 28 | 0.10 | 40.00 | 10.00 | 4.00 | 100.0 | 200.0 | 500.0 | 1000. | 2.00 | 1.00 |
| o-Xylene | 1 | 0 | Avg | 1.1030 | 1.1506 | 1.3147 | 1.0884 | 1.1436 | 1.1368 | 1.0575 | 1.5342 | ----- | 1.19 | 7.10 | 0.999 | 1.00 | 13 | 0.30 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| trans-1,4-Dichloro-2-b | 1 | 0 | Avg | 0.4238 | 0.4328 | 0.4611 | 0.4093 | 0.4254 | 0.4284 | 0.4161 | ----- | ----- | 0.428 | 7.46 | 1.00 | 1.00 | 3.9 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,3-Dichlorobenzene | 1 | 0 | Avg | 1.2575 | 1.2751 | 1.4933 | 1.2769 | 1.3004 | 1.3003 | 1.2529 | ----- | ----- | 1.31 | 7.99 | 1.00 | 1.00 | 6.4 | 0.60 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,4-Dichlorobenzene | 1 | 0 | Avg | 1.2607 | 1.2966 | 1.5792 | 1.2721 | 1.2912 | 1.2810 | 1.2524 | ----- | ----- | 1.32 | 8.03 | 1.00 | 1.00 | 8.8 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dichlorobenzene | 1 | 0 | Avg | 1.2208 | 1.3030 | 1.4136 | 1.2322 | 1.2631 | 1.2542 | 1.2274 | ----- | ----- | 1.27 | 8.25 | 1.00 | 1.00 | 5.3 | 0.40 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Isopropylbenzene | 1 | 0 | Avg | 2.8618 | 2.8266 | 3.1417 | 2.8027 | 2.9463 | 2.7702 | 1.9832 | 3.4880 | ----- | 2.85 | 7.29 | 0.967 | 0.999 | 15 | 0.10 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Cyclohexanone | 1 | 0 | Avg | 0.1015 | 0.1031 | 0.1193 | 0.0937 | 0.0953 | 0.1014 | 0.0868 | ----- | ----- | 0.100 | 7.36 | 0.994 | 0.999 | 10 | | 100.0 | 25.00 | 10.00 | 250.0 | 500.0 | 1250. | 2500. | | |
| Camphene | 1 | 0 | Avg | 1.2438 | 1.1280 | 1.2454 | 1.2548 | 1.3610 | 1.3377 | 1.2457 | ----- | ----- | 1.26 | 7.46 | 0.999 | 1.00 | 6.0 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2,3-Trichloropropane | 1 | 0 | Avg | 1.1300 | 1.0974 | 1.2315 | 1.0572 | 1.0940 | 1.1244 | 1.0667 | ----- | ----- | 1.11 | 7.47 | 0.999 | 1.00 | 5.2 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 2-Chlorotoluene | 1 | 0 | Avg | 1.7456 | 1.8440 | 2.0813 | 1.7436 | 1.7950 | 1.7235 | 1.2010 | ----- | ----- | 1.73 | 7.58 | 0.960 | 0.998 | 15 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |

*Flags*

*a - failed the min rf criteria*

*c - failed the minimum correlation coeff criteria(if applicable)*

*Note:* Avg Rsd: 7.36

*Corr 1 = Correlation Coefficient for linear Eq.*

*Corr 2 = Correlation Coefficient for quad Eq.*

*Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.*

8081617 0038

# Form 6
## Initial Calibration

Method: EPA 8260C

Instrument: GCMS_8

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 8M18964.D | CAL @ 20 PPB | 07/26/18 19:02 | 2 | 8M18963.D | CAL @ 5 PPB | 07/26/18 18:42 |
| 3 | 8M18962.D | CAL @ 2 PPB | 07/26/18 18:21 | 4 | 8M18965.D | CAL @ 50 PPB | 07/26/18 19:23 |
| 5 | 8M18972.D | CAL @ 100 PPB | 07/26/18 21:48 | 6 | 8M18969.D | CAL @ 250 PPB | 07/26/18 20:46 |
| 7 | 8M18966.D | CAL @ 500 PPB | 07/26/18 19:44 | 8 | 8M18961.D | CAL @ 1 PPB | 07/26/18 18:00 |
| 9 | 8M18960.D | CAL @ 0.5 PPB | 07/26/18 17:39 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| p-Ethyltoluene | 1 | 0 | Avg | 3.0952 | 3.1699 | 3.5721 | 3.0538 | 3.1225 | 2.9197 | 1.9570 | ----- | ----- | 2.98 | 7.57 | 0.949 | 0.999 | 17 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 4-Chlorotoluene | 1 | 0 | Avg | 1.7071 | 1.7100 | 1.9803 | 1.6900 | 1.7203 | 1.6534 | 1.2093 | ----- | ----- | 1.67 | 7.63 | 0.970 | 0.999 | 14 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| n-Propylbenzene | 1 | 0 | Avg | 3.4781 | 3.5680 | 4.0510 | 3.4557 | 3.5195 | 3.2017 | 2.0876 | 4.4789 | ----- | 3.48 | 7.51 | 0.942 | 0.999 | 20 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromobenzene | 1 | 0 | Avg | 1.9892 | 2.0332 | 2.3241 | 1.9456 | 2.0058 | 1.9951 | 1.8954 | ----- | ----- | 2.03 | 7.48 | 0.999 | 1.00 | 6.8 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,3,5-Trimethylbenzen | 1 | 0 | Avg | 2.1981 | 2.2341 | 2.4881 | 2.2006 | 2.2946 | 2.2290 | 1.6286 | 2.7940 | ----- | 2.26 | 7.59 | 0.972 | 0.999 | 14 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Butyl methacrylate | 1 | 0 | Avg | 1.0435 | 1.0049 | 1.0857 | 1.0462 | 1.0448 | 1.0319 | 1.0393 | ----- | ----- | 1.04 | 7.60 | 1.00 | 1.00 | 2.3 | 0.50 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| t-Butylbenzene | 1 | 0 | Avg | 2.2805 | 2.2265 | 2.4737 | 2.2986 | 2.4262 | 2.3697 | 2.0538 | 2.6731 | ----- | 2.35 | 7.78 | 0.995 | 1.00 | 7.8 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,4-Trimethylbenzen | 1 | 0 | Avg | 2.4223 | 2.4896 | 2.9070 | 2.4207 | 2.4800 | 2.3835 | 1.8794 | 3.2217 | ----- | 2.53 | 7.81 | 0.984 | 0.999 | 16 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| sec-Butylbenzene | 1 | 0 | Avg | 3.0325 | 3.0485 | 3.2583 | 3.0880 | 3.2111 | 2.9996 | 2.0515 | 3.5373 | ----- | 3.03 | 7.90 | 0.956 | 0.999 | 14 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 4-Isopropyltoluene | 1 | 0 | Avg | 2.4799 | 2.4098 | 2.6241 | 2.5307 | 2.6306 | 2.5283 | 1.9056 | 2.7860 | ----- | 2.49 | 7.97 | 0.977 | 0.999 | 10 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Butylbenzene | 1 | 0 | Avg | 3.0151 | 2.9100 | 3.2535 | 3.0780 | 3.1030 | 2.9838 | 2.3429 | 3.5533 | ----- | 3.03 | 8.20 | 0.984 | 1.00 | 11 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| p-Diethylbenzene | 1 | 0 | Avg | 1.5570 | 1.5222 | 1.6274 | 1.6340 | 1.6710 | 1.6798 | 1.5747 | ----- | ----- | 1.61 | 8.18 | 0.999 | 1.00 | 3.7 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2,4,5-Tetramethylbe | 1 | 0 | Avg | 2.2980 | 2.2404 | 2.2443 | 2.4455 | 2.4880 | 2.4344 | 1.9178 | ----- | ----- | 2.30 | 8.63 | 0.984 | 0.999 | 8.5 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2-Dibromo-3-Chloro | 1 | 0 | Avg | 0.1804 | 0.1616 | 0.1925 | 0.1737 | 0.1860 | 0.1930 | 0.1855 | ----- | ----- | 0.182 | 8.69 | 1.00 | 1.00 | 6.1 | 0.05 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Camphor | 1 | 0 | Avg | 0.1020 | 0.0952 | 0.1048 | 0.1014 | 0.1074 | 0.1104 | 0.1015 | ----- | ----- | 0.103 | 9.11 | 0.998 | 1.00 | 4.7 | | 200.0 | 50.00 | 20.00 | 500.0 | 1000. | 2500. | 5000. | | |
| Hexachlorobutadiene | 1 | 0 | Avg | 0.4241 | 0.4079 | 0.4158 | 0.4325 | 0.4629 | 0.4741 | 0.4710 | ----- | ----- | 0.441 | 9.25 | 1.00 | 1.00 | 6.2 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2,4-Trichlorobenzen | 1 | 0 | Avg | 0.7970 | 0.8028 | 0.8994 | 0.8356 | 0.8318 | 0.8420 | 0.8812 | ----- | ----- | 0.841 | 9.17 | 1.00 | 1.00 | 4.5 | 0.20 | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| 1,2,3-Trichlorobenzen | 1 | 0 | Avg | 0.7863 | 0.7961 | 0.8733 | 0.8297 | 0.8410 | 0.8440 | 0.8766 | ----- | ----- | 0.835 | 9.46 | 1.00 | 1.00 | 4.2 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | | |
| Naphthalene | 1 | 0 | Qua | 2.4618 | 2.4509 | 2.9933 | 2.4950 | 2.5650 | 2.4603 | 1.9746 | 4.8577 | ----- | 2.78 | 9.32 | 0.987 | 1.00 | 32 | | 20.00 | 5.00 | 2.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |

| *Flags* | *Note:* Avg Rsd: 7.36 |
|---|---|
| *a - failed the min rf criteria* | *Corr 1 = Correlation Coefficient for linear Eq.* |
| *c - failed the minimum correlation coeff criteria(if applicable)* | *Corr 2 = Correlation Coefficient for quad Eq.* |
| | *Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.* |

# Form7

Continuing Calibration

**Calibration Name:** CAL @ 50 PPB **Data File:** 8M20080.D **Instrument:** GCMS 8

**Cont Calibration Date/Time** 8/22/2018 12:50:00 Method: EPA 8260C

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorobenzene | 1 | 0 | I | 5.11 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| Chlorodifluoromethane | 1 | 0 | | 1.71 | 53.10 | 50 | 20 | 0.1 | 0.448 | 0.476 | 6.21 | |
| Dichlorodifluoromethane | 1 | 0 | | 1.70 | 13.53 | 50 | 20 | 0.1 | 0.475 | 0.128 | 72.94 | C1 |
| Chloromethane | 1 | 0 | | 1.86 | 29.98 | 50 | 20 | 0.1 | 0.502 | 0.301 | 40.04 | C1 |
| Bromomethane | 1 | 0 | | 2.24 | 47.71 | 50 | 20 | 0.1 | 0.241 | 0.230 | 4.59 | |
| Vinyl Chloride | 1 | 0 | | 1.95 | 35.12 | 50 | 20 | 0.1 | 0.466 | 0.327 | 29.76 | C1 |
| Chloroethane | 1 | 0 | | 2.32 | 45.06 | 50 | 20 | 0.1 | 0.252 | 0.227 | 9.89 | |
| Trichlorofluoromethane | 1 | 0 | | 2.54 | 37.88 | 50 | 20 | 0.1 | 0.556 | 0.422 | 24.24 | C1 |
| Ethyl ether | 1 | 0 | | 2.77 | 48.09 | 50 | 20 | 0.5 | 0.326 | 0.313 | 3.83 | |
| Furan | 1 | 0 | | 2.81 | 40.78 | 50 | 20 | 0.5 | 0.671 | 0.547 | 18.44 | |
| 1,1,2-Trichloro-1,2,2-trifluoroetha | 1 | 0 | | 2.96 | 37.64 | 50 | 20 | 0.1 | 0.209 | 0.157 | 24.73 | C1 |
| Methylene Chloride | 1 | 0 | | 3.36 | 47.97 | 50 | 20 | 0.1 | 0.370 | 0.355 | 4.07 | |
| Acrolein | 1 | 0 | | 2.88 | 129.67 | 250 | 20 | | 0.063 | 0.033 | 48.13 | C1 |
| Acrylonitrile | 1 | 0 | | 3.56 | 42.63 | 50 | 20 | | 0.137 | 0.117 | 14.74 | |
| Iodomethane | 1 | 0 | | 3.11 | 42.51 | 50 | 20 | | 0.283 | 0.318 | 14.98 | |
| Acetone | 1 | 0 | | 3.00 | 190.33 | 250 | 20 | 0.1 | 0.123 | 0.087 | 23.87 | C1 |
| Carbon Disulfide | 1 | 0 | | 3.18 | 34.93 | 50 | 20 | 0.1 | 1.140 | 0.797 | 30.14 | C1 |
| t-Butyl Alcohol | 1 | 0 | | 3.42 | 214.79 | 250 | 20 | | 0.052 | 0.045 | 14.09 | |
| n-Hexane | 1 | 0 | | 3.82 | 32.59 | 50 | 20 | | 0.334 | 0.217 | 34.83 | C1 |
| Di-isopropyl-ether | 1 | 0 | | 3.99 | 43.36 | 50 | 20 | | 1.164 | 1.010 | 13.27 | |
| 1,1-Dichloroethene | 1 | 0 | | 2.97 | 37.25 | 50 | 20 | 0.1 | 0.554 | 0.413 | 25.50 | C1 |
| Methyl Acetate | 1 | 0 | | 3.27 | 41.26 | 50 | 20 | 0.1 | 0.404 | 0.334 | 17.48 | |
| Methyl-t-butyl ether | 1 | 0 | | 3.59 | 47.46 | 50 | 20 | 0.1 | 0.868 | 0.823 | 5.08 | |
| 1,1-Dichloroethane | 1 | 0 | | 3.95 | 44.27 | 50 | 20 | 0.2 | 0.695 | 0.615 | 11.47 | |
| trans-1,2-Dichloroethene | 1 | 0 | | 3.60 | 45.44 | 50 | 20 | 0.1 | 0.356 | 0.323 | 9.11 | |
| Ethyl-t-butyl ether | 1 | 0 | | 4.27 | 45.61 | 50 | 20 | 0.5 | 1.069 | 0.975 | 8.78 | |
| cis-1,2-Dichloroethene | 1 | 0 | | 4.39 | 43.71 | 50 | 20 | 0.1 | 0.656 | 0.573 | 12.58 | |
| Bromochloromethane | 1 | 0 | | 4.55 | 42.70 | 50 | 20 | | 0.324 | 0.277 | 14.59 | |
| 2,2-Dichloropropane | 1 | 0 | | 4.40 | 41.74 | 50 | 20 | | 0.546 | 0.456 | 16.52 | |
| Ethyl acetate | 1 | 0 | | 4.42 | 41.33 | 50 | 20 | | 0.417 | 0.344 | 17.34 | |
| 1,4-Dioxane | 1 | 0 | | 5.51 | 2240.81 | 2500 | 20 | | 0.005 | 0.005 | 10.37 | |
| 1,1-Dichloropropene | 1 | 0 | | 4.83 | 39.80 | 50 | 20 | | 0.504 | 0.401 | 20.40 | |
| Chloroform | 1 | 0 | | 4.60 | 45.47 | 50 | 20 | 0.2 | 0.653 | 0.594 | 9.07 | |
| Dibromofluoromethane | 1 | 0 | S | 4.70 | 31.45 | 75 | ** | | 0.259 | 0.272 | 4.84 | |
| Cyclohexane | 1 | 0 | | 4.78 | 34.52 | 50 | 20 | 0.1 | 0.523 | 0.361 | 30.95 | C1 |
| 1,2-Dichloroethane-d4 | 1 | 0 | S | 4.92 | 27.03 | 75 | ** | | 0.148 | 0.133 | 9.91 | |
| 1,2-Dichloroethane | 1 | 0 | | 4.96 | 42.67 | 50 | 20 | 0.1 | 0.489 | 0.417 | 14.66 | |
| 2-Butanone | 1 | 0 | | 4.39 | 43.71 | 50 | 20 | 0.1 | 0.181 | 0.158 | 12.58 | |
| 1,1,1-Trichloroethane | 1 | 0 | | 4.74 | 41.63 | 50 | 20 | 0.1 | 0.568 | 0.473 | 16.74 | |
| Carbon Tetrachloride | 1 | 0 | | 4.84 | 41.37 | 50 | 20 | 0.1 | 0.466 | 0.386 | 17.26 | |
| Vinyl Acetate | 1 | 0 | | 3.98 | 40.01 | 50 | 20 | | 0.915 | 0.732 | 19.99 | |
| Bromodichloromethane | 1 | 0 | | 5.59 | 45.20 | 50 | 20 | 0.2 | 0.484 | 0.437 | 9.61 | |
| Methylcyclohexane | 1 | 0 | | 5.44 | 39.15 | 50 | 20 | 0.1 | 0.543 | 0.425 | 21.71 | C1 |
| Dibromomethane | 1 | 0 | | 5.51 | 54.80 | 50 | 20 | | 0.193 | 0.212 | 9.60 | |
| 1,2-Dichloropropane | 1 | 0 | | 5.45 | 44.52 | 50 | 20 | 0.1 | 0.402 | 0.358 | 10.97 | |
| Trichloroethene | 1 | 0 | | 5.32 | 46.18 | 50 | 20 | 0.2 | 0.351 | 0.325 | 7.64 | |
| Benzene | 1 | 0 | | 4.96 | 45.46 | 50 | 20 | 0.5 | 1.454 | 1.322 | 9.09 | |
| tert-Amyl methyl ether | 1 | 0 | | 5.01 | 47.97 | 50 | 20 | | 0.991 | 0.951 | 4.05 | |
| Chlorobenzene-d5 | 1 | 0 | I | 6.76 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| Iso-propylacetate | 1 | 0 | | 4.96 | 43.83 | 50 | 20 | 0.5 | 0.850 | 0.745 | 12.33 | |
| Methyl methacrylate | 1 | 0 | | 5.47 | 43.35 | 50 | 20 | 0.5 | 0.454 | 0.394 | 13.30 | |
| Dibromochloromethane | 1 | 0 | | 6.45 | 49.23 | 50 | 20 | 0.1 | 0.372 | 0.366 | 1.54 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL @ 50 PPB **Data File:** 8M20080.D **Instrument:** GCMS 8

**Cont Calibration Date/Time** 8/22/2018 12:50:00 Method: EPA 8260C

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chloroethylvinylether | 1 | 0 | | 5.73 | 49.06 | 50 | 20 | | 0.248 | 0.243 | 1.88 | |
| cis-1,3-Dichloropropene | 1 | 0 | | 5.83 | 46.41 | 50 | 20 | 0.2 | 0.645 | 0.598 | 7.18 | |
| trans-1,3-Dichloropropene | 1 | 0 | | 6.12 | 44.99 | 50 | 20 | 0.1 | 0.595 | 0.536 | 10.01 | |
| Ethyl methacrylate | 1 | 0 | | 6.14 | 42.41 | 50 | 20 | 0.5 | 0.440 | 0.373 | 15.17 | |
| 1,1,2-Trichloroethane | 1 | 0 | | 6.22 | 48.92 | 50 | 20 | 0.1 | 0.328 | 0.321 | 2.17 | |
| 1,2-Dibromoethane | 1 | 0 | | 6.52 | 47.72 | 50 | 20 | 0.1 | 0.333 | 0.318 | 4.56 | |
| 1,3-Dichloropropane | 1 | 0 | | 6.32 | 46.07 | 50 | 20 | | 0.600 | 0.553 | 7.85 | |
| 4-Methyl-2-Pentanone | 1 | 0 | | 5.90 | 43.04 | 50 | 20 | 0.1 | 0.431 | 0.371 | 13.92 | |
| 2-Hexanone | 1 | 0 | | 6.33 | 41.92 | 50 | 20 | 0.1 | 0.316 | 0.265 | 16.15 | |
| Tetrachloroethene | 1 | 0 | | 6.32 | 44.54 | 50 | 20 | 0.2 | 0.273 | 0.243 | 10.91 | |
| Toluene-d8 | 1 | 0 | S | 5.98 | 29.98 | 75 | ** | | 1.174 | 1.174 | 0.06 | |
| Toluene | 1 | 0 | | 6.02 | 42.30 | 50 | 20 | 0.4 | 0.975 | 0.825 | 15.39 | |
| 1,1,1,2-Tetrachloroethane | 1 | 0 | | 6.81 | 45.77 | 50 | 20 | | 0.339 | 0.311 | 8.46 | |
| Chlorobenzene | 1 | 0 | | 6.78 | 44.20 | 50 | 20 | 0.5 | 0.994 | 0.879 | 11.59 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 8.02 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| n-Butyl acrylate | 1 | 0 | | 7.02 | 43.89 | 50 | 20 | 0.5 | 1.573 | 1.381 | 12.23 | |
| n-Amyl acetate | 1 | 0 | | 7.14 | 42.07 | 50 | 20 | 0.5 | 1.339 | 1.127 | 15.87 | |
| Bromoform | 1 | 0 | | 7.22 | 49.52 | 50 | 20 | 0.1 | 0.436 | 0.432 | 0.95 | |
| Ethylbenzene | 1 | 0 | | 6.82 | 39.79 | 50 | 20 | 0.1 | 0.809 | 0.644 | 20.41 | |
| 1,1,2,2-Tetrachloroethane | 1 | 0 | | 7.43 | 45.04 | 50 | 20 | 0.1 | 0.882 | 0.795 | 9.92 | |
| Bromofluorobenzene | 1 | 0 | S | 7.38 | 30.80 | 75 | ** | | 0.715 | 0.734 | 2.68 | |
| Styrene | 1 | 0 | | 7.10 | 44.66 | 50 | 20 | 0.3 | 1.918 | 1.713 | 10.69 | |
| m&p-Xylenes | 1 | 0 | | 6.88 | 79.15 | 100 | 20 | 0.1 | 1.305 | 0.985 | 20.85 | C1 |
| o-Xylene | 1 | 0 | | 7.10 | 41.03 | 50 | 20 | 0.3 | 1.191 | 0.977 | 17.94 | |
| trans-1,4-Dichloro-2-butene | 1 | 0 | | 7.46 | 40.30 | 50 | 20 | | 0.428 | 0.345 | 19.40 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 7.99 | 43.19 | 50 | 20 | 0.6 | 1.308 | 1.130 | 13.61 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 8.03 | 43.28 | 50 | 20 | 0.5 | 1.319 | 1.142 | 13.44 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 8.25 | 42.67 | 50 | 20 | 0.4 | 1.274 | 1.087 | 14.67 | |
| Isopropylbenzene | 1 | 0 | | 7.29 | 43.42 | 50 | 20 | 0.1 | 2.853 | 2.477 | 13.15 | |
| Cyclohexanone | 1 | 0 | | 7.36 | 138.63 | 250 | 20 | | 0.100 | 0.056 | 44.55 | C1 |
| Camphene | 1 | 0 | | 7.46 | 43.90 | 50 | 20 | | 1.260 | 1.106 | 12.20 | |
| 1,2,3-Trichloropropane | 1 | 0 | | 7.47 | 43.59 | 50 | 20 | | 1.115 | 0.972 | 12.83 | |
| 2-Chlorotoluene | 1 | 0 | | 7.57 | 42.61 | 50 | 20 | | 1.733 | 1.477 | 14.77 | |
| p-Ethyltoluene | 1 | 0 | | 7.56 | 42.45 | 50 | 20 | | 2.984 | 2.534 | 15.10 | |
| 4-Chlorotoluene | 1 | 0 | | 7.63 | 42.38 | 50 | 20 | | 1.667 | 1.413 | 15.24 | |
| n-Propylbenzene | 1 | 0 | | 7.51 | 42.24 | 50 | 20 | | 3.480 | 2.940 | 15.51 | |
| Bromobenzene | 1 | 0 | | 7.48 | 41.11 | 50 | 20 | | 2.027 | 1.667 | 17.77 | |
| 1,3,5-Trimethylbenzene | 1 | 0 | | 7.59 | 40.74 | 50 | 20 | | 2.258 | 1.840 | 18.53 | |
| Butyl methacrylate | 1 | 0 | | 7.60 | 41.98 | 50 | 20 | 0.5 | 1.042 | 0.875 | 16.05 | |
| t-Butylbenzene | 1 | 0 | | 7.78 | 43.11 | 50 | 20 | | 2.350 | 2.027 | 13.77 | |
| 1,2,4-Trimethylbenzene | 1 | 0 | | 7.81 | 41.08 | 50 | 20 | | 2.526 | 2.075 | 17.84 | |
| sec-Butylbenzene | 1 | 0 | | 7.90 | 44.35 | 50 | 20 | | 3.028 | 2.686 | 11.31 | |
| 4-Isopropyltoluene | 1 | 0 | | 7.97 | 44.75 | 50 | 20 | | 2.487 | 2.226 | 10.51 | |
| n-Butylbenzene | 1 | 0 | | 8.20 | 42.74 | 50 | 20 | | 3.030 | 2.590 | 14.52 | |
| p-Diethylbenzene | 1 | 0 | | 8.19 | 44.18 | 50 | 20 | | 1.610 | 1.422 | 11.65 | |
| 1,2,4,5-Tetramethylbenzene | 1 | 0 | | 8.63 | 45.32 | 50 | 20 | | 2.296 | 2.081 | 9.35 | |
| 1,2-Dibromo-3-Chloropropane | 1 | 0 | | 8.69 | 45.03 | 50 | 20 | 0.05 | 0.182 | 0.164 | 9.94 | |
| Camphor | 1 | 0 | | 9.11 | 463.31 | 500 | 20 | | 0.103 | 0.096 | 7.34 | |
| Hexachlorobutadiene | 1 | 0 | | 9.25 | 48.22 | 50 | 20 | | 0.441 | 0.426 | 3.56 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 9.17 | 43.81 | 50 | 20 | 0.2 | 0.841 | 0.737 | 12.38 | |
| 1,2,3-Trichlorobenzene | 1 | 0 | | 9.46 | 43.07 | 50 | 20 | | 0.835 | 0.720 | 13.85 | |
| Naphthalene | 1 | 0 | | 9.32 | 39.35 | 50 | 20 | | 2.782 | 2.183 | 21.30 | C1 |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 8M18964.D  Method: EPA 8260C

Analysis Date/Time: 07/26/18 19:02

Lab File ID: CAL @ 20 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 661110 | 5.11 | 604531 | 6.76 | 332203 | 8.02 | | | | | | | | |
| Eval File Area Limit: | 330555-1322220 | | 302266-1209062 | | 166102-664406 | | | | | | | | | |
| Eval File Rt Limit: | 4.61-5.61 | | 6.26-7.26 | | 7.52-8.52 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 8M18960.D | CAL @ 0.5 PPB | 655202 | 5.11 | 614835 | 6.76 | 321924 | 8.02 |
| 8M18961.D | CAL @ 1 PPB | 656865 | 5.11 | 602584 | 6.76 | 321777 | 8.02 |
| 8M18962.D | CAL @ 2 PPB | 618415 | 5.11 | 563802 | 6.76 | 301220 | 8.02 |
| 8M18963.D | CAL @ 5 PPB | 679951 | 5.11 | 623677 | 6.76 | 335573 | 8.02 |
| 8M18964.D | CAL @ 20 PPB | 661110 | 5.11 | 604531 | 6.76 | 332203 | 8.02 |
| 8M18965.D | CAL @ 50 PPB | 681396 | 5.11 | 630354 | 6.76 | 362221 | 8.02 |
| 8M18966.D | CAL @ 500 PPB | 685663 | 5.11 | 694028 | 6.76 | 416054 | 8.02 |
| 8M18969.D | CAL @ 250 PPB | 735329 | 5.11 | 706628 | 6.76 | 397883 | 8.02 |
| 8M18972.D | CAL @ 100 PPB | 776946 | 5.11 | 727267 | 6.76 | 404337 | 8.02 |
| 8M18975.D | ICV | 762175 | 5.11 | 707056 | 6.76 | 392719 | 8.02 |
| 8M18979.D | daily blank | 718153 | 5.11 | 664781 | 6.76 | 354587 | 8.02 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 8M20080.D  Method: EPA 8260C

Analysis Date/Time: 08/22/18 00:50

Lab File ID: CAL @ 50 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 601339 | 5.11 | 558447 | 6.76 | 312651 | 8.02 | | | | | | | | |
| Eval File Area Limit: | 300670-1202678 | | 279224-1116894 | | 156326-625302 | | | | | | | | | |
| Eval File Rt Limit: | 4.61-5.61 | | 6.26-7.26 | | 7.52-8.52 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 8M20079.D | 50 PPB | 607897 | 5.11 | 555142 | 6.76 | 311596 | 8.02 |
| 8M20081.D | BLK | 602369 | 5.11 | 553160 | 6.76 | 295629 | 8.02 |
| 8M20082.D | BLK | 612034 | 5.11 | 577825 | 6.76 | 305393 | 8.02 |
| 8M20083.D | DAILY BLANK | 581280 | 5.11 | 542609 | 6.76 | 287567 | 8.02 |
| 8M20084.D | AD06068-002 | 564660 | 5.11 | 527581 | 6.76 | 280393 | 8.02 |
| 8M20085.D | AD05993-006 | 563395 | 5.11 | 503091 | 6.76 | 244905 | 8.02 |
| 8M20086.D | AD05993-007 | 552905 | 5.11 | 501143 | 6.76 | 258458 | 8.02 |
| 8M20087.D | MBS70991 | 547874 | 5.11 | 511639 | 6.76 | 285074 | 8.02 |
| 8M20088.D | AD06068-002(MS) | 556761 | 5.11 | 510788 | 6.76 | 285737 | 8.02 |
| 8M20089.D | AD06068-002(MSD) | 545616 | 5.11 | 500179 | 6.76 | 282794 | 8.02 |
| 8M20090.D | BLK | 543228 | 5.11 | 504415 | 6.76 | 269029 | 8.02 |
| 8M20091.D | AD05993-008 | 515563 | 5.11 | 474869 | 6.76 | 253452 | 8.02 |
| 8M20092.D | AD05993-009 | 522909 | 5.11 | 477209 | 6.76 | 234587 | 8.02 |
| 8M20093.D | AD05993-010 | 496798 | 5.11 | 455330 | 6.76 | 244161 | 8.02 |
| 8M20094.D | AD05993-011 | 493929 | 5.11 | 464525 | 6.76 | 246554 | 8.02 |
| 8M20095.D | AD05993-012 | 482899 | 5.11 | 438665 | 6.76 | 217451 | 8.02 |
| 8M20096.D | AD05993-013 | 461202 | 5.11 | 432929 | 6.76 | 231593 | 8.02 |
| 8M20097.D | AD05993-014 | 433209 | 5.11 | 382036 | 6.76 | 175838 | 8.02 |
| 8M20098.D | AD06019-004 | 464823 | 5.11 | 434745 | 6.76 | 227253 | 8.02 |
| 8M20099.D | AD06019-005 | 461747 | 5.11 | 430963 | 6.76 | 224675 | 8.02 |
| 8M20100.D | AD05999-001 | 456453 | 5.11 | 427439 | 6.76 | 224276 | 8.02 |
| 8M20101.D | AD05999-002 | 464845 | 5.11 | 438087 | 6.76 | 224566 | 8.02 |
| 8M20102.D | AD06051-001 | 437309 | 5.11 | 401401 | 6.76 | 198683 | 8.02 |
| 8M20103.D | AD06051-002 | 413827 | 5.11 | 389173 | 6.76 | 208141 | 8.02 |
| 8M20104.D | AD06051-003 | 421629 | 5.11 | 400120 | 6.76 | 214729 | 8.02 |
| 8M20105.D | AD06051-004 | 421051 | 5.11 | 394155 | 6.76 | 209964 | 8.02 |
| 8M20106.D | AD06051-005 | 422981 | 5.11 | 398017 | 6.76 | 207903 | 8.02 |
| 8M20107.D | AD06065-001 | 417604 | 5.11 | 368807 | 6.76 | 171142 | 8.02 |
| 8M20108.D | AD06051-001 | 418140 | 5.11 | 385979 | 6.76 | 190934 | 8.02 |
| 8M20109.D | AD06051-002 | 406187 | 5.11 | 388391 | 6.76 | 204793 | 8.02 |
| 8M20110.D | AD06051-003 | 395227 | 5.11 | 378581 | 6.76 | 199508 | 8.02 |
| 8M20111.D | AD06051-004 | 415935 | 5.11 | 398464 | 6.76 | 207027 | 8.02 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 8M20080.D  Method: EPA 8260C

Analysis Date/Time: 08/22/18 00:50

Lab File ID: CAL @ 50 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 601339 | 5.11 | 558447 | 6.76 | 312651 | 8.02 | | | | | | | | |
| Eval File Area Limit: | 300670-1202678 | | 279224-1116894 | | 156326-625302 | | | | | | | | | |
| Eval File Rt Limit: | 4.61-5.61 | | 6.26-7.26 | | 7.52-8.52 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 8M20112.D | AD06051-005 | 386497 | 5.11 | 361615 | 6.76 | 195202 | 8.02 |
| 8M20113.D | BLK | 390804 | 5.11 | 365255 | 6.76 | 193703 | 8.02 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

# TCLP Volatile Data

# Form1

ORGANICS VOLATILE REPORT

Sample Number: AD05999-001(T)
Client Id: SS-1
Data File: 3M134840.D
Analysis Date: 08/22/18 16:27
Date Rec/Extracted: 08/16/18-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

**Units: mg/L**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 75-35-4 | 1,1-Dichloroethene | 0.0010 | U | 108-90-7 | Chlorobenzene | 0.0010 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.00050 | U | 67-66-3 | Chloroform | 0.0010 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0010 | U | 127-18-4 | Tetrachloroethene | 0.0010 | U |
| 78-93-3 | 2-Butanone | 0.0010 | U | 79-01-6 | Trichloroethene | 0.0010 | U |
| 71-43-2 | Benzene | 0.00050 | U | 75-01-4 | Vinyl Chloride | 0.0010 | U |
| 56-23-5 | Carbon Tetrachloride | 0.0010 | U | | | | |

Worksheet #: 476727

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

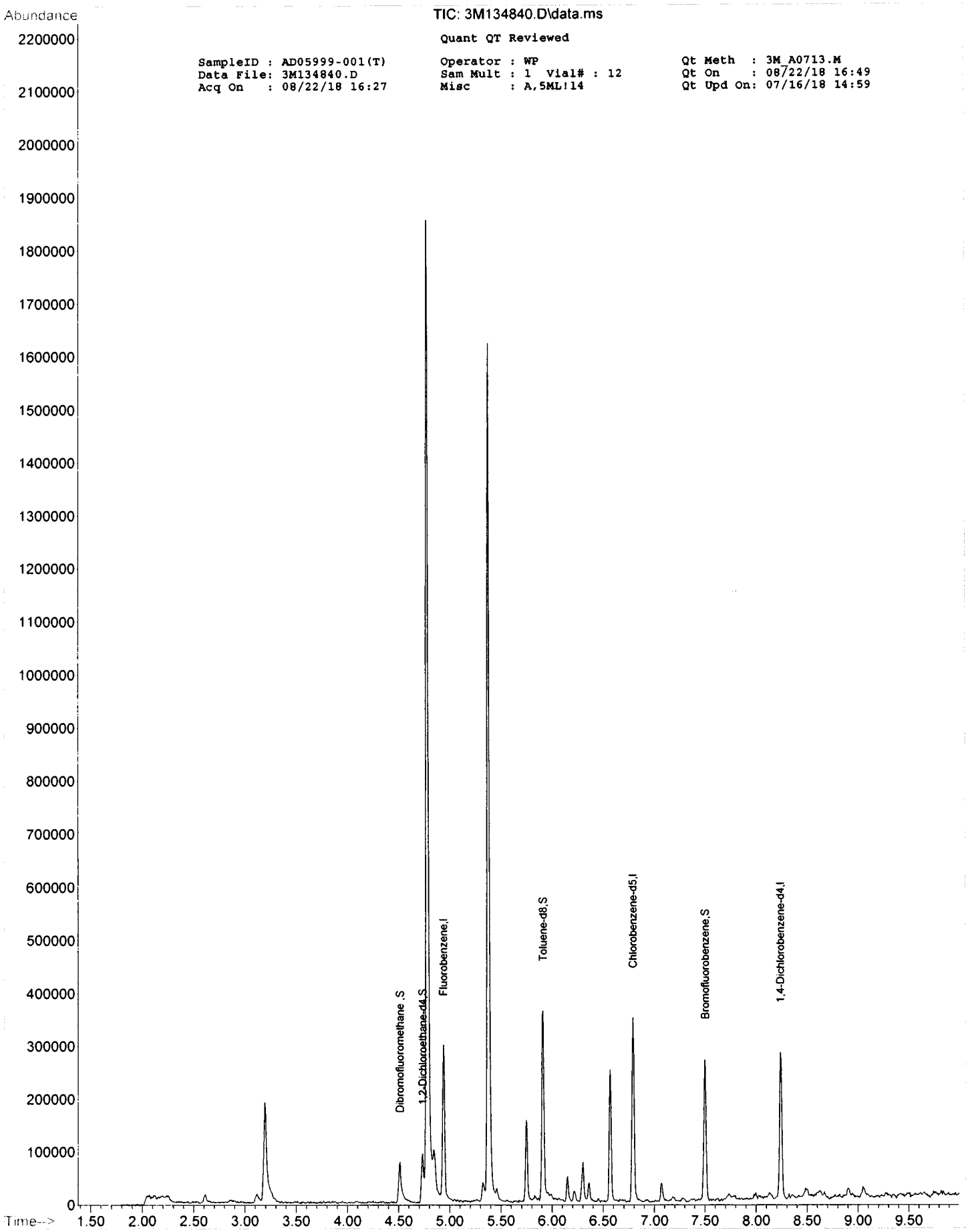
Quantitation Report (QT Reviewed)

SampleID : AD05999-001(T) Operator : WP Qt Meth : 3M_A0713.M
Data File: 3M134840.D Sam Mult : 1 Vial# : 12 Qt On : 08/22/18 16:49
Acq On : 08/22/18 16:27 Misc : A,5ML!14 Qt Upd On: 07/16/18 14:59

Data Path : G:\GcMsData\2018\GCMS_3\Data\08-22-18\
Qt Path : G:\GcMsData\2018\GCMS_3\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 4.940 | 96 | 170583 | 30.00 | ug/l | -0.01 |
| 52) Chlorobenzene-d5 | 6.790 | 117 | 145151 | 30.00 | ug/l | 0.00 |
| 70) 1,4-Dichlorobenzene-d4 | 8.238 | 152 | 66569 | 30.00 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.513 | 111 | 43754 | 29.39 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 97.97% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.736 | 67 | 30659 | 28.84 | ug/l | -0.01 |
| Spiked Amount 30.000 | | | Recovery = 96.13% | | | |
| 66) Toluene-d8 | 5.913 | 98 | 169785 | 26.91 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 89.70% | | | |
| 76) Bromofluorobenzene | 7.505 | 174 | 63507 | 25.08 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 83.60% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 3M134840.D\data.ms
Quant QT Reviewed
SampleID : AD05999-001(T)
Data File: 3M134840.D
Acq On : 08/22/18 16:27
Operator : WP
Sam Mult : 1 Vial# : 12
Misc : A,5ML!14
Qt Meth : 3M_A0713.M
Qt On : 08/22/18 16:49
Qt Upd On: 07/16/18 14:59
Dibromofluoromethane,S
1,2-Dichloroethane-d4,S
Fluorobenzene,I
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I
Time-->

# Form1

ORGANICS VOLATILE REPORT

Sample Number: DAILY BLANK
Client Id:
Data File: 3M134831.D
Analysis Date: 08/22/18 13:51
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

**Units: mg/L**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 75-35-4 | 1,1-Dichloroethene | 0.0010 | U | 108-90-7 | Chlorobenzene | 0.0010 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.00050 | U | 67-66-3 | Chloroform | 0.0010 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0010 | U | 127-18-4 | Tetrachloroethene | 0.0010 | U |
| 78-93-3 | 2-Butanone | 0.0010 | U | 79-01-6 | Trichloroethene | 0.0010 | U |
| 71-43-2 | Benzene | 0.00050 | U | 75-01-4 | Vinyl Chloride | 0.0010 | U |
| 56-23-5 | Carbon Tetrachloride | 0.0010 | U | | | | |

Worksheet #: 476727

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

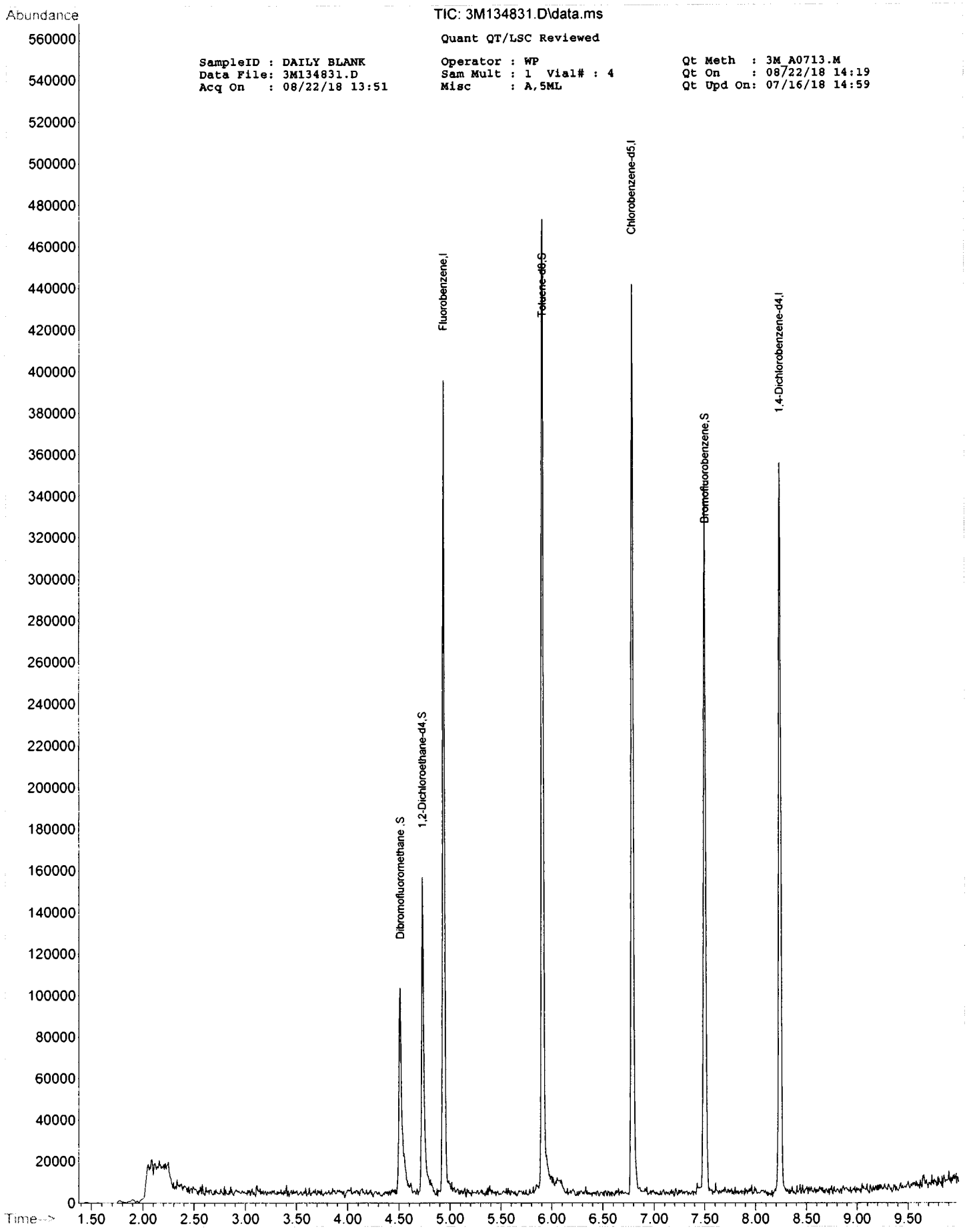
Quantitation Report (QT/LSC Reviewed)

SampleID : DAILY BLANK Operator : WP Qt Meth : 3M_A0713.M
Data File: 3M134831.D Sam Mult : 1 Vial# : 4 Qt On : 08/22/18 14:19
Acq On : 08/22/18 13:51 Misc : A,5ML Qt Upd On: 07/16/18 14:59

Data Path : G:\GcMsData\2018\GCMS_3\Data\08-22-18\
Qt Path : G:\GcMsData\2018\GCMS_3\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 4.939 | 96 | 209886 | 30.00 | ug/l | -0.01 |
| 52) Chlorobenzene-d5 | 6.789 | 117 | 182278 | 30.00 | ug/l | 0.00 |
| 70) 1,4-Dichlorobenzene-d4 | 8.237 | 152 | 83838 | 30.00 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.513 | 111 | 55275 | 30.17 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 100.57% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.729 | 67 | 44951 | 34.37 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 114.57% | | | |
| 66) Toluene-d8 | 5.912 | 98 | 222801 | 28.12 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 93.73% | | | |
| 76) Bromofluorobenzene | 7.504 | 174 | 80901 | 25.37 | ug/l | 0.00 |
| Spiked Amount 30.000 | | | Recovery = 84.57% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 3M134831.D\data.ms
Quant QT/LSC Reviewed
SampleID : DAILY BLANK
Data File: 3M134831.D
Acq On : 08/22/18 13:51
Operator : WP
Sam Mult : 1 Vial# : 4
Misc : A,5ML
Qt Meth : 3M_A0713.M
Qt On : 08/22/18 14:19
Qt Upd On: 07/16/18 14:59
Dibromofluoromethane,S
1,2-Dichloroethane-d4,S
Fluorobenzene,I
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I
Time-->

# Form1

ORGANICS VOLATILE REPORT

Sample Number: EF-1-V-285748(082118)
Client Id:
Data File: 3M134851.D
Analysis Date: 08/22/18 19:36
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

**Units: mg/L**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 75-35-4 | 1,1-Dichloroethene | 0.0010 | U | 108-90-7 | Chlorobenzene | 0.0010 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.00050 | U | 67-66-3 | Chloroform | 0.0010 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0010 | U | 127-18-4 | Tetrachloroethene | 0.0010 | U |
| 78-93-3 | 2-Butanone | 0.0010 | U | 79-01-6 | Trichloroethene | 0.0010 | U |
| 71-43-2 | Benzene | 0.00050 | U | 75-01-4 | Vinyl Chloride | 0.0010 | U |
| 56-23-5 | Carbon Tetrachloride | 0.0010 | U | | | | |

Worksheet #: 476727

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

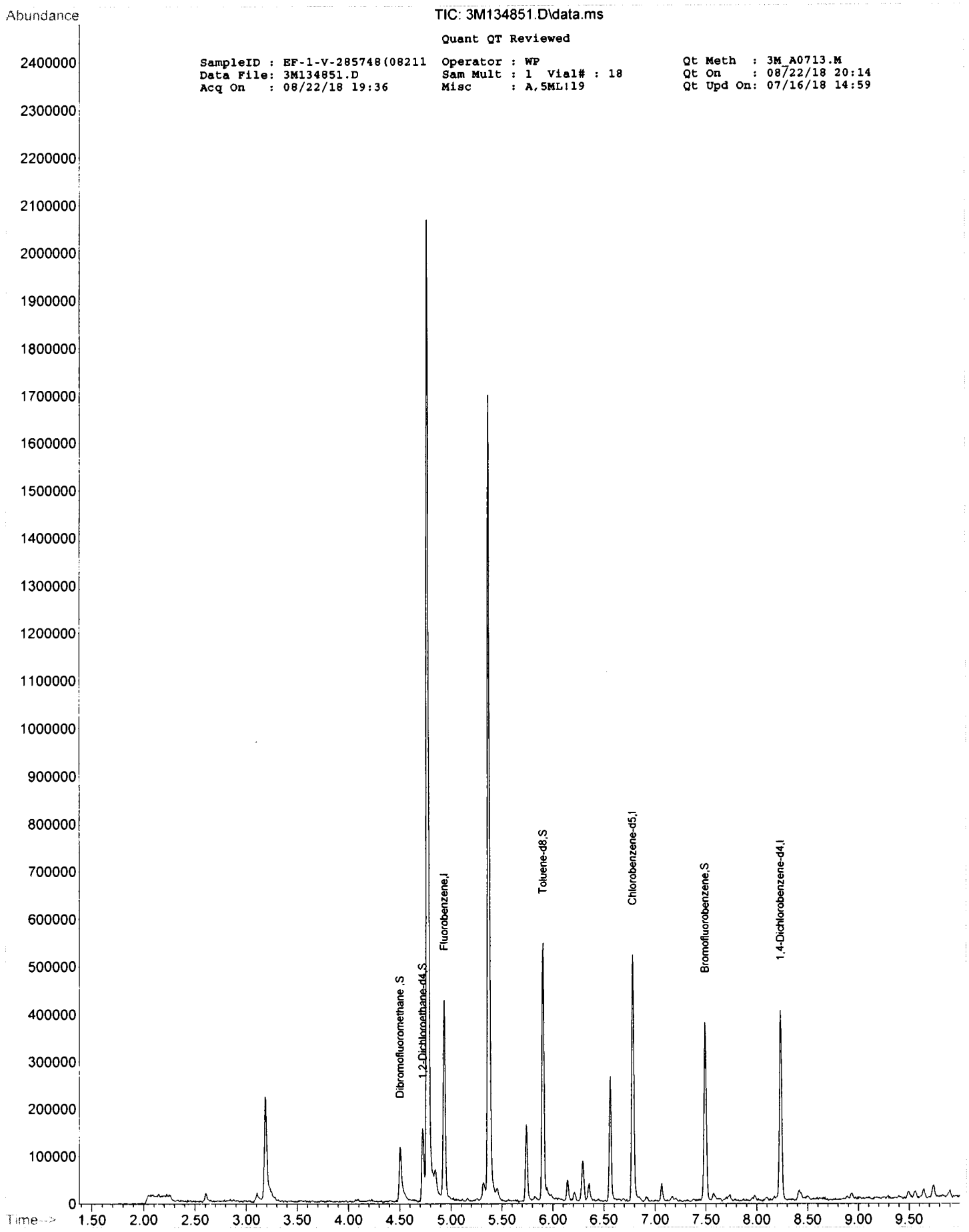
Quantitation Report (QT Reviewed)

SampleID : EF-1-V-285748(08211 Operator : WP Qt Meth : 3M_A0713.M
Data File: 3M134851.D Sam Mult : 1 Vial# : 18 Qt On : 08/22/18 20:14
Acq On : 08/22/18 19:36 Misc : A,5ML!19 Qt Upd On: 07/16/18 14:59

Data Path : G:\GcMsData\2018\GCMS_3\Data\08-22-18\
Qt Path : G:\GcMsData\2018\GCMS_3\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 4) Fluorobenzene | 4.934 | 96 | 244901 | 30.00 | ug/l | -0.02 |
| 52) Chlorobenzene-d5 | 6.784 | 117 | 213965 | 30.00 | ug/l | -0.01 |
| 70) 1,4-Dichlorobenzene-d4 | 8.232 | 152 | 98815 | 30.00 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 37) Dibromofluoromethane | 4.502 | 111 | 65806 | 30.78 | ug/l | -0.03 |
| Spiked Amount 30.000 | | | Recovery = 102.60% | | | |
| 39) 1,2-Dichloroethane-d4 | 4.724 | 67 | 48416 | 31.73 | ug/l | -0.02 |
| Spiked Amount 30.000 | | | Recovery = 105.77% | | | |
| 66) Toluene-d8 | 5.907 | 98 | 262796 | 28.26 | ug/l | -0.01 |
| Spiked Amount 30.000 | | | Recovery = 94.20% | | | |
| 76) Bromofluorobenzene | 7.493 | 174 | 95862 | 25.51 | ug/l | -0.01 |
| Spiked Amount 30.000 | | | Recovery = 85.03% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 3M134851.D\data.ms
Quant QT Reviewed
SampleID : EF-1-V-285748(08211
Data File: 3M134851.D
Acq On : 08/22/18 19:36
Operator : WP
Sam Mult : 1 Vial# : 18
Misc : A,5ML!19
Qt Meth : 3M_A0713.M
Qt On : 08/22/18 20:14
Qt Upd On: 07/16/18 14:59
2400000
2300000
2200000
2100000
2000000
1900000
1800000
1700000
1600000
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
Time-->
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00
6.50
7.00
7.50
8.00
8.50
9.00
9.50
Dibromofluoromethane,S
1,2-Dichloroethane-d4,S
Fluorobenzene,I
Toluene-d8,S
Chlorobenzene-d5,I
Bromofluorobenzene,S
1,4-Dichlorobenzene-d4,I

# FORM2

## Surrogate Recovery

Method: EPA 8260C

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column1 S2 Recov | Column1 S3 Recov | Column1 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3M134831.D | DAILY BLANK | A | 08/22/18 13:51 | 1 | | 101 | 115 | 94 | 85 | | |
| 3M134851.D | EF-1-V-285748(082118) | A | 08/22/18 19:36 | 1 | | 103 | 106 | 94 | 85 | | |
| 3M134840.D | AD05999-001(T) | A | 08/22/18 16:27 | 1 | | 98 | 96 | 90 | 84 | | |
| 3M134837.D | MBS70993 | A | 08/22/18 15:35 | 1 | | 106 | 106 | 91 | 93 | | |
| 3M134839.D | AD06006-001(T) | A | 08/22/18 16:10 | 1 | | 92 | 103 | 91 | 93 | | |
| 3M134849.D | AD06006-001(T:MS) | A | 08/22/18 19:01 | 1 | | 107 | 99 | 95 | 92 | | |
| 3M134850.D | AD06006-001(T:MSD) | A | 08/22/18 19:19 | 1 | | 99 | 97 | 91 | 91 | | |

**Flags:** SD=Surrogate diluted out

*=Surrogate out

**Method:** EPA 8260C

### Aqueous Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=Dibromofluoromethane | 30 | 73-131 |
| S2=1,2-Dichloroethane-d4 | 30 | 78-128 |
| S3=Toluene-d8 | 30 | 79-111 |
| S4=Bromofluorobenzene | 30 | 82-112 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70993

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 3M134837.D | MBS70993 | 8/22/2018 3:35:00 PM |
| Non Spike(If applicable): | | |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Aqueous | QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 27.1855 | 0 | 20 | 136 | 50 | 150 |
| Dichlorodifluoromethane | 1 | 32.392 | 0 | 20 | 162* | 50 | 150 |
| Chloromethane | 1 | 31.307 | 0 | 20 | 157* | 50 | 150 |
| Bromomethane | 1 | 14.2932 | 0 | 20 | 71 | 50 | 150 |
| Vinyl Chloride | 1 | 28.2416 | 0 | 20 | 141 | 50 | 150 |
| Chloroethane | 1 | 15.4966 | 0 | 20 | 77 | 50 | 150 |
| Trichlorofluoromethane | 1 | 15.1465 | 0 | 20 | 76 | 50 | 150 |
| Ethyl ether | 1 | 17.3645 | 0 | 20 | 87 | 50 | 150 |
| Furan | 1 | 17.3119 | 0 | 20 | 87 | 50 | 150 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 19.2158 | 0 | 20 | 96 | 50 | 150 |
| Methylene Chloride | 1 | 20.4033 | 0 | 20 | 102 | 70 | 130 |
| Acrolein | 1 | 104.8688 | 0 | 100 | 105 | 50 | 150 |
| Acrylonitrile | 1 | 20.5741 | 0 | 20 | 103 | 50 | 150 |
| Iodomethane | 1 | 18.3188 | 0 | 20 | 92 | 50 | 150 |
| Acetone | 1 | 108.3179 | 0 | 100 | 108 | 50 | 150 |
| Carbon Disulfide | 1 | 24.6555 | 0 | 20 | 123 | 50 | 150 |
| t-Butyl Alcohol | 1 | 71.8048 | 0 | 100 | 72 | 50 | 150 |
| n-Hexane | 1 | 22.9405 | 0 | 20 | 115 | 70 | 130 |
| Di-isopropyl-ether | 1 | 20.0923 | 0 | 20 | 100 | 70 | 130 |
| 1,1-Dichloroethene | 1 | 20.215 | 0 | 20 | 101 | 70 | 130 |
| Methyl Acetate | 1 | 17.8462 | 0 | 20 | 89 | 50 | 150 |
| Methyl-t-butyl ether | 1 | 21.1392 | 0 | 20 | 106 | 70 | 130 |
| 1,1-Dichloroethane | 1 | 20.0269 | 0 | 20 | 100 | 70 | 130 |
| trans-1,2-Dichloroethene | 1 | 18.1868 | 0 | 20 | 91 | 70 | 130 |
| Ethyl-t-butyl ether | 1 | 19.9594 | 0 | 20 | 100 | 70 | 130 |
| cis-1,2-Dichloroethene | 1 | 21.5575 | 0 | 20 | 108 | 70 | 130 |
| Bromochloromethane | 1 | 22.7558 | 0 | 20 | 114 | 70 | 130 |
| 2,2-Dichloropropane | 1 | 22.6199 | 0 | 20 | 113 | 70 | 130 |
| Ethyl acetate | 1 | 22.5657 | 0 | 20 | 113 | 50 | 150 |
| 1,4-Dioxane | 1 | 1069.342 | 0 | 1000 | 107 | 50 | 150 |
| 1,1-Dichloropropene | 1 | 24.1299 | 0 | 20 | 121 | 70 | 130 |
| Chloroform | 1 | 21.3755 | 0 | 20 | 107 | 70 | 130 |
| Cyclohexane | 1 | 17.5935 | 0 | 20 | 88 | 70 | 130 |
| 1,2-Dichloroethane | 1 | 21.5199 | 0 | 20 | 108 | 70 | 130 |
| 2-Butanone | 1 | 19.9776 | 0 | 20 | 100 | 50 | 150 |
| 1,1,1-Trichloroethane | 1 | 19.9441 | 0 | 20 | 100 | 70 | 130 |
| Carbon Tetrachloride | 1 | 20.3116 | 0 | 20 | 102 | 50 | 150 |
| Vinyl Acetate | 1 | 20.1761 | 0 | 20 | 101 | 50 | 150 |
| Bromodichloromethane | 1 | 18.9768 | 0 | 20 | 95 | 70 | 130 |
| Methylcyclohexane | 1 | 21.4239 | 0 | 20 | 107 | 70 | 130 |
| Dibromomethane | 1 | 17.9557 | 0 | 20 | 90 | 70 | 130 |
| 1,2-Dichloropropane | 1 | 22.2192 | 0 | 20 | 111 | 70 | 130 |
| Trichloroethene | 1 | 21.8866 | 0 | 20 | 109 | 70 | 130 |
| Benzene | 1 | 22.1699 | 0 | 20 | 111 | 70 | 130 |
| tert-Amyl methyl ether | 1 | 19.9329 | 0 | 20 | 100 | 70 | 130 |
| Iso-propylacetate | 1 | 17.6636 | 0 | 20 | 88 | 70 | 130 |
| Methyl methacrylate | 1 | 17.1984 | 0 | 20 | 86 | 70 | 130 |
| Dibromochloromethane | 1 | 16.2133 | 0 | 20 | 81 | 70 | 130 |
| 2-Chloroethylvinylether | 1 | 17.378 | 0 | 20 | 87 | 70 | 130 |
| cis-1,3-Dichloropropene | 1 | 17.4469 | 0 | 20 | 87 | 70 | 130 |
| trans-1,3-Dichloropropene | 1 | 17.8249 | 0 | 20 | 89 | 70 | 130 |
| Ethyl methacrylate | 1 | 16.8906 | 0 | 20 | 84 | 70 | 130 |
| 1,1,2-Trichloroethane | 1 | 17.0343 | 0 | 20 | 85 | 70 | 130 |
| 1,2-Dibromoethane | 1 | 18.1263 | 0 | 20 | 91 | 70 | 130 |
| 1,3-Dichloropropane | 1 | 19.5236 | 0 | 20 | 98 | 70 | 130 |
| 4-Methyl-2-Pentanone | 1 | 17.443 | 0 | 20 | 87 | 50 | 150 |
| 2-Hexanone | 1 | 16.7839 | 0 | 20 | 84 | 50 | 150 |
| Tetrachloroethene | 1 | 17.9357 | 0 | 20 | 90 | 50 | 150 |
| Toluene | 1 | 18.7313 | 0 | 20 | 94 | 70 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 19.355 | 0 | 20 | 97 | 70 | 130 |
| Chlorobenzene | 1 | 17.6816 | 0 | 20 | 88 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70993

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 17.046 | 0 | 20 | 85 | 70 | 130 |
| n-Amyl acetate | 1 | 18.9795 | 0 | 20 | 95 | 70 | 130 |
| Bromoform | 1 | 17.2341 | 0 | 20 | 86 | 70 | 130 |
| Ethylbenzene | 1 | 21.3045 | 0 | 20 | 107 | 70 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 19.8952 | 0 | 20 | 99 | 70 | 130 |
| Styrene | 1 | 21.4866 | 0 | 20 | 107 | 70 | 130 |
| m&p-Xylenes | 1 | 43.9273 | 0 | 40 | 110 | 70 | 130 |
| o-Xylene | 1 | 21.7296 | 0 | 20 | 109 | 70 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 21.7711 | 0 | 20 | 109 | 50 | 150 |
| 1,3-Dichlorobenzene | 1 | 20.4311 | 0 | 20 | 102 | 70 | 130 |
| 1,4-Dichlorobenzene | 1 | 19.9839 | 0 | 20 | 100 | 70 | 130 |
| 1,2-Dichlorobenzene | 1 | 19.2985 | 0 | 20 | 96 | 70 | 130 |
| Isopropylbenzene | 1 | 21.6068 | 0 | 20 | 108 | 70 | 130 |
| Cyclohexanone | 1 | 105.253 | 0 | 100 | 105 | 50 | 150 |
| Camphene | 1 | 22.3489 | 0 | 20 | 112 | 70 | 130 |
| 1,2,3-Trichloropropane | 1 | 19.8712 | 0 | 20 | 99 | 70 | 130 |
| 2-Chlorotoluene | 1 | 23.1317 | 0 | 20 | 116 | 70 | 130 |
| p-Ethyltoluene | 1 | 21.4178 | 0 | 20 | 107 | 70 | 130 |
| 4-Chlorotoluene | 1 | 19.5171 | 0 | 20 | 98 | 70 | 130 |
| n-Propylbenzene | 1 | 23.8395 | 0 | 20 | 119 | 70 | 130 |
| Bromobenzene | 1 | 20.2086 | 0 | 20 | 101 | 70 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 22.8247 | 0 | 20 | 114 | 70 | 130 |
| Butyl methacrylate | 1 | 22.2536 | 0 | 20 | 111 | 70 | 130 |
| t-Butylbenzene | 1 | 22.2777 | 0 | 20 | 111 | 70 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 22.8421 | 0 | 20 | 114 | 70 | 130 |
| sec-Butylbenzene | 1 | 22.6492 | 0 | 20 | 113 | 70 | 130 |
| 4-Isopropyltoluene | 1 | 23.8051 | 0 | 20 | 119 | 70 | 130 |
| n-Butylbenzene | 1 | 24.594 | 0 | 20 | 123 | 70 | 130 |
| p-Diethylbenzene | 1 | 22.6925 | 0 | 20 | 113 | 70 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 17.9591 | 0 | 20 | 90 | 70 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 17.2974 | 0 | 20 | 86 | 50 | 150 |
| Camphor | 1 | 207.4034 | 0 | 200 | 104 | 20 | 150 |
| Hexachlorobutadiene | 1 | 23.543 | 0 | 20 | 118 | 50 | 150 |
| 1,2,4-Trichlorobenzene | 1 | 20.4855 | 0 | 20 | 102 | 70 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 20.7128 | 0 | 20 | 104 | 70 | 130 |
| Naphthalene | 1 | 19.4964 | 0 | 20 | 97 | 50 | 150 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70993

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 3M134849.D | AD06006-001(T:MS) | 8/22/2018 7:01:00 PM |
| Non Spike(If applicable): 3M134839.D | AD06006-001(T) | 8/22/2018 4:10:00 PM |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Aqueous | QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 22.6652 | 0 | 20 | 113 | 50 | 150 |
| Dichlorodifluoromethane | 1 | 44.231 | 0 | 20 | 221* | 50 | 150 |
| Chloromethane | 1 | 29.9385 | 0 | 20 | 150 | 50 | 150 |
| Bromomethane | 1 | 28.2127 | 0 | 20 | 141 | 50 | 150 |
| Vinyl Chloride | 1 | 27.2391 | 0 | 20 | 136 | 50 | 150 |
| Chloroethane | 1 | 24.7812 | 0 | 20 | 124 | 50 | 150 |
| Trichlorofluoromethane | 1 | 17.412 | 0 | 20 | 87 | 50 | 150 |
| Ethyl ether | 1 | 21.1367 | 0 | 20 | 106 | 50 | 150 |
| Furan | 1 | 18.5994 | 0 | 20 | 93 | 50 | 150 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 24.8152 | 0 | 20 | 124 | 50 | 150 |
| Methylene Chloride | 1 | 65.6708 | 0 | 20 | 328* | 70 | 130 |
| Acrolein | 1 | 43.824 | 0 | 100 | 44* | 50 | 150 |
| Acrylonitrile | 1 | 19.8269 | 0 | 20 | 99 | 50 | 150 |
| Iodomethane | 1 | 24.2332 | 0 | 20 | 121 | 50 | 150 |
| Acetone | 1 | 107.4245 | 0 | 100 | 107 | 50 | 150 |
| Carbon Disulfide | 1 | 25.3488 | 0 | 20 | 127 | 50 | 150 |
| t-Butyl Alcohol | 1 | 63.7768 | 0 | 100 | 64 | 50 | 150 |
| n-Hexane | 1 | 23.5213 | 0 | 20 | 118 | 70 | 130 |
| Di-isopropyl-ether | 1 | 19.9717 | 0 | 20 | 100 | 70 | 130 |
| 1,1-Dichloroethene | 1 | 19.5333 | 0 | 20 | 98 | 70 | 130 |
| Methyl Acetate | 1 | 8.9175 | 0 | 20 | 45* | 50 | 150 |
| Methyl-t-butyl ether | 1 | 19.0784 | 0 | 20 | 95 | 70 | 130 |
| 1,1-Dichloroethane | 1 | 16.312 | 0 | 20 | 82 | 70 | 130 |
| trans-1,2-Dichloroethene | 1 | 21.9621 | 0 | 20 | 110 | 70 | 130 |
| Ethyl-t-butyl ether | 1 | 18.5357 | 0 | 20 | 93 | 70 | 130 |
| cis-1,2-Dichloroethene | 1 | 22.2442 | 0 | 20 | 111 | 70 | 130 |
| Bromochloromethane | 1 | 16.4838 | 0 | 20 | 82 | 70 | 130 |
| 2,2-Dichloropropane | 1 | 22.8178 | 0 | 20 | 114 | 70 | 130 |
| Ethyl acetate | 1 | 16.7808 | 0 | 20 | 84 | 50 | 150 |
| 1,4-Dioxane | 1 | 736.7535 | 0 | 1000 | 74 | 50 | 150 |
| 1,1-Dichloropropene | 1 | 23.5275 | 0 | 20 | 118 | 70 | 130 |
| Chloroform | 1 | 22.3523 | 0 | 20 | 112 | 70 | 130 |
| Cyclohexane | 1 | 21.5052 | 0 | 20 | 108 | 70 | 130 |
| 1,2-Dichloroethane | 1 | 21.851 | 0 | 20 | 109 | 70 | 130 |
| 2-Butanone | 1 | 16.981 | 0 | 20 | 85 | 50 | 150 |
| 1,1,1-Trichloroethane | 1 | 21.4352 | 0 | 20 | 107 | 70 | 130 |
| Carbon Tetrachloride | 1 | 24.6198 | 0 | 20 | 123 | 50 | 150 |
| Vinyl Acetate | 1 | 13.4634 | 0 | 20 | 67 | 50 | 150 |
| Bromodichloromethane | 1 | 20.7498 | 0 | 20 | 104 | 70 | 130 |
| Methylcyclohexane | 1 | 22.9002 | 0 | 20 | 115 | 70 | 130 |
| Dibromomethane | 1 | 19.2626 | 0 | 20 | 96 | 70 | 130 |
| 1,2-Dichloropropane | 1 | 21.621 | 0 | 20 | 108 | 70 | 130 |
| Trichloroethene | 1 | 39.0936 | 0 | 20 | 195* | 70 | 130 |
| Benzene | 1 | 23.3642 | 0 | 20 | 117 | 70 | 130 |
| tert-Amyl methyl ether | 1 | 19.9888 | 0 | 20 | 100 | 70 | 130 |
| Iso-propylacetate | 1 | 19.2833 | 0 | 20 | 96 | 70 | 130 |
| Methyl methacrylate | 1 | 13.4226 | 0 | 20 | 67* | 70 | 130 |
| Dibromochloromethane | 1 | 18.0628 | 0 | 20 | 90 | 70 | 130 |
| 2-Chloroethylvinylether | 1 | 16.8775 | 0 | 20 | 84 | 70 | 130 |
| cis-1,3-Dichloropropene | 1 | 16.5072 | 0 | 20 | 83 | 70 | 130 |
| trans-1,3-Dichloropropene | 1 | 16.873 | 0 | 20 | 84 | 70 | 130 |
| Ethyl methacrylate | 1 | 13.7287 | 0 | 20 | 69* | 70 | 130 |
| 1,1,2-Trichloroethane | 1 | 17.2324 | 0 | 20 | 86 | 70 | 130 |
| 1,2-Dibromoethane | 1 | 17.5039 | 0 | 20 | 88 | 70 | 130 |
| 1,3-Dichloropropane | 1 | 18.6256 | 0 | 20 | 93 | 70 | 130 |
| 4-Methyl-2-Pentanone | 1 | 14.9457 | 0 | 20 | 75 | 50 | 150 |
| 2-Hexanone | 1 | 18.9472 | 0 | 20 | 95 | 50 | 150 |
| Tetrachloroethene | 1 | 20.8719 | 0 | 20 | 104 | 50 | 150 |
| Toluene | 1 | 20.3738 | 0 | 20 | 102 | 70 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 20.1137 | 0 | 20 | 101 | 70 | 130 |
| Chlorobenzene | 1 | 18.5715 | 0 | 20 | 93 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3

## Recovery Data Laboratory Limits

QC Batch: MBS70993

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 11.4067 | 0 | 20 | 57* | 70 | 130 |
| n-Amyl acetate | 1 | 13.4376 | 0 | 20 | 67* | 70 | 130 |
| Bromoform | 1 | 16.1006 | 0 | 20 | 81 | 70 | 130 |
| Ethylbenzene | 1 | 19.7282 | 0 | 20 | 99 | 70 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 1.6575 | 0 | 20 | 8.3* | 70 | 130 |
| Styrene | 1 | 19.8814 | 0 | 20 | 99 | 70 | 130 |
| m&p-Xylenes | 1 | 42.9695 | 0 | 40 | 107 | 70 | 130 |
| o-Xylene | 1 | 22.5996 | 0 | 20 | 113 | 70 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 18.6116 | 0 | 20 | 93 | 50 | 150 |
| 1,3-Dichlorobenzene | 1 | 20.3803 | 0 | 20 | 102 | 70 | 130 |
| 1,4-Dichlorobenzene | 1 | 19.8517 | 0 | 20 | 99 | 70 | 130 |
| 1,2-Dichlorobenzene | 1 | 19.207 | 0 | 20 | 96 | 70 | 130 |
| Isopropylbenzene | 1 | 20.852 | 0 | 20 | 104 | 70 | 130 |
| Cyclohexanone | 1 | 91.3364 | 0 | 100 | 91 | 50 | 150 |
| Camphene | 1 | 20.8159 | 0 | 20 | 104 | 70 | 130 |
| 1,2,3-Trichloropropane | 1 | 19.4175 | 0 | 20 | 97 | 70 | 130 |
| 2-Chlorotoluene | 1 | 21.1279 | 0 | 20 | 106 | 70 | 130 |
| p-Ethyltoluene | 1 | 22.0208 | 0 | 20 | 110 | 70 | 130 |
| 4-Chlorotoluene | 1 | 22.5092 | 0 | 20 | 113 | 70 | 130 |
| n-Propylbenzene | 1 | 22.8785 | 0 | 20 | 114 | 70 | 130 |
| Bromobenzene | 1 | 19.5985 | 0 | 20 | 98 | 70 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 24.2659 | 0 | 20 | 121 | 70 | 130 |
| Butyl methacrylate | 1 | 16.5452 | 0 | 20 | 83 | 70 | 130 |
| t-Butylbenzene | 1 | 21.1626 | 0 | 20 | 106 | 70 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 23.7791 | 0 | 20 | 119 | 70 | 130 |
| sec-Butylbenzene | 1 | 21.6484 | 0 | 20 | 108 | 70 | 130 |
| 4-Isopropyltoluene | 1 | 23.0301 | 0 | 20 | 115 | 70 | 130 |
| n-Butylbenzene | 1 | 24.8108 | 0 | 20 | 124 | 70 | 130 |
| p-Diethylbenzene | 1 | 23.6301 | 0 | 20 | 118 | 70 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 20.5175 | 0 | 20 | 103 | 70 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 18.0248 | 0 | 20 | 90 | 50 | 150 |
| Camphor | 1 | 184.0101 | 0 | 200 | 92 | 20 | 150 |
| Hexachlorobutadiene | 1 | 19.5984 | 0 | 20 | 98 | 50 | 150 |
| 1,2,4-Trichlorobenzene | 1 | 20.9784 | 0 | 20 | 105 | 70 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 20.5683 | 0 | 20 | 103 | 70 | 130 |
| Naphthalene | 1 | 17.0543 | 0 | 20 | 85 | 50 | 150 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70993

| Data File | Sample ID: | Analysis Date |
|---|---|---|
| Spike or Dup: 3M134850.D | AD06006-001(T:MSD) | 8/22/2018 7:19:00 PM |
| Non Spike(If applicable): 3M134839.D | AD06006-001(T) | 8/22/2018 4:10:00 PM |
| Inst Blank(If applicable): | | |

Method: 8260C | Matrix: Aqueous | QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 20.066 | 0 | 20 | 100 | 50 | 150 |
| Dichlorodifluoromethane | 1 | 39.0242 | 0 | 20 | 195* | 50 | 150 |
| Chloromethane | 1 | 24.7621 | 0 | 20 | 124 | 50 | 150 |
| Bromomethane | 1 | 25.9955 | 0 | 20 | 130 | 50 | 150 |
| Vinyl Chloride | 1 | 27.6917 | 0 | 20 | 138 | 50 | 150 |
| Chloroethane | 1 | 19.8363 | 0 | 20 | 99 | 50 | 150 |
| Trichlorofluoromethane | 1 | 16.3702 | 0 | 20 | 82 | 50 | 150 |
| Ethyl ether | 1 | 18.3949 | 0 | 20 | 92 | 50 | 150 |
| Furan | 1 | 15.998 | 0 | 20 | 80 | 50 | 150 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 22.3766 | 0 | 20 | 112 | 50 | 150 |
| Methylene Chloride | 1 | 58.1619 | 0 | 20 | 291* | 70 | 130 |
| Acrolein | 1 | 33.6142 | 0 | 100 | 34* | 50 | 150 |
| Acrylonitrile | 1 | 17.1687 | 0 | 20 | 86 | 50 | 150 |
| Iodomethane | 1 | 20.9294 | 0 | 20 | 105 | 50 | 150 |
| Acetone | 1 | 116.0941 | 0 | 100 | 116 | 50 | 150 |
| Carbon Disulfide | 1 | 24.2597 | 0 | 20 | 121 | 50 | 150 |
| t-Butyl Alcohol | 1 | 71.9261 | 0 | 100 | 72 | 50 | 150 |
| n-Hexane | 1 | 21.8713 | 0 | 20 | 109 | 70 | 130 |
| Di-isopropyl-ether | 1 | 18.0719 | 0 | 20 | 90 | 70 | 130 |
| 1,1-Dichloroethene | 1 | 20.3885 | 0 | 20 | 102 | 70 | 130 |
| Methyl Acetate | 1 | 5.9833 | 0 | 20 | 30* | 50 | 150 |
| Methyl-t-butyl ether | 1 | 17.9897 | 0 | 20 | 90 | 70 | 130 |
| 1,1-Dichloroethane | 1 | 13.7187 | 0 | 20 | 69* | 70 | 130 |
| trans-1,2-Dichloroethene | 1 | 18.9076 | 0 | 20 | 95 | 70 | 130 |
| Ethyl-t-butyl ether | 1 | 17.4973 | 0 | 20 | 87 | 70 | 130 |
| cis-1,2-Dichloroethene | 1 | 18.7184 | 0 | 20 | 94 | 70 | 130 |
| Bromochloromethane | 1 | 14.8535 | 0 | 20 | 74 | 70 | 130 |
| 2,2-Dichloropropane | 1 | 20.6382 | 0 | 20 | 103 | 70 | 130 |
| Ethyl acetate | 1 | 14.5963 | 0 | 20 | 73 | 50 | 150 |
| 1,4-Dioxane | 1 | 944.2716 | 0 | 1000 | 94 | 50 | 150 |
| 1,1-Dichloropropene | 1 | 21.368 | 0 | 20 | 107 | 70 | 130 |
| Chloroform | 1 | 18.933 | 0 | 20 | 95 | 70 | 130 |
| Cyclohexane | 1 | 18.0213 | 0 | 20 | 90 | 70 | 130 |
| 1,2-Dichloroethane | 1 | 19.4501 | 0 | 20 | 97 | 70 | 130 |
| 2-Butanone | 1 | 20.5253 | 0 | 20 | 103 | 50 | 150 |
| 1,1,1-Trichloroethane | 1 | 19.5485 | 0 | 20 | 98 | 70 | 130 |
| Carbon Tetrachloride | 1 | 21.2724 | 0 | 20 | 106 | 50 | 150 |
| Vinyl Acetate | 1 | 12.0675 | 0 | 20 | 60 | 50 | 150 |
| Bromodichloromethane | 1 | 20.1894 | 0 | 20 | 101 | 70 | 130 |
| Methylcyclohexane | 1 | 18.8545 | 0 | 20 | 94 | 70 | 130 |
| Dibromomethane | 1 | 18.2324 | 0 | 20 | 91 | 70 | 130 |
| 1,2-Dichloropropane | 1 | 20.0119 | 0 | 20 | 100 | 70 | 130 |
| Trichloroethene | 1 | 37.2769 | 0 | 20 | 186* | 70 | 130 |
| Benzene | 1 | 21.2493 | 0 | 20 | 106 | 70 | 130 |
| tert-Amyl methyl ether | 1 | 18.1508 | 0 | 20 | 91 | 70 | 130 |
| Iso-propylacetate | 1 | 17.6494 | 0 | 20 | 88 | 70 | 130 |
| Methyl methacrylate | 1 | 12.2185 | 0 | 20 | 61* | 70 | 130 |
| Dibromochloromethane | 1 | 15.9192 | 0 | 20 | 80 | 70 | 130 |
| 2-Chloroethylvinylether | 1 | 13.5281 | 0 | 20 | 68* | 70 | 130 |
| cis-1,3-Dichloropropene | 1 | 15.9895 | 0 | 20 | 80 | 70 | 130 |
| trans-1,3-Dichloropropene | 1 | 16.1989 | 0 | 20 | 81 | 70 | 130 |
| Ethyl methacrylate | 1 | 12.2712 | 0 | 20 | 61* | 70 | 130 |
| 1,1,2-Trichloroethane | 1 | 15.9042 | 0 | 20 | 80 | 70 | 130 |
| 1,2-Dibromoethane | 1 | 16.6605 | 0 | 20 | 83 | 70 | 130 |
| 1,3-Dichloropropane | 1 | 17.3267 | 0 | 20 | 87 | 70 | 130 |
| 4-Methyl-2-Pentanone | 1 | 15.2333 | 0 | 20 | 76 | 50 | 150 |
| 2-Hexanone | 1 | 16.2549 | 0 | 20 | 81 | 50 | 150 |
| Tetrachloroethene | 1 | 19.4785 | 0 | 20 | 97 | 50 | 150 |
| Toluene | 1 | 18.1877 | 0 | 20 | 91 | 70 | 130 |
| 1,1,1,2-Tetrachloroethane | 1 | 19.04 | 0 | 20 | 95 | 70 | 130 |
| Chlorobenzene | 1 | 16.926 | 0 | 20 | 85 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: MBS70993

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n-Butyl acrylate | 1 | 9.3357 | 0 | 20 | 47* | 70 | 130 |
| n-Amyl acetate | 1 | 10.2759 | 0 | 20 | 51* | 70 | 130 |
| Bromoform | 1 | 15.6346 | 0 | 20 | 78 | 70 | 130 |
| Ethylbenzene | 1 | 22.5838 | 0 | 20 | 113 | 70 | 130 |
| 1,1,2,2-Tetrachloroethane | 1 | 0 | 0 | 20 | 0* | 70 | 130 |
| Styrene | 1 | 19.0058 | 0 | 20 | 95 | 70 | 130 |
| m&p-Xylenes | 1 | 39.5373 | 0 | 40 | 99 | 70 | 130 |
| o-Xylene | 1 | 19.8183 | 0 | 20 | 99 | 70 | 130 |
| trans-1,4-Dichloro-2-butene | 1 | 15.9844 | 0 | 20 | 80 | 50 | 150 |
| 1,3-Dichlorobenzene | 1 | 17.5319 | 0 | 20 | 88 | 70 | 130 |
| 1,4-Dichlorobenzene | 1 | 17.8658 | 0 | 20 | 89 | 70 | 130 |
| 1,2-Dichlorobenzene | 1 | 17.9907 | 0 | 20 | 90 | 70 | 130 |
| Isopropylbenzene | 1 | 18.3504 | 0 | 20 | 92 | 70 | 130 |
| Cyclohexanone | 1 | 90.742 | 0 | 100 | 91 | 50 | 150 |
| Camphene | 1 | 18.9935 | 0 | 20 | 95 | 70 | 130 |
| 1,2,3-Trichloropropane | 1 | 17.048 | 0 | 20 | 85 | 70 | 130 |
| 2-Chlorotoluene | 1 | 19.2832 | 0 | 20 | 96 | 70 | 130 |
| p-Ethyltoluene | 1 | 17.8598 | 0 | 20 | 89 | 70 | 130 |
| 4-Chlorotoluene | 1 | 18.707 | 0 | 20 | 94 | 70 | 130 |
| n-Propylbenzene | 1 | 20.1094 | 0 | 20 | 101 | 70 | 130 |
| Bromobenzene | 1 | 17.8895 | 0 | 20 | 89 | 70 | 130 |
| 1,3,5-Trimethylbenzene | 1 | 24.6396 | 0 | 20 | 123 | 70 | 130 |
| Butyl methacrylate | 1 | 15.1435 | 0 | 20 | 76 | 70 | 130 |
| t-Butylbenzene | 1 | 19.8401 | 0 | 20 | 99 | 70 | 130 |
| 1,2,4-Trimethylbenzene | 1 | 22.1853 | 0 | 20 | 111 | 70 | 130 |
| sec-Butylbenzene | 1 | 19.9153 | 0 | 20 | 100 | 70 | 130 |
| 4-Isopropyltoluene | 1 | 20.875 | 0 | 20 | 104 | 70 | 130 |
| n-Butylbenzene | 1 | 23.4368 | 0 | 20 | 117 | 70 | 130 |
| p-Diethylbenzene | 1 | 21.2673 | 0 | 20 | 106 | 70 | 130 |
| 1,2,4,5-Tetramethylbenzene | 1 | 21.4128 | 0 | 20 | 107 | 70 | 130 |
| 1,2-Dibromo-3-Chloropropane | 1 | 17.5751 | 0 | 20 | 88 | 50 | 150 |
| Camphor | 1 | 181.0298 | 0 | 200 | 91 | 20 | 150 |
| Hexachlorobutadiene | 1 | 20.566 | 0 | 20 | 103 | 50 | 150 |
| 1,2,4-Trichlorobenzene | 1 | 21.96 | 0 | 20 | 110 | 70 | 130 |
| 1,2,3-Trichlorobenzene | 1 | 20.9538 | 0 | 20 | 105 | 70 | 130 |
| Naphthalene | 1 | 17.8588 | 0 | 20 | 89 | 50 | 150 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
# RPD Data Laboratory Limits
## QC Batch: MBS70993

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3M134850.D | AD06006-001(T:MSD) | 8/22/2018 7:19:00 PM |
| Duplicate(If applicable): | 3M134849.D | AD06006-001(T:MS) | 8/22/2018 7:01:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8260C  Matrix: Aqueous  QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 20.066 | 22.6652 | 12 | 30 |
| Dichlorodifluoromethane | 1 | 39.0242 | 44.231 | 13 | 30 |
| Chloromethane | 1 | 24.7621 | 29.9385 | 19 | 30 |
| Bromomethane | 1 | 25.9955 | 28.2127 | 8.2 | 30 |
| Vinyl Chloride | 1 | 27.6917 | 27.2391 | 1.6 | 40 |
| Chloroethane | 1 | 19.8363 | 24.7812 | 22 | 30 |
| Trichlorofluoromethane | 1 | 16.3702 | 17.412 | 6.2 | 30 |
| Ethyl ether | 1 | 18.3949 | 21.1367 | 14 | 30 |
| Furan | 1 | 15.998 | 18.5994 | 15 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1 | 22.3766 | 24.8152 | 10 | 30 |
| Methylene Chloride | 1 | 58.1619 | 65.6708 | 12 | 30 |
| Acrolein | 1 | 33.6142 | 43.824 | 26 | 30 |
| Acrylonitrile | 1 | 17.1687 | 19.8269 | 14 | 30 |
| Iodomethane | 1 | 20.9294 | 24.2332 | 15 | 30 |
| Acetone | 1 | 116.0941 | 107.4245 | 7.8 | 30 |
| Carbon Disulfide | 1 | 24.2597 | 25.3488 | 4.4 | 30 |
| t-Butyl Alcohol | 1 | 71.9261 | 63.7768 | 12 | 30 |
| n-Hexane | 1 | 21.8713 | 23.5213 | 7.3 | 30 |
| Di-isopropyl-ether | 1 | 18.0719 | 19.9717 | 10 | 30 |
| 1,1-Dichloroethene | 1 | 20.3885 | 19.5333 | 4.3 | 40 |
| Methyl Acetate | 1 | 5.9833 | 8.9175 | 39* | 30 |
| Methyl-t-butyl ether | 1 | 17.9897 | 19.0784 | 5.9 | 30 |
| 1,1-Dichloroethane | 1 | 13.7187 | 16.312 | 17 | 40 |
| trans-1,2-Dichloroethene | 1 | 18.9076 | 21.9621 | 15 | 30 |
| Ethyl-t-butyl ether | 1 | 17.4973 | 18.5357 | 5.8 | 30 |
| cis-1,2-Dichloroethene | 1 | 18.7184 | 22.2442 | 17 | 30 |
| Bromochloromethane | 1 | 14.8535 | 16.4838 | 10 | 30 |
| 2,2-Dichloropropane | 1 | 20.6382 | 22.8178 | 10 | 30 |
| Ethyl acetate | 1 | 14.5963 | 16.7808 | 14 | 30 |
| 1,4-Dioxane | 1 | 944.2716 | 736.7535 | 25 | 30 |
| 1,1-Dichloropropene | 1 | 21.368 | 23.5275 | 9.6 | 30 |
| Chloroform | 1 | 18.933 | 22.3523 | 17 | 40 |
| Cyclohexane | 1 | 18.0213 | 21.5052 | 18 | 30 |
| 1,2-Dichloroethane | 1 | 19.4501 | 21.851 | 12 | 40 |
| 2-Butanone | 1 | 20.5253 | 16.981 | 19 | 40 |
| 1,1,1-Trichloroethane | 1 | 19.5485 | 21.4352 | 9.2 | 30 |
| Carbon Tetrachloride | 1 | 21.2724 | 24.6198 | 15 | 40 |
| Vinyl Acetate | 1 | 12.0675 | 13.4634 | 11 | 30 |
| Bromodichloromethane | 1 | 20.1894 | 20.7498 | 2.7 | 30 |
| Methylcyclohexane | 1 | 18.8545 | 22.9002 | 19 | 30 |
| Dibromomethane | 1 | 18.2324 | 19.2626 | 5.5 | 30 |
| 1,2-Dichloropropane | 1 | 20.0119 | 21.621 | 7.7 | 30 |
| Trichloroethene | 1 | 37.2769 | 39.0936 | 4.8 | 40 |
| Benzene | 1 | 21.2493 | 23.3642 | 9.5 | 40 |
| tert-Amyl methyl ether | 1 | 18.1508 | 19.9888 | 9.6 | 30 |
| Iso-propylacetate | 1 | 17.6494 | 19.2833 | 8.8 | 30 |
| Methyl methacrylate | 1 | 12.2185 | 13.4226 | 9.4 | 30 |
| Dibromochloromethane | 1 | 15.9192 | 18.0628 | 13 | 30 |
| 2-Chloroethylvinylether | 1 | 13.5281 | 16.8775 | 22 | 30 |
| cis-1,3-Dichloropropene | 1 | 15.9895 | 16.5072 | 3.2 | 30 |
| trans-1,3-Dichloropropene | 1 | 16.1989 | 16.873 | 4.1 | 30 |
| Ethyl methacrylate | 1 | 12.2712 | 13.7287 | 11 | 30 |
| 1,1,2-Trichloroethane | 1 | 15.9042 | 17.2324 | 8 | 30 |
| 1,2-Dibromoethane | 1 | 16.6605 | 17.5039 | 4.9 | 30 |
| 1,3-Dichloropropane | 1 | 17.3267 | 18.6256 | 7.2 | 30 |
| 4-Methyl-2-Pentanone | 1 | 15.2333 | 14.9457 | 1.9 | 30 |
| 2-Hexanone | 1 | 16.2549 | 18.9472 | 15 | 30 |
| Tetrachloroethene | 1 | 19.4785 | 20.8719 | 6.9 | 40 |
| Toluene | 1 | 18.1877 | 20.3738 | 11 | 40 |
| 1,1,1,2-Tetrachloroethane | 1 | 19.04 | 20.1137 | 5.5 | 30 |
| Chlorobenzene | 1 | 16.926 | 18.5715 | 9.3 | 40 |
| n-Butyl acrylate | 1 | 9.3357 | 11.4067 | 20 | 30 |
| n-Amyl acetate | 1 | 10.2759 | 13.4376 | 27 | 30 |

# Form3
## RPD Data Laboratory Limits
### QC Batch: MBS70993

| | | | | | |
|---|---|---|---|---|---|
| Bromoform | 1 | 15.6346 | 16.1006 | 2.9 | 30 |
| Ethylbenzene | 1 | 22.5838 | 19.7282 | 13 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | 0 | 1.6575 | 200* | 30 |
| Styrene | 1 | 19.0058 | 19.8814 | 4.5 | 30 |
| m&p-Xylenes | 1 | 39.5373 | 42.9695 | 8.3 | 30 |
| o-Xylene | 1 | 19.8183 | 22.5996 | 13 | 30 |
| trans-1,4-Dichloro-2-butene | 1 | 15.9844 | 18.6116 | 15 | 30 |
| 1,3-Dichlorobenzene | 1 | 17.5319 | 20.3803 | 15 | 30 |
| 1,4-Dichlorobenzene | 1 | 17.8658 | 19.8517 | 11 | 40 |
| 1,2-Dichlorobenzene | 1 | 17.9907 | 19.207 | 6.5 | 40 |
| Isopropylbenzene | 1 | 18.3504 | 20.852 | 13 | 30 |
| Cyclohexanone | 1 | 90.742 | 91.3364 | 0.65 | 30 |
| Camphene | 1 | 18.9935 | 20.8159 | 9.2 | 30 |
| 1,2,3-Trichloropropane | 1 | 17.048 | 19.4175 | 13 | 30 |
| 2-Chlorotoluene | 1 | 19.2832 | 21.1279 | 9.1 | 30 |
| p-Ethyltoluene | 1 | 17.8598 | 22.0208 | 21 | 30 |
| 4-Chlorotoluene | 1 | 18.707 | 22.5092 | 18 | 30 |
| n-Propylbenzene | 1 | 20.1094 | 22.8785 | 13 | 40 |
| Bromobenzene | 1 | 17.8895 | 19.5985 | 9.1 | 30 |
| 1,3,5-Trimethylbenzene | 1 | 24.6396 | 24.2659 | 1.5 | 30 |
| Butyl methacrylate | 1 | 15.1435 | 16.5452 | 8.8 | 30 |
| t-Butylbenzene | 1 | 19.8401 | 21.1626 | 6.5 | 30 |
| 1,2,4-Trimethylbenzene | 1 | 22.1853 | 23.7791 | 6.9 | 30 |
| sec-Butylbenzene | 1 | 19.9153 | 21.6484 | 8.3 | 40 |
| 4-Isopropyltoluene | 1 | 20.875 | 23.0301 | 9.8 | 30 |
| n-Butylbenzene | 1 | 23.4368 | 24.8108 | 5.7 | 30 |
| p-Diethylbenzene | 1 | 21.2673 | 23.6301 | 11 | 30 |
| 1,2,4,5-Tetramethylbenzene | 1 | 21.4128 | 20.5175 | 4.3 | 30 |
| 1,2-Dibromo-3-Chloropropane | 1 | 17.5751 | 18.0248 | 2.5 | 30 |
| Camphor | 1 | 181.0298 | 184.0101 | 1.6 | 30 |
| Hexachlorobutadiene | 1 | 20.566 | 19.5984 | 4.8 | 30 |
| 1,2,4-Trichlorobenzene | 1 | 21.96 | 20.9784 | 4.6 | 30 |
| 1,2,3-Trichlorobenzene | 1 | 20.9538 | 20.5683 | 1.9 | 30 |
| Naphthalene | 1 | 17.8588 | 17.0543 | 4.6 | 30 |

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: DAILY BLANK
Blank Data File: 3M134831.D
Matrix: Aqueous

Blank Analysis Date: 08/22/18 13:51
Blank Extraction Date: NA
(If Applicable)
Method: EPA 8260C

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD05999-001(T) | 3M134840.D | 08/22/18 16:27 |
| EF-1-V-285748(082 | 3M134851.D | 08/22/18 19:36 |
| AD06006-001(T:M | 3M134850.D | 08/22/18 19:19 |
| AD06006-001(T:M | 3M134849.D | 08/22/18 19:01 |
| AD06006-001(T) | 3M134839.D | 08/22/18 16:10 |
| MBS70993 | 3M134837.D | 08/22/18 15:35 |

# Form 5

**Tune Name:** BFB TUNE
**Instrument:** GCMS 3
**Data File:** 3M132618.D
**Analysis Date:** 07/13/18 19:52
Method: EPA 8260C

Tune Scan/Time Range: Scan 34

| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 18.7 | 11574 | PASS |
| 75 | 95 | 30 | 60 | 44.6 | 27616 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 61856 | PASS |
| 96 | 95 | 5 | 9 | 7.0 | 4317 | PASS |
| 173 | 174 | 0.00 | 2 | 1.1 | 563 | PASS |
| 174 | 95 | 50 | 100 | 84.0 | 51952 | PASS |
| 175 | 174 | 5 | 9 | 8.3 | 4335 | PASS |
| 176 | 174 | 95 | 101 | 96.7 | 50232 | PASS |
| 177 | 176 | 5 | 9 | 7.7 | 3883 | PASS |

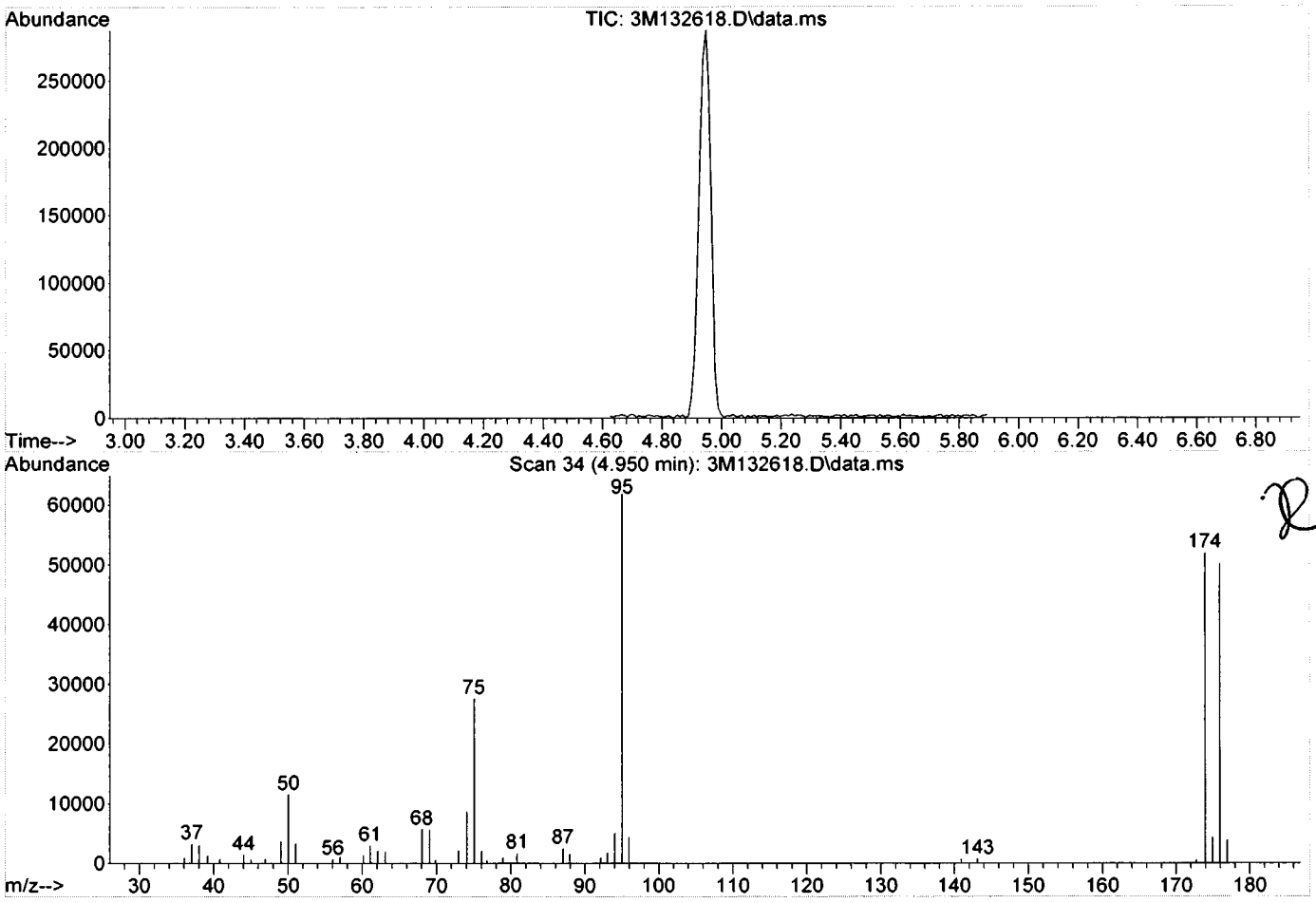
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 3M132620.D | CAL @ 0.5 PPB | 07/13/18 20:24 |
| 3M132621.D | CAL @ 1 PPB | 07/13/18 20:41 |
| 3M132622.D | CAL @ 5 PPB | 07/13/18 20:58 |
| 3M132623.D | CAL @ 10 PPB | 07/13/18 21:14 |
| 3M132624.D | CAL @ 20 PPB | 07/13/18 21:31 |
| 3M132625.D | CAL @ 500 PPB | 07/13/18 21:48 |
| 3M132628.D | CAL @ 250 PPB | 07/13/18 22:37 |
| 3M132631.D | CAL @ 100 PPB | 07/13/18 23:28 |
| 3M132634.D | CAL @ 50 PPB | 07/14/18 00:22 |
| 3M132637.D | ICV | 07/14/18 01:13 |
| 3M132643.D | DAILY BLANK | 07/14/18 02:55 |
| 3M132644.D | AD05312-001 | 07/14/18 03:12 |
| 3M132645.D | AD05377-001 | 07/14/18 03:29 |
| 3M132646.D | AD05357-003 | 07/14/18 03:45 |
| 3M132647.D | AD05357-005 | 07/14/18 04:03 |
| 3M132648.D | MBS70502 | 07/14/18 04:19 |
| 3M132649.D | AD05357-008(MS) | 07/14/18 04:36 |
| 3M132650.D | AD05357-008(MSD | 07/14/18 04:53 |
| 3M132651.D | AD05357-008 | 07/14/18 05:10 |
| 3M132652.D | AD05357-002 | 07/14/18 05:27 |
| 3M132653.D | AD05357-001 | 07/14/18 05:44 |
| 3M132654.D | AD05357-006 | 07/14/18 06:01 |
| 3M132655.D | AD05357-004 | 07/14/18 06:18 |
| 3M132656.D | AD05357-007 | 07/14/18 06:35 |
| 3M132657.D | MBS70503 | 07/14/18 06:51 |

8081617 0065

Data Path : G:\GcMsData\2018\GCMS_3\Data\07-13-18\
Data File : 3M132618.D
Acq On : 13 Jul 2018 19:52
Operator : WP
Sample : BFB TUNE
Misc : A,5ML
ALS Vial : 26 Sample Multiplier: 1

Integration File: RTEINT.P

Method : G:\GcMsData\2018\GCMS_3\MethodQt\3M_A0713.M
Title : @GCMS_3,ug,624,8260
Last Update : Mon Jul 16 14:57:47 2018




Spectrum Information: Scan 34

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 18.7 | 11574 | PASS |
| 75 | 95 | 30 | 60 | 44.6 | 27616 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 61856 | PASS |
| 96 | 95 | 5 | 9 | 7.0 | 4317 | PASS |
| 173 | 174 | 0.00 | 2 | 1.1 | 563 | PASS |
| 174 | 95 | 50 | 100 | 84.0 | 51952 | PASS |
| 175 | 174 | 5 | 9 | 8.3 | 4335 | PASS |
| 176 | 174 | 95 | 101 | 96.7 | 50232 | PASS |
| 177 | 176 | 5 | 9 | 7.7 | 3883 | PASS |

# Form 5



**Tune Name:** BFB TUNE
**Instrument:** GCMS 3
**Data File:** 3M134826.D
**Analysis Date:** 08/22/18 12:30
**Method:** EPA 8260C

**Tune Scan/Time Range:** Average of 4.913 to 4.992 min

| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 22.1 | 6132 | PASS |
| 75 | 95 | 30 | 60 | 48.6 | 13487 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 27743 | PASS |
| 96 | 95 | 5 | 9 | 7.3 | 2021 | PASS |
| 173 | 174 | 0.00 | 2 | 0.3 | 60 | PASS |
| 174 | 95 | 50 | 100 | 76.4 | 21201 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 1593 | PASS |
| 176 | 174 | 95 | 101 | 97.0 | 20575 | PASS |
| 177 | 176 | 5 | 9 | 6.9 | 1420 | PASS |

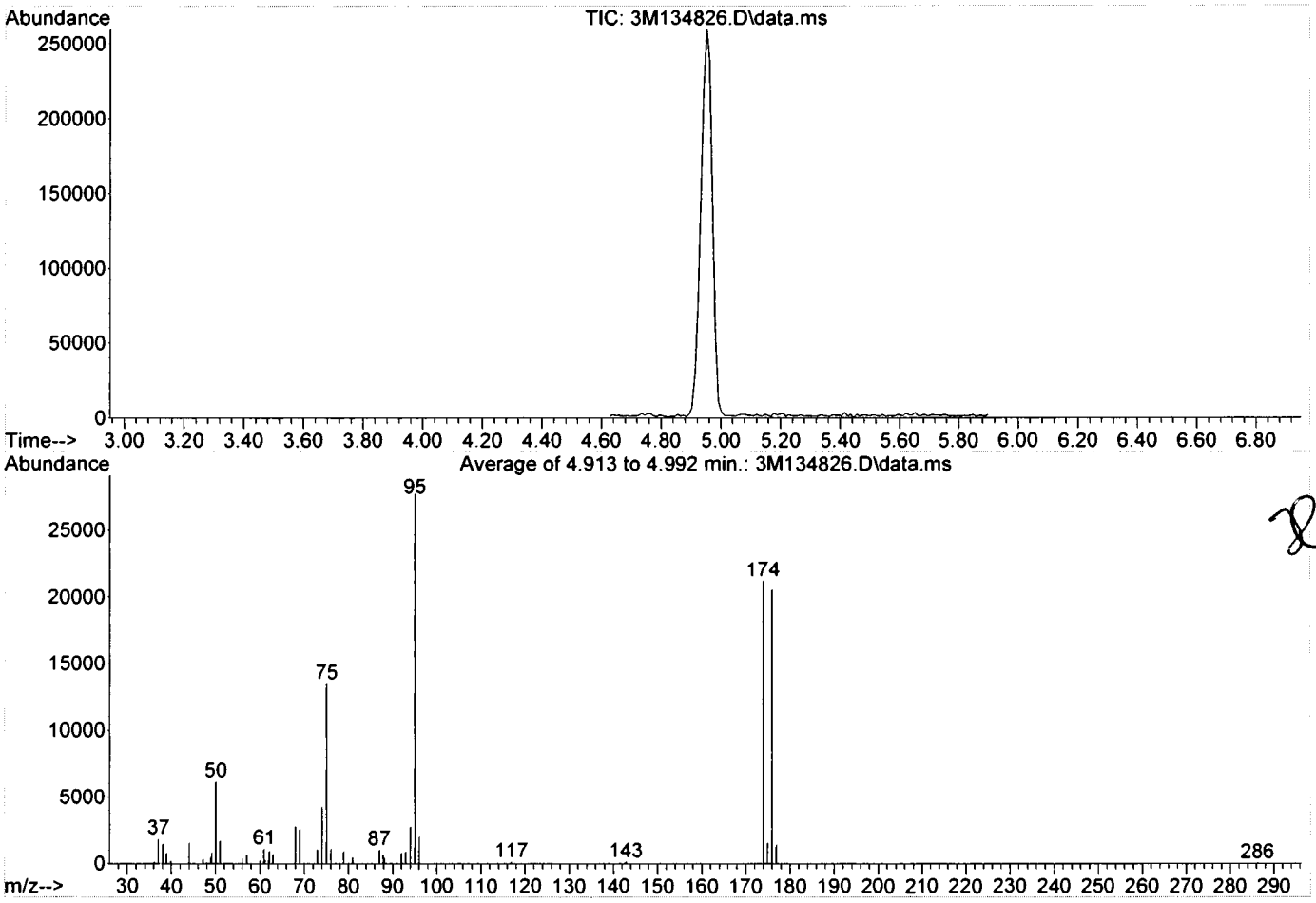
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 3M134827.D | 20 PPB | 08/22/18 12:39 |
| 3M134828.D | CAL @ 20 PPB | 08/22/18 12:56 |
| 3M134829.D | BLK | 08/22/18 13:17 |
| 3M134830.D | DAILY BLANK | 08/22/18 13:34 |
| 3M134831.D | DAILY BLANK | 08/22/18 13:51 |
| 3M134832.D | AD06007-003 | 08/22/18 14:09 |
| 3M134833.D | AD06026-002 | 08/22/18 14:26 |
| 3M134834.D | MBS70992 | 08/22/18 14:43 |
| 3M134835.D | AD06069-001(MS) | 08/22/18 15:00 |
| 3M134836.D | AD06069-001(MSD | 08/22/18 15:18 |
| 3M134837.D | MBS70993 | 08/22/18 15:35 |
| 3M134838.D | AD06069-001 | 08/22/18 15:53 |
| 3M134839.D | AD06006-001(T) | 08/22/18 16:10 |
| 3M134840.D | AD05999-001(T) | 08/22/18 16:27 |
| 3M134841.D | AD06064-001(T) | 08/22/18 16:45 |
| 3M134842.D | AD06064-002(T) | 08/22/18 17:02 |
| 3M134843.D | AD06064-003(T) | 08/22/18 17:19 |
| 3M134844.D | AD06027-001(T) | 08/22/18 17:36 |
| 3M134845.D | AD05997-004(5X) | 08/22/18 17:53 |
| 3M134846.D | BLK | 08/22/18 18:08 |
| 3M134847.D | AD05997-005(10X) | 08/22/18 18:27 |
| 3M134848.D | BLK | 08/22/18 18:44 |
| 3M134849.D | AD06006-001(T:M | 08/22/18 19:01 |
| 3M134850.D | AD06006-001(T:M | 08/22/18 19:19 |
| 3M134851.D | EF-1-V-285748(082 | 08/22/18 19:36 |
| 3M134852.D | AD06079-003 | 08/22/18 19:53 |
| 3M134853.D | AD06079-004 | 08/22/18 20:10 |
| 3M134854.D | AD06079-003 | 08/22/18 20:27 |
| 3M134855.D | AD06077-001 | 08/22/18 20:45 |
| 3M134856.D | EF-1-285748(0821 | 08/22/18 21:02 |
| 3M134857.D | AD05962-017(T) | 08/22/18 21:20 |
| 3M134858.D | AD05962-018(T) | 08/22/18 21:37 |
| 3M134859.D | AD05962-019(T) | 08/22/18 21:54 |
| 3M134860.D | AD05962-020(T) | 08/22/18 22:08 |
| 3M134861.D | AD05962-021(T) | 08/22/18 22:25 |
| 3M134862.D | AD05962-022(T) | 08/22/18 22:43 |
| 3M134863.D | AD05962-023(T) | 08/22/18 23:02 |
| 3M134864.D | AD06079-002 | 08/22/18 23:17 |
| 3M134865.D | AD06079-001 | 08/22/18 23:37 |
| 3M134866.D | BLK | 08/22/18 23:54 |
| 3M134867.D | BLK | 08/23/18 00:11 |
| 3M134868.D | AD06085-001 | 08/23/18 00:28 |
| 3M134869.D | BLK | 08/23/18 00:45 |

8081617 0067

Data Path : G:\GcMsData\2018\GCMS_3\Data\08-22-18\
Data File : 3M134826.D
Acq On : 22 Aug 2018 12:30
Operator : WP
Sample : BFB TUNE
Misc : A,5ML
ALS Vial : 17 Sample Multiplier: 1

Integration File: RTEINT.P

Method : G:\GcMsData\2018\GCMS_3\MethodQt\3M_A0713.M
Title : @GCMS_3,ug,624,8260
Last Update : Mon Jul 16 14:57:47 2018




Spectrum Information: Average of 4.913 to 4.992 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 22.1 | 6132 | PASS |
| 75 | 95 | 30 | 60 | 48.6 | 13487 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 27743 | PASS |
| 96 | 95 | 5 | 9 | 7.3 | 2021 | PASS |
| 173 | 174 | 0.00 | 2 | 0.3 | 60 | PASS |
| 174 | 95 | 50 | 100 | 76.4 | 21201 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 1593 | PASS |
| 176 | 174 | 95 | 101 | 97.0 | 20575 | PASS |
| 177 | 176 | 5 | 9 | 6.9 | 1420 | PASS |

8081617 0068

# Form 6
## Initial Calibration

Method: EPA 8260C

Instrument: GCMS_3

| Level # | Data File | Cal Identifier | Analysis Date/Time | Level # | Data File | Cal Identifier | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3M132624.D | CAL @ 20 PPB | 07/13/18 21:31 | 2 | 3M132622.D | CAL @ 5 PPB | 07/13/18 20:58 |
| 3 | 3M132623.D | CAL @ 10 PPB | 07/13/18 21:14 | 4 | 3M132634.D | CAL @ 50 PPB | 07/14/18 00:22 |
| 5 | 3M132631.D | CAL @ 100 PPB | 07/13/18 23:28 | 6 | 3M132628.D | CAL @ 250 PPB | 07/13/18 22:37 |
| 7 | 3M132625.D | CAL @ 500 PPB | 07/13/18 21:48 | 8 | 3M132621.D | CAL @ 1 PPB | 07/13/18 20:41 |
| 9 | 3M132620.D | CAL @ 0.5 PPB | 07/13/18 20:24 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorodifluoromethane | 1 | 0 | Qua | 0.3510 | 0.4710 | 0.3974 | 0.3687 | 0.3853 | 0.3794 | 0.3749 | 0.6123 | ----- | 0.418 | 1.68 | 1.00 | 1.00 | 21 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Dichlorodifluorometha | 1 | 0 | Avg | 0.0833 | 0.0724 | 0.0948 | 0.0876 | 0.0857 | 0.0936 | 0.0944 | 0.0730 | ----- | 0.0856 | 1.61 | 1.00 | 1.00 | 11 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Chloromethane | 1 | 0 | Avg | 0.1616 | 0.1690 | 0.1859 | 0.1475 | 0.1454 | 0.1510 | 0.1467 | 0.1020 | ----- | 0.151 | 1.81 | 1.00 | 1.00 | 16 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromomethane | 1 | 0 | Avg | 0.0662 | 0.0722 | 0.0730 | 0.0705 | 0.0703 | 0.0486 | ----- | 0.0586 | ----- | 0.0657 | 2.13 | 0.969 | 0.999 | 14 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | | 1.00 | |
| Vinyl Chloride | 1 | 0 | Avg | 0.1268 | 0.1443 | 0.1552 | 0.1331 | 0.1375 | 0.1347 | 0.1359 | 0.1592 | ----- | 0.141 | 1.84 | 1.00 | 1.00 | 8.0 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Chloroethane | 1 | 0 | Qua | 0.0807 | 0.0784 | 0.0824 | 0.0700 | 0.0757 | 0.0650 | 0.0490 | 0.1103 | ----- | 0.0765 | 2.21 | 0.974 | 1.00 | 23 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Trichlorofluoromethan | 1 | 0 | Avg | 0.2515 | 0.3028 | 0.2649 | 0.2628 | 0.2560 | 0.2618 | 0.2501 | 0.2027 | ----- | 0.257 | 2.42 | 1.00 | 1.00 | 11 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethyl ether | 1 | 0 | Avg | 0.2444 | 0.2483 | 0.2577 | 0.2435 | 0.2468 | 0.2209 | 0.2123 | 0.2194 | ----- | 0.237 | 2.65 | 0.999 | 1.00 | 7.0 | 0.50 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Furan | 1 | 0 | Avg | 0.5621 | 0.6583 | 0.6615 | 0.6194 | 0.5994 | 0.5780 | 0.5351 | 0.6410 | ----- | 0.607 | 2.69 | 0.998 | 1.00 | 7.6 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,2-Trichloro-1,2,2-tr | 1 | 0 | Avg | 0.1340 | 0.1491 | 0.1327 | 0.1190 | 0.1236 | 0.1177 | 0.1035 | 0.1225 | ----- | 0.125 | 2.84 | 0.996 | 1.00 | 11 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Methylene Chloride | 1 | 0 | Avg | 0.2515 | 0.2964 | 0.2733 | 0.2461 | 0.2536 | 0.2312 | 0.2148 | 0.2073 | ----- | 0.247 | 3.23 | 0.998 | 1.00 | 12 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Acrolein | 1 | 0 | Avg | 0.0437 | 0.0480 | 0.0487 | 0.0435 | 0.0421 | 0.0427 | 0.0397 | 0.0470 | ----- | 0.0445 | 2.77 | 0.999 | 1.00 | 7.1 | | 100.0 | 25.00 | 50.00 | 250.0 | 500.0 | 1250. | 2500. | 5.00 | |
| Acrylonitrile | 1 | 0 | Avg | 0.1001 | 0.1006 | 0.1129 | 0.1061 | 0.1056 | 0.0971 | 0.0939 | 0.0939 | ----- | 0.101 | 3.44 | 0.999 | 1.00 | 6.5 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Iodomethane | 1 | 0 | Avg | 0.2459 | 0.2288 | 0.2485 | 0.2491 | 0.2514 | 0.2433 | 0.2332 | 0.2522 | ----- | 0.244 | 2.98 | 0.999 | 1.00 | 3.5 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Acetone | 1 | 0 | Avg | 0.0966 | 0.1067 | 0.0997 | 0.0906 | 0.0956 | 0.0900 | 0.0845 | 0.1049 | ----- | 0.0961 | 2.92 | 0.999 | 1.00 | 7.9 | 0.10 a | 100.0 | 25.00 | 50.00 | 250.0 | 500.0 | 1250. | 2500. | 5.00 | |
| Carbon Disulfide | 1 | 0 | Avg | 0.4774 | 0.4973 | 0.5048 | 0.4986 | 0.5018 | 0.4970 | 0.4663 | 0.5384 | ----- | 0.498 | 3.05 | 0.999 | 1.00 | 4.2 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| t-Butyl Alcohol | 1 | 0 | Avg | 0.0279 | 0.0270 | 0.0276 | 0.0265 | 0.0279 | 0.0290 | 0.0278 | 0.0309 | ----- | 0.0281 | 3.35 | 1.00 | 1.00 | 4.9 | | 100.0 | 25.00 | 50.00 | 250.0 | 500.0 | 1250. | 2500. | 5.00 | |
| n-Hexane | 1 | 0 | Avg | 0.1049 | 0.1259 | 0.1056 | 0.0970 | 0.0998 | 0.1101 | 0.1005 | 0.1294 | ----- | 0.109 | 3.68 | 0.998 | 0.999 | 11 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Di-isopropyl-ether | 1 | 0 | Avg | 0.9419 | 0.9275 | 1.0613 | 0.9574 | 0.9188 | 0.8352 | 0.6926 | 1.0667 | ----- | 0.925 | 3.84 | 0.989 | 1.00 | 13 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1-Dichloroethene | 1 | 0 | Avg | 0.3164 | 0.3471 | 0.3433 | 0.3347 | 0.3396 | 0.3238 | 0.3034 | 0.3052 | ----- | 0.327 | 2.85 | 0.999 | 1.00 | 5.2 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Methyl Acetate | 1 | 0 | Avg | 0.3600 | 0.4007 | 0.3868 | 0.3613 | 0.3608 | 0.3567 | 0.3327 | 0.4831 | ----- | 0.380 | 3.14 | 0.999 | 1.00 | 12 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Methyl-t-butyl ether | 1 | 0 | Avg | 0.6184 | 0.7110 | 0.7012 | 0.6563 | 0.6349 | 0.5624 | 0.4782 | 0.5921 | 0.6349 | 0.621 | 3.46 | 0.991 | 1.00 | 12 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | 0.50 |
| 1,1-Dichloroethane | 1 | 0 | Avg | 0.4187 | 0.4633 | 0.4572 | 0.4390 | 0.4211 | 0.4068 | 0.3718 | 0.4846 | ----- | 0.433 | 3.80 | 0.998 | 1.00 | 8.3 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| trans-1,2-Dichloroethe | 1 | 0 | Avg | 0.2064 | 0.2435 | 0.2484 | 0.2105 | 0.2132 | 0.1938 | 0.1713 | 0.2697 | ----- | 0.220 | 3.46 | 0.995 | 1.00 | 15 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethyl-t-butyl ether | 1 | 0 | Avg | 0.8065 | 0.8333 | 0.9293 | 0.8213 | 0.8275 | 0.7471 | 0.6292 | 0.8974 | ----- | 0.812 | 4.10 | 0.991 | 1.00 | 11 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| cis-1,2-Dichloroethene | 1 | 0 | Avg | 0.4883 | 0.4951 | 0.5440 | 0.4818 | 0.4640 | 0.4191 | 0.3667 | 0.4760 | ----- | 0.467 | 4.22 | 0.994 | 1.00 | 11 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromochloromethane | 1 | 0 | Avg | 0.3104 | 0.3320 | 0.3406 | 0.3068 | 0.2973 | 0.2897 | 0.2678 | 0.3177 | ----- | 0.308 | 4.39 | 0.998 | 1.00 | 7.6 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 2,2-Dichloropropane | 1 | 0 | Avg | 0.3301 | 0.3565 | 0.3863 | 0.3033 | 0.3066 | 0.2866 | 0.2383 | 0.3482 | ----- | 0.320 | 4.22 | 0.991 | 1.00 | 14 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethyl acetate | 1 | 0 | Avg | 0.3592 | 0.3077 | 0.4324 | 0.3746 | 0.3525 | 0.3306 | 0.3071 | 0.3861 | ----- | 0.356 | 4.25 | 0.998 | 1.00 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,4-Dioxane | 1 | 0 | Avg | 0.0026 | 0.0027 | 0.0031 | 0.0026 | 0.0027 | 0.0026 | 0.0023 | 0.0022 | ----- | 0.00265 | 5.41 | 0.997 | 1.00 | 11 | | 1000. | 250.0 | 500.0 | 2500. | 5000. | 1250 | 2500 | 50.00 | |
| 1,1-Dichloropropene | 1 | 0 | Avg | 0.3008 | 0.3564 | 0.3224 | 0.3015 | 0.2894 | 0.2648 | 0.2164 | 0.3176 | ----- | 0.296 | 4.66 | 0.988 | 1.00 | 14 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Chloroform | 1 | 0 | Avg | 0.4571 | 0.4824 | 0.5004 | 0.4719 | 0.4457 | 0.4329 | 0.3949 | 0.4677 | ----- | 0.457 | 4.42 | 0.998 | 1.00 | 7.1 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Dibromofluoromethan | 1 | 0 | Avg | 0.2591 | 0.2618 | 0.2853 | 0.2683 | 0.2535 | 0.2553 | 0.2507 | 0.2634 | 0.2590 | 0.262 | 4.53 | -1 | -1 | 3.9 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Cyclohexane | 1 | 0 | Avg | 0.2326 | 0.2337 | 0.2444 | 0.2322 | 0.2269 | 0.2381 | 0.2088 | 0.2381 | ----- | 0.232 | 4.60 | 0.996 | 0.999 | 4.6 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dichloroethane-d4 | 1 | 0 | Avg | 0.1821 | 0.2006 | 0.1967 | 0.1884 | 0.1915 | 0.1801 | 0.1672 | 0.1860 | 0.1893 | 0.187 | 4.75 | -1 | -1 | 5.3 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| 1,2-Dichloroethane | 1 | 0 | Avg | 0.4325 | 0.4818 | 0.4866 | 0.4252 | 0.4012 | 0.3432 | 0.2891 | 0.5478 | 0.4692 | 0.431 | 4.80 | 0.990 | 1.00 | 18 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | 0.50 |
| 2-Butanone | 1 | 0 | Avg | 0.1488 | 0.1776 | 0.1303 | 0.1347 | 0.1274 | 0.1282 | 0.0958 | 0.1770 | ----- | 0.140 | 4.24 | 0.977 | 0.999 | 20 | 0.10 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,1-Trichloroethane | 1 | 0 | Avg | 0.3469 | 0.4099 | 0.3833 | 0.3654 | 0.3587 | 0.3368 | 0.2913 | 0.3695 | ----- | 0.358 | 4.56 | 0.994 | 1.00 | 9.8 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Carbon Tetrachloride | 1 | 0 | Avg | 0.2755 | 0.2720 | 0.3099 | 0.2814 | 0.2660 | 0.2432 | 0.2062 | 0.2461 | ----- | 0.263 | 4.66 | 0.992 | 1.00 | 12 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Vinyl Acetate | 1 | 0 | Avg | 0.7093 | 0.7479 | 0.7589 | 0.7055 | 0.6759 | 0.6379 | 0.5479 | 0.8162 | ----- | 0.700 | 3.84 | 0.994 | 1.00 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromodichloromethan | 1 | 0 | Avg | 0.3542 | 0.3862 | 0.3965 | 0.3748 | 0.3819 | 0.3616 | 0.3127 | 0.3777 | ----- | 0.368 | 5.48 | 0.994 | 1.00 | 7.1 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |

*Flags*

*a - failed the min rf criteria*

*c - failed the minimum correlation coeff criteria(if applicable)*

*Note:* Avg Rsd: 10.4

*Corr 1 = Correlation Coefficient for linear Eq.*

*Corr 2 = Correlation Coefficient for quad Eq.*

*Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.*

8081617 0069

# Form 6
## Initial Calibration

Method: EPA 8260C

Instrument: GCMS_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3M132624.D | CAL @ 20 PPB | 07/13/18 21:31 | 2 | 3M132622.D | CAL @ 5 PPB | 07/13/18 20:58 |
| 3 | 3M132623.D | CAL @ 10 PPB | 07/13/18 21:14 | 4 | 3M132634.D | CAL @ 50 PPB | 07/14/18 00:22 |
| 5 | 3M132631.D | CAL @ 100 PPB | 07/13/18 23:28 | 6 | 3M132628.D | CAL @ 250 PPB | 07/13/18 22:37 |
| 7 | 3M132625.D | CAL @ 500 PPB | 07/13/18 21:48 | 8 | 3M132621.D | CAL @ 1 PPB | 07/13/18 20:41 |
| 9 | 3M132620.D | CAL @ 0.5 PPB | 07/13/18 20:24 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | 1 | 0 | Avg | 0.1405 | 0.1686 | 0.1619 | 0.1394 | 0.1460 | 0.1441 | 0.1226 | 0.1670 | ----- | 0.149 | 5.31 | 0.993 | 1.00 | 11 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Dibromomethane | 1 | 0 | Avg | 0.2497 | 0.2594 | 0.2847 | 0.2376 | 0.2292 | 0.2006 | 0.1667 | 0.2560 | ----- | 0.236 | 5.40 | 0.989 | 1.00 | 16 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dichloropropane | 1 | 0 | Avg | 0.2744 | 0.2846 | 0.3327 | 0.2754 | 0.2721 | 0.2536 | 0.2087 | 0.2420 | ----- | 0.268 | 5.32 | 0.989 | 1.00 | 13 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Trichloroethene | 1 | 0 | Avg | 0.2489 | 0.2676 | 0.2864 | 0.2628 | 0.2469 | 0.2272 | 0.1883 | 0.2876 | ----- | 0.252 | 5.18 | 0.990 | 1.00 | 13 | 0.20 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Benzene | 1 | 0 | Avg | 0.9238 | 1.0203 | 0.9729 | 0.8748 | 0.8092 | 0.6635 | 0.5136 | 0.9419 | 0.9874 | 0.856 | 4.79 | 0.976 | 1.00 | 20 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | 0.50 |
| tert-Amyl methyl ether | 1 | 0 | Avg | 0.7756 | 0.7899 | 0.7973 | 0.7409 | 0.7312 | 0.6321 | 0.5403 | 0.7816 | ----- | 0.724 | 4.84 | 0.991 | 1.00 | 13 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Iso-propylacetate | 1 | 0 | Avg | 0.9434 | 0.8422 | 0.8851 | 0.8920 | 0.8879 | 0.7961 | 0.6198 | 1.0295 | ----- | 0.862 | 4.79 | 0.981 | 1.00 | 14 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Methyl methacrylate | 1 | 0 | Avg | 0.5071 | 0.4615 | 0.5363 | 0.4954 | 0.5462 | 0.5435 | 0.4864 | 0.6384 | ----- | 0.527 | 5.35 | 0.997 | 1.00 | 10 | 0.50 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Dibromochloromethan | 1 | 0 | Avg | 0.3755 | 0.3320 | 0.3444 | 0.3742 | 0.3912 | 0.3816 | 0.3311 | 0.3249 | ----- | 0.357 | 6.44 | 0.995 | 1.00 | 7.4 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 2-Chloroethylvinylethe | 1 | 0 | Avg | 0.2399 | 0.1928 | 0.2342 | 0.2398 | 0.2484 | 0.2538 | 0.2298 | 0.2186 | ----- | 0.232 | 5.64 | 0.998 | 1.00 | 8.3 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| cis-1,3-Dichloropropen | 1 | 0 | Avg | 0.6062 | 0.5512 | 0.5705 | 0.5609 | 0.6023 | 0.5918 | 0.5076 | 0.5869 | ----- | 0.572 | 5.74 | 0.994 | 1.00 | 5.7 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| trans-1,3-Dichloroprop | 1 | 0 | Avg | 0.5467 | 0.6006 | 0.5334 | 0.5247 | 0.5643 | 0.5554 | 0.4709 | 0.4712 | ----- | 0.533 | 6.07 | 0.993 | 1.00 | 8.4 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethyl methacrylate | 1 | 0 | Avg | 0.5039 | 0.4951 | 0.4942 | 0.5145 | 0.5117 | 0.5071 | 0.4381 | 0.4704 | ----- | 0.492 | 6.09 | 0.994 | 1.00 | 5.2 | 0.50 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,2-Trichloroethane | 1 | 0 | Avg | 0.3197 | 0.3242 | 0.3372 | 0.3108 | 0.3111 | 0.3026 | 0.2652 | 0.4143 | ----- | 0.323 | 6.19 | 0.996 | 1.00 | 13 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dibromoethane | 1 | 0 | Avg | 0.3362 | 0.3015 | 0.3112 | 0.3184 | 0.3328 | 0.3287 | 0.2852 | 0.2782 | ----- | 0.312 | 6.53 | 0.995 | 1.00 | 7.0 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,3-Dichloropropane | 1 | 0 | Avg | 0.5672 | 0.5776 | 0.5692 | 0.5384 | 0.5209 | 0.4812 | 0.3859 | 0.6342 | ----- | 0.534 | 6.29 | 0.986 | 1.00 | 14 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 4-Methyl-2-Pentanone | 1 | 0 | Avg | 0.4417 | 0.4221 | 0.4530 | 0.4476 | 0.4664 | 0.4778 | 0.4437 | 0.4237 | ----- | 0.447 | 5.82 | 0.999 | 1.00 | 4.3 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 2-Hexanone | 1 | 0 | Avg | 0.3193 | 0.2945 | 0.3137 | 0.3186 | 0.3212 | 0.3227 | 0.2882 | 0.3302 | ----- | 0.314 | 6.31 | 0.997 | 1.00 | 4.6 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Tetrachloroethene | 1 | 0 | Qua | 0.2539 | 0.2896 | 0.2652 | 0.2256 | 0.2170 | 0.1827 | 0.1351 | 0.2558 | ----- | 0.228 | 6.30 | 0.970 | 1.00 | 22 | 0.20 a | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Toluene-d8 | 1 | 0 | Avg | 1.2609 | 1.2387 | 1.3042 | 1.2837 | 1.3223 | 1.3874 | 1.4031 | 1.2554 | 1.2793 | 1.30 | 5.92 | -1 | -1 | 4.4 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Toluene | 1 | 0 | Avg | 0.6828 | 0.7706 | 0.7403 | 0.6772 | 0.6904 | 0.6415 | 0.5319 | 0.7970 | ----- | 0.692 | 5.95 | 0.990 | 1.00 | 12 | 0.40 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,1,2-Tetrachloroeth | 1 | 0 | Avg | 0.3070 | 0.2877 | 0.3038 | 0.2966 | 0.2902 | 0.2491 | 0.1977 | 0.2416 | ----- | 0.272 | 6.85 | 0.982 | 1.00 | 14 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Chlorobenzene | 1 | 0 | Avg | 0.7976 | 0.8339 | 0.8457 | 0.7846 | 0.7815 | 0.7148 | 0.5879 | 0.9010 | ----- | 0.781 | 6.81 | 0.989 | 1.00 | 12 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Butyl acrylate | 1 | 0 | Avg | 1.6052 | 1.3828 | 1.5425 | 1.6706 | 1.7794 | 1.8110 | 1.5570 | 1.5117 | ----- | 1.61 | 7.08 | 0.994 | 0.999 | 8.8 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Amyl acetate | 1 | 0 | Avg | 1.5159 | 1.4883 | 1.4992 | 1.5563 | 1.5915 | 1.6486 | 1.4381 | 1.7194 | ----- | 1.56 | 7.21 | 0.995 | 0.999 | 5.9 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromoform | 1 | 0 | Avg | 0.6271 | 0.5919 | 0.5878 | 0.6542 | 0.6845 | 0.7037 | 0.6046 | 0.5022 | ----- | 0.620 | 7.32 | 0.994 | 0.999 | 10 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Ethylbenzene | 1 | 0 | Qua | 0.4180 | 0.5272 | 0.4661 | 0.4576 | 0.4263 | 0.3883 | 0.2876 | 0.7641 | ----- | 0.467 | 6.86 | 0.973 | 1.00 | 30 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,1,2,2-Tetrachloroeth | 1 | 0 | Avg | 0.8183 | 0.8485 | 0.7869 | 0.7779 | 0.7957 | 0.8385 | 0.7389 | 0.9074 | ----- | 0.814 | 7.56 | 0.996 | 0.999 | 6.3 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromofluorobenzene | 1 | 0 | Avg | 1.0959 | 1.1597 | 1.1029 | 1.1113 | 1.1162 | 1.1789 | 1.2399 | 1.1227 | 1.1403 | 1.14 | 7.50 | -1 | -1 | 4.0 | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Styrene | 1 | 0 | Avg | 1.5345 | 1.5950 | 1.6236 | 1.5425 | 1.4887 | 1.3460 | 1.0307 | 1.5201 | ----- | 1.46 | 7.17 | 0.978 | 1.00 | 13 | 0.30 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| m&p-Xylenes | 1 | 0 | Avg | 0.7379 | 0.8464 | 0.7884 | 0.7681 | 0.7430 | 0.6943 | 0.5179 | 0.7611 | 0.7453 | 0.734 | 6.92 | 0.975 | 1.00 | 12 | 0.10 | 40.00 | 10.00 | 20.00 | 100.0 | 200.0 | 500.0 | 1000. | 2.00 | 1.00 |
| o-Xylene | 1 | 0 | Avg | 0.8126 | 0.8517 | 0.8296 | 0.7886 | 0.7604 | 0.6981 | 0.5399 | 0.8705 | ----- | 0.769 | 7.17 | 0.981 | 1.00 | 14 | 0.30 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| trans-1,4-Dichloro-2-b | 1 | 0 | Avg | 0.3441 | 0.3071 | 0.3336 | 0.3315 | 0.3433 | 0.3754 | 0.3174 | 0.4246 | ----- | 0.347 | 7.58 | 0.993 | 0.999 | 11 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,3-Dichlorobenzene | 1 | 0 | Avg | 1.0101 | 1.0712 | 1.0769 | 0.9851 | 1.0164 | 0.9717 | 0.8002 | 1.1173 | ----- | 1.01 | 8.20 | 0.990 | 1.00 | 9.6 | 0.60 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,4-Dichlorobenzene | 1 | 0 | Avg | 1.0277 | 1.1248 | 1.1420 | 1.0236 | 1.0100 | 0.9794 | 0.8246 | 1.2033 | ----- | 1.04 | 8.26 | 0.992 | 1.00 | 11 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dichlorobenzene | 1 | 0 | Avg | 1.0735 | 1.2126 | 1.1057 | 1.0399 | 1.0207 | 0.9837 | 0.8465 | 1.2189 | ----- | 1.06 | 8.51 | 0.994 | 1.00 | 11 | 0.40 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Isopropylbenzene | 1 | 0 | Avg | 1.5183 | 1.7023 | 1.6267 | 1.5670 | 1.5930 | 1.6460 | 1.3891 | 1.5483 | ----- | 1.57 | 7.38 | 0.993 | 0.999 | 6.0 | 0.10 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Cyclohexanone | 1 | 0 | Avg | 0.1098 | 0.0897 | 0.1013 | 0.0896 | 0.1135 | 0.1014 | 0.1024 | 0.1443 | ----- | 0.107 | 7.48 | 0.999 | 0.999 | 16 | | 100.0 | 25.00 | 50.00 | 250.0 | 500.0 | 1250. | 2500. | 5.00 | |
| Camphene | 1 | 0 | Avg | 0.4735 | 0.4945 | 0.4767 | 0.4240 | 0.4336 | 0.4774 | 0.3841 | 0.6747 | ----- | 0.480 | 7.58 | 0.988 | 0.998 | 18 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,3-Trichloropropane | 1 | 0 | Avg | 1.0119 | 1.0942 | 1.1257 | 1.0239 | 1.0429 | 1.0250 | 0.8356 | 0.9908 | ----- | 1.02 | 7.60 | 0.989 | 0.999 | 8.5 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 2-Chlorotoluene | 1 | 0 | Avg | 0.9887 | 1.1707 | 1.0530 | 0.9426 | 0.9333 | 0.8217 | 0.6481 | 1.1072 | ----- | 0.958 | 7.72 | 0.983 | 1.00 | 17 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |

*Flags*

*a - failed the min rf criteria*

*c - failed the minimum correlation coeff criteria(if applicable)*

*Note:* Avg Rsd: 10.4

*Corr 1 = Correlation Coefficient for linear Eq.*

*Corr 2 = Correlation Coefficient for quad Eq.*

*Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.*

Method: EPA 8260C

# Form 6
## Initial Calibration

Instrument: GCMS_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3M132624.D | CAL @ 20 PPB | 07/13/18 21:31 | 2 | 3M132622.D | CAL @ 5 PPB | 07/13/18 20:58 |
| 3 | 3M132623.D | CAL @ 10 PPB | 07/13/18 21:14 | 4 | 3M132634.D | CAL @ 50 PPB | 07/14/18 00:22 |
| 5 | 3M132631.D | CAL @ 100 PPB | 07/13/18 23:28 | 6 | 3M132628.D | CAL @ 250 PPB | 07/13/18 22:37 |
| 7 | 3M132625.D | CAL @ 500 PPB | 07/13/18 21:48 | 8 | 3M132621.D | CAL @ 1 PPB | 07/13/18 20:41 |
| 9 | 3M132620.D | CAL @ 0.5 PPB | 07/13/18 20:24 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| p-Ethyltoluene | 1 | 0 | Avg | 1.6003 | 1.7529 | 1.7171 | 1.6238 | 1.7439 | 1.6777 | 1.2854 | 1.7762 | ----- | 1.65 | 7.70 | 0.980 | 0.999 | 9.6 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 4-Chlorotoluene | 1 | 0 | Avg | 1.0377 | 1.0889 | 1.1012 | 1.0533 | 1.0281 | 0.9879 | 0.7789 | 1.2256 | ----- | 1.04 | 7.79 | 0.984 | 1.00 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Propylbenzene | 1 | 0 | Avg | 1.5533 | 1.8148 | 1.7237 | 1.6614 | 1.6678 | 1.7346 | 1.4299 | 1.6753 | ----- | 1.66 | 7.64 | 0.991 | 0.999 | 7.1 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Bromobenzene | 1 | 0 | Avg | 1.6105 | 1.7279 | 1.7822 | 1.6335 | 1.6548 | 1.5869 | 1.3073 | 1.8697 | ----- | 1.65 | 7.61 | 0.990 | 1.00 | 10 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,3,5-Trimethylbenzen | 1 | 0 | Qua | 1.1932 | 1.4808 | 1.1470 | 1.1385 | 0.9756 | 0.9170 | 0.6826 | 0.9627 | ----- | 1.06 | 7.74 | 0.974 | 0.999 | 22 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Butyl methacrylate | 1 | 0 | Avg | 1.2745 | 1.2191 | 1.2805 | 1.2051 | 1.2306 | 1.1806 | 0.9365 | 1.0511 | ----- | 1.17 | 7.74 | 0.985 | 1.00 | 10 | 0.50 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| t-Butylbenzene | 1 | 0 | Avg | 1.0552 | 1.2129 | 1.1016 | 1.0460 | 1.0720 | 1.1298 | 0.9369 | 1.2009 | ----- | 1.09 | 7.96 | 0.991 | 0.999 | 8.2 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,4-Trimethylbenzen | 1 | 0 | Avg | 1.3729 | 1.4304 | 1.4779 | 1.3642 | 1.3541 | 1.3692 | 1.1417 | 1.3250 | ----- | 1.35 | 7.99 | 0.992 | 0.999 | 7.3 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| sec-Butylbenzene | 1 | 0 | Avg | 1.1131 | 1.2832 | 1.2195 | 1.1657 | 1.1835 | 1.2856 | 1.1350 | 1.3423 | ----- | 1.22 | 8.10 | 0.996 | 0.999 | 6.7 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 4-Isopropyltoluene | 1 | 0 | Avg | 1.0037 | 1.0276 | 1.0786 | 1.0026 | 1.0302 | 1.0850 | 0.9099 | 1.1017 | ----- | 1.03 | 8.17 | 0.992 | 0.999 | 6.0 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| n-Butylbenzene | 1 | 0 | Avg | 1.0961 | 1.1568 | 1.1278 | 1.0670 | 1.0924 | 1.1916 | 1.0286 | 1.2136 | ----- | 1.12 | 8.44 | 0.995 | 0.999 | 5.6 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| p-Diethylbenzene | 1 | 0 | Avg | 0.6336 | 0.7438 | 0.6704 | 0.6606 | 0.6715 | 0.6990 | 0.6067 | 0.6613 | ----- | 0.668 | 8.42 | 0.995 | 0.999 | 6.1 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,4,5-Tetramethylbe | 1 | 0 | Avg | 0.9435 | 1.0447 | 0.9956 | 1.0077 | 1.0081 | 1.1149 | 0.9609 | 1.3682 | ----- | 1.06 | 8.93 | 0.995 | 0.999 | 13 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2-Dibromo-3-Chloro | 1 | 0 | Avg | 0.1698 | 0.1819 | 0.1709 | 0.1840 | 0.1836 | 0.1979 | 0.1913 | 0.1782 | ----- | 0.182 | 9.01 | 1.00 | 1.00 | 5.2 | 0.05 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Camphor | 1 | 0 | Avg | 0.0760 | 0.0658 | 0.0754 | 0.0736 | 0.0756 | 0.0785 | 0.0684 | 0.0880 | 0.0721 | 0.0749 | 9.50 | 0.996 | 0.999 | 8.5 | | 200.0 | 50.00 | 100.0 | 500.0 | 1000. | 2500. | 5000. | 10.00 | 5.00 |
| Hexachlorobutadiene | 1 | 0 | Avg | 0.3145 | 0.3942 | 0.3421 | 0.3240 | 0.3238 | 0.3569 | 0.3009 | 0.5075 | ----- | 0.358 | 9.66 | 0.993 | 0.998 | 19 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,4-Trichlorobenzen | 1 | 0 | Avg | 0.5431 | 0.5799 | 0.5712 | 0.5191 | 0.5169 | 0.5287 | 0.4664 | 0.6313 | ----- | 0.545 | 9.56 | 0.996 | 1.00 | 9.1 | 0.20 | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| 1,2,3-Trichlorobenzen | 1 | 0 | Avg | 0.5022 | 0.5563 | 0.5185 | 0.4962 | 0.4729 | 0.5047 | 0.4544 | 0.6507 | ----- | 0.520 | 9.90 | 0.997 | 0.999 | 12 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |
| Naphthalene | 1 | 0 | Avg | 1.1900 | 1.2449 | 1.1589 | 1.1803 | 1.2305 | 1.2677 | 1.1769 | 1.5613 | ----- | 1.25 | 9.74 | 0.999 | 1.00 | 10 | | 20.00 | 5.00 | 10.00 | 50.00 | 100.0 | 250.0 | 500.0 | 1.00 | |

| *Flags* | *Note:* Avg Rsd: 10.4 |
|---|---|
| *a - failed the min rf criteria* | *Corr 1 = Correlation Coefficient for linear Eq.* |
| *c - failed the minimum correlation coeff criteria(if applicable)* | *Corr 2 = Correlation Coefficient for quad Eq.* |
| | *Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.* |

# Form7

8081617 0071

Continuing Calibration

**Calibration Name:** CAL @ 20 PPB **Data File:** 3M134828.D **Instrument:** GCMS 3

**Cont Calibration Date/Time** 8/22/2018 12:56:00 P Method: EPA 8260C

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorobenzene | 1 | 0 | I | 4.93 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| Chlorodifluoromethane | 1 | 0 | | 1.59 | 21.70 | 20 | 20 | 0.1 | 0.418 | 0.416 | 8.51 | |
| Dichlorodifluoromethane | 1 | 0 | | 1.54 | 20.89 | 20 | 20 | 0.1 | 0.086 | 0.089 | 4.44 | |
| Chloromethane | 1 | 0 | | 1.74 | 28.41 | 20 | 20 | 0.1 | 0.151 | 0.215 | 42.03 | C1 |
| Bromomethane | 1 | 0 | | 2.08 | 29.00 | 20 | 20 | 0.1 | 0.066 | 0.095 | 45.02 | C1 |
| Vinyl Chloride | 1 | 0 | | 1.79 | 22.34 | 20 | 20 | 0.1 | 0.141 | 0.157 | 11.70 | |
| Chloroethane | 1 | 0 | | 2.16 | 22.89 | 20 | 20 | 0.1 | 0.076 | 0.091 | 14.47 | |
| Trichlorofluoromethane | 1 | 0 | | 2.37 | 16.73 | 20 | 20 | 0.1 | 0.257 | 0.215 | 16.33 | |
| Ethyl ether | 1 | 0 | | 2.61 | 20.64 | 20 | 20 | 0.5 | 0.237 | 0.244 | 3.21 | |
| Furan | 1 | 0 | | 2.64 | 19.44 | 20 | 20 | 0.5 | 0.607 | 0.590 | 2.81 | |
| 1,1,2-Trichloro-1,2,2-trifluoroetha | 1 | 0 | | 2.79 | 16.71 | 20 | 20 | 0.1 | 0.125 | 0.105 | 16.46 | |
| Methylene Chloride | 1 | 0 | | 3.19 | 22.38 | 20 | 20 | 0.1 | 0.247 | 0.276 | 11.88 | |
| Acrolein | 1 | 0 | | 2.72 | 59.31 | 100 | 20 | | 0.044 | 0.026 | 40.69 | C1 |
| Acrylonitrile | 1 | 0 | | 3.40 | 19.70 | 20 | 20 | | 0.101 | 0.100 | 1.52 | |
| Iodomethane | 1 | 0 | | 2.93 | 19.97 | 20 | 20 | | 0.244 | 0.244 | 0.16 | |
| Acetone | 1 | 0 | | 2.84 | 100.07 | 100 | 20 | 0.1 | 0.096 | 0.096 | 0.07 | |
| Carbon Disulfide | 1 | 0 | | 3.00 | 20.93 | 20 | 20 | 0.1 | 0.498 | 0.521 | 4.64 | |
| t-Butyl Alcohol | 1 | 0 | | 3.28 | 75.09 | 100 | 20 | | 0.028 | 0.021 | 24.91 | C1 |
| n-Hexane | 1 | 0 | | 3.64 | 11.05 | 20 | 20 | | 0.109 | 0.060 | 44.77 | C1 |
| Di-isopropyl-ether | 1 | 0 | | 3.81 | 19.79 | 20 | 20 | | 0.925 | 0.915 | 1.06 | |
| 1,1-Dichloroethene | 1 | 0 | | 2.79 | 17.54 | 20 | 20 | 0.1 | 0.327 | 0.287 | 12.28 | |
| Methyl Acetate | 1 | 0 | | 3.11 | 21.82 | 20 | 20 | 0.1 | 0.380 | 0.415 | 9.12 | |
| Methyl-t-butyl ether | 1 | 0 | | 3.42 | 18.85 | 20 | 20 | 0.1 | 0.621 | 0.585 | 5.76 | |
| 1,1-Dichloroethane | 1 | 0 | | 3.77 | 21.70 | 20 | 20 | 0.2 | 0.433 | 0.470 | 8.50 | |
| trans-1,2-Dichloroethene | 1 | 0 | | 3.42 | 20.98 | 20 | 20 | 0.1 | 0.220 | 0.230 | 4.92 | |
| Ethyl-t-butyl ether | 1 | 0 | | 4.07 | 18.82 | 20 | 20 | 0.5 | 0.812 | 0.764 | 5.89 | |
| cis-1,2-Dichloroethene | 1 | 0 | | 4.19 | 19.76 | 20 | 20 | 0.1 | 0.467 | 0.461 | 1.22 | |
| Bromochloromethane | 1 | 0 | | 4.36 | 22.61 | 20 | 20 | | 0.308 | 0.348 | 13.07 | |
| 2,2-Dichloropropane | 1 | 0 | | 4.19 | 14.27 | 20 | 20 | | 0.320 | 0.228 | 28.65 | C1 |
| Ethyl acetate | 1 | 0 | | 4.22 | 21.61 | 20 | 20 | | 0.356 | 0.385 | 8.03 | |
| 1,4-Dioxane | 1 | 0 | | 5.40 | 1177.68 | 1000 | 20 | | 0.003 | 0.003 | 17.77 | |
| 1,1-Dichloropropene | 1 | 0 | | 4.63 | 21.74 | 20 | 20 | | 0.296 | 0.322 | 8.70 | |
| Chloroform | 1 | 0 | | 4.40 | 21.92 | 20 | 20 | 0.2 | 0.457 | 0.501 | 9.62 | |
| Dibromofluoromethane | 1 | 0 | S | 4.51 | 29.93 | 30 | ** | | 0.262 | 0.261 | 0.24 | |
| Cyclohexane | 1 | 0 | | 4.57 | 15.89 | 20 | 20 | 0.1 | 0.232 | 0.184 | 20.57 | C1 |
| 1,2-Dichloroethane-d4 | 1 | 0 | S | 4.73 | 32.43 | 30 | ** | | 0.187 | 0.202 | 8.12 | |
| 1,2-Dichloroethane | 1 | 0 | | 4.78 | 21.21 | 20 | 20 | 0.1 | 0.431 | 0.457 | 6.03 | |
| 2-Butanone | 1 | 0 | | 4.21 | 18.67 | 20 | 20 | 0.1 | 0.140 | 0.131 | 6.63 | |
| 1,1,1-Trichloroethane | 1 | 0 | | 4.53 | 20.30 | 20 | 20 | 0.1 | 0.358 | 0.363 | 1.52 | |
| Carbon Tetrachloride | 1 | 0 | | 4.64 | 22.55 | 20 | 20 | 0.1 | 0.263 | 0.296 | 12.76 | |
| Vinyl Acetate | 1 | 0 | | 3.80 | 18.79 | 20 | 20 | | 0.700 | 0.658 | 6.06 | |
| Bromodichloromethane | 1 | 0 | | 5.47 | 22.13 | 20 | 20 | 0.2 | 0.368 | 0.408 | 10.66 | |
| Methylcyclohexane | 1 | 0 | | 5.29 | 19.07 | 20 | 20 | 0.1 | 0.149 | 0.142 | 4.63 | |
| Dibromomethane | 1 | 0 | | 5.38 | 19.45 | 20 | 20 | | 0.236 | 0.229 | 2.76 | |
| 1,2-Dichloropropane | 1 | 0 | | 5.31 | 20.84 | 20 | 20 | 0.1 | 0.268 | 0.279 | 4.22 | |
| Trichloroethene | 1 | 0 | | 5.16 | 20.20 | 20 | 20 | 0.2 | 0.252 | 0.255 | 1.01 | |
| Benzene | 1 | 0 | | 4.77 | 23.73 | 20 | 20 | 0.5 | 0.856 | 1.016 | 18.63 | |
| tert-Amyl methyl ether | 1 | 0 | | 4.82 | 18.85 | 20 | 20 | | 0.724 | 0.682 | 5.73 | |
| Chlorobenzene-d5 | 1 | 0 | I | 6.78 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| Iso-propylacetate | 1 | 0 | | 4.77 | 17.13 | 20 | 20 | 0.5 | 0.862 | 0.738 | 14.35 | |
| Methyl methacrylate | 1 | 0 | | 5.34 | 16.89 | 20 | 20 | 0.5 | 0.527 | 0.445 | 15.56 | |
| Dibromochloromethane | 1 | 0 | | 6.43 | 18.69 | 20 | 20 | 0.1 | 0.357 | 0.334 | 6.55 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL @ 20 PPB **Data File:** 3M134828.D **Instrument:** GCMS 3

**Cont Calibration Date/Time** 8/22/2018 12:56:00 P Method: EPA 8260C

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chloroethylvinylether | 1 | 0 | | 5.62 | 17.09 | 20 | 20 | | 0.232 | 0.198 | 14.55 | |
| cis-1,3-Dichloropropene | 1 | 0 | | 5.73 | 16.41 | 20 | 20 | 0.2 | 0.572 | 0.470 | 17.93 | |
| trans-1,3-Dichloropropene | 1 | 0 | | 6.06 | 16.69 | 20 | 20 | 0.1 | 0.533 | 0.445 | 16.55 | |
| Ethyl methacrylate | 1 | 0 | | 6.08 | 16.86 | 20 | 20 | 0.5 | 0.492 | 0.415 | 15.70 | |
| 1,1,2-Trichloroethane | 1 | 0 | | 6.18 | 18.56 | 20 | 20 | 0.1 | 0.323 | 0.300 | 7.18 | |
| 1,2-Dibromoethane | 1 | 0 | | 6.52 | 18.33 | 20 | 20 | 0.1 | 0.312 | 0.286 | 8.35 | |
| 1,3-Dichloropropane | 1 | 0 | | 6.28 | 20.83 | 20 | 20 | | 0.534 | 0.557 | 4.16 | |
| 4-Methyl-2-Pentanone | 1 | 0 | | 5.81 | 16.27 | 20 | 20 | 0.1 | 0.447 | 0.364 | 18.67 | |
| 2-Hexanone | 1 | 0 | | 6.30 | 15.93 | 20 | 20 | 0.1 | 0.314 | 0.250 | 20.36 | |
| Tetrachloroethene | 1 | 0 | | 6.28 | 17.22 | 20 | 20 | 0.2 | 0.228 | 0.198 | 13.88 | |
| Toluene-d8 | 1 | 0 | S | 5.91 | 28.33 | 30 | ** | | 1.304 | 1.231 | 5.56 | |
| Toluene | 1 | 0 | | 5.95 | 19.23 | 20 | 20 | 0.4 | 0.692 | 0.665 | 3.86 | |
| 1,1,1,2-Tetrachloroethane | 1 | 0 | | 6.84 | 21.48 | 20 | 20 | | 0.272 | 0.292 | 7.39 | |
| Chlorobenzene | 1 | 0 | | 6.80 | 18.07 | 20 | 20 | 0.5 | 0.781 | 0.706 | 9.65 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 8.24 | 30.00 | 30 | ** | | | 0.000 | 0.00 | |
| n-Butyl acrylate | 1 | 0 | | 7.08 | 15.32 | 20 | 20 | 0.5 | 1.608 | 1.231 | 23.40 | C1 |
| n-Amyl acetate | 1 | 0 | | 7.21 | 16.28 | 20 | 20 | 0.5 | 1.557 | 1.267 | 18.62 | |
| Bromoform | 1 | 0 | | 7.31 | 18.35 | 20 | 20 | 0.1 | 0.620 | 0.568 | 8.28 | |
| Ethylbenzene | 1 | 0 | | 6.85 | 18.13 | 20 | 20 | 0.1 | 0.467 | 0.428 | 9.37 | |
| 1,1,2,2-Tetrachloroethane | 1 | 0 | | 7.55 | 19.89 | 20 | 20 | 0.1 | 0.814 | 0.810 | 0.54 | |
| Bromofluorobenzene | 1 | 0 | S | 7.50 | 27.84 | 30 | ** | | 1.141 | 1.059 | 7.19 | |
| Styrene | 1 | 0 | | 7.17 | 20.61 | 20 | 20 | 0.3 | 1.460 | 1.504 | 3.03 | |
| m&p-Xylenes | 1 | 0 | | 6.92 | 41.68 | 40 | 20 | 0.1 | 0.734 | 0.764 | 4.20 | |
| o-Xylene | 1 | 0 | | 7.17 | 20.68 | 20 | 20 | 0.3 | 0.769 | 0.795 | 3.41 | |
| trans-1,4-Dichloro-2-butene | 1 | 0 | | 7.58 | 17.29 | 20 | 20 | | 0.347 | 0.300 | 13.53 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 8.19 | 19.61 | 20 | 20 | 0.6 | 1.006 | 0.987 | 1.93 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 8.25 | 19.07 | 20 | 20 | 0.5 | 1.042 | 0.993 | 4.66 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 8.51 | 19.09 | 20 | 20 | 0.4 | 1.063 | 1.014 | 4.56 | |
| Isopropylbenzene | 1 | 0 | | 7.38 | 19.75 | 20 | 20 | 0.1 | 1.574 | 1.554 | 1.23 | |
| Cyclohexanone | 1 | 0 | | 7.47 | 41.06 | 100 | 20 | | 0.107 | 0.044 | 58.94 | C1 |
| Camphene | 1 | 0 | | 7.58 | 20.11 | 20 | 20 | | 0.480 | 0.483 | 0.56 | |
| 1,2,3-Trichloropropane | 1 | 0 | | 7.60 | 19.69 | 20 | 20 | | 1.019 | 1.003 | 1.55 | |
| 2-Chlorotoluene | 1 | 0 | | 7.72 | 21.77 | 20 | 20 | | 0.958 | 1.043 | 8.87 | |
| p-Ethyltoluene | 1 | 0 | | 7.70 | 17.77 | 20 | 20 | | 1.647 | 1.463 | 11.17 | |
| 4-Chlorotoluene | 1 | 0 | | 7.78 | 20.54 | 20 | 20 | | 1.038 | 1.066 | 2.71 | |
| n-Propylbenzene | 1 | 0 | | 7.64 | 20.98 | 20 | 20 | | 1.658 | 1.739 | 4.92 | |
| Bromobenzene | 1 | 0 | | 7.61 | 19.90 | 20 | 20 | | 1.647 | 1.639 | 0.48 | |
| 1,3,5-Trimethylbenzene | 1 | 0 | | 7.73 | 20.10 | 20 | 20 | | 1.062 | 1.116 | 0.48 | |
| Butyl methacrylate | 1 | 0 | | 7.73 | 18.76 | 20 | 20 | 0.5 | 1.172 | 1.099 | 6.22 | |
| t-Butylbenzene | 1 | 0 | | 7.95 | 17.72 | 20 | 20 | | 1.094 | 0.970 | 11.38 | |
| 1,2,4-Trimethylbenzene | 1 | 0 | | 7.98 | 21.01 | 20 | 20 | | 1.354 | 1.423 | 5.04 | |
| sec-Butylbenzene | 1 | 0 | | 8.09 | 20.12 | 20 | 20 | | 1.216 | 1.223 | 0.61 | |
| 4-Isopropyltoluene | 1 | 0 | | 8.17 | 20.99 | 20 | 20 | | 1.030 | 1.081 | 4.95 | |
| n-Butylbenzene | 1 | 0 | | 8.44 | 21.97 | 20 | 20 | | 1.122 | 1.232 | 9.85 | |
| p-Diethylbenzene | 1 | 0 | | 8.42 | 18.64 | 20 | 20 | | 0.668 | 0.623 | 6.80 | |
| 1,2,4,5-Tetramethylbenzene | 1 | 0 | | 8.93 | 16.42 | 20 | 20 | | 1.056 | 0.867 | 17.88 | |
| 1,2-Dibromo-3-Chloropropane | 1 | 0 | | 9.01 | 18.95 | 20 | 20 | 0.05 | 0.182 | 0.173 | 5.26 | |
| Camphor | 1 | 0 | | 9.50 | 176.81 | 200 | 20 | | 0.075 | 0.066 | 11.60 | |
| Hexachlorobutadiene | 1 | 0 | | 9.64 | 20.27 | 20 | 20 | | 0.358 | 0.363 | 1.36 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 9.55 | 21.59 | 20 | 20 | 0.2 | 0.545 | 0.588 | 7.94 | |
| 1,2,3-Trichlorobenzene | 1 | 0 | | 9.89 | 21.80 | 20 | 20 | | 0.520 | 0.566 | 8.98 | |
| Naphthalene | 1 | 0 | | 9.74 | 19.09 | 20 | 20 | | 1.251 | 1.195 | 4.53 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 3M132624.D  Method: EPA 8260C

Analysis Date/Time: 07/13/18 21:31

Lab File ID: CAL @ 20 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 334343 | 4.94 | 251682 | 6.78 | 127867 | 8.23 | | | | | | | | |
| Eval File Area Limit: | 167172-668686 | | 125841-503364 | | 63934-255734 | | | | | | | | | |
| Eval File Rt Limit: | 4.44-5.44 | | 6.28-7.28 | | 7.73-8.73 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 3M132620.D | CAL @ 0.5 PPB | 347928 | 4.95 | 273171 | 6.78 | 132705 | 8.23 |
| 3M132621.D | CAL @ 1 PPB | 322366 | 4.95 | 262629 | 6.78 | 125201 | 8.23 |
| 3M132622.D | CAL @ 5 PPB | 326196 | 4.95 | 261678 | 6.78 | 126198 | 8.23 |
| 3M132623.D | CAL @ 10 PPB | 314063 | 4.95 | 261884 | 6.78 | 127378 | 8.23 |
| 3M132624.D | CAL @ 20 PPB | 334343 | 4.94 | 251682 | 6.78 | 127867 | 8.23 |
| 3M132625.D | CAL @ 500 PPB | 319125 | 4.95 | 231944 | 6.78 | 107063 | 8.23 |
| 3M132628.D | CAL @ 250 PPB | 334590 | 4.95 | 242058 | 6.78 | 110343 | 8.23 |
| 3M132631.D | CAL @ 100 PPB | 321193 | 4.95 | 245256 | 6.78 | 120410 | 8.23 |
| 3M132634.D | CAL @ 50 PPB | 327811 | 4.95 | 257776 | 6.78 | 126573 | 8.23 |
| 3M132637.D | ICV | 324657 | 4.95 | 254995 | 6.78 | 125929 | 8.23 |
| 3M132643.D | DAILY BLANK | 322128 | 4.94 | 248010 | 6.78 | 127977 | 8.23 |
| 3M132644.D | AD05312-001 | 321676 | 4.94 | 248795 | 6.78 | 126579 | 8.23 |
| 3M132645.D | AD05377-001 | 319350 | 4.93 | 250133 | 6.78 | 127384 | 8.23 |
| 3M132646.D | AD05357-003 | 330036 | 4.94 | 256205 | 6.78 | 128578 | 8.23 |
| 3M132647.D | AD05357-005 | 326494 | 4.94 | 255272 | 6.78 | 132275 | 8.23 |
| 3M132648.D | MBS70502 | 325965 | 4.94 | 247894 | 6.78 | 133417 | 8.23 |
| 3M132649.D | AD05357-008(MS) | 336966 | 4.95 | 263831 | 6.78 | 125326 | 8.23 |
| 3M132650.D | AD05357-008(MSD) | 321984 | 4.94 | 261215 | 6.78 | 125056 | 8.23 |
| 3M132651.D | AD05357-008 | 323339 | 4.94 | 253278 | 6.78 | 130228 | 8.23 |
| 3M132652.D | AD05357-002 | 329529 | 4.94 | 252921 | 6.78 | 126682 | 8.23 |
| 3M132653.D | AD05357-001 | 323525 | 4.94 | 253114 | 6.78 | 128850 | 8.23 |
| 3M132654.D | AD05357-006 | 327324 | 4.94 | 258881 | 6.78 | 131450 | 8.23 |
| 3M132655.D | AD05357-004 | 327270 | 4.94 | 248709 | 6.78 | 134956 | 8.23 |
| 3M132656.D | AD05357-007 | 323273 | 4.94 | 246588 | 6.78 | 157539 | 8.23 |
| 3M132657.D | MBS70503 | 339995 | 4.95 | 264803 | 6.78 | 141847 | 8.23 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 3M134828.D  Method: EPA 8260C

Analysis Date/Time: 08/22/18 12:56

Lab File ID: CAL @ 20 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 222547 | 4.93 | 193531 | 6.78 | 89371 | 8.24 | | | | | | | | |
| Eval File Area Limit: | 111274-445094 | | 96766-387062 | | 44686-178742 | | | | | | | | | |
| Eval File Rt Limit: | 4.43-5.43 | | 6.28-7.28 | | 7.74-8.74 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 3M134827.D | 20 PPB | 238911 | 4.95 | 203179 | 6.80 | 99356 | 8.25 |
| 3M134829.D | BLK | 215070 | 4.93 | 188678 | 6.78 | 85201 | 8.23 |
| 3M134830.D | DAILY BLANK | 208719 | 4.93 | 184158 | 6.78 | 83223 | 8.24 |
| 3M134831.D | DAILY BLANK | 209886 | 4.94 | 182278 | 6.79 | 83838 | 8.24 |
| 3M134832.D | AD06007-003 | 204883 | 4.93 | 183667 | 6.79 | 82707 | 8.23 |
| 3M134833.D | AD06026-002 | 216081 | 4.93 | 202001 | 6.78 | 117780 | 8.24 |
| 3M134834.D | MBS70992 | 233183 | 4.93 | 208392 | 6.78 | 97444 | 8.23 |
| 3M134835.D | AD06069-001(MS) | 214220 | 4.93 | 190705 | 6.79 | 96906 | 8.24 |
| 3M134836.D | AD06069-001(MSD) | 214494 | 4.93 | 197760 | 6.79 | 90255 | 8.24 |
| 3M134837.D | MBS70993 | 215658 | 4.94 | 198030 | 6.78 | 87130 | 8.24 |
| 3M134838.D | AD06069-001 | 235078 | 4.93 | 205029 | 6.79 | 95994 | 8.24 |
| 3M134839.D | AD06006-001(T) | 237725 | 4.94 | 204191 | 6.78 | 87836 | 8.24 |
| 3M134840.D | AD05999-001(T) | 170583 | 4.94 | 145151 | 6.79 | 66569 | 8.24 |
| 3M134841.D | AD06064-001(T) | 210252 | 4.93 | 186053 | 6.79 | 84681 | 8.24 |
| 3M134842.D | AD06064-002(T) | 204618 | 4.93 | 180973 | 6.78 | 85727 | 8.24 |
| 3M134843.D | AD06064-003(T) | 210783 | 4.94 | 186580 | 6.79 | 81834 | 8.24 |
| 3M134844.D | AD06027-001(T) | 198933 | 4.95 | 179939 | 6.80 | 78783 | 8.25 |
| 3M134845.D | AD05997-004(5X) | 214392 | 4.94 | 193802 | 6.78 | 90585 | 8.24 |
| 3M134846.D | BLK | 223165 | 4.94 | 187374 | 6.79 | 88312 | 8.24 |
| 3M134847.D | AD05997-005(10X) | 231005 | 4.93 | 211378 | 6.78 | 93962 | 8.24 |
| 3M134848.D | BLK | 233012 | 4.93 | 201848 | 6.78 | 93452 | 8.24 |
| 3M134849.D | AD06006-001(T:MS) | 221008 | 4.94 | 200220 | 6.79 | 93559 | 8.24 |
| 3M134850.D | AD06006-001(T:MSD) | 237380 | 4.94 | 214857 | 6.79 | 101535 | 8.24 |
| 3M134851.D | EF-1-V-285748(08211 | 244901 | 4.93 | 213965 | 6.78 | 98815 | 8.23 |
| 3M134852.D | AD06079-003 | 231236 | 4.93 | 200658 | 6.78 | 91834 | 8.23 |
| 3M134853.D | AD06079-004 | 217303 | 4.93 | 189168 | 6.78 | 88411 | 8.23 |
| 3M134854.D | AD06079-003 | 237306 | 4.93 | 208076 | 6.78 | 94421 | 8.23 |
| 3M134855.D | AD06077-001 | 235913 | 4.93 | 204560 | 6.78 | 90458 | 8.23 |
| 3M134856.D | EF-1-285748(082118) | 209563 | 4.93 | 189022 | 6.78 | 86610 | 8.23 |
| 3M134857.D | AD05962-017(T) | 159007 | 4.93 | 136889 | 6.78 | 65191 | 8.23 |
| 3M134858.D | AD05962-018(T) | 217307 | 4.93 | 191982 | 6.78 | 86697 | 8.23 |
| 3M134859.D | AD05962-019(T) | 225126 | 4.93 | 199363 | 6.78 | 92932 | 8.23 |

I1 = Fluorobenzene
I2 = Chlorobenzene-d5
I3 = 1,4-Dichlorobenzene-d4
I4 =
I5 =
I6 =
I7 =

625/8270 Internal Standard concentration = 40 mg/L (in final extract)
624/8260 Internal Standard concentration = 30ug/L
524 Internal Standard concentration =5ug/L

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 3M134828.D  Method: EPA 8260C

Analysis Date/Time: 08/22/18 12:56

Lab File ID: CAL @ 20 PPB

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 222547 | 4.93 | 193531 | 6.78 | 89371 | 8.24 | | | | | | | | |
| Eval File Area Limit: | 111274-445094 | | 96766-387062 | | 44686-178742 | | | | | | | | | |
| Eval File Rt Limit: | 4.43-5.43 | | 6.28-7.28 | | 7.74-8.74 | | | | | | | | | |

| Data File | Sample | | | | | | |
|---|---|---|---|---|---|---|---|
| 3M134860.D | AD05962-020(T) | 225789 | 4.93 | 201634 | 6.78 | 92802 | 8.23 |
| 3M134861.D | AD05962-021(T) | 224047 | 4.93 | 194582 | 6.78 | 88844 | 8.23 |
| 3M134864.D | AD06079-002 | 245772 | 4.93 | 214785 | 6.78 | 97523 | 8.23 |
| 3M134865.D | AD06079-001 | 210862 | 4.93 | 182123 | 6.78 | 82440 | 8.23 |
| 3M134866.D | BLK | 225865 | 4.93 | 193564 | 6.78 | 93162 | 8.24 |
| 3M134867.D | BLK | 222672 | 4.93 | 190306 | 6.78 | 94656 | 8.23 |
| 3M134868.D | AD06085-001 | 220083 | 4.93 | 189991 | 6.78 | 95352 | 8.23 |
| 3M134869.D | BLK | 201736 | 4.93 | 175412 | 6.78 | 81415 | 8.23 |

| | | | | |
|---|---|---|---|---|
| I1 = | Fluorobenzene | I4 = | I7 = | 625/8270 Internal Standard concentration = 40 mg/L (in final extract) |
| I2 = | Chlorobenzene-d5 | I5 = | | 624/8260 Internal Standard concentration = 30ug/L |
| I3 = | 1,4-Dichlorobenzene-d4 | I6 = | | 524 Internal Standard concentration =5ug/L |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

# Base Neutral/Acid Extractable Data

# Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD05999-001
Client Id: SS-1
Data File: 7M94025.D
Analysis Date: 08/22/18 14:49
Date Rec/Extracted: 08/16/18-08/22/18
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Soil
Initial Vol: 30g
Final Vol: 0.5ml
Dilution: 1
Solids: 95

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 95-95-4 | 2,4,5-Trichlorophenol | 0.035 | U | 207-08-9 | Benzo[k]fluoranthene | 0.035 | U |
| 120-83-2 | 2,4-Dichlorophenol | 0.0088 | U | 65-85-0 | Benzoic Acid | 0.18 | U |
| 51-28-5 | 2,4-Dinitrophenol | 0.11 | U | 117-81-7 | bis(2-Ethylhexyl)phthalate | 0.035 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 0.035 | U | 85-68-7 | Butylbenzylphthalate | 0.035 | U |
| 95-57-8 | 2-Chlorophenol | 0.035 | U | 218-01-9 | Chrysene | 0.035 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.035 | U | 53-70-3 | Dibenzo[a,h]anthracene | 0.035 | U |
| 95-48-7 | 2-Methylphenol | 0.0088 | U | 132-64-9 | Dibenzofuran | 0.0088 | U |
| 88-74-4 | 2-Nitroaniline | 0.035 | U | 84-66-2 | Diethylphthalate | 0.035 | U |
| 88-75-5 | 2-Nitrophenol | 0.035 | U | 131-11-3 | Dimethylphthalate | 0.035 | U |
| 106-44-5 | 3&4-Methylphenol | 0.0088 | U | 84-74-2 | Di-n-butylphthalate | 0.0088 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.035 | U | 117-84-0 | Di-n-octylphthalate | 0.035 | U |
| 99-09-2 | 3-Nitroaniline | 0.035 | U | 206-44-0 | Fluoranthene | 0.035 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 0.035 | U | 86-73-7 | Fluorene | 0.035 | U |
| 106-47-8 | 4-Chloroaniline | 0.0088 | U | 118-74-1 | Hexachlorobenzene | 0.035 | U |
| 100-02-7 | 4-Nitrophenol | 0.035 | U | 193-39-5 | Indeno[1,2,3-cd]pyrene | 0.035 | U |
| 83-32-9 | Acenaphthene | 0.035 | U | 78-59-1 | Isophorone | 0.035 | U |
| 208-96-8 | Acenaphthylene | 0.035 | U | 91-20-3 | Naphthalene | 0.0088 | U |
| 62-53-3 | Aniline | 0.0088 | U | 98-95-3 | Nitrobenzene | 0.035 | U |
| 120-12-7 | Anthracene | 0.035 | U | 87-86-5 | Pentachlorophenol | 0.075 | U |
| 56-55-3 | Benzo[a]anthracene | 0.035 | U | 85-01-8 | Phenanthrene | 0.035 | U |
| 50-32-8 | Benzo[a]pyrene | 0.035 | U | 108-95-2 | Phenol | 0.035 | U |
| 205-99-2 | Benzo[b]fluoranthene | 0.035 | U | 129-00-0 | Pyrene | 0.035 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 0.035 | U | | | | |

Worksheet # 477023 **Total Target Concentration** 0 ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

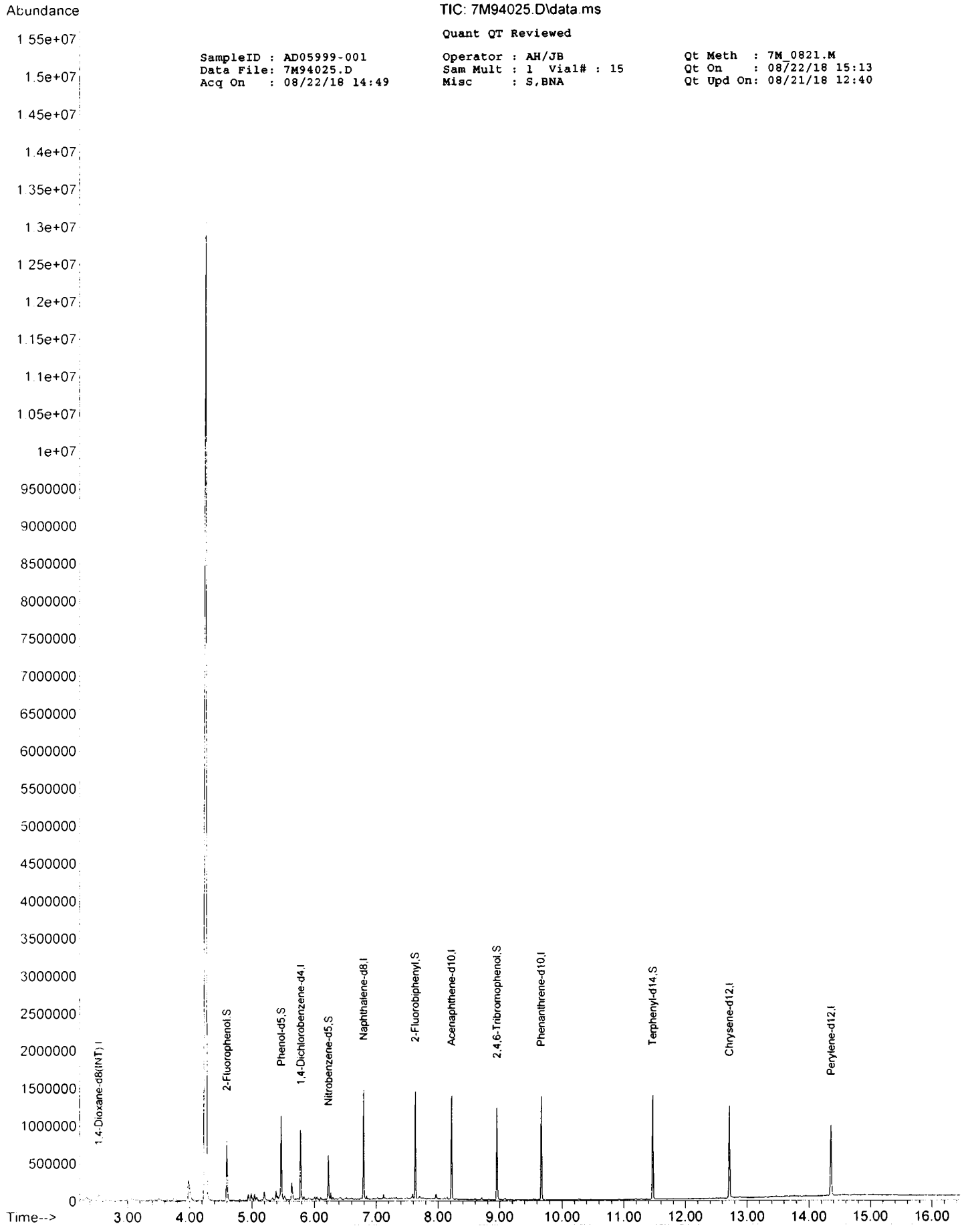
Quantitation Report (QT Reviewed)

SampleID : AD05999-001 Operator : AH/JB Qt Meth : 7M_0821.M
Data File: 7M94025.D Sam Mult : 1 Vial# : 15 Qt On : 08/22/18 15:13
Acq On : 08/22/18 14:49 Misc : S,BNA Qt Upd On: 08/21/18 12:40

Data Path : G:\GcMsData\2018\GCMS_7\Data\08-22-18\
Qt Path : G:\GCMSDATA\2018\GCMS_7\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 7) 1,4-Dioxane-d8(INT) | 2.542 | 96 | 67422 | 40.00 | ng | -0.03 |
| 21) 1,4-Dichlorobenzene-d4 | 5.784 | 152 | 122121 | 40.00 | ng | 0.00 |
| 31) Naphthalene-d8 | 6.794 | 136 | 440404 | 40.00 | ng | -0.01 |
| 50) Acenaphthene-d10 | 8.220 | 164 | 273502 | 40.00 | ng | -0.02 |
| 77) Phenanthrene-d10 | 9.668 | 188 | 474571 | 40.00 | ng | -0.02 |
| 91) Chrysene-d12 | 12.713 | 240 | 447943 | 40.00 | ng | -0.02 |
| 103) Perylene-d12 | 14.359 | 264 | 376600 | 40.00 | ng | -0.06 |
| System Monitoring Compounds | | | | | | |
| 11) 2-Fluorophenol | 4.598 | 112 | 184152 | 47.50 | ng | 0.00 |
| Spiked Amount 100.000 | | | Recovery = 47.50% | | | |
| 16) Phenol-d5 | 5.475 | 99 | 323774 | 55.68 | ng | 0.00 |
| Spiked Amount 100.000 | | | Recovery = 55.68% | | | |
| 32) Nitrobenzene-d5 | 6.228 | 128 | 54068 | 37.16 | ng | 0.00 |
| Spiked Amount 50.000 | | | Recovery = 74.32% | | | |
| 55) 2-Fluorobiphenyl | 7.633 | 172 | 329955 | 38.75 | ng | -0.02 |
| Spiked Amount 50.000 | | | Recovery = 77.50% | | | |
| 80) 2,4,6-Tribromophenol | 8.952 | 330 | 96344 | 91.97 | ng | -0.02 |
| Spiked Amount 100.000 | | | Recovery = 91.97% | | | |
| 94) Terphenyl-d14 | 11.469 | 244 | 389760 | 51.31 | ng | 0.00 |
| Spiked Amount 50.000 | | | Recovery = 102.62% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed


Abundance
TIC: 7M94025.D\data.ms
Quant QT Reviewed
SampleID : AD05999-001
Data File: 7M94025.D
Acq On : 08/22/18 14:49
Operator : AH/JB
Sam Mult : 1 Vial# : 15
Misc : S,BNA
Qt Meth : 7M_0821.M
Qt On : 08/22/18 15:13
Qt Upd On: 08/21/18 12:40
1.55e+07
1.5e+07
1.45e+07
1.4e+07
1.35e+07
1.3e+07
1.25e+07
1.2e+07
1.15e+07
1.1e+07
1.05e+07
1e+07
9500000
9000000
8500000
8000000
7500000
7000000
6500000
6000000
5500000
5000000
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
1,4-Dioxane-d8(INT),I
2-Fluorophenol,S
Phenol-d5,S
1,4-Dichlorobenzene-d4,I
Nitrobenzene-d5,S
Naphthalene-d8,I
2-Fluorobiphenyl,S
Acenaphthene-d10,I
2,4,6-Tribromophenol,S
Phenanthrene-d10,I
Terphenyl-d14,S
Chrysene-d12,I
Perylene-d12,I
Time-->
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
13.00
14.00
15.00
16.00

# Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: SMB69957
Client Id:
Data File: 7M94015.D
Analysis Date: 08/22/18 10:55
Date Rec/Extracted: NA-08/22/18
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Soil
Initial Vol: 30g
Final Vol: 0.5ml
Dilution: 1
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 95-95-4 | 2,4,5-Trichlorophenol | 0.033 | U | 207-08-9 | Benzo[k]fluoranthene | 0.033 | U |
| 120-83-2 | 2,4-Dichlorophenol | 0.0083 | U | 65-85-0 | Benzoic Acid | 0.17 | U |
| 51-28-5 | 2,4-Dinitrophenol | 0.10 | U | 117-81-7 | bis(2-Ethylhexyl)phthalate | 0.033 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 0.033 | U | 85-68-7 | Butylbenzylphthalate | 0.033 | U |
| 95-57-8 | 2-Chlorophenol | 0.033 | U | 218-01-9 | Chrysene | 0.033 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.033 | U | 53-70-3 | Dibenzo[a,h]anthracene | 0.033 | U |
| 95-48-7 | 2-Methylphenol | 0.0083 | U | 132-64-9 | Dibenzofuran | 0.0083 | U |
| 88-74-4 | 2-Nitroaniline | 0.033 | U | 84-66-2 | Diethylphthalate | 0.033 | U |
| 88-75-5 | 2-Nitrophenol | 0.033 | U | 131-11-3 | Dimethylphthalate | 0.033 | U |
| 106-44-5 | 3&4-Methylphenol | 0.0083 | U | 84-74-2 | Di-n-butylphthalate | 0.0083 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.033 | U | 117-84-0 | Di-n-octylphthalate | 0.033 | U |
| 99-09-2 | 3-Nitroaniline | 0.033 | U | 206-44-0 | Fluoranthene | 0.033 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 0.033 | U | 86-73-7 | Fluorene | 0.033 | U |
| 106-47-8 | 4-Chloroaniline | 0.0083 | U | 118-74-1 | Hexachlorobenzene | 0.033 | U |
| 100-02-7 | 4-Nitrophenol | 0.033 | U | 193-39-5 | Indeno[1,2,3-cd]pyrene | 0.033 | U |
| 83-32-9 | Acenaphthene | 0.033 | U | 78-59-1 | Isophorone | 0.033 | U |
| 208-96-8 | Acenaphthylene | 0.033 | U | 91-20-3 | Naphthalene | 0.0083 | U |
| 62-53-3 | Aniline | 0.0083 | U | 98-95-3 | Nitrobenzene | 0.033 | U |
| 120-12-7 | Anthracene | 0.033 | U | 87-86-5 | Pentachlorophenol | 0.071 | U |
| 56 55-3 | Benzo[a]anthracene | 0.033 | U | 85-01-8 | Phenanthrene | 0.033 | U |
| 50-32-8 | Benzo[a]pyrene | 0.033 | U | 108-95-2 | Phenol | 0.033 | U |
| 205-99-2 | Benzo[b]fluoranthene | 0.033 | U | 129-00-0 | Pyrene | 0.033 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 0.033 | U | | | | |

Worksheet # 477023 ***Total Target Concentration*** 0 ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Quantitation Report (QT Reviewed)

SampleID : SMB69957 Operator : AH/JB Qt Meth : 7M_0821.M
Data File: 7M94015.D Sam Mult : 1 Vial# : 5 Qt On : 08/22/18 11:30
Acq On : 08/22/18 10:55 Misc : S,BNA Qt Upd On: 08/21/18 12:40

Data Path : G:\GcMsData\2018\GCMS_7\Data\08-22-18\
Qt Path : G:\GCMSDATA\2018\GCMS_7\MethodQt\
Qt Resp Via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 7) 1,4-Dioxane-d8(INT) | 2.542 | 96 | 57345 | 40.00 | ng | -0.03 |
| 21) 1,4-Dichlorobenzene-d4 | 5.785 | 152 | 105379 | 40.00 | ng | 0.00 |
| 31) Naphthalene-d8 | 6.794 | 136 | 373037 | 40.00 | ng | -0.01 |
| 50) Acenaphthene-d10 | 8.221 | 164 | 231378 | 40.00 | ng | -0.02 |
| 77) Phenanthrene-d10 | 9.668 | 188 | 401366 | 40.00 | ng | -0.02 |
| 91) Chrysene-d12 | 12.713 | 240 | 386758 | 40.00 | ng | -0.02 |
| 103) Perylene-d12 | 14.364 | 264 | 323054 | 40.00 | ng | -0.05 |
| System Monitoring Compounds | | | | | | |
| 11) 2-Fluorophenol | 4.599 | 112 | 267754 | 81.20 | ng | 0.00 |
| Spiked Amount 100.000 | | | Recovery = 81.20% | | | |
| 16) Phenol-d5 | 5.475 | 99 | 416655 | 84.25 | ng | 0.00 |
| Spiked Amount 100.000 | | | Recovery = 84.25% | | | |
| 32) Nitrobenzene-d5 | 6.228 | 128 | 71770 | 58.24 | ng | 0.00 |
| Spiked Amount 50.000 | | | Recovery = 116.48% | | | |
| 55) 2-Fluorobiphenyl | 7.633 | 172 | 370094 | 51.37 | ng | -0.02 |
| Spiked Amount 50.000 | | | Recovery = 102.74% | | | |
| 80) 2,4,6-Tribromophenol | 8.952 | 330 | 87556 | 97.31 | ng | -0.02 |
| Spiked Amount 100.000 | | | Recovery = 97.31% | | | |
| 94) Terphenyl-d14 | 11.469 | 244 | 370211 | 56.45 | ng | 0.00 |
| Spiked Amount 50.000 | | | Recovery = 112.90% | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

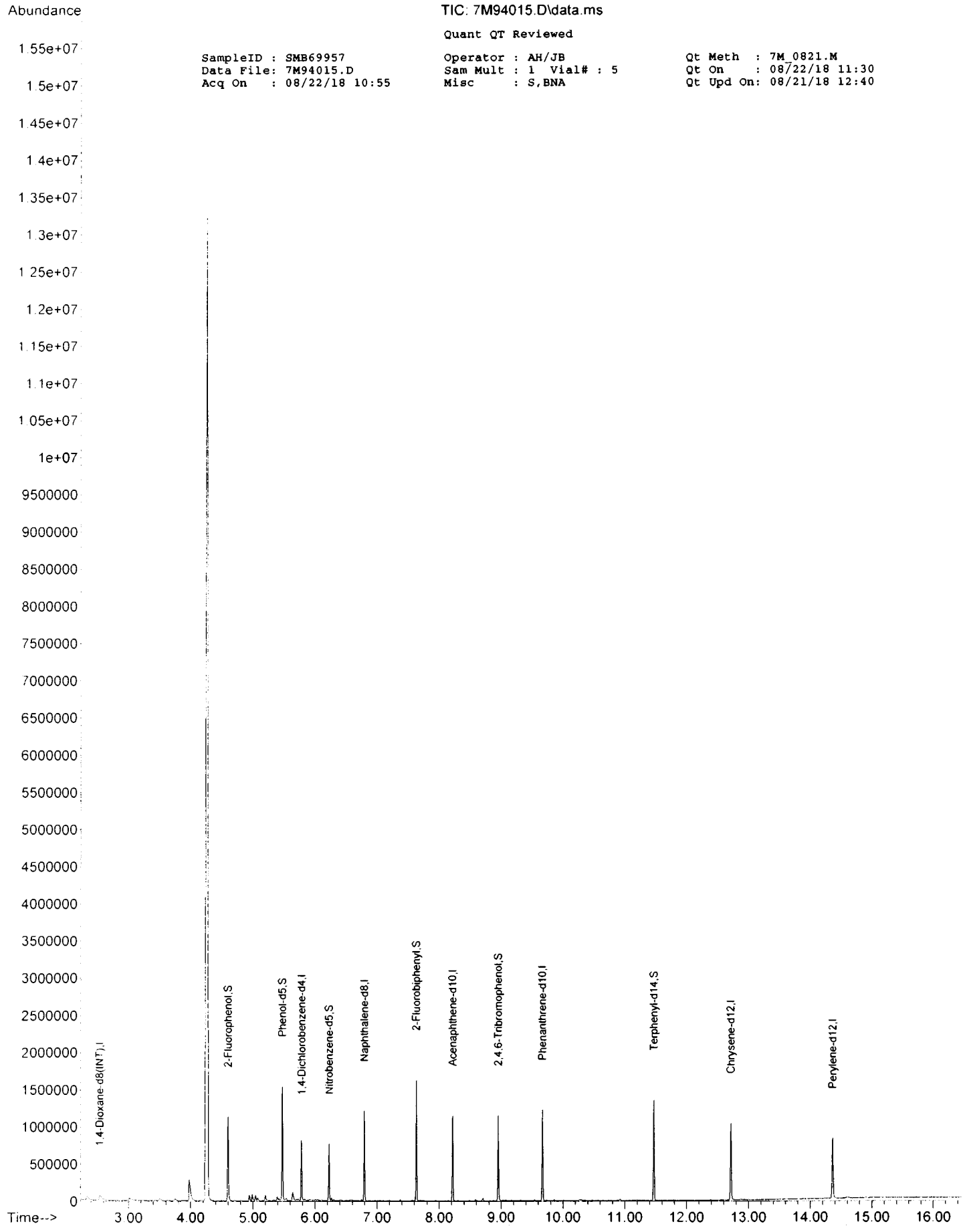
TIC: 7M94015.D\data.ms

Quant QT Reviewed

SampleID : SMB69957
Data File: 7M94015.D
Acq On : 08/22/18 10:55

Operator : AH/JB
Sam Mult : 1 Vial# : 5
Misc : S,BNA

Qt Meth : 7M_0821.M
Qt On : 08/22/18 11:30
Qt Upd On: 08/21/18 12:40



# FORM2

## Surrogate Recovery

Method: EPA 8270D

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column1 S2 Recov | Column1 S3 Recov | Column1 S4 Recov | Column1 S5 Recov | Column1 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M94015.D | SMB69957 | S | 08/22/18 10:55 | 1 | | 81 | 84 | 116 | 103 | 97 | 113 |
| 7M94025.D | AD05999-001 | S | 08/22/18 14:49 | 1 | | 47 | 56 | 74 | 77 | 92 | 103 |
| 7M94014.D | SMB69957(MS) | S | 08/22/18 10:32 | 1 | | 76 | 85 | 114 | 108 | 110 | 122 |
| 7M94028.D | AD05999-001(MS) | S | 08/22/18 16:11 | 1 | | 72 | 77 | 109 | 100 | 104 | 111 |
| 7M94029.D | AD05999-001(MSD) | S | 08/22/18 16:34 | 1 | | 68 | 71 | 101 | 88 | 95 | 101 |

**Flags:** SD=Surrogate diluted out

*=Surrogate out

**Method:** EPA 8270D

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=2-Fluorophenol | 100 | 43-128 |
| S2=Phenol-d5 | 100 | 49-129 |
| S3=Nitrobenzene-d5 | 50 | 52-129 |
| S4=2-Fluorobiphenyl | 50 | 58-125 |
| S5=2,4,6-Tribromophenol | 100 | 54-145 |
| S6=Terphenyl-d14 | 50 | 58-148 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69957

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 7M94014.D | SMB69957(MS) | 8/22/2018 10:32:00 AM |
| Non Spike(If applicable): | | | |
| Inst Blank(If applicable): | | | |

Method: 8270D | Matrix: Soil | QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Pyridine | 1 | 21.2454 | 0 | 50 | 42 | 1 | 150 |
| N-Nitrosodimethylamine | 1 | 34.2517 | 0 | 50 | 69 | 50 | 130 |
| Benzaldehyde | 1 | 47.0609 | 0 | 50 | 94 | 20 | 220 |
| Aniline | 1 | 31.6574 | 0 | 50 | 63 | 20 | 150 |
| Pentachloroethane | 1 | 41.0771 | 0 | 50 | 82 | 50 | 130 |
| bis(2-Chloroethyl)ether | 1 | 38.7689 | 0 | 50 | 78 | 50 | 130 |
| Phenol | 1 | 70.6897 | 0 | 100 | 71 | 20 | 150 |
| 2-Chlorophenol | 1 | 69.6614 | 0 | 100 | 70 | 50 | 130 |
| N-Decane | 1 | 28.9335 | 0 | 50 | 58 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 31.3299 | 0 | 50 | 63 | 60 | 130 |
| 1,4-Dichlorobenzene | 1 | 32.3883 | 0 | 50 | 65 | 60 | 130 |
| 1,2-Dichlorobenzene | 1 | 33.5977 | 0 | 50 | 67 | 50 | 130 |
| Benzyl alcohol | 1 | 45.0837 | 0 | 50 | 90 | 20 | 130 |
| bis(2-chloroisopropyl)ether | 1 | 32.4313 | 0 | 50 | 65 | 40 | 130 |
| 2-Methylphenol | 1 | 79.0156 | 0 | 100 | 79 | 50 | 130 |
| Acetophenone | 1 | 46.7098 | 0 | 50 | 93 | 50 | 130 |
| Hexachloroethane | 1 | 31.7125 | 0 | 50 | 63 | 50 | 130 |
| N-Nitroso-di-n-propylamine | 1 | 36.0998 | 0 | 50 | 72 | 40 | 130 |
| 3&4-Methylphenol | 1 | 78.852 | 0 | 100 | 79 | 70 | 130 |
| Nitrobenzene | 1 | 38.5164 | 0 | 50 | 77 | 70 | 130 |
| Isophorone | 1 | 38.6568 | 0 | 50 | 77 | 60 | 130 |
| 2-Nitrophenol | 1 | 72.4284 | 0 | 100 | 72 | 70 | 130 |
| 2,4-Dimethylphenol | 1 | 79.0657 | 0 | 100 | 79 | 50 | 130 |
| Benzoic Acid | 1 | 95.0861 | 0 | 100 | 95 | 20 | 130 |
| bis(2-Chloroethoxy)methane | 1 | 38.2221 | 0 | 50 | 76 | 60 | 130 |
| 2,4-Dichlorophenol | 1 | 82.7642 | 0 | 100 | 83 | 70 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 35.4176 | 0 | 50 | 71 | 50 | 130 |
| Naphthalene | 1 | 39.54 | 0 | 50 | 79 | 50 | 130 |
| 4-Chloroaniline | 1 | 42.7442 | 0 | 50 | 85 | 10 | 150 |
| Hexachlorobutadiene | 1 | 36.0648 | 0 | 50 | 72 | 60 | 130 |
| Caprolactam | 1 | 67.6684 | 0 | 50 | 135* | 50 | 130 |
| 4-Chloro-3-methylphenol | 1 | 85.6091 | 0 | 100 | 86 | 50 | 130 |
| 2-Methylnaphthalene | 1 | 38.7378 | 0 | 50 | 77 | 70 | 130 |
| 1-Methylnaphthalene | 1 | 45.2816 | 0 | 50 | 91 | 70 | 130 |
| 1,1'-Biphenyl | 1 | 42.5774 | 0 | 50 | 85 | 60 | 130 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 50.1856 | 0 | 50 | 100 | 70 | 130 |
| Hexachlorocyclopentadiene | 1 | 37.5507 | 0 | 50 | 75 | 20 | 160 |
| 2,4,6-Trichlorophenol | 1 | 86.2336 | 0 | 100 | 86 | 70 | 130 |
| 2,4,5-Trichlorophenol | 1 | 90.7465 | 0 | 100 | 91 | 70 | 130 |
| 2-Chloronaphthalene | 1 | 40.4997 | 0 | 50 | 81 | 70 | 130 |
| 1,4-Dimethylnaphthalene | 1 | 46.6122 | 0 | 50 | 93 | 70 | 130 |
| Diphenyl Ether | 1 | 52.8635 | 0 | 50 | 106 | 70 | 130 |
| 2-Nitroaniline | 1 | 50.8369 | 0 | 50 | 102 | 50 | 130 |
| Coumarin | 1 | 56.5707 | 0 | 50 | 113 | 70 | 130 |
| Acenaphthylene | 1 | 47.421 | 0 | 50 | 95 | 70 | 130 |
| Dimethylphthalate | 1 | 44.7847 | 0 | 50 | 90 | 70 | 130 |
| 2,6-Dinitrotoluene | 1 | 46.9411 | 0 | 50 | 94 | 70 | 130 |
| Acenaphthene | 1 | 43.8335 | 0 | 50 | 88 | 50 | 130 |
| 3-Nitroaniline | 1 | 46.1477 | 0 | 50 | 92 | 10 | 130 |
| 2,4-Dinitrophenol | 1 | 78.1221 | 0 | 100 | 78 | 20 | 150 |
| Dibenzofuran | 1 | 46.1347 | 0 | 50 | 92 | 70 | 130 |
| 2,4-Dinitrotoluene | 1 | 44.5784 | 0 | 50 | 89 | 40 | 130 |
| 4-Nitrophenol | 1 | 94.2889 | 0 | 100 | 94 | 20 | 150 |
| 2,3,4,6-Tetrachlorophenol | 1 | 81.0915 | 0 | 100 | 81 | 70 | 130 |
| Fluorene | 1 | 45.0221 | 0 | 50 | 90 | 50 | 130 |
| 4-Chlorophenyl-phenylether | 1 | 42.9789 | 0 | 50 | 86 | 70 | 130 |
| Diethylphthalate | 1 | 47.2901 | 0 | 50 | 95 | 70 | 130 |
| 4-Nitroaniline | 1 | 46.2515 | 0 | 50 | 93 | 50 | 130 |
| Atrazine | 1 | 73.8561 | 0 | 50 | 148* | 50 | 130 |
| 4,6-Dinitro-2-methylphenol | 1 | 85.5327 | 0 | 100 | 86 | 70 | 130 |
| n-Nitrosodiphenylamine | 1 | 36.6341 | 0 | 50 | 73 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69957

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 1 | 52.3681 | 0 | 50 | 105 | 70 | 130 |
| 4-Bromophenyl-phenylether | 1 | 44.2035 | 0 | 50 | 88 | 70 | 130 |
| Hexachlorobenzene | 1 | 42.1419 | 0 | 50 | 84 | 70 | 130 |
| N-Octadecane | 1 | 60.6527 | 0 | 50 | 121 | 70 | 130 |
| Pentachlorophenol | 1 | 82.4746 | 0 | 100 | 82 | 40 | 130 |
| Phenanthrene | 1 | 43.4203 | 0 | 50 | 87 | 70 | 130 |
| Anthracene | 1 | 41.0753 | 0 | 50 | 82 | 70 | 130 |
| Carbazole | 1 | 54.0664 | 0 | 50 | 108 | 70 | 130 |
| Di-n-butylphthalate | 1 | 44.8514 | 0 | 50 | 90 | 70 | 130 |
| Fluoranthene | 1 | 42.9295 | 0 | 50 | 86 | 70 | 130 |
| Pyrene | 1 | 45.5499 | 0 | 50 | 91 | 50 | 130 |
| Benzidine | 1 | 3.5569 | 0 | 50 | 7.1 | 1 | 130 |
| Butylbenzylphthalate | 1 | 46.0666 | 0 | 50 | 92 | 50 | 130 |
| 3,3'-Dichlorobenzidine | 1 | 42.3029 | 0 | 50 | 85 | 10 | 130 |
| Benzo[a]anthracene | 1 | 45.439 | 0 | 50 | 91 | 70 | 130 |
| Chrysene | 1 | 45.3597 | 0 | 50 | 91 | 60 | 130 |
| bis(2-Ethylhexyl)phthalate | 1 | 48.108 | 0 | 50 | 96 | 70 | 130 |
| Di-n-octylphthalate | 1 | 47.5376 | 0 | 50 | 95 | 70 | 130 |
| Benzo[b]fluoranthene | 1 | 45.9195 | 0 | 50 | 92 | 70 | 130 |
| Benzo[k]fluoranthene | 1 | 47.2157 | 0 | 50 | 94 | 70 | 130 |
| Benzo[a]pyrene | 1 | 40.479 | 0 | 50 | 81 | 70 | 130 |
| Indeno[1,2,3-cd]pyrene | 1 | 46.9658 | 0 | 50 | 94 | 70 | 130 |
| Dibenzo[a,h]anthracene | 1 | 51.3137 | 0 | 50 | 103 | 60 | 130 |
| Benzo[g,h,i]perylene | 1 | 44.1412 | 0 | 50 | 88 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69957

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 7M94028.D | AD05999-001(MS) | 8/22/2018 4:11:00 PM |
| Non Spike(If applicable): | 7M94025.D | AD05999-001 | 8/22/2018 2:49:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8270D  Matrix: Soil  QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Pyridine | 1 | 25.0598 | 0 | 50 | 50 | 1 | 150 |
| N-Nitrosodimethylamine | 1 | 31.3986 | 0 | 50 | 63 | 50 | 130 |
| Benzaldehyde | 1 | 50.5529 | 0 | 50 | 101 | 20 | 220 |
| Aniline | 1 | 30.3855 | 0 | 50 | 61 | 20 | 150 |
| Pentachloroethane | 1 | 42.4324 | 0 | 50 | 85 | 50 | 130 |
| bis(2-Chloroethyl)ether | 1 | 35.5147 | 0 | 50 | 71 | 50 | 130 |
| Phenol | 1 | 72.0502 | 0 | 100 | 72 | 20 | 150 |
| 2-Chlorophenol | 1 | 70.829 | 0 | 100 | 71 | 50 | 130 |
| N-Decane | 1 | 53.2942 | 2.6886 | 50 | 101 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 29.6744 | 0 | 50 | 59* | 60 | 130 |
| 1,4-Dichlorobenzene | 1 | 30.0185 | 0 | 50 | 60 | 60 | 130 |
| 1,2-Dichlorobenzene | 1 | 30.9249 | 0 | 50 | 62 | 50 | 130 |
| Benzyl alcohol | 1 | 36.1132 | 0 | 50 | 72 | 20 | 130 |
| bis(2-chloroisopropyl)ether | 1 | 29.8533 | 0 | 50 | 60 | 40 | 130 |
| 2-Methylphenol | 1 | 79.1807 | 0 | 100 | 79 | 50 | 130 |
| Acetophenone | 1 | 49.1759 | 0 | 50 | 98 | 50 | 130 |
| Hexachloroethane | 1 | 30.3672 | 0 | 50 | 61 | 50 | 130 |
| N-Nitroso-di-n-propylamine | 1 | 32.5745 | 0 | 50 | 65 | 40 | 130 |
| 3&4-Methylphenol | 1 | 75.2827 | 0 | 100 | 75 | 70 | 130 |
| Nitrobenzene | 1 | 35.2994 | 0 | 50 | 71 | 70 | 130 |
| Isophorone | 1 | 34.0776 | 0 | 50 | 68 | 60 | 130 |
| 2-Nitrophenol | 1 | 72.7951 | 0 | 100 | 73 | 70 | 130 |
| 2,4-Dimethylphenol | 1 | 72.9597 | 0 | 100 | 73 | 50 | 130 |
| Benzoic Acid | 1 | 45.4478 | 0 | 100 | 45 | 20 | 130 |
| bis(2-Chloroethoxy)methane | 1 | 33.4948 | 0 | 50 | 67 | 60 | 130 |
| 2,4-Dichlorophenol | 1 | 81.0702 | 0 | 100 | 81 | 70 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 32.4013 | 0 | 50 | 65 | 50 | 130 |
| Naphthalene | 1 | 35.758 | 0 | 50 | 72 | 50 | 130 |
| 4-Chloroaniline | 1 | 34.1328 | 0 | 50 | 68 | 10 | 150 |
| Hexachlorobutadiene | 1 | 31.1757 | 0 | 50 | 62 | 60 | 130 |
| Caprolactam | 1 | 43.5279 | 0 | 50 | 87 | 50 | 130 |
| 4-Chloro-3-methylphenol | 1 | 79.2588 | 0 | 100 | 79 | 50 | 130 |
| 2-Methylnaphthalene | 1 | 33.6018 | 0 | 50 | 67* | 70 | 130 |
| 1-Methylnaphthalene | 1 | 48.1788 | 0 | 50 | 96 | 70 | 130 |
| 1,1'-Biphenyl | 1 | 43.341 | 0 | 50 | 87 | 60 | 130 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 53.0175 | 0 | 50 | 106 | 70 | 130 |
| Hexachlorocyclopentadiene | 1 | 35.1494 | 0 | 50 | 70 | 20 | 160 |
| 2,4,6-Trichlorophenol | 1 | 81.1876 | 0 | 100 | 81 | 70 | 130 |
| 2,4,5-Trichlorophenol | 1 | 84.0727 | 0 | 100 | 84 | 70 | 130 |
| 2-Chloronaphthalene | 1 | 34.5984 | 0 | 50 | 69* | 70 | 130 |
| 1,4-Dimethylnaphthalene | 1 | 45.5338 | 0 | 50 | 91 | 70 | 130 |
| Diphenyl Ether | 1 | 54.0962 | 0 | 50 | 108 | 70 | 130 |
| 2-Nitroaniline | 1 | 44.3286 | 0 | 50 | 89 | 50 | 130 |
| Coumarin | 1 | 49.1538 | 0 | 50 | 98 | 70 | 130 |
| Acenaphthylene | 1 | 40.4365 | 0 | 50 | 81 | 70 | 130 |
| Dimethylphthalate | 1 | 37.5409 | 0 | 50 | 75 | 70 | 130 |
| 2,6-Dinitrotoluene | 1 | 42.0818 | 0 | 50 | 84 | 70 | 130 |
| Acenaphthene | 1 | 37.8838 | 0 | 50 | 76 | 50 | 130 |
| 3-Nitroaniline | 1 | 37.6486 | 0 | 50 | 75 | 70 | 130 |
| 2,4-Dinitrophenol | 1 | 73.8039 | 0 | 100 | 74 | 20 | 150 |
| Dibenzofuran | 1 | 39.4782 | 0 | 50 | 79 | 70 | 130 |
| 2,4-Dinitrotoluene | 1 | 38.8443 | 0 | 50 | 78 | 40 | 130 |
| 4-Nitrophenol | 1 | 79.0284 | 0 | 100 | 79 | 20 | 150 |
| 2,3,4,6-Tetrachlorophenol | 1 | 74.2276 | 0 | 100 | 74 | 70 | 130 |
| Fluorene | 1 | 38.6142 | 0 | 50 | 77 | 50 | 130 |
| 4-Chlorophenyl-phenylether | 1 | 36.8344 | 0 | 50 | 74 | 70 | 130 |
| Diethylphthalate | 1 | 39.6709 | 0 | 50 | 79 | 70 | 130 |
| 4-Nitroaniline | 1 | 38.6262 | 0 | 50 | 77 | 50 | 130 |
| Atrazine | 1 | 43.941 | 0 | 50 | 88 | 50 | 130 |
| 4,6-Dinitro-2-methylphenol | 1 | 80.032 | 0 | 100 | 80 | 70 | 130 |
| n-Nitrosodiphenylamine | 1 | 32.1073 | 0 | 50 | 64 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69957

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 1 | 43.9518 | 0 | 50 | 88 | 70 | 130 |
| 4-Bromophenyl-phenylether | 1 | 38.2588 | 0 | 50 | 77 | 70 | 130 |
| Hexachlorobenzene | 1 | 38.1743 | 0 | 50 | 76 | 70 | 130 |
| N-Octadecane | 1 | 56.0719 | 0 | 50 | 112 | 70 | 130 |
| Pentachlorophenol | 1 | 77.501 | 0 | 100 | 78 | 40 | 130 |
| Phenanthrene | 1 | 38.5489 | 0 | 50 | 77 | 70 | 130 |
| Anthracene | 1 | 37.1572 | 0 | 50 | 74 | 70 | 130 |
| Carbazole | 1 | 48.2504 | 0 | 50 | 97 | 70 | 130 |
| Di-n-butylphthalate | 1 | 31.1855 | 0 | 50 | 62* | 70 | 130 |
| Fluoranthene | 1 | 39.1629 | 0 | 50 | 78 | 70 | 130 |
| Pyrene | 1 | 41.7262 | 0 | 50 | 83 | 50 | 130 |
| Benzidine | 1 | 0 | 0 | 50 | 0* | 1 | 130 |
| Butylbenzylphthalate | 1 | 9.3099 | 0 | 50 | 19* | 50 | 130 |
| 3,3'-Dichlorobenzidine | 1 | 21.772 | 0 | 50 | 44 | 10 | 130 |
| Benzo[a]anthracene | 1 | 40.4643 | 0 | 50 | 81 | 70 | 130 |
| Chrysene | 1 | 39.8855 | 0 | 50 | 80 | 60 | 130 |
| bis(2-Ethylhexyl)phthalate | 1 | 14.8421 | 0 | 50 | 30* | 70 | 130 |
| Di-n-octylphthalate | 1 | 15.1639 | 0 | 50 | 30* | 70 | 130 |
| Benzo[b]fluoranthene | 1 | 46.0515 | 0 | 50 | 92 | 70 | 130 |
| Benzo[k]fluoranthene | 1 | 45.7205 | 0 | 50 | 91 | 70 | 130 |
| Benzo[a]pyrene | 1 | 38.8803 | 0 | 50 | 78 | 70 | 130 |
| Indeno[1,2,3-cd]pyrene | 1 | 44.6015 | 0 | 50 | 89 | 70 | 130 |
| Dibenzo[a,h]anthracene | 1 | 48.7208 | 0 | 50 | 97 | 60 | 130 |
| Benzo[g,h,i]perylene | 1 | 41.595 | 0 | 50 | 83 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69957

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 7M94029.D | AD05999-001(MSD) | 8/22/2018 4:34:00 PM |
| Non Spike(If applicable): | 7M94025.D | AD05999-001 | 8/22/2018 2:49:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8270D  Matrix: Soil  QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Pyridine | 1 | 29.0903 | 0 | 50 | 58 | 1 | 150 |
| N-Nitrosodimethylamine | 1 | 31.4179 | 0 | 50 | 63 | 50 | 130 |
| Benzaldehyde | 1 | 51.5708 | 0 | 50 | 103 | 20 | 220 |
| Aniline | 1 | 31.0537 | 0 | 50 | 62 | 20 | 150 |
| Pentachloroethane | 1 | 44.9995 | 0 | 50 | 90 | 50 | 130 |
| bis(2-Chloroethyl)ether | 1 | 35.1093 | 0 | 50 | 70 | 50 | 130 |
| Phenol | 1 | 71.2418 | 0 | 100 | 71 | 20 | 150 |
| 2-Chlorophenol | 1 | 69.5152 | 0 | 100 | 70 | 50 | 130 |
| N-Decane | 1 | 38.6852 | 2.6886 | 50 | 72 | 20 | 130 |
| 1,3-Dichlorobenzene | 1 | 29.4936 | 0 | 50 | 59* | 60 | 130 |
| 1,4-Dichlorobenzene | 1 | 29.896 | 0 | 50 | 60 | 60 | 130 |
| 1,2-Dichlorobenzene | 1 | 30.3842 | 0 | 50 | 61 | 50 | 130 |
| Benzyl alcohol | 1 | 39.1779 | 0 | 50 | 78 | 20 | 130 |
| bis(2-chloroisopropyl)ether | 1 | 29.5448 | 0 | 50 | 59 | 40 | 130 |
| 2-Methylphenol | 1 | 76.5696 | 0 | 100 | 77 | 50 | 130 |
| Acetophenone | 1 | 50.4715 | 0 | 50 | 101 | 50 | 130 |
| Hexachloroethane | 1 | 30.8155 | 0 | 50 | 62 | 50 | 130 |
| N-Nitroso-di-n-propylamine | 1 | 31.3399 | 0 | 50 | 63 | 40 | 130 |
| 3&4-Methylphenol | 1 | 75.9282 | 0 | 100 | 76 | 70 | 130 |
| Nitrobenzene | 1 | 34.5744 | 0 | 50 | 69* | 70 | 130 |
| Isophorone | 1 | 33.5801 | 0 | 50 | 67 | 60 | 130 |
| 2-Nitrophenol | 1 | 72.4618 | 0 | 100 | 72 | 70 | 130 |
| 2,4-Dimethylphenol | 1 | 77.1923 | 0 | 100 | 77 | 50 | 130 |
| Benzoic Acid | 1 | 60.3121 | 0 | 100 | 60 | 20 | 130 |
| bis(2-Chloroethoxy)methane | 1 | 32.1013 | 0 | 50 | 64 | 60 | 130 |
| 2,4-Dichlorophenol | 1 | 80.6347 | 0 | 100 | 81 | 70 | 130 |
| 1,2,4-Trichlorobenzene | 1 | 30.9084 | 0 | 50 | 62 | 50 | 130 |
| Naphthalene | 1 | 34.436 | 0 | 50 | 69 | 50 | 130 |
| 4-Chloroaniline | 1 | 39.7019 | 0 | 50 | 79 | 10 | 150 |
| Hexachlorobutadiene | 1 | 31.7264 | 0 | 50 | 63 | 60 | 130 |
| Caprolactam | 1 | 48.1358 | 0 | 50 | 96 | 50 | 130 |
| 4-Chloro-3-methylphenol | 1 | 81.4311 | 0 | 100 | 81 | 50 | 130 |
| 2-Methylnaphthalene | 1 | 33.1456 | 0 | 50 | 66* | 70 | 130 |
| 1-Methylnaphthalene | 1 | 45.5825 | 0 | 50 | 91 | 70 | 130 |
| 1,1'-Biphenyl | 1 | 40.9269 | 0 | 50 | 82 | 60 | 130 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 48.2113 | 0 | 50 | 96 | 70 | 130 |
| Hexachlorocyclopentadiene | 1 | 28.4978 | 0 | 50 | 57 | 20 | 160 |
| 2,4,6-Trichlorophenol | 1 | 85.6167 | 0 | 100 | 86 | 70 | 130 |
| 2,4,5-Trichlorophenol | 1 | 79.2213 | 0 | 100 | 79 | 70 | 130 |
| 2-Chloronaphthalene | 1 | 34.1194 | 0 | 50 | 68* | 70 | 130 |
| 1,4-Dimethylnaphthalene | 1 | 41.5145 | 0 | 50 | 83 | 70 | 130 |
| Diphenyl Ether | 1 | 47.9749 | 0 | 50 | 96 | 70 | 130 |
| 2-Nitroaniline | 1 | 43.0422 | 0 | 50 | 86 | 50 | 130 |
| Coumarin | 1 | 43.5524 | 0 | 50 | 87 | 70 | 130 |
| Acenaphthylene | 1 | 40.0659 | 0 | 50 | 80 | 70 | 130 |
| Dimethylphthalate | 1 | 36.1938 | 0 | 50 | 72 | 70 | 130 |
| 2,6-Dinitrotoluene | 1 | 38.9473 | 0 | 50 | 78 | 70 | 130 |
| Acenaphthene | 1 | 37.219 | 0 | 50 | 74 | 50 | 130 |
| 3-Nitroaniline | 1 | 39.5302 | 0 | 50 | 79 | 70 | 130 |
| 2,4-Dinitrophenol | 1 | 67.1887 | 0 | 100 | 67 | 20 | 150 |
| Dibenzofuran | 1 | 38.4107 | 0 | 50 | 77 | 70 | 130 |
| 2,4-Dinitrotoluene | 1 | 37.6498 | 0 | 50 | 75 | 40 | 130 |
| 4-Nitrophenol | 1 | 80.6756 | 0 | 100 | 81 | 20 | 150 |
| 2,3,4,6-Tetrachlorophenol | 1 | 74.7969 | 0 | 100 | 75 | 70 | 130 |
| Fluorene | 1 | 37.5135 | 0 | 50 | 75 | 50 | 130 |
| 4-Chlorophenyl-phenylether | 1 | 36.5712 | 0 | 50 | 73 | 70 | 130 |
| Diethylphthalate | 1 | 36.912 | 0 | 50 | 74 | 70 | 130 |
| 4-Nitroaniline | 1 | 38.4016 | 0 | 50 | 77 | 50 | 130 |
| Atrazine | 1 | 44.6999 | 0 | 50 | 89 | 50 | 130 |
| 4,6-Dinitro-2-methylphenol | 1 | 80.194 | 0 | 100 | 80 | 70 | 130 |
| n-Nitrosodiphenylamine | 1 | 31.8334 | 0 | 50 | 64 | 50 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3

## Recovery Data Laboratory Limits

### QC Batch: SMB69957

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 1 | 42.511 | 0 | 50 | 85 | 70 | 130 |
| 4-Bromophenyl-phenylether | 1 | 37.4804 | 0 | 50 | 75 | 70 | 130 |
| Hexachlorobenzene | 1 | 38.491 | 0 | 50 | 77 | 70 | 130 |
| N-Octadecane | 1 | 52.9096 | 0 | 50 | 106 | 70 | 130 |
| Pentachlorophenol | 1 | 76.4207 | 0 | 100 | 76 | 40 | 130 |
| Phenanthrene | 1 | 38.7088 | 0 | 50 | 77 | 70 | 130 |
| Anthracene | 1 | 36.5573 | 0 | 50 | 73 | 70 | 130 |
| Carbazole | 1 | 46.7591 | 0 | 50 | 94 | 70 | 130 |
| Di-n-butylphthalate | 1 | 32.4678 | 0 | 50 | 65* | 70 | 130 |
| Fluoranthene | 1 | 38.2796 | 0 | 50 | 77 | 70 | 130 |
| Pyrene | 1 | 42.2225 | 0 | 50 | 84 | 50 | 130 |
| Benzidine | 1 | 2.1458 | 0 | 50 | 4.3 | 1 | 130 |
| Butylbenzylphthalate | 1 | 14.1196 | 0 | 50 | 28* | 50 | 130 |
| 3,3'-Dichlorobenzidine | 1 | 30.9108 | 0 | 50 | 62 | 10 | 130 |
| Benzo[a]anthracene | 1 | 39.85 | 0 | 50 | 80 | 70 | 130 |
| Chrysene | 1 | 39.9455 | 0 | 50 | 80 | 60 | 130 |
| bis(2-Ethylhexyl)phthalate | 1 | 19.0992 | 0 | 50 | 38* | 70 | 130 |
| Di-n-octylphthalate | 1 | 18.1223 | 0 | 50 | 36* | 70 | 130 |
| Benzo[b]fluoranthene | 1 | 40.9658 | 0 | 50 | 82 | 70 | 130 |
| Benzo[k]fluoranthene | 1 | 41.4935 | 0 | 50 | 83 | 70 | 130 |
| Benzo[a]pyrene | 1 | 35.8861 | 0 | 50 | 72 | 70 | 130 |
| Indeno[1,2,3-cd]pyrene | 1 | 40.4646 | 0 | 50 | 81 | 70 | 130 |
| Dibenzo[a,h]anthracene | 1 | 44.9458 | 0 | 50 | 90 | 60 | 130 |
| Benzo[g,h,i]perylene | 1 | 38.6811 | 0 | 50 | 77 | 70 | 130 |

* - Indicates outside of limits  # - Indicates outside of standard limits but within method exceedance limits

# Form3
## RPD Data Laboratory Limits
QC Batch: SMB69957

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 7M94029.D | AD05999-001(MSD) | 8/22/2018 4:34:00 PM |
| Duplicate(If applicable): | 7M94028.D | AD05999-001(MS) | 8/22/2018 4:11:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8270D Matrix: Soil QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Pyridine | 1 | 29.0903 | 25.0598 | 15 | 30 |
| N-Nitrosodimethylamine | 1 | 31.4179 | 31.3986 | 0.06 | 30 |
| Benzaldehyde | 1 | 51.5708 | 50.5529 | 2 | 30 |
| Aniline | 1 | 31.0537 | 30.3855 | 2.2 | 30 |
| Pentachloroethane | 1 | 44.9995 | 42.4324 | 5.9 | 30 |
| bis(2-Chloroethyl)ether | 1 | 35.1093 | 35.5147 | 1.1 | 30 |
| Phenol | 1 | 71.2418 | 72.0502 | 1.1 | 40 |
| 2-Chlorophenol | 1 | 69.5152 | 70.829 | 1.9 | 40 |
| N-Decane | 1 | 38.6852 | 53.2942 | 32* | 30 |
| 1,3-Dichlorobenzene | 1 | 29.4936 | 29.6744 | 0.61 | 30 |
| 1,4-Dichlorobenzene | 1 | 29.896 | 30.0185 | 0.41 | 40 |
| 1,2-Dichlorobenzene | 1 | 30.3842 | 30.9249 | 1.8 | 30 |
| Benzyl alcohol | 1 | 39.1779 | 36.1132 | 8.1 | 30 |
| bis(2-chloroisopropyl)ether | 1 | 29.5448 | 29.8533 | 1 | 30 |
| 2-Methylphenol | 1 | 76.5696 | 79.1807 | 3.4 | 40 |
| Acetophenone | 1 | 50.4715 | 49.1759 | 2.6 | 30 |
| Hexachloroethane | 1 | 30.8155 | 30.3672 | 1.5 | 30 |
| N-Nitroso-di-n-propylamine | 1 | 31.3399 | 32.5745 | 3.9 | 40 |
| 3&4-Methylphenol | 1 | 75.9282 | 75.2827 | 0.85 | 30 |
| Nitrobenzene | 1 | 34.5744 | 35.2994 | 2.1 | 30 |
| Isophorone | 1 | 33.5801 | 34.0776 | 1.5 | 30 |
| 2-Nitrophenol | 1 | 72.4618 | 72.7951 | 0.46 | 30 |
| 2,4-Dimethylphenol | 1 | 77.1923 | 72.9597 | 5.6 | 40 |
| Benzoic Acid | 1 | 60.3121 | 45.4478 | 28 | 30 |
| bis(2-Chloroethoxy)methane | 1 | 32.1013 | 33.4948 | 4.2 | 30 |
| 2,4-Dichlorophenol | 1 | 80.6347 | 81.0702 | 0.54 | 30 |
| 1,2,4-Trichlorobenzene | 1 | 30.9084 | 32.4013 | 4.7 | 40 |
| Naphthalene | 1 | 34.436 | 35.758 | 3.8 | 40 |
| 4-Chloroaniline | 1 | 39.7019 | 34.1328 | 15 | 30 |
| Hexachlorobutadiene | 1 | 31.7264 | 31.1757 | 1.8 | 30 |
| Caprolactam | 1 | 48.1358 | 43.5279 | 10 | 30 |
| 4-Chloro-3-methylphenol | 1 | 81.4311 | 79.2588 | 2.7 | 40 |
| 2-Methylnaphthalene | 1 | 33.1456 | 33.6018 | 1.4 | 30 |
| 1-Methylnaphthalene | 1 | 45.5825 | 48.1788 | 5.5 | 30 |
| 1,1'-Biphenyl | 1 | 40.9269 | 43.341 | 5.7 | 30 |
| 1,2,4,5-Tetrachlorobenzene | 1 | 48.2113 | 53.0175 | 9.5 | 30 |
| Hexachlorocyclopentadiene | 1 | 28.4978 | 35.1494 | 21 | 30 |
| 2,4,6-Trichlorophenol | 1 | 85.6167 | 81.1876 | 5.3 | 30 |
| 2,4,5-Trichlorophenol | 1 | 79.2213 | 84.0727 | 5.9 | 30 |
| 2-Chloronaphthalene | 1 | 34.1194 | 34.5984 | 1.4 | 30 |
| 1,4-Dimethylnaphthalene | 1 | 41.5145 | 45.5338 | 9.2 | 30 |
| Diphenyl Ether | 1 | 47.9749 | 54.0962 | 12 | 30 |
| 2-Nitroaniline | 1 | 43.0422 | 44.3286 | 2.9 | 30 |
| Coumarin | 1 | 43.5524 | 49.1538 | 12 | 30 |
| Acenaphthylene | 1 | 40.0659 | 40.4365 | 0.92 | 30 |
| Dimethylphthalate | 1 | 36.1938 | 37.5409 | 3.7 | 30 |
| 2,6-Dinitrotoluene | 1 | 38.9473 | 42.0818 | 7.7 | 30 |
| Acenaphthene | 1 | 37.219 | 37.8838 | 1.8 | 40 |
| 3-Nitroaniline | 1 | 39.5302 | 37.6486 | 4.9 | 30 |
| 2,4-Dinitrophenol | 1 | 67.1887 | 73.8039 | 9.4 | 30 |
| Dibenzofuran | 1 | 38.4107 | 39.4782 | 2.7 | 30 |
| 2,4-Dinitrotoluene | 1 | 37.6498 | 38.8443 | 3.1 | 40 |
| 4-Nitrophenol | 1 | 80.6756 | 79.0284 | 2.1 | 40 |
| 2,3,4,6-Tetrachlorophenol | 1 | 74.7969 | 74.2276 | 0.76 | 30 |
| Fluorene | 1 | 37.5135 | 38.6142 | 2.9 | 40 |
| 4-Chlorophenyl-phenylether | 1 | 36.5712 | 36.8344 | 0.72 | 30 |
| Diethylphthalate | 1 | 36.912 | 39.6709 | 7.2 | 30 |
| 4-Nitroaniline | 1 | 38.4016 | 38.6262 | 0.58 | 30 |
| Atrazine | 1 | 44.6999 | 43.941 | 1.7 | 30 |
| 4,6-Dinitro-2-methylphenol | 1 | 80.194 | 80.032 | 0.2 | 30 |
| n-Nitrosodiphenylamine | 1 | 31.8334 | 32.1073 | 0.86 | 30 |
| 1,2-Diphenylhydrazine | 1 | 42.511 | 43.9518 | 3.3 | 30 |
| 4-Bromophenyl-phenylether | 1 | 37.4804 | 38.2588 | 2.1 | 30 |

# Form3
## RPD Data Laboratory Limits
### QC Batch: SMB69957

| | | | | | |
|---|---|---|---|---|---|
| Hexachlorobenzene | 1 | 38.491 | 38.1743 | 0.83 | 30 |
| N-Octadecane | 1 | 52.9096 | 56.0719 | 5.8 | 30 |
| Pentachlorophenol | 1 | 76.4207 | 77.501 | 1.4 | 40 |
| Phenanthrene | 1 | 38.7088 | 38.5489 | 0.41 | 30 |
| Anthracene | 1 | 36.5573 | 37.1572 | 1.6 | 30 |
| Carbazole | 1 | 46.7591 | 48.2504 | 3.1 | 30 |
| Di-n-butylphthalate | 1 | 32.4678 | 31.1855 | 4 | 30 |
| Fluoranthene | 1 | 38.2796 | 39.1629 | 2.3 | 30 |
| Pyrene | 1 | 42.2225 | 41.7262 | 1.2 | 40 |
| Benzidine | 1 | 2.1458 | 0 | 200* | 30 |
| Butylbenzylphthalate | 1 | 14.1196 | 9.3099 | 41* | 40 |
| 3,3'-Dichlorobenzidine | 1 | 30.9108 | 21.772 | 35* | 30 |
| Benzo[a]anthracene | 1 | 39.85 | 40.4643 | 1.5 | 30 |
| Chrysene | 1 | 39.9455 | 39.8855 | 0.15 | 30 |
| bis(2-Ethylhexyl)phthalate | 1 | 19.0992 | 14.8421 | 25 | 30 |
| Di-n-octylphthalate | 1 | 18.1223 | 15.1639 | 18 | 30 |
| Benzo[b]fluoranthene | 1 | 40.9658 | 46.0515 | 12 | 30 |
| Benzo[k]fluoranthene | 1 | 41.4935 | 45.7205 | 9.7 | 30 |
| Benzo[a]pyrene | 1 | 35.8861 | 38.8803 | 8 | 30 |
| Indeno[1,2,3-cd]pyrene | 1 | 40.4646 | 44.6015 | 9.7 | 30 |
| Dibenzo[a,h]anthracene | 1 | 44.9458 | 48.7208 | 8.1 | 30 |
| Benzo[g,h,i]perylene | 1 | 38.6811 | 41.595 | 7.3 | 30 |

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: SMB69957
Blank Data File: 7M94015.D
Matrix: Soil

Blank Analysis Date: 08/22/18 10:55
Blank Extraction Date: 08/22/18
(If Applicable)
Method: EPA 8270D

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD05999-001 | 7M94025.D | 08/22/18 14:49 |
| AD05999-001(MSD | 7M94029.D | 08/22/18 16:34 |
| AD05999-001(MS) | 7M94028.D | 08/22/18 16:11 |
| SMB69957(MS) | 7M94014.D | 08/22/18 10:32 |

# Form 5

**Tune Name:** CAL DFTPP
**Instrument:** GCMS 7
**Data File:** 7M93972.D
**Analysis Date:** 08/21/18 08:24
Method: EPA 8270D

**Tune Scan/Time Range:** Average of 9.968 to 9.973 min

| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 48.0 | 93340 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 51.0 | 99124 | PASS |
| 70 | 69 | 0.00 | 2 | 0.5 | 502 | PASS |
| 127 | 198 | 40 | 60 | 52.2 | 101400 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 194400 | PASS |
| 199 | 198 | 5 | 9 | 7.0 | 13535 | PASS |
| 275 | 198 | 10 | 30 | 23.3 | 45312 | PASS |
| 365 | 198 | 1 | 100 | 3.2 | 6162 | PASS |
| 441 | 443 | 0.01 | 100 | 74.7 | 14992 | PASS |
| 442 | 198 | 40 | 100 | 53.7 | 104416 | PASS |
| 443 | 442 | 17 | 23 | 19.2 | 20056 | PASS |

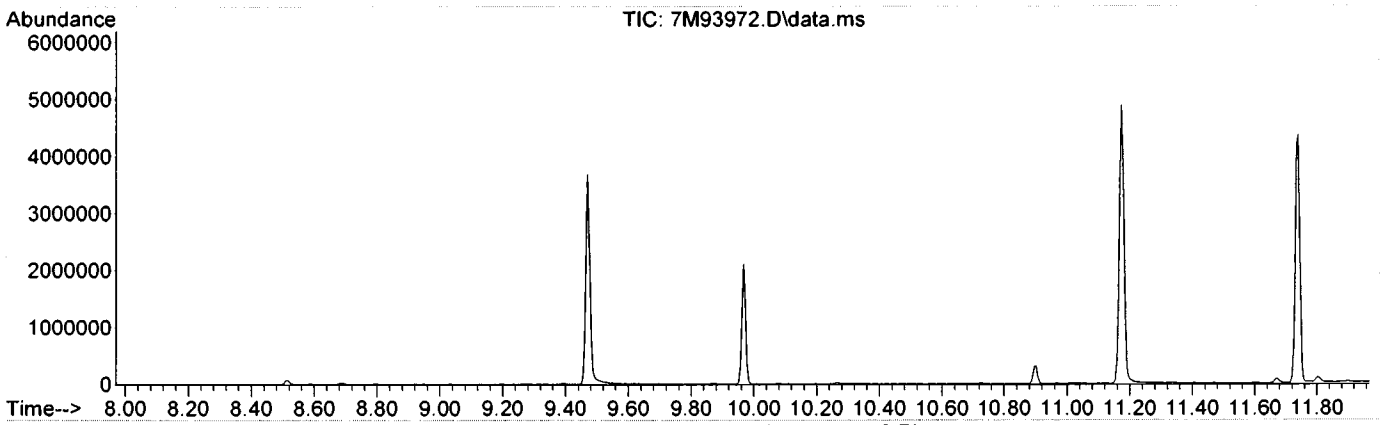
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 7M93973.D | CAL BNA@10PPM | 08/21/18 08:59 |
| 7M93974.D | CAL BNA@2PPM | 08/21/18 09:23 |
| 7M93975.D | CAL BNA@196PP | 08/21/18 09:51 |
| 7M93976.D | CAL BNA@160PP | 08/21/18 10:14 |
| 7M93977.D | CAL BNA@120PP | 08/21/18 10:37 |
| 7M93978.D | CAL BNA@80PPM | 08/21/18 11:02 |
| 7M93979.D | CAL BNA@20PPM | 08/21/18 11:25 |
| 7M93980.D | CAL BNA@0.5PP | 08/21/18 11:48 |
| 7M93981.D | CAL BNA@50PPM | 08/21/18 12:11 |
| 7M93982.D | ICV BNA@50PPM | 08/21/18 12:43 |

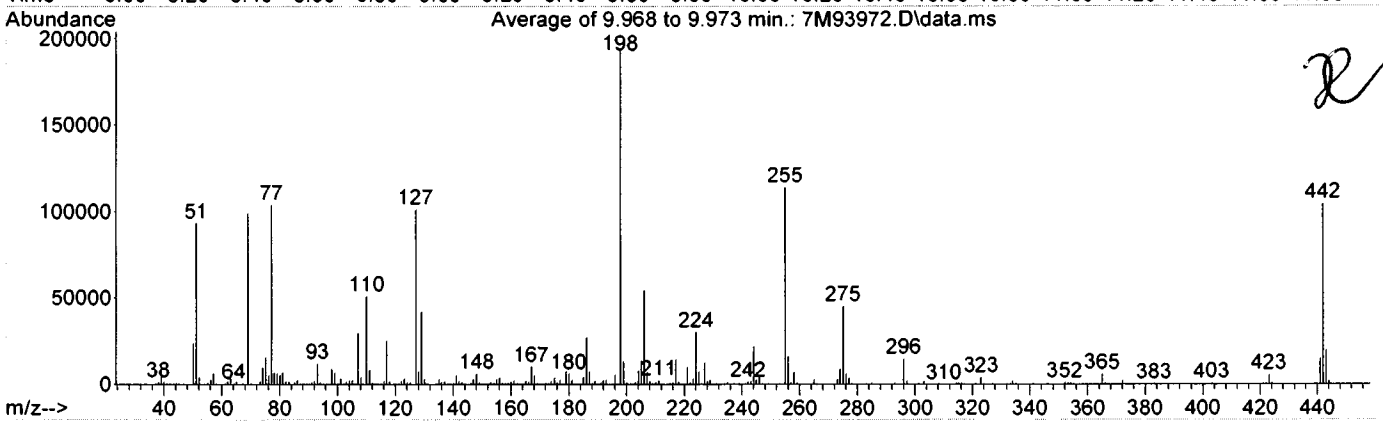
8081617 0094

Data Path : G:\GcMsData\2018\GCMS_7\Data\08-21-18\
Data File : 7M93972.D
Acq On : 21 Aug 2018 8:24
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2018\GCMS_7\MethodQt\7M_0802.M
Title : @GCMS_7,mg,625,8270
Last Update : Thu Aug 02 12:25:02 2018




Spectrum Information: Average of 9.968 to 9.973 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 48.0 | 93340 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 51.0 | 99124 | PASS |
| 70 | 69 | 0.00 | 2 | 0.5 | 502 | PASS |
| 127 | 198 | 40 | 60 | 52.2 | 101400 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 194400 | PASS |
| 199 | 198 | 5 | 9 | 7.0 | 13535 | PASS |
| 275 | 198 | 10 | 30 | 23.3 | 45312 | PASS |
| 365 | 198 | 1 | 100 | 3.2 | 6162 | PASS |
| 441 | 443 | 0.01 | 100 | 74.7 | 14992 | PASS |
| 442 | 198 | 40 | 100 | 53.7 | 104416 | PASS |
| 443 | 442 | 17 | 23 | 19.2 | 20056 | PASS |

# Form 5



**Tune Name:** CAL DFTPP **Data File:** 7M94011.D
**Instrument:** GCMS 7 **Analysis Date:** 08/22/18 08:58
**Method:** EPA 8270D

**Tune Scan/Time Range:** Average of 9.962 to 9.962 min

| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 47.5 | 79352 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 51.3 | 85696 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 478 | PASS |
| 127 | 198 | 40 | 60 | 51.5 | 85904 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 166912 | PASS |
| 199 | 198 | 5 | 9 | 7.4 | 12275 | PASS |
| 275 | 198 | 10 | 30 | 25.8 | 43120 | PASS |
| 365 | 198 | 1 | 100 | 3.5 | 5828 | PASS |
| 441 | 443 | 0.01 | 100 | 83.8 | 14166 | PASS |
| 442 | 198 | 40 | 100 | 53.3 | 88936 | PASS |
| 443 | 442 | 17 | 23 | 19.0 | 16904 | PASS |

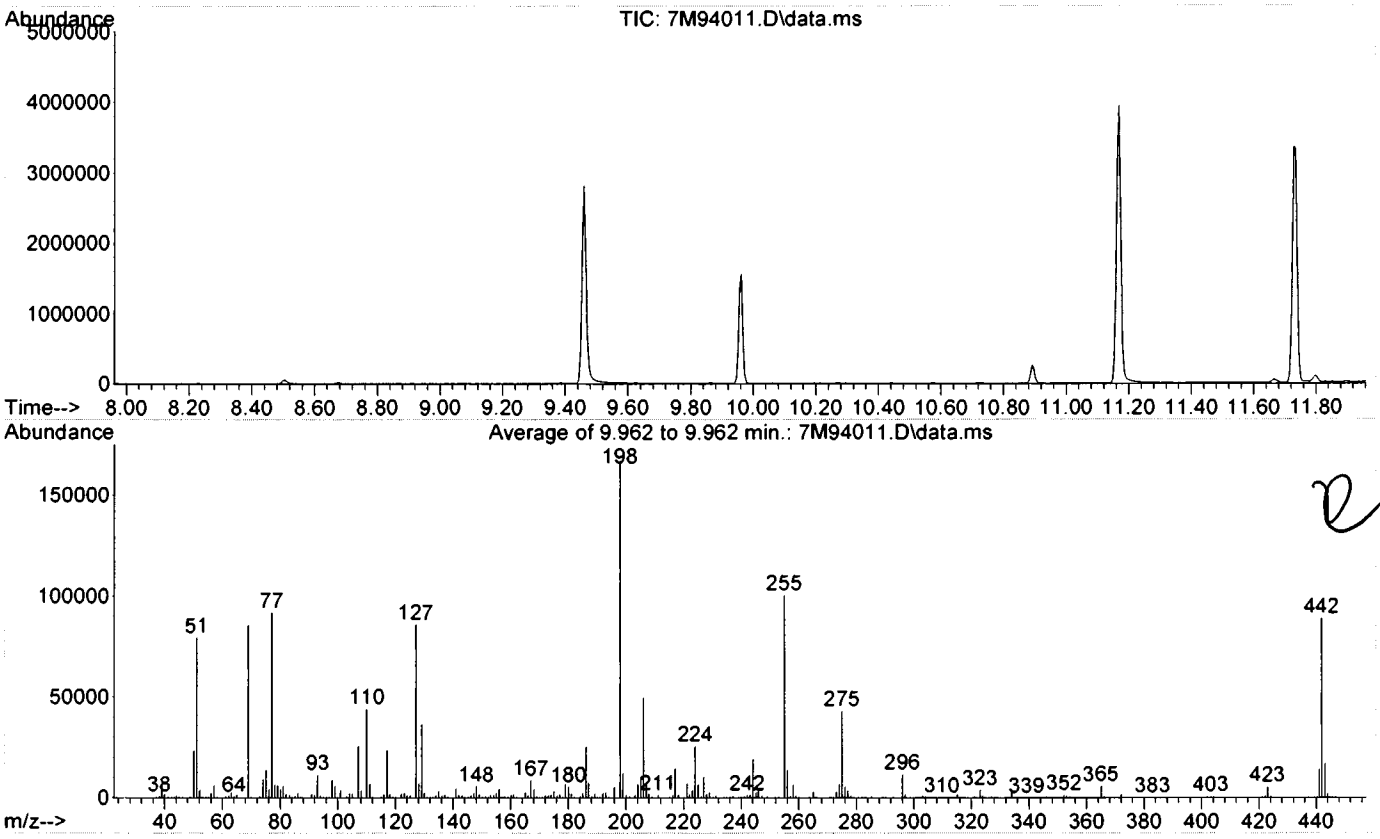
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 7M94012.D | CAL BNA@50PPM | 08/22/18 09:24 |
| 7M94013.D | WMB69959 | 08/22/18 10:09 |
| 7M94014.D | SMB69957(MS) | 08/22/18 10:32 |
| 7M94015.D | SMB69957 | 08/22/18 10:55 |
| 7M94016.D | OMB69865 | 08/22/18 11:18 |
| 7M94017.D | AD06050-005(10X) | 08/22/18 11:42 |
| 7M94018.D | AD05930-007(T) | 08/22/18 12:05 |
| 7M94019.D | AD05930-013(T) | 08/22/18 12:29 |
| 7M94020.D | AD06057-001 | 08/22/18 12:52 |
| 7M94021.D | EF-SPLP V-285163 | 08/22/18 13:15 |
| 7M94022.D | WMB69963 | 08/22/18 13:39 |
| 7M94023.D | WMB69955 | 08/22/18 14:02 |
| 7M94024.D | AD05980-008(R) | 08/22/18 14:25 |
| 7M94025.D | AD05999-001 | 08/22/18 14:49 |

8081617 0096

Data Path : G:\GcMsData\2018\GCMS_7\Data\08-22-18\
Data File : 7M94011.D
Acq On : 22 Aug 2018 8:58
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2018\GCMS_7\MethodQt\7M_0821.M
Title : @GCMS_7,mg,625,8270
Last Update : Tue Aug 21 12:37:06 2018




Spectrum Information: Average of 9.962 to 9.962 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 47.5 | 79352 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 51.3 | 85696 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 478 | PASS |
| 127 | 198 | 40 | 60 | 51.5 | 85904 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 166912 | PASS |
| 199 | 198 | 5 | 9 | 7.4 | 12275 | PASS |
| 275 | 198 | 10 | 30 | 25.8 | 43120 | PASS |
| 365 | 198 | 1 | 100 | 3.5 | 5828 | PASS |
| 441 | 443 | 0.01 | 100 | 83.8 | 14166 | PASS |
| 442 | 198 | 40 | 100 | 53.3 | 88936 | PASS |
| 443 | 442 | 17 | 23 | 19.0 | 16904 | PASS |

# Form 5



**Tune Name:** CAL DFTPP **Data File:** 7M94026.D
**Instrument:** GCMS 7 **Analysis Date:** 08/22/18 15:14
**Method:** EPA 8270D

**Tune Scan/Time Range:** Average of 9.973 to 9.978 min

| Tgt Mass | Rel Mass | Lo Lim | Hi Lim | Rel Abund | Raw Abund | Pass/ Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 44.3 | 55776 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 46.4 | 58448 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 341 | PASS |
| 127 | 198 | 40 | 60 | 47.7 | 60040 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 125880 | PASS |
| 199 | 198 | 5 | 9 | 7.2 | 9024 | PASS |
| 275 | 198 | 10 | 30 | 24.2 | 30508 | PASS |
| 365 | 198 | 1 | 100 | 3.0 | 3775 | PASS |
| 441 | 443 | 0.01 | 100 | 75.0 | 11254 | PASS |
| 442 | 198 | 40 | 100 | 58.3 | 73336 | PASS |
| 443 | 442 | 17 | 23 | 20.5 | 15005 | PASS |

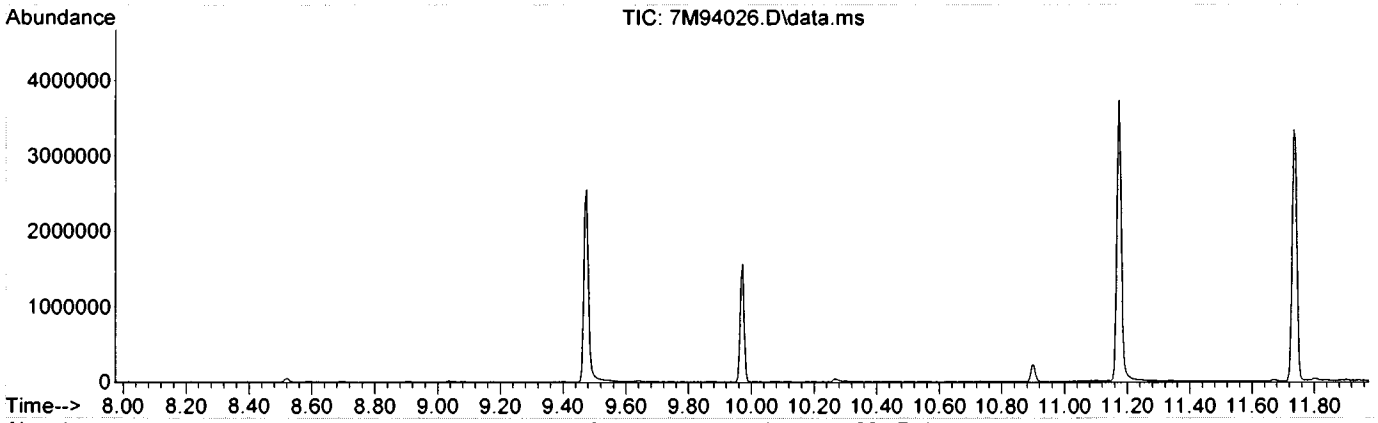
| Data File | Sample Number | Analysis Date: |
|---|---|---|
| 7M94027.D | CAL BNA@50PPM | 08/22/18 15:45 |
| 7M94028.D | AD05999-001(MS) | 08/22/18 16:11 |
| 7M94029.D | AD05999-001(MSD | 08/22/18 16:34 |
| 7M94030.D | SMB69958(MS) | 08/22/18 16:58 |
| 7M94031.D | SMB69958 | 08/22/18 17:21 |
| 7M94032.D | AD06068-004 | 08/22/18 17:44 |
| 7M94033.D | AD06068-004(MS) | 08/22/18 18:07 |
| 7M94034.D | AD06068-004(MSD | 08/22/18 18:31 |
| 7M94035.D | AD06068-001 | 08/22/18 18:54 |
| 7M94036.D | AD06068-002 | 08/22/18 19:17 |
| 7M94037.D | AD06068-003 | 08/22/18 19:40 |
| 7M94038.D | AD06042-004 | 08/22/18 20:03 |
| 7M94039.D | AD06042-006 | 08/22/18 20:27 |
| 7M94040.D | AD06042-008 | 08/22/18 20:50 |
| 7M94041.D | AD06042-010 | 08/22/18 21:13 |
| 7M94042.D | AD06027-001 | 08/22/18 21:36 |
| 7M94043.D | AD05985-001 | 08/22/18 21:59 |
| 7M94044.D | AD05985-003 | 08/22/18 22:22 |
| 7M94045.D | AD05985-006 | 08/22/18 22:45 |
| 7M94046.D | AD06026-001 | 08/22/18 23:09 |
| 7M94047.D | AD06026-003 | 08/22/18 23:32 |
| 7M94048.D | AD06065-001 | 08/22/18 23:55 |
| 7M94049.D | AD06069-001 | 08/23/18 00:18 |
| 7M94050.D | AD06053-001 | 08/23/18 00:41 |
| 7M94051.D | AD06053-002 | 08/23/18 01:04 |
| 7M94052.D | AD06053-003 | 08/23/18 01:27 |
| 7M94053.D | AD06073-001 | 08/23/18 01:50 |
| 7M94054.D | AD06073-002 | 08/23/18 02:13 |
| 7M94055.D | AD06073-003 | 08/23/18 02:36 |

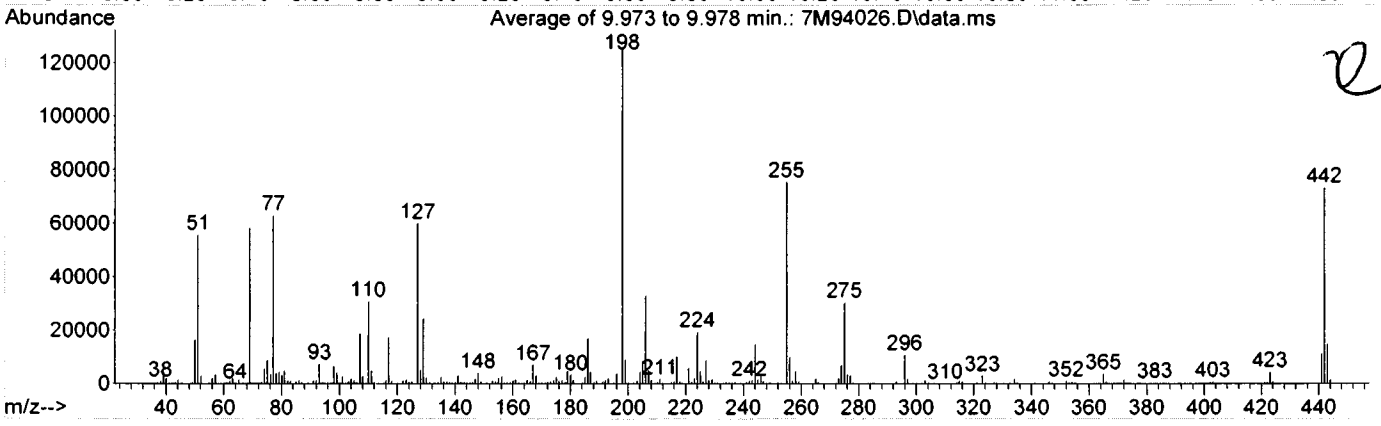
8081617 0098

Data Path : G:\GcMsData\2018\GCMS_7\Data\08-2218\
Data File : 7M94026.D
Acq On : 22 Aug 2018 15:14
Operator : AH/JB
Sample : CAL DFTPP
Misc : A,BNA
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : G:\GCMSDATA\2018\GCMS_7\MethodQt\7M_0821.M
Title : @GCMS_7,mg,625,8270
Last Update : Tue Aug 21 12:37:06 2018




Spectrum Information: Average of 9.973 to 9.978 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 44.3 | 55776 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 46.4 | 58448 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 341 | PASS |
| 127 | 198 | 40 | 60 | 47.7 | 60040 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 125880 | PASS |
| 199 | 198 | 5 | 9 | 7.2 | 9024 | PASS |
| 275 | 198 | 10 | 30 | 24.2 | 30508 | PASS |
| 365 | 198 | 1 | 100 | 3.0 | 3775 | PASS |
| 441 | 443 | 0.01 | 100 | 75.0 | 11254 | PASS |
| 442 | 198 | 40 | 100 | 58.3 | 73336 | PASS |
| 443 | 442 | 17 | 23 | 20.5 | 15005 | PASS |

8081617 0099

Method: EPA 8270D

# Form 6
## Initial Calibration

Instrument: GCMS_7

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 7M93981.D | CAL BNA@50PPM | 08/21/18 12:11 | 2 | 7M93974.D | CAL BNA@2PPM | 08/21/18 09:23 |
| 3 | 7M93973.D | CAL BNA@10PPM | 08/21/18 08:59 | 4 | 7M93979.D | CAL BNA@20PPM | 08/21/18 11:25 |
| 5 | 7M93978.D | CAL BNA@80PPM | 08/21/18 11:02 | 6 | 7M93977.D | CAL BNA@120PPM | 08/21/18 10:37 |
| 7 | 7M93976.D | CAL BNA@160PPM | 08/21/18 10:14 | 8 | 7M93975.D | CAL BNA@196PPM | 08/21/18 09:51 |
| 9 | 7M93980.D | CAL BNA@0.5PPM | 08/21/18 11:48 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 1 | 0 | Qua | 0.9857 | 0.9851 | 0.9844 | 1.0725 | 1.0114 | 0.9614 | 0.9868 | 1.0591 | 0.6411 | 0.965 | 2.60 | 0.997 | 0.998 | 13 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Pyridine | 1 | 0 | Qua | 3.0795 | 5.0985 | 3.0419 | 3.0060 | 3.1337 | 2.9826 | 3.1339 | 3.3246 | ----- | 3.35 | 3.08 | 0.996 | 0.999 | 21 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Nitrosodimethylamin | 1 | 0 | Avg | 1.8036 | 2.0621 | 1.5498 | 1.8049 | 1.8725 | 1.8160 | 1.8680 | 2.0124 | ----- | 1.85 | 2.98 | 0.996 | 0.999 | 8.4 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Fluorophenol | 1 | 0 | Avg | 2.2023 | 2.6011 | 2.0413 | 2.2571 | 2.2715 | 2.2380 | 2.3055 | 2.4846 | ----- | 2.30 | 4.59 | 0.996 | 0.999 | 7.5 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzaldehyde | 1 | 0 | Qua | 1.8978 | 2.3813 | 2.1154 | 2.3677 | 1.6903 | 1.4775 | 1.3626 | 1.4784 | ----- | 1.85 | 5.41 | 0.989 | 0.990 | 22 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Aniline | 1 | 0 | Avg | 3.9156 | 3.4303 | 2.9097 | 4.1001 | 3.9484 | 3.8692 | 4.0580 | 3.6763 | 4.1615 | 3.79 | 5.50 | 0.996 | 0.997 | 11 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Pentachloroethane | 1 | 0 | Qua | 0.8530 | 1.1736 | 0.7626 | 0.8665 | 0.8421 | 0.8265 | 0.8683 | 0.9170 | ----- | 0.889 | 5.54 | 0.997 | 0.999 | 14 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Chloroethyl)ether | 1 | 0 | Qua | 2.6601 | 3.4757 | 2.4217 | 2.7948 | 2.6613 | 2.5814 | 2.7101 | 2.9393 | 3.8174 | 2.90 | 5.56 | 0.995 | 0.998 | 16 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Phenol-d5 | 1 | 0 | Avg | 3.3704 | 3.8873 | 3.0453 | 3.3495 | 3.4453 | 3.3539 | 3.4560 | 3.6896 | ----- | 3.45 | 5.47 | 0.997 | 0.999 | 7.3 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Phenol | 1 | 0 | Avg | 3.9366 | 4.2731 | 3.4067 | 3.8600 | 3.8551 | 3.8163 | 3.9398 | 4.1273 | ----- | 3.90 | 5.49 | 0.998 | 0.999 | 6.5 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Chlorophenol | 1 | 0 | Avg | 2.4755 | 2.8058 | 2.2423 | 2.5479 | 2.4619 | 2.4128 | 2.5762 | 2.9044 | ----- | 2.55 | 5.61 | 0.989 | 0.997 | 8.4 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Decane | 1 | 0 | Qua | 3.2167 | 4.1698 | 3.0402 | 3.3963 | 3.2333 | 3.1397 | 3.1861 | 3.2658 | ----- | 3.33 | 5.66 | 0.999 | 1.00 | 11 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,3-Dichlorobenzene | 1 | 0 | Avg | 2.7422 | 3.2467 | 2.4429 | 2.7723 | 2.7525 | 2.7136 | 2.8069 | 3.0562 | ----- | 2.82 | 5.74 | 0.995 | 0.999 | 8.5 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,4-Dichlorobenzene | 1 | 0 | Avg | 1.5846 | 1.8145 | 1.4593 | 1.6079 | 1.5851 | 1.5545 | 1.5871 | 1.7764 | ----- | 1.62 | 5.80 | 0.993 | 0.997 | 7.2 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2-Dichlorobenzene | 1 | 0 | Avg | 1.5028 | 1.7948 | 1.4026 | 1.5184 | 1.5125 | 1.4991 | 1.5008 | 1.6901 | ----- | 1.55 | 5.92 | 0.993 | 0.997 | 8.1 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzyl alcohol | 1 | 0 | Qua | 0.8216 | 0.6208 | 0.6287 | 0.6856 | 0.8720 | 0.8791 | 0.9096 | 1.0184 | ----- | 0.805 | 5.90 | 0.992 | 0.999 | 18 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-chloroisopropyl)e | 1 | 0 | Avg | 2.5269 | 3.0040 | 2.3622 | 2.6102 | 2.5094 | 2.4037 | 2.3852 | 2.4516 | ----- | 2.53 | 6.01 | 0.999 | 0.999 | 8.2 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Methylphenol | 1 | 0 | Qua | 1.4301 | 1.4871 | 1.3819 | 1.4097 | 1.4947 | 1.4421 | 1.4836 | 1.6638 | 1.5790 | 1.49 | 5.99 | 0.993 | 0.997 | 5.9 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Acetophenone | 1 | 0 | Avg | 2.1161 | 2.4466 | 1.8948 | 2.1164 | 2.1028 | 2.1272 | 2.0340 | 2.0825 | ----- | 2.12 | 6.11 | 0.999 | 0.999 | 7.3 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Hexachloroethane | 1 | 0 | Avg | 0.6566 | 0.7926 | 0.6376 | 0.6665 | 0.6642 | 0.6431 | 0.6749 | 0.7285 | ----- | 0.683 | 6.20 | 0.995 | 0.999 | 7.7 | 0.30 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Nitroso-di-n-propyla | 1 | 0 | Qua | 1.3284 | 1.5406 | 1.3081 | 1.3591 | 1.3329 | 1.2999 | 1.1622 | 1.0942 | 2.3488 | 1.42 | 6.11 | 0.993 | 0.999 | 26 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 3&4-Methylphenol | 1 | 0 | Avg | 1.5101 | 1.7608 | 1.4507 | 1.5591 | 1.5497 | 1.5698 | 1.4573 | 1.3703 | 1.7678 | 1.56 | 6.12 | 0.995 | 0.999 | 8.6 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Nitrobenzene-d5 | 1 | 0 | Avg | 0.1246 | 0.1467 | 0.1263 | 0.1275 | 0.1271 | 0.1251 | 0.1317 | 0.1477 | ----- | 0.132 | 6.23 | 0.990 | 0.998 | 7.2 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 98.00 | |
| Nitrobenzene | 1 | 0 | Avg | 0.5353 | 0.6523 | 0.5208 | 0.5348 | 0.5358 | 0.5234 | 0.5323 | 0.5107 | ----- | 0.543 | 6.25 | 0.999 | 1.00 | 8.3 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Isophorone | 1 | 0 | Avg | 0.9074 | 1.0264 | 0.8440 | 0.9129 | 0.9344 | 0.9162 | 0.9193 | 0.9718 | ----- | 0.929 | 6.44 | 0.998 | 0.999 | 5.7 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Nitrophenol | 1 | 0 | Avg | 0.2114 | 0.2219 | 0.1997 | 0.2118 | 0.2220 | 0.2143 | 0.2201 | 0.2406 | ----- | 0.218 | 6.50 | 0.995 | 0.998 | 5.4 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dimethylphenol | 1 | 0 | Qua | 0.4468 | 0.4958 | 0.4302 | 0.4526 | 0.4596 | 0.4382 | 0.4546 | 0.4640 | 0.5924 | 0.471 | 6.53 | 0.999 | 1.00 | 10 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Benzoic Acid | 1 | 0 | Qua | 0.3260 | ----- | 0.2605 | 0.3230 | 0.3532 | 0.3550 | 0.3671 | 0.3926 | ----- | 0.340 | 6.60 | 0.997 | 0.999 | 12 | | 50.00 | | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Chloroethoxy)me | 1 | 0 | Avg | 0.5204 | 0.6102 | 0.4859 | 0.5249 | 0.5315 | 0.5177 | 0.5289 | 0.5719 | ----- | 0.536 | 6.60 | 0.996 | 0.999 | 7.1 | 0.30 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dichlorophenol | 1 | 0 | Qua | 0.3405 | 0.3757 | 0.3109 | 0.3379 | 0.3451 | 0.3364 | 0.3488 | 0.3748 | 0.4636 | 0.359 | 6.69 | 0.997 | 0.999 | 12 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 1,2,4-Trichlorobenzen | 1 | 0 | Avg | 0.3570 | 0.4074 | 0.3409 | 0.3583 | 0.3692 | 0.3656 | 0.3731 | 0.4033 | ----- | 0.372 | 6.76 | 0.996 | 0.999 | 6.1 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Naphthalene | 1 | 0 | Qua | 1.1784 | 1.3618 | 1.0809 | 1.1564 | 1.2092 | 1.1847 | 1.2392 | 1.3111 | 1.7256 | 1.27 | 6.82 | 0.997 | 0.999 | 15 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 4-Chloroaniline | 1 | 0 | Avg | 0.4341 | 0.3833 | 0.3367 | 0.4494 | 0.4235 | 0.3694 | 0.3509 | 0.3312 | 0.4313 | 0.390 | 6.85 | 0.988 | 0.999 | 12 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Hexachlorobutadiene | 1 | 0 | Avg | 0.2055 | 0.2326 | 0.1944 | 0.2057 | 0.2177 | 0.2121 | 0.2216 | 0.2378 | ----- | 0.216 | 6.92 | 0.996 | 0.999 | 6.7 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Caprolactam | 1 | 0 | Avg | 0.1241 | 0.1437 | 0.1138 | 0.1263 | 0.1293 | 0.1263 | 0.1270 | 0.1476 | ----- | 0.130 | 7.13 | 0.989 | 0.995 | 8.4 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Chloro-3-methylphe | 1 | 0 | Avg | 0.3803 | 0.4144 | 0.3542 | 0.3702 | 0.3835 | 0.3816 | 0.3904 | 0.4100 | ----- | 0.386 | 7.23 | 0.998 | 1.00 | 5.1 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Methylnaphthalene | 1 | 0 | Avg | 0.7772 | 0.8895 | 0.7469 | 0.7925 | 0.8154 | 0.8034 | 0.8305 | 0.8911 | ----- | 0.818 | 7.36 | 0.996 | 0.999 | 6.2 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1-Methylnaphthalene | 1 | 0 | Avg | 0.7582 | 0.8806 | 0.6970 | 0.7517 | 0.7755 | 0.7647 | 0.8105 | 0.8533 | ----- | 0.786 | 7.44 | 0.997 | 0.999 | 7.5 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Methylnaphthalenes ( | 1 | 0 | Avg | 0.7690 | 0.8861 | 0.7228 | 0.7718 | 0.7967 | 0.7841 | 0.8202 | 0.8724 | ----- | 0.803 | 7.36 | 0.996 | 0.999 | 6.8 | | 100.0 | 4.00 | 20.00 | 40.00 | 160.0 | 240.0 | 320.0 | 392.0 | |
| 1,1'-Biphenyl | 1 | 0 | Avg | 0.9328 | 1.0546 | 0.8799 | 0.9512 | 0.9643 | 0.9493 | 1.0015 | 1.0724 | ----- | 0.976 | 7.73 | 0.995 | 0.999 | 6.6 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2,4,5-Tetrachloroben | 1 | 0 | Avg | 0.5695 | 0.6376 | 0.5008 | 0.5368 | 0.5721 | 0.5629 | 0.5372 | 0.6277 | ----- | 0.568 | 7.50 | 0.990 | 0.993 | 8.1 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |

| *Flags* | *Note:* Avg Rsd: 9.44 |
|---|---|
| *a - failed the min rf criteria* | *Corr 1 = Correlation Coefficient for linear Eq.* |
| *c - failed the minimum correlation coeff criteria(if applicable)* | *Corr 2 = Correlation Coefficient for quad Eq.* |
| | *Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.* |

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Method: EPA 8270D

# Form 6
## Initial Calibration

Instrument: GCMS_7

| Level # | Data File: | Cal Identifier: | Analysis Date/Time | Level # | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 7M93981.D | CAL BNA@50PPM | 08/21/18 12:11 | 2 | 7M93974.D | CAL BNA@2PPM | 08/21/18 09:23 |
| 3 | 7M93973.D | CAL BNA@10PPM | 08/21/18 08:59 | 4 | 7M93979.D | CAL BNA@20PPM | 08/21/18 11:25 |
| 5 | 7M93978.D | CAL BNA@80PPM | 08/21/18 11:02 | 6 | 7M93977.D | CAL BNA@120PPM | 08/21/18 10:37 |
| 7 | 7M93976.D | CAL BNA@160PPM | 08/21/18 10:14 | 8 | 7M93975.D | CAL BNA@196PPM | 08/21/18 09:51 |
| 9 | 7M93980.D | CAL BNA@0.5PPM | 08/21/18 11:48 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopenta | 1 | 0 | Qua | 0.2097 | 0.0562 | 0.0921 | 0.1609 | 0.2454 | 0.2640 | 0.2607 | 0.3137 | ----- | 0.200 | 7.49 | 0.984 | 0.995 | 45 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,6-Trichlorophenol | 1 | 0 | Avg | 0.3798 | 0.3876 | 0.3558 | 0.3722 | 0.3940 | 0.3882 | 0.3595 | 0.4271 | ----- | 0.383 | 7.58 | 0.988 | 0.991 | 5.9 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,5-Trichlorophenol | 1 | 0 | Avg | 0.4056 | 0.4507 | 0.3800 | 0.3731 | 0.4182 | 0.4059 | 0.3828 | 0.4589 | ----- | 0.409 | 7.62 | 0.987 | 0.991 | 7.8 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Fluorobiphenyl | 1 | 0 | Avg | 1.2627 | 1.3450 | 1.1498 | 1.2349 | 1.2485 | 1.2122 | 1.1325 | 1.3773 | ----- | 1.25 | 7.65 | 0.993 | 0.994 | 6.8 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 98.00 | |
| 2-Chloronaphthalene | 1 | 0 | Avg | 1.1907 | 1.3086 | 1.1227 | 1.1628 | 1.1976 | 1.1755 | 1.1537 | 1.3322 | ----- | 1.21 | 7.76 | 0.991 | 0.995 | 6.2 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,4-Dimethylnaphthale | 1 | 0 | Avg | 0.9366 | 1.0646 | 0.8524 | 0.9187 | 0.9290 | 0.9588 | 0.7265 | 0.7445 | ----- | 0.891 | 8.04 | 0.983 | 0.993 | 13 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dimethylnaphthalenes | 1 | 0 | Avg | 0.9366 | 1.0646 | 0.8524 | 0.9187 | 0.9290 | 0.9588 | 0.7265 | 0.7445 | ----- | 0.891 | 8.04 | 0.983 | 0.993 | 13 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Diphenyl Ether | 1 | 0 | Avg | 0.8266 | 0.9370 | 0.7691 | 0.8037 | 0.8304 | 0.8452 | 0.8064 | 0.9355 | ----- | 0.844 | 7.82 | 0.991 | 0.995 | 7.2 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2-Nitroaniline | 1 | 0 | Avg | 0.5961 | 0.6806 | 0.5365 | 0.5892 | 0.5764 | 0.5416 | 0.4752 | 0.5542 | ----- | 0.569 | 7.83 | 0.988 | 0.988 | 10 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Coumarin | 1 | 0 | Avg | 0.4701 | 0.5240 | 0.4473 | 0.4582 | 0.4775 | 0.4676 | 0.4431 | 0.4615 | ----- | 0.469 | 8.02 | 0.999 | 0.999 | 5.4 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Acenaphthylene | 1 | 0 | Avg | 1.7661 | 1.9018 | 1.6040 | 1.7146 | 1.7841 | 1.8577 | 1.4423 | 1.5308 | ----- | 1.70 | 8.11 | 0.989 | 0.994 | 9.5 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dimethylphthalate | 1 | 0 | Avg | 1.3914 | 1.5797 | 1.3188 | 1.3863 | 1.4153 | 1.3751 | 1.3316 | 1.5492 | ----- | 1.42 | 7.98 | 0.990 | 0.994 | 6.8 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,6-Dinitrotoluene | 1 | 0 | Avg | 0.3359 | 0.3467 | 0.3042 | 0.3144 | 0.3404 | 0.3451 | 0.2708 | 0.2646 | ----- | 0.315 | 8.03 | 0.970 | 0.992 | 10 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Acenaphthene | 1 | 0 | Avg | 1.2175 | 1.3950 | 1.0821 | 1.1720 | 1.2200 | 1.2384 | 1.1643 | 1.1530 | ----- | 1.21 | 8.27 | 0.998 | 0.999 | 7.6 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 3-Nitroaniline | 1 | 0 | Avg | 0.3332 | 0.3129 | 0.2863 | 0.3169 | 0.3226 | 0.3150 | 0.2785 | 0.2790 | ----- | 0.306 | 8.18 | 0.992 | 0.998 | 6.9 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4-Dinitrophenol | 1 | 0 | Qua | 0.1764 | 0.0714 | 0.1052 | 0.1404 | 0.1980 | 0.2124 | 0.2045 | 0.2060 | ----- | 0.164 | 8.28 | 0.995 | 0.997 | 32 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dibenzofuran | 1 | 0 | Qua | 1.7023 | 1.9529 | 1.5457 | 1.6482 | 1.7420 | 1.6917 | 1.6387 | 1.7644 | 2.6662 | 1.82 | 8.42 | 0.998 | 0.998 | 19 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| 2,4-Dinitrotoluene | 1 | 0 | Avg | 0.4385 | 0.4479 | 0.3994 | 0.4242 | 0.4441 | 0.4371 | 0.4155 | 0.5017 | ----- | 0.439 | 8.39 | 0.985 | 0.991 | 6.9 | 0.20 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Nitrophenol | 1 | 0 | Avg | 0.3724 | 0.3813 | 0.3136 | 0.3608 | 0.3774 | 0.3527 | 0.3188 | 0.2865 | ----- | 0.345 | 8.32 | 0.988 | 0.998 | 10 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,3,4,6-Tetrachlorophe | 1 | 0 | Avg | 0.3396 | 0.3563 | 0.3066 | 0.3556 | 0.3600 | 0.3580 | 0.3415 | 0.4100 | ----- | 0.354 | 8.53 | 0.986 | 0.992 | 8.1 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Fluorene | 1 | 0 | Avg | 1.4336 | 1.5860 | 1.2787 | 1.3702 | 1.4548 | 1.4469 | 1.3459 | 1.4600 | ----- | 1.42 | 8.74 | 0.997 | 0.997 | 6.5 | 0.90 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Chlorophenyl-phenyl | 1 | 0 | Avg | 0.6799 | 0.7274 | 0.6071 | 0.6539 | 0.6914 | 0.6941 | 0.6483 | 0.7817 | ----- | 0.686 | 8.73 | 0.986 | 0.991 | 7.7 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Diethylphthalate | 1 | 0 | Avg | 1.4197 | 1.5543 | 1.2710 | 1.3896 | 1.4137 | 1.3982 | 1.3138 | 1.5430 | ----- | 1.41 | 8.61 | 0.990 | 0.993 | 7.0 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Nitroaniline | 1 | 0 | Avg | 0.3878 | 0.3651 | 0.3403 | 0.3727 | 0.3928 | 0.3940 | 0.3428 | 0.3510 | ----- | 0.368 | 8.74 | 0.993 | 0.997 | 6.0 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Atrazine | 1 | 0 | Avg | 0.4199 | 0.4588 | 0.3804 | 0.4036 | 0.4249 | 0.4141 | 0.3930 | 0.4466 | ----- | 0.418 | 9.36 | 0.993 | 0.995 | 6.3 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,6-Dinitro-2-methylph | 1 | 0 | Qua | 0.1307 | 0.0792 | 0.0904 | 0.1185 | 0.1413 | 0.1516 | 0.1624 | 0.1600 | ----- | 0.129 | 8.78 | 0.997 | 0.999 | 24 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| n-Nitrosodiphenylamin | 1 | 0 | Avg | 0.6905 | 0.7302 | 0.6223 | 0.6774 | 0.7048 | 0.7214 | 0.7643 | 0.7128 | ----- | 0.703 | 8.84 | 0.998 | 0.999 | 6.0 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 2,4,6-Tribromophenol | 1 | 0 | Qua | 0.0808 | 0.0923 | 0.0717 | 0.0761 | 0.0881 | 0.0908 | 0.1070 | 0.1153 | ----- | 0.0903 | 8.97 | 0.984 | 0.999 | 16 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 1,2-Diphenylhydrazine | 1 | 0 | Avg | 1.0171 | 1.1444 | 0.9203 | 1.0225 | 1.0324 | 1.0037 | 0.8282 | 0.7582 | ----- | 0.966 | 8.88 | 0.982 | 0.996 | 13 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4-Bromophenyl-phenyl | 1 | 0 | Avg | 0.2137 | 0.2339 | 0.1974 | 0.2129 | 0.2288 | 0.2261 | 0.2397 | 0.2592 | ----- | 0.227 | 9.21 | 0.994 | 0.999 | 8.3 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Hexachlorobenzene | 1 | 0 | Avg | 0.2113 | 0.2373 | 0.1877 | 0.2025 | 0.2176 | 0.2241 | 0.2303 | 0.2512 | ----- | 0.220 | 9.29 | 0.991 | 0.999 | 9.1 | 0.10 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| N-Octadecane | 1 | 0 | Avg | 0.6377 | 0.7284 | 0.5882 | 0.6268 | 0.6433 | 0.6337 | 0.6370 | 0.6592 | ----- | 0.644 | 9.55 | 0.999 | 1.00 | 6.1 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Pentachlorophenol | 1 | 0 | Qua | 0.1299 | 0.1115 | 0.1037 | 0.1191 | 0.1429 | 0.1463 | 0.1538 | 0.1652 | ----- | 0.134 | 9.48 | 0.995 | 1.00 | 16 | 0.05 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Phenanthrene | 1 | 0 | Avg | 1.1636 | 1.3588 | 1.0518 | 1.1454 | 1.1932 | 1.1873 | 1.2634 | 1.3531 | ----- | 1.21 | 9.71 | 0.996 | 0.999 | 8.7 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Anthracene | 1 | 0 | Avg | 1.2035 | 1.3942 | 1.0957 | 1.1871 | 1.2452 | 1.2350 | 1.3529 | 1.3049 | ----- | 1.25 | 9.76 | 0.998 | 0.998 | 7.7 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Carbazole | 1 | 0 | Avg | 1.0832 | 1.1807 | 1.0120 | 1.0763 | 1.1266 | 1.1283 | 1.1892 | 1.2587 | ----- | 1.13 | 9.93 | 0.996 | 1.00 | 6.8 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Di-n-butylphthalate | 1 | 0 | Avg | 1.3946 | 1.5494 | 1.2289 | 1.3318 | 1.4339 | 1.4412 | 1.4836 | 1.5672 | 1.7609 | 1.47 | 10.31 | 0.998 | 1.00 | 10 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | 0.50 |
| Fluoranthene | 1 | 0 | Avg | 1.3110 | 1.3922 | 1.1685 | 1.2591 | 1.3522 | 1.3636 | 1.4097 | 1.5070 | ----- | 1.35 | 11.03 | 0.996 | 0.999 | 7.6 | 0.60 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Pyrene | 1 | 0 | Avg | 1.3266 | 1.3963 | 1.2119 | 1.2493 | 1.3411 | 1.3349 | 1.3111 | 1.3667 | ----- | 1.32 | 11.29 | 0.999 | 0.999 | 4.6 | 0.60 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzidine | 1 | 0 | Qua | 0.4875 | 0.2621 | 0.3088 | 0.5156 | 0.4584 | 0.4184 | 0.3805 | 0.3887 | ----- | 0.403 | 11.17 | 0.988 | 0.996 | 22 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Terphenyl-d14 | 1 | 0 | Avg | 0.6810 | 0.7011 | 0.6112 | 0.6471 | 0.6857 | 0.6921 | 0.6819 | 0.7257 | ----- | 0.678 | 11.47 | 0.998 | 0.999 | 5.1 | | 25.00 | 1.00 | 5.00 | 10.00 | 40.00 | 60.00 | 80.00 | 96.00 | |

***Flags***

*a - failed the min rf criteria*

*c - failed the minimum correlation coeff criteria(if applicable)*

***Note:*** Avg Rsd: 9.44

*Corr 1 = Correlation Coefficient for linear Eq.*

*Corr 2 = Correlation Coefficient for quad Eq.*

*Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.*

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Method: EPA 8270D

# Form 6
## Initial Calibration

Instrument: GCMS_7

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 7M93981.D | CAL BNA@50PPM | 08/21/18 12:11 | 2 | 7M93974.D | CAL BNA@2PPM | 08/21/18 09:23 |
| 3 | 7M93973.D | CAL BNA@10PPM | 08/21/18 08:59 | 4 | 7M93979.D | CAL BNA@20PPM | 08/21/18 11:25 |
| 5 | 7M93978.D | CAL BNA@80PPM | 08/21/18 11:02 | 6 | 7M93977.D | CAL BNA@120PPM | 08/21/18 10:37 |
| 7 | 7M93976.D | CAL BNA@160PPM | 08/21/18 10:14 | 8 | 7M93975.D | CAL BNA@196PPM | 08/21/18 09:51 |
| 9 | 7M93980.D | CAL BNA@0.5PPM | 08/21/18 11:48 | | | | |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | RF9 | AvgRf | RT | Corr1 | Corr2 | %Rsd | | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 | Lvl9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 1 | 0 | Avg | 0.2507 | 0.2765 | 0.2150 | 0.2367 | 0.2492 | 0.2518 | 0.2467 | 0.2574 | ----- | 0.248 | 11.41 | 0.999 | 0.999 | 7.1 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,4'-DDD | 1 | 0 | Avg | 0.4231 | 0.4325 | 0.3842 | 0.4017 | 0.4319 | 0.4362 | 0.4264 | 0.4413 | ----- | 0.422 | 11.81 | 0.999 | 1.00 | 4.6 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Butylbenzylphthalate | 1 | 0 | Avg | 0.6374 | 0.6857 | 0.5519 | 0.5995 | 0.6296 | 0.6430 | 0.6172 | 0.6395 | ----- | 0.626 | 12.06 | 0.999 | 0.999 | 6.2 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 4,4'-DDT | 1 | 0 | Avg | 0.3753 | 0.3000 | 0.3089 | 0.3334 | 0.3858 | 0.3882 | 0.3893 | 0.4096 | ----- | 0.361 | 12.17 | 0.998 | 0.999 | 11 | | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| 3,3'-Dichlorobenzidine | 1 | 0 | Qua | 0.3822 | 0.3752 | 0.3146 | 0.3778 | 0.3503 | 0.3174 | 0.2972 | 0.2950 | ----- | 0.339 | 12.69 | 0.992 | 0.998 | 11 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[a]anthracene | 1 | 0 | Avg | 1.2132 | 1.3486 | 1.1031 | 1.1515 | 1.2184 | 1.2190 | 1.1912 | 1.2492 | ----- | 1.21 | 12.72 | 0.999 | 0.999 | 5.9 | 0.80 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Chrysene | 1 | 0 | Avg | 1.1431 | 1.2264 | 1.0302 | 1.0799 | 1.1697 | 1.2100 | 1.1925 | 1.0737 | ----- | 1.14 | 12.76 | 0.993 | 0.997 | 6.3 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| bis(2-Ethylhexyl)phthal | 1 | 0 | Avg | 0.8450 | 0.9339 | 0.7795 | 0.7944 | 0.8546 | 0.8816 | 0.8261 | 0.6856 | ----- | 0.825 | 12.77 | 0.975 | 0.992 | 9.0 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Di-n-octylphthalate | 1 | 0 | Avg | 1.6660 | 1.7071 | 1.5086 | 1.5531 | 1.7176 | 1.7169 | 1.7390 | 1.8762 | ----- | 1.69 | 13.55 | 0.997 | 0.999 | 6.8 | 0.01 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[b]fluoranthene | 1 | 0 | Avg | 1.3367 | 1.3079 | 1.1670 | 1.2531 | 1.3462 | 1.2838 | 1.3614 | 1.4861 | ----- | 1.32 | 13.99 | 0.996 | 0.999 | 7.0 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[k]fluoranthene | 1 | 0 | Avg | 1.1896 | 1.4020 | 1.0830 | 1.1481 | 1.2419 | 1.3150 | 1.3431 | 1.4775 | ----- | 1.28 | 14.02 | 0.993 | 0.999 | 10 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[a]pyrene | 1 | 0 | Avg | 1.2199 | 1.3288 | 1.0634 | 1.1715 | 1.2579 | 1.2572 | 1.2929 | 1.4084 | ----- | 1.25 | 14.36 | 0.995 | 0.999 | 8.3 | 0.70 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Indeno[1,2,3-cd]pyren | 1 | 0 | Avg | 1.2080 | 1.3044 | 1.0811 | 1.1351 | 1.2498 | 1.2347 | 1.2870 | 1.4275 | ----- | 1.24 | 15.73 | 0.995 | 0.999 | 8.6 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Dibenzo[a,h]anthracen | 1 | 0 | Qua | 1.0028 | 1.1239 | 0.8939 | 0.9552 | 1.0506 | 1.0393 | 1.1089 | 1.2821 | ----- | 1.06 | 15.75 | 0.985 | 0.997 | 11 | 0.40 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |
| Benzo[g,h,i]perylene | 1 | 0 | Avg | 1.0019 | 1.1782 | 0.9040 | 0.9654 | 1.0319 | 1.0173 | 1.0436 | 1.1280 | ----- | 1.03 | 16.11 | 0.996 | 0.999 | 8.4 | 0.50 | 50.00 | 2.00 | 10.00 | 20.00 | 80.00 | 120.0 | 160.0 | 196.0 | |

| *Flags* | *Note:* Avg Rsd: 9.44 |
|---|---|
| *a - failed the min rf criteria* | *Corr 1 = Correlation Coefficient for linear Eq.* |
| *c - failed the minimum correlation coeff criteria(if applicable)* | *Corr 2 = Correlation Coefficient for quad Eq.* |
| | *Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.* |

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M94012.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 8/22/2018 9:24:00 A Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8(INT) | 1 | 0 | I | 2.56 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dioxane | 1 | 0 | | 2.60 | 54.59 | 50 | ** | | 0.965 | 1.036 | 9.17 | |
| Pyridine | 1 | 0 | | 3.07 | 52.71 | 50 | ** | | 3.350 | 3.089 | 5.43 | |
| N-Nitrosodimethylamine | 1 | 0 | | 2.97 | 50.74 | 50 | ** | | 1.849 | 1.876 | 1.49 | |
| 2-Fluorophenol | 1 | 0 | S | 4.59 | 48.61 | 50 | ** | | 2.300 | 2.236 | 2.77 | |
| Benzaldehyde | 1 | 0 | | 5.41 | 52.00 | 50 | 20 | 0.01 | 1.846 | 1.741 | 3.99 | |
| Aniline | 1 | 0 | | 5.50 | 52.27 | 50 | ** | | 3.786 | 3.957 | 4.53 | |
| Pentachloroethane | 1 | 0 | | 5.54 | 53.85 | 50 | ** | 0.05 | 0.889 | 0.866 | 7.71 | |
| bis(2-Chloroethyl)ether | 1 | 0 | | 5.55 | 54.25 | 50 | 20 | 0.7 | 2.896 | 2.701 | 8.50 | |
| Phenol-d5 | 1 | 0 | S | 5.47 | 48.65 | 50 | ** | | 3.450 | 3.356 | 2.70 | |
| Phenol | 1 | 0 | | 5.48 | 48.91 | 50 | 20 | 0.8 | 3.902 | 3.817 | 2.19 | |
| 2-Chlorophenol | 1 | 0 | | 5.60 | 49.03 | 50 | 20 | 0.8 | 2.553 | 2.504 | 1.94 | |
| N-Decane | 1 | 0 | | 5.66 | 52.06 | 50 | ** | 0.05 | 3.331 | 3.282 | 4.11 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 5.74 | 48.57 | 50 | ** | | 2.817 | 2.736 | 2.86 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 5.78 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 5.80 | 49.15 | 50 | 20 | | 1.621 | 1.594 | 1.69 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 5.92 | 48.48 | 50 | ** | | 1.553 | 1.505 | 3.04 | |
| Benzyl alcohol | 1 | 0 | | 5.90 | 55.03 | 50 | ** | | 0.805 | 0.871 | 10.06 | |
| bis(2-chloroisopropyl)ether | 1 | 0 | | 6.01 | 51.22 | 50 | 20 | 0.01 | 2.532 | 2.593 | 2.43 | |
| 2-Methylphenol | 1 | 0 | | 5.99 | 54.46 | 50 | 20 | 0.7 | 1.486 | 1.477 | 8.92 | |
| Acetophenone | 1 | 0 | | 6.11 | 50.46 | 50 | 20 | 0.01 | 2.115 | 2.135 | 0.92 | |
| Hexachloroethane | 1 | 0 | | 6.20 | 48.06 | 50 | 20 | 0.3 | 0.683 | 0.657 | 3.88 | |
| N-Nitroso-di-n-propylamine | 1 | 0 | | 6.11 | 49.65 | 50 | 20 | 0.5 | 1.419 | 1.359 | 0.70 | |
| 3&4-Methylphenol | 1 | 0 | | 6.11 | 49.48 | 50 | 20 | | 1.555 | 1.539 | 1.04 | |
| Naphthalene-d8 | 1 | 0 | I | 6.80 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Nitrobenzene-d5 | 1 | 0 | S | 6.23 | 23.63 | 25 | ** | | 0.132 | 0.125 | 5.49 | |
| Nitrobenzene | 1 | 0 | | 6.24 | 50.24 | 50 | 20 | 0.2 | 0.543 | 0.546 | 0.48 | |
| Isophorone | 1 | 0 | | 6.44 | 49.66 | 50 | 20 | 0.4 | 0.929 | 0.923 | 0.69 | |
| 2-Nitrophenol | 1 | 0 | | 6.50 | 48.33 | 50 | 20 | 0.1 | 0.218 | 0.210 | 3.33 | |
| 2,4-Dimethylphenol | 1 | 0 | | 6.53 | 50.68 | 50 | 20 | 0.2 | 0.471 | 0.446 | 1.36 | |
| Benzoic Acid | 1 | 0 | | 6.60 | 45.54 | 50 | ** | | 0.340 | 0.296 | 8.93 | |
| bis(2-Chloroethoxy)methane | 1 | 0 | | 6.60 | 48.52 | 50 | 20 | 0.3 | 0.536 | 0.521 | 2.96 | |
| 2,4-Dichlorophenol | 1 | 0 | | 6.69 | 51.78 | 50 | 20 | 0.2 | 0.359 | 0.335 | 3.57 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 6.75 | 48.00 | 50 | ** | | 0.372 | 0.357 | 4.00 | |
| Naphthalene | 1 | 0 | | 6.82 | 52.36 | 50 | 20 | 0.7 | 1.272 | 1.192 | 4.72 | |
| 4-Chloroaniline | 1 | 0 | | 6.85 | 56.43 | 50 | 20 | 0.01 | 0.390 | 0.440 | 12.85 | |
| Hexachlorobutadiene | 1 | 0 | | 6.91 | 47.95 | 50 | 20 | 0.01 | 0.216 | 0.207 | 4.09 | |
| Caprolactam | 1 | 0 | | 7.11 | 48.33 | 50 | 20 | 0.01 | 0.130 | 0.125 | 3.34 | |
| 4-Chloro-3-methylphenol | 1 | 0 | | 7.22 | 49.85 | 50 | 20 | 0.2 | 0.386 | 0.384 | 0.31 | |
| 2-Methylnaphthalene | 1 | 0 | | 7.36 | 48.02 | 50 | ** | 0.4 | 0.818 | 0.786 | 3.96 | |
| 1-Methylnaphthalene | 1 | 0 | | 7.44 | 48.04 | 50 | ** | 0.4 | 0.786 | 0.756 | 3.93 | |
| Methylnaphthalenes | 1 | 0 | | 7.36 | 95.97 | 100 | ** | | | 0.771 | 4.03 | |
| 1,1'-Biphenyl | 1 | 0 | | 7.72 | 48.44 | 50 | 20 | 0.01 | 0.976 | 0.945 | 3.13 | |
| Acenaphthene-d10 | 1 | 0 | I | 8.23 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,2,4,5-Tetrachlorobenzene | 1 | 0 | | 7.49 | 48.65 | 50 | 20 | 0.01 | 0.568 | 0.553 | 2.70 | |
| Hexachlorocyclopentadiene | 1 | 0 | | 7.48 | 48.00 | 50 | 20 | 0.05 | 0.200 | 0.199 | 4.00 | |
| 2,4,6-Trichlorophenol | 1 | 0 | | 7.57 | 51.37 | 50 | 20 | 0.2 | 0.383 | 0.394 | 2.74 | |
| 2,4,5-Trichlorophenol | 1 | 0 | | 7.61 | 47.89 | 50 | 20 | 0.2 | 0.409 | 0.392 | 4.22 | |
| 2-Fluorobiphenyl | 1 | 0 | S | 7.64 | 24.76 | 25 | ** | | 1.245 | 1.233 | 0.98 | |
| 2-Chloronaphthalene | 1 | 0 | | 7.75 | 48.38 | 50 | 20 | 0.8 | 1.206 | 1.166 | 3.24 | |
| 1,4-Dimethylnaphthalene | 1 | 0 | | 8.03 | 51.52 | 50 | ** | | 0.891 | 0.918 | 3.03 | |
| Dimethylnaphthalenes | 1 | 0 | | 8.03 | 51.52 | 50 | 20 | | | 0.918 | 3.03 | |

S-Surrogate Compound
N/O or N/Q - Not applicable for this run

I-Internal Standard Compound
C1-Compound %Diff exceeds limits

** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F.**
**624 limits are compared against the concentration found.**
**625 limits are compared against the %DIFF.**
**524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M94012.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 8/22/2018 9:24:00 A Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diphenyl Ether | 1 | 0 | | 7.81 | 48.78 | 50 | ** | | 0.844 | 0.824 | 2.44 | |
| 2-Nitroaniline | 1 | 0 | | 7.82 | 52.54 | 50 | 20 | 0.01 | 0.569 | 0.598 | 5.07 | |
| Coumarin | 1 | 0 | | 8.01 | 49.18 | | ** | | 0.469 | | | |
| Acenaphthylene | 1 | 0 | | 8.10 | 50.54 | 50 | 20 | 0.9 | 1.700 | 1.719 | 1.08 | |
| Dimethylphthalate | 1 | 0 | | 7.97 | 49.21 | 50 | 20 | 0.01 | 1.418 | 1.396 | 1.58 | |
| 2,6-Dinitrotoluene | 1 | 0 | | 8.02 | 53.22 | 50 | 20 | 0.2 | 0.315 | 0.336 | 6.44 | |
| Acenaphthene | 1 | 0 | | 8.26 | 49.91 | 50 | 20 | 0.9 | 1.205 | 1.203 | 0.18 | |
| 3-Nitroaniline | 1 | 0 | | 8.17 | 54.38 | 50 | 20 | 0.01 | 0.306 | 0.332 | 8.76 | |
| 2,4-Dinitrophenol | 1 | 0 | | 8.27 | 47.35 | 50 | 20 | 0.01 | 0.164 | 0.168 | 5.31 | |
| Dibenzofuran | 1 | 0 | | 8.41 | 51.24 | 50 | 20 | 0.8 | 1.817 | 1.699 | 2.48 | |
| 2,4-Dinitrotoluene | 1 | 0 | | 8.38 | 49.31 | 50 | 20 | 0.2 | 0.439 | 0.433 | 1.38 | |
| 4-Nitrophenol | 1 | 0 | | 8.31 | 50.06 | 50 | 20 | 0.01 | 0.345 | 0.346 | 0.13 | |
| 2,3,4,6-Tetrachlorophenol | 1 | 0 | | 8.52 | 48.10 | 50 | 20 | 0.01 | 0.354 | 0.340 | 3.81 | |
| Fluorene | 1 | 0 | | 8.73 | 50.19 | 50 | 20 | 0.9 | 1.422 | 1.428 | 0.39 | |
| 4-Chlorophenyl-phenylether | 1 | 0 | | 8.72 | 49.47 | 50 | 20 | 0.4 | 0.686 | 0.678 | 1.06 | |
| Diethylphthalate | 1 | 0 | | 8.60 | 50.65 | 50 | 20 | 0.01 | 1.413 | 1.431 | 1.30 | |
| 4-Nitroaniline | 1 | 0 | | 8.73 | 51.57 | 50 | 20 | 0.01 | 0.368 | 0.380 | 3.13 | |
| Atrazine | 1 | 0 | | 9.35 | 47.86 | 50 | 20 | 0.01 | 0.418 | 0.400 | 4.28 | |
| Phenanthrene-d10 | 1 | 0 | I | 9.67 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 4,6-Dinitro-2-methylphenol | 1 | 0 | | 8.77 | 45.78 | 50 | 20 | 0.01 | 0.129 | 0.126 | 8.45 | |
| n-Nitrosodiphenylamine | 1 | 0 | | 8.83 | 48.02 | 50 | 20 | 0.01 | 0.703 | 0.675 | 3.97 | |
| 2,4,6-Tribromophenol | 1 | 0 | S | 8.96 | 51.02 | 50 | ** | | 0.090 | 0.079 | 2.04 | |
| 1,2-Diphenylhydrazine | 1 | 0 | | 8.87 | 53.57 | 50 | ** | | 0.966 | 1.035 | 7.14 | |
| 4-Bromophenyl-phenylether | 1 | 0 | | 9.20 | 46.53 | 50 | 20 | 0.1 | 0.227 | 0.211 | 6.93 | |
| Hexachlorobenzene | 1 | 0 | | 9.28 | 46.06 | 50 | 20 | 0.1 | 0.220 | 0.203 | 7.89 | |
| N-Octadecane | 1 | 0 | | 9.55 | 50.17 | 50 | ** | 0.05 | 0.644 | 0.647 | 0.34 | |
| Pentachlorophenol | 1 | 0 | | 9.48 | 47.70 | 50 | 20 | 0.05 | 0.134 | 0.125 | 4.59 | |
| Phenanthrene | 1 | 0 | | 9.70 | 47.29 | 50 | 20 | 0.7 | 1.215 | 1.149 | 5.41 | |
| Anthracene | 1 | 0 | | 9.75 | 47.55 | 50 | 20 | 0.7 | 1.252 | 1.191 | 4.89 | |
| Carbazole | 1 | 0 | | 9.92 | 47.65 | 50 | 20 | 0.01 | 1.132 | 1.079 | 4.69 | |
| Di-n-butylphthalate | 1 | 0 | | 10.30 | 46.75 | 50 | 20 | 0.01 | 1.466 | 1.371 | 6.49 | |
| Fluoranthene | 1 | 0 | | 11.03 | 47.35 | 50 | 20 | 0.6 | 1.345 | 1.274 | 5.30 | |
| Chrysene-d12 | 1 | 0 | I | 12.72 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Pyrene | 1 | 0 | | 11.29 | 49.90 | 50 | 20 | 0.6 | 1.317 | 1.315 | 0.19 | |
| Benzidine | 1 | 0 | | 11.17 | 51.14 | 50 | ** | | 0.403 | 0.467 | 2.28 | |
| Terphenyl-d14 | 1 | 0 | S | 11.47 | 24.68 | 25 | ** | | 0.678 | 0.670 | 1.27 | |
| 4,4'-DDE | 1 | 0 | | 11.41 | 49.96 | | ** | | 0.248 | | | |
| 4,4'-DDD | 1 | 0 | | 11.81 | 49.76 | | ** | | 0.422 | | | |
| Butylbenzylphthalate | 1 | 0 | | 12.06 | 51.24 | 50 | 20 | 0.01 | 0.626 | 0.641 | 2.47 | |
| 4,4'-DDT | 1 | 0 | | 12.16 | 52.62 | | ** | | 0.361 | | | |
| 3,3'-Dichlorobenzidine | 1 | 0 | | 12.68 | 53.50 | 50 | 20 | 0.01 | 0.339 | 0.379 | 7.00 | |
| Benzo[a]anthracene | 1 | 0 | | 12.71 | 49.54 | 50 | 20 | 0.8 | 1.212 | 1.201 | 0.92 | |
| Chrysene | 1 | 0 | | 12.75 | 49.98 | 50 | 20 | 0.7 | 1.141 | 1.140 | 0.03 | |
| bis(2-Ethylhexyl)phthalate | 1 | 0 | | 12.76 | 50.34 | 50 | 20 | 0.01 | 0.825 | 0.831 | 0.68 | |
| Perylene-d12 | 1 | 0 | I | 14.35 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Di-n-octylphthalate | 1 | 0 | | 13.51 | 49.47 | 50 | 20 | 0.01 | 1.686 | 1.668 | 1.06 | |
| Benzo[b]fluoranthene | 1 | 0 | | 13.93 | 52.85 | 50 | 20 | 0.7 | 1.318 | 1.393 | 5.71 | |
| Benzo[k]fluoranthene | 1 | 0 | | 13.96 | 49.89 | 50 | 20 | 0.7 | 1.275 | 1.272 | 0.23 | |
| Benzo[a]pyrene | 1 | 0 | | 14.29 | 48.69 | 50 | 20 | 0.7 | 1.250 | 1.217 | 2.62 | |
| Indeno[1,2,3-cd]pyrene | 1 | 0 | | 15.65 | 49.09 | 50 | 20 | 0.5 | 1.241 | 1.218 | 1.82 | |
| Dibenzo[a,h]anthracene | 1 | 0 | | 15.67 | 54.99 | 50 | 20 | 0.4 | 1.057 | 1.018 | 9.97 | |
| Benzo[g,h,i]perylene | 1 | 0 | | 16.02 | 48.90 | 50 | 20 | 0.5 | 1.034 | 1.011 | 2.20 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

8081617 0104

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M94027.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 8/22/2018 3:45:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8(INT) | 1 | 0 | I | 2.55 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dioxane | 1 | 0 | | 2.59 | 53.84 | 50 | ** | | 0.965 | 1.021 | 7.69 | |
| Pyridine | 1 | 0 | | 3.06 | 49.60 | 50 | ** | | 3.350 | 2.899 | 0.81 | |
| N-Nitrosodimethylamine | 1 | 0 | | 2.97 | 50.30 | 50 | ** | | 1.849 | 1.860 | 0.59 | |
| 2-Fluorophenol | 1 | 0 | S | 4.59 | 46.80 | 50 | ** | | 2.300 | 2.153 | 6.41 | |
| Benzaldehyde | 1 | 0 | | 5.40 | 51.62 | 50 | 20 | 0.01 | 1.846 | 1.729 | 3.25 | |
| Aniline | 1 | 0 | | 5.50 | 50.59 | 50 | ** | | 3.786 | 3.830 | 1.18 | |
| Pentachloroethane | 1 | 0 | | 5.54 | 51.92 | 50 | ** | 0.05 | 0.889 | 0.834 | 3.84 | |
| bis(2-Chloroethyl)ether | 1 | 0 | | 5.55 | 52.09 | 50 | 20 | 0.7 | 2.896 | 2.587 | 4.18 | |
| Phenol-d5 | 1 | 0 | S | 5.47 | 47.66 | 50 | ** | | 3.450 | 3.288 | 4.68 | |
| Phenol | 1 | 0 | | 5.48 | 48.45 | 50 | 20 | 0.8 | 3.902 | 3.781 | 3.09 | |
| 2-Chlorophenol | 1 | 0 | | 5.60 | 46.58 | 50 | 20 | 0.8 | 2.553 | 2.379 | 6.84 | |
| N-Decane | 1 | 0 | | 5.65 | 51.37 | 50 | ** | 0.05 | 3.331 | 3.238 | 2.73 | |
| 1,3-Dichlorobenzene | 1 | 0 | | 5.73 | 48.25 | 50 | ** | | 2.817 | 2.718 | 3.51 | |
| 1,4-Dichlorobenzene-d4 | 1 | 0 | I | 5.78 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,4-Dichlorobenzene | 1 | 0 | | 5.80 | 49.79 | 50 | 20 | | 1.621 | 1.614 | 0.42 | |
| 1,2-Dichlorobenzene | 1 | 0 | | 5.92 | 49.11 | 50 | ** | | 1.553 | 1.525 | 1.78 | |
| Benzyl alcohol | 1 | 0 | | 5.90 | 57.43 | 50 | ** | | 0.805 | 0.913 | 14.87 | |
| bis(2-chloroisopropyl)ether | 1 | 0 | | 6.01 | 53.03 | 50 | 20 | 0.01 | 2.532 | 2.685 | 6.05 | |
| 2-Methylphenol | 1 | 0 | | 5.99 | 54.50 | 50 | 20 | 0.7 | 1.486 | 1.478 | 9.00 | |
| Acetophenone | 1 | 0 | | 6.11 | 50.90 | 50 | 20 | 0.01 | 2.115 | 2.153 | 1.81 | |
| Hexachloroethane | 1 | 0 | | 6.20 | 49.00 | 50 | 20 | 0.3 | 0.683 | 0.669 | 1.99 | |
| N-Nitroso-di-n-propylamine | 1 | 0 | | 6.11 | 51.16 | 50 | 20 | 0.5 | 1.419 | 1.397 | 2.31 | |
| 3&4-Methylphenol | 1 | 0 | | 6.11 | 50.08 | 50 | 20 | | 1.555 | 1.557 | 0.15 | |
| Naphthalene-d8 | 1 | 0 | I | 6.80 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Nitrobenzene-d5 | 1 | 0 | S | 6.23 | 24.26 | 25 | ** | | 0.132 | 0.128 | 2.97 | |
| Nitrobenzene | 1 | 0 | | 6.24 | 50.28 | 50 | 20 | 0.2 | 0.543 | 0.546 | 0.56 | |
| Isophorone | 1 | 0 | | 6.44 | 50.53 | 50 | 20 | 0.4 | 0.929 | 0.939 | 1.07 | |
| 2-Nitrophenol | 1 | 0 | | 6.50 | 48.77 | 50 | 20 | 0.1 | 0.218 | 0.212 | 2.46 | |
| 2,4-Dimethylphenol | 1 | 0 | | 6.53 | 51.58 | 50 | 20 | 0.2 | 0.471 | 0.454 | 3.17 | |
| Benzoic Acid | 1 | 0 | | 6.60 | 49.87 | 50 | ** | | 0.340 | 0.326 | 0.26 | |
| bis(2-Chloroethoxy)methane | 1 | 0 | | 6.60 | 49.00 | 50 | 20 | 0.3 | 0.536 | 0.526 | 2.01 | |
| 2,4-Dichlorophenol | 1 | 0 | | 6.69 | 51.53 | 50 | 20 | 0.2 | 0.359 | 0.333 | 3.06 | |
| 1,2,4-Trichlorobenzene | 1 | 0 | | 6.76 | 49.77 | 50 | ** | | 0.372 | 0.370 | 0.46 | |
| Naphthalene | 1 | 0 | | 6.82 | 52.03 | 50 | 20 | 0.7 | 1.272 | 1.185 | 4.06 | |
| 4-Chloroaniline | 1 | 0 | | 6.85 | 57.84 | 50 | 20 | 0.01 | 0.390 | 0.451 | 15.69 | |
| Hexachlorobutadiene | 1 | 0 | | 6.91 | 48.00 | 50 | 20 | 0.01 | 0.216 | 0.207 | 4.00 | |
| Caprolactam | 1 | 0 | | 7.12 | 48.42 | 50 | 20 | 0.01 | 0.130 | 0.126 | 3.15 | |
| 4-Chloro-3-methylphenol | 1 | 0 | | 7.22 | 49.80 | 50 | 20 | 0.2 | 0.386 | 0.384 | 0.40 | |
| 2-Methylnaphthalene | 1 | 0 | | 7.36 | 49.54 | 50 | ** | 0.4 | 0.818 | 0.811 | 0.91 | |
| 1-Methylnaphthalene | 1 | 0 | | 7.44 | 48.80 | 50 | ** | 0.4 | 0.786 | 0.768 | 2.40 | |
| Methylnaphthalenes | 1 | 0 | | 7.36 | 98.36 | 100 | ** | | | 0.790 | 1.64 | |
| 1,1'-Biphenyl | 1 | 0 | | 7.73 | 48.58 | 50 | 20 | 0.01 | 0.976 | 0.948 | 2.84 | |
| Acenaphthene-d10 | 1 | 0 | I | 8.23 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 1,2,4,5-Tetrachlorobenzene | 1 | 0 | | 7.49 | 49.64 | 50 | 20 | 0.01 | 0.568 | 0.564 | 0.72 | |
| Hexachlorocyclopentadiene | 1 | 0 | | 7.48 | 49.34 | 50 | 20 | 0.05 | 0.200 | 0.205 | 1.33 | |
| 2,4,6-Trichlorophenol | 1 | 0 | | 7.57 | 49.58 | 50 | 20 | 0.2 | 0.383 | 0.380 | 0.83 | |
| 2,4,5-Trichlorophenol | 1 | 0 | | 7.61 | 50.10 | 50 | 20 | 0.2 | 0.409 | 0.410 | 0.20 | |
| 2-Fluorobiphenyl | 1 | 0 | S | 7.64 | 24.81 | 25 | ** | | 1.245 | 1.236 | 0.77 | |
| 2-Chloronaphthalene | 1 | 0 | | 7.75 | 48.39 | 50 | 20 | 0.8 | 1.206 | 1.167 | 3.22 | |
| 1,4-Dimethylnaphthalene | 1 | 0 | | 8.03 | 51.93 | 50 | ** | | 0.891 | 0.926 | 3.86 | |
| Dimethylnaphthalenes | 1 | 0 | | 8.03 | 51.93 | 50 | 20 | | | 0.926 | 3.86 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M94027.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 8/22/2018 3:45:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diphenyl Ether | 1 | 0 | | 7.81 | 47.70 | 50 | ** | | 0.844 | 0.805 | 4.60 | |
| 2-Nitroaniline | 1 | 0 | | 7.83 | 52.87 | 50 | 20 | 0.01 | 0.569 | 0.601 | 5.74 | |
| Coumarin | 1 | 0 | | 8.01 | 50.06 | | ** | | 0.469 | | | |
| Acenaphthylene | 1 | 0 | | 8.11 | 51.12 | 50 | 20 | 0.9 | 1.700 | 1.738 | 2.25 | |
| Dimethylphthalate | 1 | 0 | | 7.97 | 49.25 | 50 | 20 | 0.01 | 1.418 | 1.397 | 1.50 | |
| 2,6-Dinitrotoluene | 1 | 0 | | 8.03 | 52.61 | 50 | 20 | 0.2 | 0.315 | 0.332 | 5.23 | |
| Acenaphthene | 1 | 0 | | 8.26 | 49.42 | 50 | 20 | 0.9 | 1.205 | 1.191 | 1.17 | |
| 3-Nitroaniline | 1 | 0 | | 8.17 | 55.39 | 50 | 20 | 0.01 | 0.306 | 0.339 | 10.79 | |
| 2,4-Dinitrophenol | 1 | 0 | | 8.27 | 49.88 | 50 | 20 | 0.01 | 0.164 | 0.178 | 0.23 | |
| Dibenzofuran | 1 | 0 | | 8.41 | 50.79 | 50 | 20 | 0.8 | 1.817 | 1.684 | 1.59 | |
| 2,4-Dinitrotoluene | 1 | 0 | | 8.39 | 49.18 | 50 | 20 | 0.2 | 0.439 | 0.431 | 1.65 | |
| 4-Nitrophenol | 1 | 0 | | 8.31 | 52.58 | 50 | 20 | 0.01 | 0.345 | 0.363 | 5.16 | |
| 2,3,4,6-Tetrachlorophenol | 1 | 0 | | 8.52 | 48.53 | 50 | 20 | 0.01 | 0.354 | 0.343 | 2.94 | |
| Fluorene | 1 | 0 | | 8.73 | 50.11 | 50 | 20 | 0.9 | 1.422 | 1.425 | 0.22 | |
| 4-Chlorophenyl-phenylether | 1 | 0 | | 8.72 | 48.34 | 50 | 20 | 0.4 | 0.686 | 0.663 | 3.33 | |
| Diethylphthalate | 1 | 0 | | 8.60 | 50.19 | 50 | 20 | 0.01 | 1.413 | 1.418 | 0.39 | |
| 4-Nitroaniline | 1 | 0 | | 8.73 | 51.92 | 50 | 20 | 0.01 | 0.368 | 0.383 | 3.85 | |
| Atrazine | 1 | 0 | | 9.36 | 49.13 | 50 | 20 | 0.01 | 0.418 | 0.410 | 1.74 | |
| Phenanthrene-d10 | 1 | 0 | I | 9.68 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| 4,6-Dinitro-2-methylphenol | 1 | 0 | | 8.77 | 44.32 | 50 | 20 | 0.01 | 0.129 | 0.122 | 11.35 | |
| n-Nitrosodiphenylamine | 1 | 0 | | 8.83 | 48.17 | 50 | 20 | 0.01 | 0.703 | 0.677 | 3.66 | |
| 2,4,6-Tribromophenol | 1 | 0 | S | 8.96 | 51.85 | 50 | ** | | 0.090 | 0.081 | 3.69 | |
| 1,2-Diphenylhydrazine | 1 | 0 | | 8.88 | 52.92 | 50 | ** | | 0.966 | 1.022 | 5.83 | |
| 4-Bromophenyl-phenylether | 1 | 0 | | 9.20 | 47.83 | 50 | 20 | 0.1 | 0.227 | 0.217 | 4.34 | |
| Hexachlorobenzene | 1 | 0 | | 9.28 | 48.39 | 50 | 20 | 0.1 | 0.220 | 0.213 | 3.23 | |
| N-Octadecane | 1 | 0 | | 9.55 | 50.46 | 50 | ** | 0.05 | 0.644 | 0.650 | 0.93 | |
| Pentachlorophenol | 1 | 0 | | 9.48 | 50.03 | 50 | 20 | 0.05 | 0.134 | 0.131 | 0.07 | |
| Phenanthrene | 1 | 0 | | 9.71 | 48.65 | 50 | 20 | 0.7 | 1.215 | 1.182 | 2.69 | |
| Anthracene | 1 | 0 | | 9.76 | 47.78 | 50 | 20 | 0.7 | 1.252 | 1.197 | 4.43 | |
| Carbazole | 1 | 0 | | 9.92 | 48.42 | 50 | 20 | 0.01 | 1.132 | 1.096 | 3.16 | |
| Di-n-butylphthalate | 1 | 0 | | 10.30 | 47.29 | 50 | 20 | 0.01 | 1.466 | 1.386 | 5.42 | |
| Fluoranthene | 1 | 0 | | 11.03 | 48.39 | 50 | 20 | 0.6 | 1.345 | 1.302 | 3.21 | |
| Chrysene-d12 | 1 | 0 | I | 12.72 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Pyrene | 1 | 0 | | 11.29 | 49.34 | 50 | 20 | 0.6 | 1.317 | 1.300 | 1.31 | |
| Benzidine | 1 | 0 | | 11.17 | 51.21 | 50 | ** | | 0.403 | 0.468 | 2.43 | |
| Terphenyl-d14 | 1 | 0 | S | 11.47 | 24.69 | 25 | ** | | 0.678 | 0.670 | 1.24 | |
| 4,4'-DDE | 1 | 0 | | 11.41 | 48.72 | | ** | | 0.248 | | | |
| 4,4'-DDD | 1 | 0 | | 11.81 | 49.69 | | ** | | 0.422 | | | |
| Butylbenzylphthalate | 1 | 0 | | 12.06 | 49.66 | 50 | 20 | 0.01 | 0.626 | 0.621 | 0.67 | |
| 4,4'-DDT | 1 | 0 | | 12.16 | 51.85 | | ** | | 0.361 | | | |
| 3,3'-Dichlorobenzidine | 1 | 0 | | 12.68 | 51.55 | 50 | 20 | 0.01 | 0.339 | 0.366 | 3.09 | |
| Benzo[a]anthracene | 1 | 0 | | 12.71 | 49.98 | 50 | 20 | 0.8 | 1.212 | 1.211 | 0.05 | |
| Chrysene | 1 | 0 | | 12.75 | 47.89 | 50 | 20 | 0.7 | 1.141 | 1.093 | 4.22 | |
| bis(2-Ethylhexyl)phthalate | 1 | 0 | | 12.76 | 50.68 | 50 | 20 | 0.01 | 0.825 | 0.836 | 1.37 | |
| Perylene-d12 | 1 | 0 | I | 14.37 | 40.00 | 40 | ** | | | 0.000 | 0.00 | |
| Di-n-octylphthalate | 1 | 0 | | 13.52 | 48.11 | 50 | 20 | 0.01 | 1.686 | 1.622 | 3.79 | |
| Benzo[b]fluoranthene | 1 | 0 | | 13.95 | 45.90 | 50 | 20 | 0.7 | 1.318 | 1.210 | 8.20 | |
| Benzo[k]fluoranthene | 1 | 0 | | 13.98 | 45.94 | 50 | 20 | 0.7 | 1.275 | 1.172 | 8.12 | |
| Benzo[a]pyrene | 1 | 0 | | 14.31 | 48.44 | 50 | 20 | 0.7 | 1.250 | 1.211 | 3.12 | |
| Indeno[1,2,3-cd]pyrene | 1 | 0 | | 15.67 | 49.47 | 50 | 20 | 0.5 | 1.241 | 1.228 | 1.06 | |
| Dibenzo[a,h]anthracene | 1 | 0 | | 15.69 | 54.86 | 50 | 20 | 0.4 | 1.057 | 1.015 | 9.72 | |
| Benzo[g,h,i]perylene | 1 | 0 | | 16.05 | 48.99 | 50 | 20 | 0.5 | 1.034 | 1.013 | 2.01 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

# Form7

Continuing Calibration

**Calibration Name:** CAL BNA@50PPM **Data File:** 7M94027.D **Instrument:** GCMS 7

**Cont Calibration Date/Time** 8/22/2018 3:45:00 P Method: EPA 8270D

| TxtCompd: | Col# | Multi Num | Type | RT | Conc | Conc Exp | Lo Lim | MIN RF | Initial RF | RF | %Diff | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.803 | 0.000 | 100.00 | |
| Methoxychlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Toluene Diisocyanate | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| Heptachlor epoxide | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| 2,4 Diaminotoluene | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| Heptachlor | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| gamma-BHC | 1 | 100 | | 0.00 | 0.00 | 10 | ** | | | 0.000 | 100.00 | |
| Endrin | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 1,4-Dioxane-d8 | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| 4-Methylphenol | 1 | 100 | | 0.00 | 0.00 | 50 | ** | 0.6 | | 0.000 | 100.00 | |
| 1,4-Dioxane-d8-Surro | 1 | 100 | | 0.00 | 0.00 | 40 | ** | | | 0.000 | 100.00 | |
| Diaminotoluene Dihydrochloride | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| 2,2'-oxybis-(1-Chloropropane) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | | 0.000 | 100.00 | |
| Dimethylnaphthalenes (Total) | 1 | 100 | | 0.00 | 0.00 | 50 | ** | | 0.891 | 0.000 | 100.00 | |

S-Surrogate Compound I-Internal Standard Compound

N/O or N/Q - Not applicable for this run C1-Compound %Diff exceeds limits ** - No limit specified in method



**Note: 8260/8270 limits are compared against the %DIFF/R.F. 625 limits are compared against the %DIFF.**

**624 limits are compared against the concentration found. 524.2 limits are compared against the %DIFF**

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 7M93981.D  Method: EPA 8270D

Analysis Date/Time: 08/21/18 12:11

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 75211 | 2.57 | 131555 | 5.78 | 483474 | 6.80 | 298424 | 8.24 | 527315 | 9.68 | 522565 | 12.73 | 455516 | 14.42 |
| Eval File Area Limit: | 37606-150422 | | 65778-263110 | | 241737-966948 | | 149212-596848 | | 263658-1054630 | | 261282-1045130 | | 227758-911032 | |
| Eval File Rt Limit: | 2.07-3.07 | | 5.28-6.28 | | 6.3-7.3 | | 7.74-8.74 | | 9.18-10.18 | | 12.23-13.23 | | 13.92-14.92 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M93973.D | CAL BNA@10PPM | 82526 | 2.55 | 140808 | 5.78 | 516348 | 6.81 | 329544 | 8.26 | 576342 | 9.70 | 570191 | 12.73 | 484112 | 14.39 |
| 7M93974.D | CAL BNA@2PPM | 80517 | 2.56 | 145864 | 5.78 | 535524 | 6.80 | 342506 | 8.23 | 591445 | 9.68 | 587514 | 12.72 | 495633 | 14.37 |
| 7M93975.D | CAL BNA@196PPM | 73998 | 2.56 | 128890 | 5.78 | 479740 | 6.80 | 309109 | 8.24 | 520750 | 9.69 | 574549 | 12.73 | 454691 | 14.39 |
| 7M93976.D | CAL BNA@160PPM | 79138 | 2.56 | 141041 | 5.78 | 503798 | 6.80 | 351785 | 8.24 | 541169 | 9.68 | 579081 | 12.73 | 480616 | 14.40 |
| 7M93977.D | CAL BNA@120PPM | 81572 | 2.56 | 141926 | 5.78 | 513249 | 6.80 | 324788 | 8.23 | 558290 | 9.68 | 562079 | 12.72 | 485517 | 14.38 |
| 7M93978.D | CAL BNA@80PPM | 76738 | 2.56 | 134448 | 5.78 | 480313 | 6.82 | 301877 | 8.27 | 525381 | 9.71 | 529516 | 12.74 | 452986 | 14.43 |
| 7M93979.D | CAL BNA@20PPM | 73604 | 2.57 | 131942 | 5.78 | 481326 | 6.82 | 308065 | 8.26 | 534784 | 9.70 | 539240 | 12.75 | 459161 | 14.46 |
| 7M93980.D | CAL BNA@0.5PPM | 76491 | 2.56 | 139473 | 5.78 | 512287 | 6.81 | 320753 | 8.25 | 569558 | 9.69 | 565396 | 12.75 | 491426 | 14.45 |
| 7M93981.D | CAL BNA@50PPM | 75211 | 2.57 | 131555 | 5.78 | 483474 | 6.80 | 298424 | 8.24 | 527315 | 9.68 | 522565 | 12.73 | 455516 | 14.42 |
| 7M93982.D | ICV BNA@50PPM | 72571 | 2.56 | 129500 | 5.78 | 457953 | 6.82 | 285425 | 8.26 | 506349 | 9.71 | 517004 | 12.76 | 443984 | 14.50 |

| | | | | | |
|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | |

**625/8270 Internal Standard concentration = 40 mg/L (in final extract)**
**624/8260 Internal Standard concentration = 30ug/L**
**524 Internal Standard concentration =5ug/L**

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 7M94012.D  Method: EPA 8270D

Analysis Date/Time: 08/22/18 09:24

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 72715 | 2.56 | 126685 | 5.78 | 466938 | 6.80 | 290792 | 8.23 | 517872 | 9.67 | 506313 | 12.72 | 437771 | 14.35 |
| Eval File Area Limit: | 36358-145430 | | 63342-253370 | | 233469-933876 | | 145396-581584 | | 258936-1035744 | | 253156-1012626 | | 218886-875542 | |
| Eval File Rt Limit: | 2.06-3.06 | | 5.28-6.28 | | 6.3-7.3 | | 7.73-8.73 | | 9.17-10.17 | | 12.22-13.22 | | 13.85-14.85 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M94013.D | WMB69959 | 70273 | 2.56 | 121479 | 5.78 | 455824 | 6.82 | 286982 | 8.27 | 496647 | 9.71 | 472991 | 12.73 | 405823 | 14.41 |
| 7M94014.D | SMB69957(MS) | 58630 | 2.55 | 102664 | 5.78 | 370709 | 6.80 | 228065 | 8.24 | 403466 | 9.68 | 399558 | 12.73 | 332545 | 14.42 |
| 7M94015.D | SMB69957 | 57345 | 2.54 | 105379 | 5.78 | 373037 | 6.79 | 231378 | 8.22 | 401366 | 9.67 | 386758 | 12.71 | 323054 | 14.36 |
| 7M94016.D | OMB69865 | 66261 | 2.56 | 115064 | 5.78 | 418804 | 6.80 | 261835 | 8.23 | 456975 | 9.68 | 434647 | 12.72 | 366960 | 14.40 |
| 7M94017.D | AD06050-005(10X) | 64910 | 2.56 | 122717 | 5.78 | 439104 | 6.80 | 267307 | 8.22 | 449279 | 9.67 | 439723 | 12.72 | 381492 | 14.41 |
| 7M94018.D | AD05930-007(T) | 61327 | 2.57 | 111309 | 5.78 | 393617 | 6.80 | 273391 | 8.25 | 442482 | 9.71 | 431207 | 12.73 | 370898 | 14.38 |
| 7M94019.D | AD05930-013(T) | 97090 | 2.56 | 177894 | 5.78 | 617379 | 6.81 | 376587 | 8.25 | 644541 | 9.69 | 592765 | 12.73 | 503332 | 14.42 |
| 7M94020.D | AD06057-001 | 94304 | 2.56 | 165864 | 5.78 | 591438 | 6.79 | 358828 | 8.22 | 609331 | 9.67 | 552436 | 12.72 | 462811 | 14.39 |
| 7M94021.D | EF-SPLP V-285163(0 | 83099 | 2.56 | 151901 | 5.78 | 549027 | 6.79 | 335014 | 8.22 | 590047 | 9.67 | 547324 | 12.71 | 446852 | 14.35 |
| 7M94022.D | WMB69963 | 98584 | 2.56 | 174098 | 5.78 | 632416 | 6.79 | 394796 | 8.22 | 671116 | 9.67 | 648354 | 12.71 | 543988 | 14.35 |
| 7M94023.D | WMB69955 | 72987 | 2.56 | 124615 | 5.78 | 444378 | 6.80 | 269451 | 8.23 | 470291 | 9.67 | 453379 | 12.72 | 387495 | 14.37 |
| 7M94025.D | AD05999-001 | 67422 | 2.54 | 122121 | 5.78 | 440404 | 6.79 | 273502 | 8.22 | 474571 | 9.67 | 447943 | 12.71 | 376600 | 14.36 |

| | | | | | |
|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | |

**625/8270 Internal Standard concentration = 40 mg/L (in final extract)**
**624/8260 Internal Standard concentration = 30ug/L**
**524 Internal Standard concentration =5ug/L**

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

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# FORM8

Internal Standard Areas

Evaluation Std Data File: 7M94027.D  Method: EPA 8270D

Analysis Date/Time: 08/22/18 15:45

Lab File ID: CAL BNA@50PPM

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT | Area | RT |
| Eval File Area/RT: | 75985 | 2.55 | 128149 | 5.78 | 470988 | 6.80 | 296622 | 8.23 | 526052 | 9.68 | 524505 | 12.72 | 452730 | 14.37 |
| Eval File Area Limit: | 37992-151970 | | 64074-256298 | | 235494-941976 | | 148311-593244 | | 263026-1052104 | | 262252-1049010 | | 226365-905460 | |
| Eval File Rt Limit: | 2.05-3.05 | | 5.28-6.28 | | 6.3-7.3 | | 7.73-8.73 | | 9.18-10.18 | | 12.22-13.22 | | 13.87-14.87 | |

| Data File | Sample | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7M94028.D | AD05999-001(MS) | 78463 | 2.54 | 135267 | 5.78 | 484055 | 6.80 | 300987 | 8.23 | 523543 | 9.68 | 500658 | 12.72 | 358744 | 14.35 |
| 7M94029.D | AD05999-001(MSD) | 75609 | 2.55 | 130291 | 5.78 | 473054 | 6.80 | 304127 | 8.23 | 514763 | 9.67 | 484403 | 12.72 | 381326 | 14.36 |
| 7M94030.D | SMB69958(MS) | 67858 | 2.55 | 116633 | 5.78 | 428902 | 6.79 | 267656 | 8.22 | 458285 | 9.67 | 445582 | 12.71 | 356682 | 14.34 |
| 7M94031.D | SMB69958 | 84399 | 2.55 | 140247 | 5.78 | 476193 | 6.79 | 289758 | 8.22 | 493602 | 9.67 | 465393 | 12.71 | 375439 | 14.33 |
| 7M94032.D | AD06068-004 | 63778 | 2.54 | 111339 | 5.78 | 411255 | 6.79 | 254807 | 8.21 | 445385 | 9.66 | 397586 | 12.71 | 319204 | 14.33 |
| 7M94033.D | AD06068-004(MS) | 67431 | 2.55 | 115533 | 5.78 | 416806 | 6.79 | 263966 | 8.22 | 450910 | 9.67 | 430585 | 12.71 | 341484 | 14.33 |
| 7M94034.D | AD06068-004(MSD) | 61439 | 2.54 | 108676 | 5.78 | 391685 | 6.79 | 249195 | 8.21 | 425628 | 9.66 | 410378 | 12.71 | 320980 | 14.33 |
| 7M94035.D | AD06068-001 | 72998 | 2.54 | 123507 | 5.78 | 428144 | 6.79 | 253931 | 8.21 | 442773 | 9.66 | 413342 | 12.71 | 330907 | 14.33 |
| 7M94036.D | AD06068-002 | 76900 | 2.54 | 126068 | 5.78 | 457218 | 6.79 | 275575 | 8.21 | 472086 | 9.66 | 445006 | 12.71 | 369738 | 14.33 |
| 7M94037.D | AD06068-003 | 62413 | 2.54 | 108059 | 5.78 | 405861 | 6.79 | 257505 | 8.21 | 444107 | 9.66 | 395858 | 12.71 | 321246 | 14.33 |
| 7M94038.D | AD06042-004 | 77248 | 2.54 | 133383 | 5.78 | 472686 | 6.79 | 276796 | 8.21 | 471555 | 9.66 | 430876 | 12.71 | 355093 | 14.33 |
| 7M94039.D | AD06042-006 | 59216 | 2.54 | 107299 | 5.78 | 406253 | 6.79 | 251578 | 8.21 | 425733 | 9.66 | 376613 | 12.71 | 300670 | 14.33 |
| 7M94040.D | AD06042-008 | 66779 | 2.54 | 121185 | 5.78 | 452152 | 6.79 | 277306 | 8.20 | 477890 | 9.66 | 419515 | 12.71 | 338024 | 14.33 |
| 7M94041.D | AD06042-010 | 75624 | 2.55 | 141962 | 5.78 | 530833 | 6.79 | 318100 | 8.21 | 536735 | 9.66 | 472414 | 12.71 | 373251 | 14.33 |
| 7M94042.D | AD06027-001 | 80018 | 2.53 | 137340 | 5.78 | 496267 | 6.79 | 299446 | 8.21 | 516381 | 9.66 | 467652 | 12.71 | 381970 | 14.33 |
| 7M94043.D | AD05985-001 | 59982 | 2.55 | 110637 | 5.78 | 409858 | 6.79 | 253139 | 8.21 | 420608 | 9.66 | 371449 | 12.71 | 305194 | 14.33 |
| 7M94044.D | AD05985-003 | 66699 | 2.55 | 120727 | 5.78 | 444383 | 6.79 | 266199 | 8.21 | 462272 | 9.66 | 408577 | 12.71 | 328268 | 14.33 |
| 7M94045.D | AD05985-006 | 85824 | 2.55 | 153076 | 5.78 | 549686 | 6.79 | 330295 | 8.21 | 562442 | 9.66 | 507441 | 12.71 | 405591 | 14.33 |
| 7M94046.D | AD06026-001 | 70636 | 2.54 | 131429 | 5.78 | 480689 | 6.79 | 281565 | 8.21 | 479878 | 9.66 | 422057 | 12.71 | 355873 | 14.33 |
| 7M94047.D | AD06026-003 | 68370 | 2.54 | 152340 | 5.78 | 591701 | 6.80 | 387678 | 8.23 | 589932 | 9.67 | 512144 | 12.72 | 480776 | 14.33 |
| 7M94048.D | AD06065-001 | 76644 | 2.55 | 141729 | 5.78 | 515102 | 6.79 | 305667 | 8.21 | 506413 | 9.66 | 405467 | 12.71 | 325739 | 14.33 |
| 7M94049.D | AD06069-001 | 87765 | 2.55 | 149786 | 5.78 | 528164 | 6.79 | 319546 | 8.21 | 540403 | 9.66 | 462117 | 12.71 | 376256 | 14.33 |
| 7M94050.D | AD06053-001 | 64087 | 2.55 | 119339 | 5.78 | 425589 | 6.79 | 253929 | 8.21 | 407262 | 9.66 | 374847 | 12.71 | 313269 | 14.33 |
| 7M94051.D | AD06053-002 | 68320 | 2.55 | 127040 | 5.78 | 525588 | 6.79 | 303389 | 8.21 | 501967 | 9.66 | 400329 | 12.71 | 342624 | 14.33 |
| 7M94052.D | AD06053-003 | 65984 | 2.55 | 122432 | 5.78 | 442776 | 6.79 | 257596 | 8.21 | 426819 | 9.66 | 393703 | 12.71 | 326436 | 14.33 |
| 7M94053.D | AD06073-001 | 76372 | 2.55 | 132871 | 5.78 | 475343 | 6.79 | 293297 | 8.21 | 484841 | 9.66 | 408311 | 12.71 | 331468 | 14.33 |
| 7M94054.D | AD06073-002 | 69608 | 2.55 | 127057 | 5.78 | 466940 | 6.79 | 281522 | 8.21 | 457252 | 9.66 | 383141 | 12.71 | 320257 | 14.33 |
| 7M94055.D | AD06073-003 | 85187 | 2.55 | 146824 | 5.78 | 514733 | 6.79 | 306962 | 8.21 | 505358 | 9.66 | 423217 | 12.71 | 368833 | 14.33 |

| | | | | | | |
|---|---|---|---|---|---|---|
| I1 = | 1,4-Dioxane-d8(INT) | I4 = | Acenaphthene-d10 | I7 = | Perylene-d12 | **625/8270 Internal Standard concentration = 40 mg/L (in final extract)** |
| I2 = | 1,4-Dichlorobenzene-d4 | I5 = | Phenanthrene-d10 | | | **624/8260 Internal Standard concentration = 30ug/L** |
| I3 = | Naphthalene-d8 | I6 = | Chrysene-d12 | | | **524 Internal Standard concentration =5ug/L** |

**Internal Standard Areas**

Upper Limit = + 100% of internal standard area from daily cal or mid pt.

Lower Limit = - 50% of internal standard area from daily cal or mid pt.

**Flags:**

A - Indicates the compound failed the internal standard area criteria

R - Indicates the compound failed the internal standard retention time criteria.

**Retention Times:** Limit = within +/- 0.5 min of internal standard retention time from the daily cal or mid pt.

# PCB Data

# Form1

ORGANICS PCB REPORT

Sample Number: AD05999-001
Client Id: SS-1
Data File: 3G110753.D
Analysis Date: 08/23/18 16:39
Date Rec/Extracted: 08/16/18-08/23/18
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8082A
Matrix: Soil
Initial Vol: 20g
Final Vol: 10ml
Dilution: 1
Solids: 95

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 0.026 | U | 11097-69-1 | Aroclor-1254 | 0.026 | U |
| 11104-28-2 | Aroclor-1221 | 0.026 | U | 11096-82-5 | Aroclor-1260 | 0.026 | U |
| 11141-16-5 | Aroclor-1232 | 0.026 | U | 37324-23-5 | Aroclor-1262 | 0.026 | U |
| 53469-21-9 | Aroclor-1242 | 0.026 | U | 11100-14-4 | Aroclor-1268 | 0.026 | U |
| 12672-29-6 | Aroclor-1248 | 0.026 | U | 1336-36-3 | Aroclor (Total) | 0.026 | U |

Worksheet #: 477245

*Total Target Concentration* 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2018\GC_3\Data\08-23-18\
Data File : 3G110753.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 23 Aug 2018 16:39
Operator : MS/ZM/MLC
Sample : AD05999-001
Misc : S,PCB
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 17:15:50 2018
Quant Method : G:\GCDATA\2018\GC_3\METHODQT\3G_C0724.M
Quant Title : @GC_3,ug,608,8082
QLast Update : Wed Jul 25 11:18:21 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

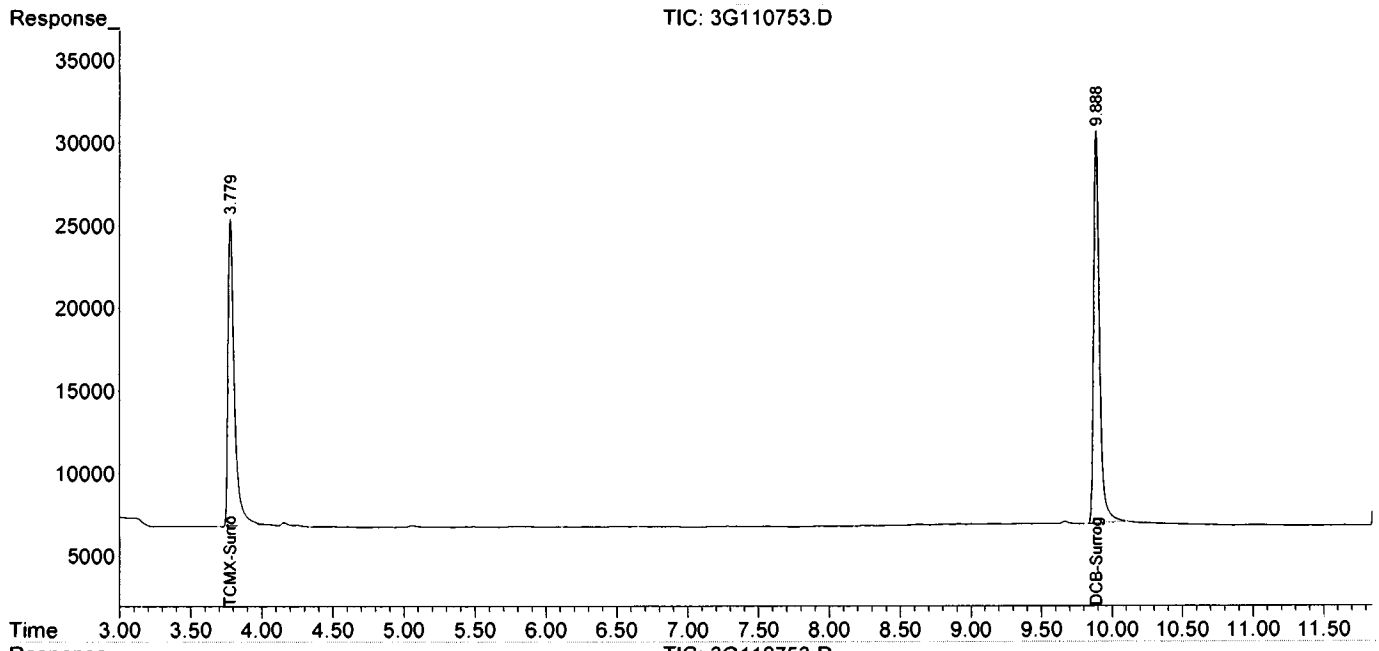
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | pg#1 | pg#2 |
|---|---|---|---|---|---|---|
| Target Compounds | | | | | | |
| 1)TCMX-Surrogate | 3.780 | 3.831 | 575848 | 1188105 | 81.258 | 84.474 |
| 45)DCB-Surrogate | 9.888 | 10.625 | 676885 | 1420362 | 74.677 | 77.907 |

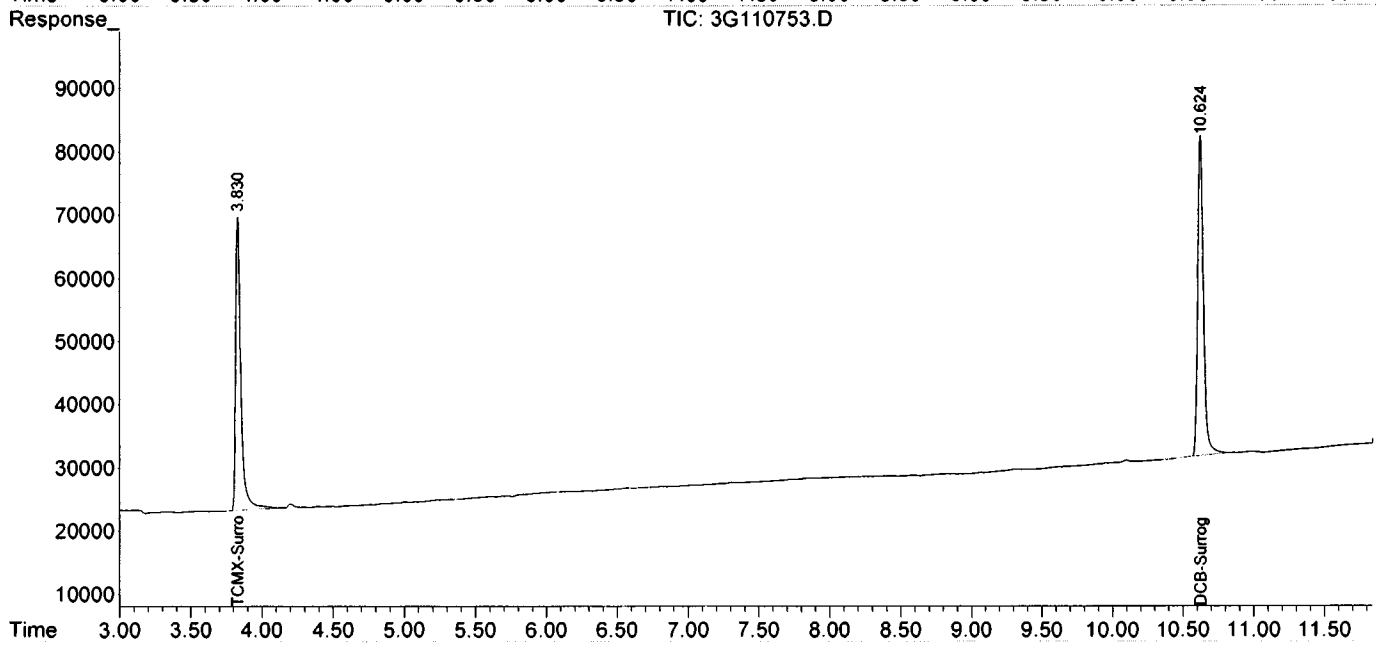
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2018\GC_3\Data\08-23-18\
Data File : 3G110753.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 23 Aug 2018 16:39
Operator : MS/ZM/MLC
Sample : AD05999-001
Misc : S,PCB
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 17:15:50 2018
Quant Method : G:\GCDATA\2018\GC_3\METHODQT\3G_C0724.M
Quant Title : @GC_3,ug,608,8082
QLast Update : Wed Jul 25 11:18:21 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# Form1

ORGANICS PCB REPORT

Sample Number: SMB69977
Client Id:
Data File: 3G110743.D
Analysis Date: 08/23/18 12:29
Date Rec/Extracted: NA-08/23/18
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8082A
Matrix: Soil
Initial Vol: 20g
Final Vol: 10ml
Dilution: 1
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 0.025 | U | 11097-69-1 | Aroclor-1254 | 0.025 | U |
| 11104-28-2 | Aroclor-1221 | 0.025 | U | 11096-82-5 | Aroclor-1260 | 0.025 | U |
| 11141-16-5 | Aroclor-1232 | 0.025 | U | 37324-23-5 | Aroclor-1262 | 0.025 | U |
| 53469-21-9 | Aroclor-1242 | 0.025 | U | 11100-14-4 | Aroclor-1268 | 0.025 | U |
| 12672-29-6 | Aroclor-1248 | 0.025 | U | | | | |

Worksheet #: 477245

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*

*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2018\GC_3\Data\08-23-18\
Data File : 3G110743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 23 Aug 2018 12:29
Operator : MS/ZM/MLC
Sample : SMB69977
Misc : S,PCB
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 13:20:34 2018
Quant Method : G:\GCDATA\2018\GC_3\METHODQT\3G_C0724.M
Quant Title : @GC_3,ug,608,8082
QLast Update : Wed Jul 25 11:18:21 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

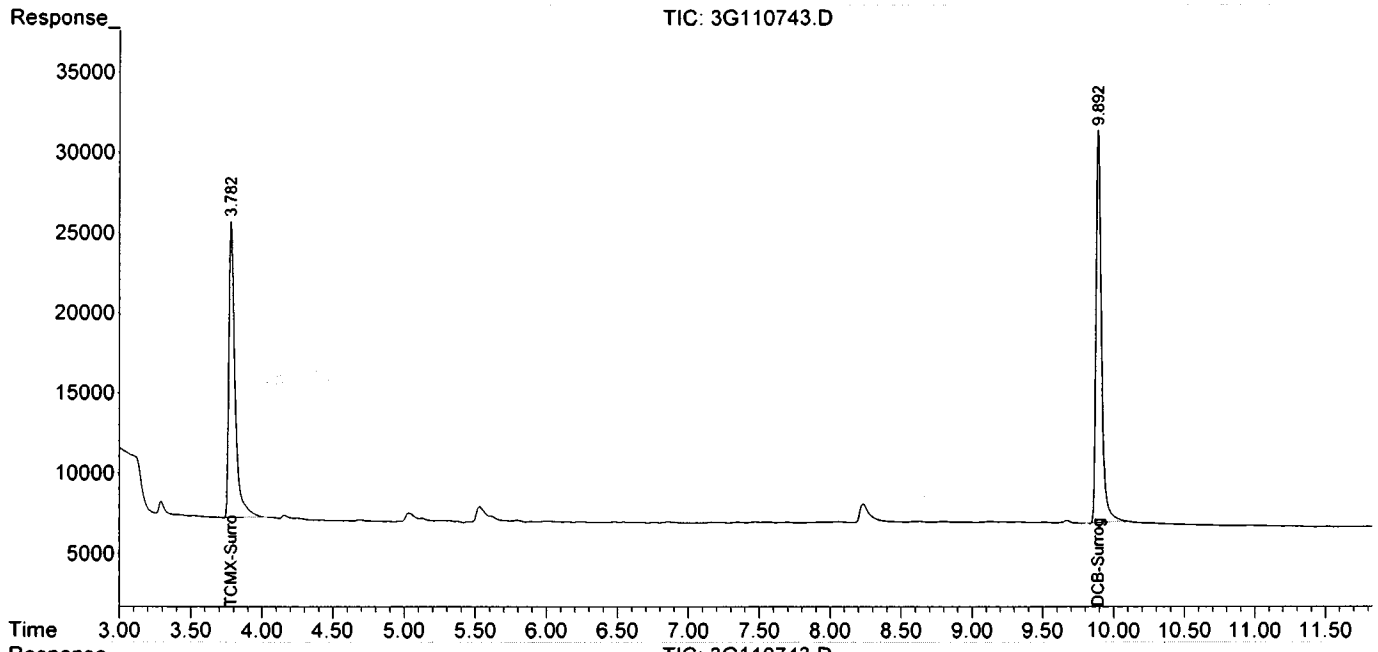
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | pg#1 | pg#2 |
|---|---|---|---|---|---|---|---|
| | Target Compounds | | | | | | |
| 1) | TCMX-Surrogate | 3.783 | 3.831 | 555125 | 1149459 | 78.333 | 81.726 |
| 45) | DCB-Surrogate | 9.893 | 10.625 | 650678 | 1376778 | 71.785 | 75.517 |

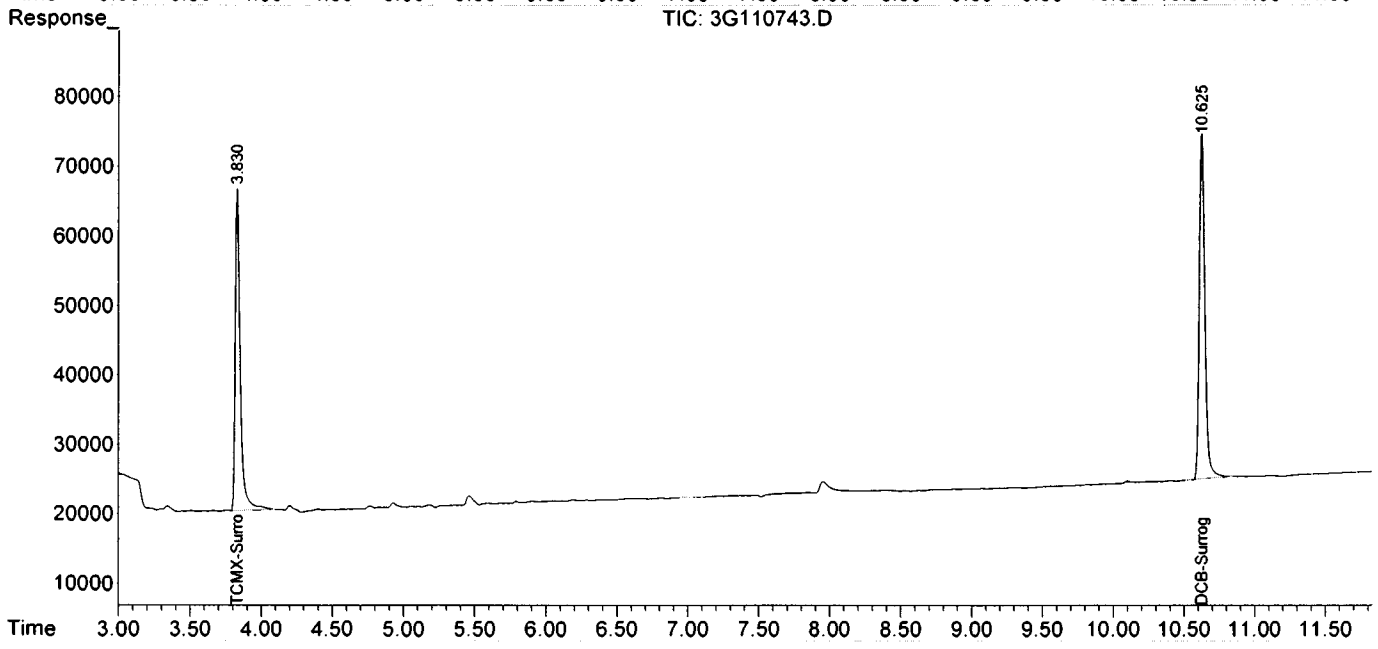
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2018\GC_3\Data\08-23-18\
Data File : 3G110743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 23 Aug 2018 12:29
Operator : MS/ZM/MLC
Sample : SMB69977
Misc : S,PCB
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 13:20:34 2018
Quant Method : G:\GCDATA\2018\GC_3\METHODQT\3G_C0724.M
Quant Title : @GC_3,ug,608,8082
QLast Update : Wed Jul 25 11:18:21 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# FORM2

## Surrogate Recovery

Method: EPA 8082A

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column2 S2 Recov | Column1 S3 Recov | Column2 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3G110743.D | SMB69977 | S | 08/23/18 12:29 | 1 | | 78 | 82 | 72 | 76 | | |
| 3G110753.D | AD05999-001 | S | 08/23/18 16:39 | 1 | | 81 | 84 | 75 | 78 | | |
| 3G110744.D | SMB69977(MS) | S | 08/23/18 12:44 | 1 | | 81 | 83 | 73 | 76 | | |
| 3G110751.D | AD05999-001(MS) | S | 08/23/18 16:09 | 1 | | 91 | 94 | 73 | 77 | | |
| 3G110752.D | AD05999-001(MSD) | S | 08/23/18 16:23 | 1 | | 88 | 90 | 74 | 77 | | |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8082A

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=TCMX-Surrogate | 100 | 37-141 |
| S2=TCMX-Surrogate | 100 | 37-141 |
| S3=DCB-Surrogate | 100 | 34-146 |
| S4=DCB-Surrogate | 100 | 34-146 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69977

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3G110744.D | SMB69977(MS) | 8/23/2018 12:44:00 PM |
| Non Spike(If applicable): | | | |
| Inst Blank(If applicable): | | | |

Method: 8082 Matrix: Soil QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 -Total | 1 | 818.362 | 0 | 1000 | 82 | 30 | 163 |
| Aroclor-1260 -Total | 1 | 794.098 | 0 | 1000 | 79 | 25 | 166 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69977

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3G110751.D | AD05999-001(MS) | 8/23/2018 4:09:00 PM |
| Non Spike(If applicable): | 3G110753.D | AD05999-001 | 8/23/2018 4:39:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8082 Matrix: Soil QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 -Total | 1 | 979.718 | 0 | 1000 | 98 | 30 | 163 |
| Aroclor-1260 -Total | 1 | 894.594 | 0 | 1000 | 89 | 25 | 166 |

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3G110752.D | AD05999-001(MSD) | 8/23/2018 4:23:00 PM |
| Non Spike(If applicable): | 3G110753.D | AD05999-001 | 8/23/2018 4:39:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8082 Matrix: Soil QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 -Total | 1 | 949.144 | 0 | 1000 | 95 | 30 | 163 |
| Aroclor-1260 -Total | 1 | 897.42 | 0 | 1000 | 90 | 25 | 166 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
## RPD Data Laboratory Limits
### QC Batch: SMB69977

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 3G110752.D | AD05999-001(MSD) | 8/23/2018 4:23:00 PM |
| Duplicate(If applicable): | 3G110751.D | AD05999-001(MS) | 8/23/2018 4:09:00 PM |
| Inst Blank(If applicable): | | | |

Method: 8082 Matrix: Soil QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Aroclor-1016 -Total | 1 | 949.144 | 979.718 | 3.2 | 40 |
| Aroclor-1260 -Total | 1 | 897.42 | 894.594 | 0.32 | 37 |

* - Indicates outside of limits NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: SMB69977
Blank Data File: 3G110743.D
Matrix: Soil

Blank Analysis Date: 08/23/18 12:29
Blank Extraction Date: 08/23/18
(If Applicable)
Method: EPA 8082A

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD05999-001 | 3G110753.D | 08/23/18 16:39 |
| AD05999-001(MS) | 3G110751.D | 08/23/18 16:09 |
| SMB69977(MS) | 3G110744.D | 08/23/18 12:44 |
| AD05999-001(MSD | 3G110752.D | 08/23/18 16:23 |

# Form 5

Method: EPA 8082A

Instrument: GC_3 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 3G110256.D | 500PPB | 07/24/18 10:39 | Soil | | | | | |
| 3G110257.D | 500PPB | 07/24/18 10:54 | Soil | | | | | |
| 3G110258.D | 500PPB | 07/24/18 11:09 | Soil | | | | | |
| 3G110259.D | CAL 3268@500PPB | 07/24/18 11:24 | Soil | 3G11026 | 9.8891 | 0.0061 | 10.6222 | 0.0132 |
| 3G110260.D | CAL 1242@500PPB | 07/24/18 11:39 | Soil | 3G11026 | 9.8892 | 0.0071 | 10.6205 | 0.0028 |
| 3G110261.D | CAL 1248@500PPB | 07/24/18 11:54 | Soil | 3G11026 | 9.8886 | 0.001 | 10.6219 | 0.0104 |
| 3G110262.D | CAL 2154@500PPB | 07/24/18 12:09 | Soil | 3G11026 | 9.8901 | 0.0162 | 10.6219 | 0.0104 |
| 3G110263.D | CAL 1262@500PPB | 07/24/18 12:24 | Soil | 3G11026 | 9.8885 | 0 | 10.6213 | 0.0047 |
| 3G110264.D | CAL 1660@50PPB | 07/24/18 12:38 | Soil | 3G11026 | 9.8885 | 0 | 10.6208 | 0 |
| 3G110265.D | CAL 1660@200PPB | 07/24/18 12:53 | Soil | 3G11026 | 9.8905 | 0.0202 | 10.6212 | 0.0038 |
| 3G110266.D | CAL 1660@500PPB | 07/24/18 13:08 | Soil | 3G11026 | 9.8901 | 0.0162 | 10.6230 | 0.0207 |
| 3G110267.D | CAL 1660@1000PPB | 07/24/18 13:23 | Soil | 3G11026 | 9.8884 | 0.001 | 10.6206 | 0.0019 |
| 3G110268.D | CAL 1660@2000PPB | 07/24/18 13:38 | Soil | 3G11026 | 9.8893 | 0.0081 | 10.6219 | 0.0104 |
| 3G110269.D | CAL 1660@4000PPB | 07/24/18 13:53 | Soil | 3G11026 | 9.8893 | 0.0081 | 10.6213 | 0.0047 |
| 3G110270.D | ICV | 07/24/18 14:07 | Soil | 3G11026 | 9.8903 | 0.0182 | 10.6232 | 0.0226 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8082A

Instrument: GC_3 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 3G110742.D | CAL 1660@1000PPB | 08/23/18 11:07 | Soil | 3G11074 | 9.8948 | 0 | 10.6259 | 0 |
| 3G110743.D | SMB69977 | 08/23/18 12:29 | Soil | 3G11074 | 9.8928 | 0.0202 | 10.6253 | 0.0056 |
| 3G110744.D | SMB69977(MS) | 08/23/18 12:44 | Soil | 3G11074 | 9.8873 | 0.0758 | 10.6233 | 0.0245 |
| 3G110745.D | AD06097-001 | 08/23/18 12:58 | Soil | 3G11074 | 9.8802 | 0.1477 | 10.6169 | 0.0847 |
| 3G110746.D | AD06098-002 | 08/23/18 13:13 | Soil | 3G11074 | 9.8810 | 0.1396 | 10.6157 | 0.096 |
| 3G110747.D | AD06097-001 | 08/23/18 13:28 | Soil | 3G11074 | 9.8819 | 0.1305 | 10.6188 | 0.0668 |
| 3G110748.D | SMB69979 | 08/23/18 14:40 | Soil | 3G11074 | 9.8936 | 0.0121 | 10.6244 | 0.0141 |
| 3G110749.D | SMB69979(MS) | 08/23/18 14:54 | Soil | 3G11074 | 9.8867 | 0.0819 | 10.6222 | 0.0348 |
| 3G110750.D | CAL 1660@1000PPB | 08/23/18 15:09 | Soil | 3G11074 | 9.8876 | 0.0728 | 10.6257 | 0.0019 |
| 3G110751.D | AD05999-001(MS) | 08/23/18 16:09 | Soil | 3G11075 | 9.8942 | 0.0667 | 10.6244 | 0.0122 |
| 3G110752.D | AD05999-001(MSD) | 08/23/18 16:23 | Soil | 3G11075 | 9.8875 | 0.001 | 10.6225 | 0.0301 |
| 3G110753.D | AD05999-001 | 08/23/18 16:39 | Soil | 3G11075 | 9.8884 | 0.0081 | 10.6253 | 0.0038 |
| 3G110754.D | AD06047-001 | 08/23/18 16:54 | Soil | 3G11075 | 9.8859 | 0.0172 | 10.6213 | 0.0414 |
| 3G110755.D | AD06047-002 | 08/23/18 17:10 | Soil | 3G11075 | 9.8816 | 0.0607 | 10.6174 | 0.0781 |
| 3G110756.D | AD06075-001 | 08/23/18 17:25 | Soil | 3G11075 | 9.8828 | 0.0486 | 10.6173 | 0.0791 |
| 3G110757.D | AD06075-003 | 08/23/18 17:40 | Soil | 3G11075 | 9.8839 | 0.0374 | 10.6218 | 0.0367 |
| 3G110758.D | AD06075-005 | 08/23/18 17:56 | Soil | 3G11075 | 9.8851 | 0.0253 | 10.6208 | 0.0461 |
| 3G110759.D | AD06075-007 | 08/23/18 18:11 | Soil | 3G11075 | 9.8836 | 0.0405 | 10.6203 | 0.0508 |
| 3G110760.D | AD06075-009 | 08/23/18 18:26 | Soil | 3G11075 | 9.8834 | 0.0425 | 10.6184 | 0.0687 |
| 3G110761.D | AD06075-011 | 08/23/18 18:42 | Soil | 3G11075 | 9.8840 | 0.0364 | 10.6197 | 0.0565 |
| 3G110762.D | AD06075-013 | 08/23/18 18:57 | Soil | 3G11075 | 9.8844 | 0.0324 | 10.6208 | 0.0461 |
| 3G110763.D | AD06059-001 | 08/23/18 19:12 | Soil | 3G11075 | 9.8836 | 0.0405 | 10.6192 | 0.0612 |
| 3G110764.D | AD06059-002 | 08/23/18 19:28 | Soil | 3G11075 | 9.8838 | 0.0384 | 10.6194 | 0.0593 |
| 3G110765.D | AD06051-001(MS) | 08/23/18 19:43 | Soil | 3G11075 | 9.8859 | 0.0172 | 10.6219 | 0.0358 |
| 3G110766.D | AD06051-001(MSD) | 08/23/18 19:58 | Soil | 3G11075 | 9.8849 | 0.0273 | 10.6206 | 0.048 |
| 3G110767.D | AD06051-001 | 08/23/18 20:13 | Soil | 3G11075 | 9.8857 | 0.0192 | 10.6212 | 0.0424 |
| 3G110768.D | CAL 1660@1000PPB | 08/23/18 20:29 | Soil | 3G11075 | 9.8887 | 0.0111 | 10.6251 | 0.0056 |
| 3G110769.D | 2000PPB | 08/23/18 20:44 | Soil | 3G11076 | 9.8880 | 0.0071 | 10.6241 | 0.0094 |
| 3G110770.D | AD06051-002 | 08/23/18 20:59 | Soil | 3G11076 | 9.8854 | 0.0334 | 10.6219 | 0.0301 |
| 3G110771.D | AD06051-003 | 08/23/18 21:14 | Soil | 3G11076 | 9.8850 | 0.0374 | 10.6209 | 0.0395 |
| 3G110772.D | AD06051-004 | 08/23/18 21:30 | Soil | 3G11076 | 9.8861 | 0.0263 | 10.6238 | 0.0122 |
| 3G110773.D | AD06051-005 | 08/23/18 21:45 | Soil | 3G11076 | 9.8842 | 0.0455 | 10.6189 | 0.0584 |
| 3G110774.D | AD06078-009 | 08/23/18 22:00 | Soil | 3G11076 | 9.8823 | 0.0647 | 10.6179 | 0.0678 |
| 3G110775.D | AD06027-001 | 08/23/18 22:15 | Soil | 3G11076 | 9.8871 | 0.0162 | 10.6230 | 0.0198 |
| 3G110776.D | AD06065-001 | 08/23/18 22:30 | Soil | 3G11076 | 9.8836 | 0.0516 | 10.6189 | 0.0584 |
| 3G110777.D | AD06073-001 | 08/23/18 22:46 | Soil | 3G11076 | 9.8845 | 0.0425 | 10.6208 | 0.0405 |
| 3G110778.D | AD06073-002 | 08/23/18 23:01 | Soil | 3G11076 | 9.8837 | 0.0506 | 10.6199 | 0.049 |
| 3G110779.D | AD06073-003 | 08/23/18 23:16 | Soil | 3G11076 | 9.8826 | 0.0617 | 10.6178 | 0.0687 |
| 3G110780.D | AD06073-004 | 08/23/18 23:31 | Soil | 3G11076 | 9.8835 | 0.0526 | 10.6190 | 0.0574 |
| 3G110781.D | AD06073-005 | 08/23/18 23:46 | Soil | 3G11076 | 9.8843 | 0.0445 | 10.6191 | 0.0565 |
| 3G110782.D | AD06073-006 | 08/24/18 00:02 | Soil | 3G11076 | 9.8848 | 0.0394 | 10.6215 | 0.0339 |
| 3G110783.D | AD05973-011(R) | 08/24/18 00:17 | Soil | 3G11076 | 9.8864 | 0.0233 | 10.6224 | 0.0254 |
| 3G110784.D | CAL 1660@1000PPB | 08/24/18 00:32 | Soil | 3G11076 | 9.8885 | 0.002 | 10.6236 | 0.0141 |
| 3G110785.D | 2000PPB | 08/24/18 00:48 | Soil | 3G11078 | 9.8891 | 0.0061 | 10.6245 | 0.0085 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

8081617 0124

# Form 6
## Initial Calibration

Method: EPA 8082A

Instrument: GC_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3G110264.D | CAL 1660@50PPB | 07/24/18 12:38 | 2 | 3G110265.D | CAL 1660@200PPB | 07/24/18 12:53 |
| 3 | 3G110266.D | CAL 1660@500PPB | 07/24/18 13:08 | 4 | 3G110267.D | CAL 1660@1000PPB | 07/24/18 13:23 |
| 5 | 3G110268.D | CAL 1660@2000PPB | 07/24/18 13:38 | 6 | 3G110269.D | CAL 1660@4000PPB | 07/24/18 13:53 |
| 7 | 3G110259.D | CAL 3268@500PPB | 07/24/18 11:24 | 8 | 3G110260.D | CAL 1242@500PPB | 07/24/18 11:39 |
| 9 | 3G110261.D | CAL 1248@500PPB | 07/24/18 11:54 | 10 | 3G110262.D | CAL 2154@500PPB | 07/24/18 12:09 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMX-Surrogate | 1 | 0 | Avg | 0.7111 | 0.7081 | 0.6773 | 0.6883 | 0.7232 | 0.7439 | ---- | ---- | 0.709 | 3.78 | 1.00 | 1.00 | 3.4 | 5.00 | 20.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Aroclor-1016 | 1 | 1 | Avg | 0.0193 | 0.0194 | 0.0172 | 0.0162 | 0.0164 | 0.0180 | ---- | ---- | 0.0178 | 4.25 | 0.997 | 1.00 | 7.7 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 1 | 2 | LinF | 0.0404 | 0.0404 | 0.0363 | 0.0325 | 0.0319 | 0.0307 | ---- | ---- | 0.0354 | 4.61 | 1.00 | 1.00 | 12 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 1 | 3 | Avg | 0.0723 | 0.0745 | 0.0688 | 0.0622 | 0.0635 | 0.0625 | ---- | ---- | 0.0673 | 5.07 | 1.00 | 1.00 | 8.0 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 1 | 4 | Avg | 0.0236 | 0.0235 | 0.0229 | 0.0203 | 0.0213 | 0.0212 | ---- | ---- | 0.0222 | 5.30 | 1.00 | 1.00 | 6.2 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 1 | 5 | LinF | 0.0604 | 0.0590 | 0.0570 | 0.0480 | 0.0500 | 0.0479 | ---- | ---- | 0.0538 | 5.42 | 0.999 | 0.999 | 11 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 1 | LinF | 0.0523 | 0.0495 | 0.0457 | 0.0409 | 0.0412 | 0.0390 | ---- | ---- | 0.0448 | 6.90 | 0.999 | 1.00 | 12 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 2 | Avg | 0.0580 | 0.0588 | 0.0545 | 0.0503 | 0.0509 | 0.0491 | ---- | ---- | 0.0536 | 7.15 | 1.00 | 1.00 | 7.7 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 3 | Avg | 0.0279 | 0.0290 | 0.0283 | 0.0256 | 0.0278 | 0.0281 | ---- | ---- | 0.0278 | 7.34 | 0.999 | 1.00 | 4.1 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 4 | Avg | 0.0396 | 0.0379 | 0.0364 | 0.0337 | 0.0351 | 0.0341 | ---- | ---- | 0.0362 | 7.92 | 1.00 | 1.00 | 6.4 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 1 | 5 | Avg | 0.0665 | 0.0654 | 0.0648 | 0.0593 | 0.0651 | 0.0660 | ---- | ---- | 0.0646 | 8.63 | 0.999 | 1.00 | 4.1 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1221 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00933 | 4.07 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1221 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00598 | 4.20 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1221 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0294 | 4.26 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0177 | 4.25 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0167 | 4.61 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0289 | 5.07 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0134 | 5.20 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0130 | 5.65 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0194 | 4.25 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0364 | 4.60 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0701 | 5.07 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0554 | 5.42 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0297 | 5.65 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0143 | 4.61 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0279 | 5.08 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0633 | 5.42 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0338 | 5.76 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0399 | 6.35 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0166 | 6.55 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0608 | 6.75 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0365 | 6.91 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0502 | 7.04 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0188 | 7.41 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1262 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0639 | 7.58 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0375 | 8.57 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |

Avg Rsd Col 1: 7.42 Avg Rsd Col 2: 9.85

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pcb/chlordane etc.)
Fit = Indicates whehter Avg RF, Linear, or Quadratic Curve was used for compound
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 ; Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

# Form 6
## Initial Calibration

8081617 0125

Method: EPA 8082A

Instrument: GC_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3G110264.D | CAL 1660@50PPB | 07/24/18 12:38 | 2 | 3G110265.D | CAL 1660@200PPB | 07/24/18 12:53 |
| 3 | 3G110266.D | CAL 1660@500PPB | 07/24/18 13:08 | 4 | 3G110267.D | CAL 1660@1000PPB | 07/24/18 13:23 |
| 5 | 3G110268.D | CAL 1660@2000PPB | 07/24/18 13:38 | 6 | 3G110269.D | CAL 1660@4000PPB | 07/24/18 13:53 |
| 7 | 3G110259.D | CAL 3268@500PPB | 07/24/18 11:24 | 8 | 3G110260.D | CAL 1242@500PPB | 07/24/18 11:39 |
| 9 | 3G110261.D | CAL 1248@500PPB | 07/24/18 11:54 | 10 | 3G110262.D | CAL 2154@500PPB | 07/24/18 12:09 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1262 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0742 | 8.63 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0338 | 9.32 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0113 | 9.67 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0120 | 7.93 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00840 | 8.24 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0901 | 8.82 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0245 | 8.92 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.271 | 9.66 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| DCB-Surrogate | 1 | 0 | Avg | 1.0053 | 0.9545 | 0.9026 | 0.8582 | 0.8635 | 0.8541 | ---- | ---- | 0.906 | 9.89 | 1.00 | 1.00 | 6.8 | 5.00 | 20.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| TCMX-Surrogate | 2 | 0 | Avg | 1.4471 | 1.5329 | 1.4093 | 1.2887 | 1.3759 | 1.3847 | ---- | ---- | 1.41 | 3.83 | 1.00 | 1.00 | 5.8 | 5.00 | 20.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Aroclor-1016 | 2 | 1 | LinF | 0.0402 | 0.0256 | 0.0279 | 0.0235 | 0.0261 | 0.0261 | ---- | ---- | 0.0283 | 4.43 | 0.999 | 0.999 | 21 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 2 | 2 | Avg | 0.0636 | 0.0591 | 0.0604 | 0.0538 | 0.0536 | 0.0511 | ---- | ---- | 0.0570 | 4.84 | 0.999 | 1.00 | 8.5 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 2 | 3 | Avg | 0.1352 | 0.1461 | 0.1307 | 0.1174 | 0.1201 | 0.1170 | ---- | ---- | 0.128 | 5.23 | 1.00 | 1.00 | 9.1 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 2 | 4 | Avg | 0.0520 | 0.0528 | 0.0516 | 0.0488 | 0.0490 | 0.0484 | ---- | ---- | 0.0505 | 5.55 | 1.00 | 1.00 | 3.8 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1016 | 2 | 5 | Avg | 0.0375 | 0.0382 | 0.0341 | 0.0333 | 0.0344 | 0.0347 | ---- | ---- | 0.0354 | 5.91 | 1.00 | 1.00 | 5.6 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 1 | Avg | 0.1035 | 0.1007 | 0.0895 | 0.0881 | 0.0830 | 0.0813 | ---- | ---- | 0.0910 | 7.21 | 1.00 | 1.00 | 10 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 2 | Avg | 0.1190 | 0.1353 | 0.1221 | 0.1163 | 0.1153 | 0.1161 | ---- | ---- | 0.121 | 7.30 | 1.00 | 1.00 | 6.3 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 3 | LinF | 0.0476 | 0.0734 | 0.0616 | 0.0473 | 0.0550 | 0.0585 | ---- | ---- | 0.0573 | 7.93 | 0.996 | 0.998 | 17 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 4 | Avg | 0.0881 | 0.1063 | 0.0957 | 0.0953 | 0.0929 | 0.0950 | ---- | ---- | 0.0956 | 8.28 | 1.00 | 1.00 | 6.2 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1260 | 2 | 5 | LinF | 0.1291 | 0.1037 | 0.1083 | 0.0842 | 0.0904 | 0.0977 | ---- | ---- | 0.102 | 8.98 | 0.997 | 0.999 | 15 | 50.00 | 200.0 | 500.0 | 1000. | 2000. | 4000. | | |
| Aroclor-1221 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0167 | 4.21 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1221 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00918 | 4.36 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1221 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0332 | 4.43 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0263 | 4.42 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0282 | 4.84 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0666 | 5.23 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0199 | 5.91 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1232 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0186 | 6.06 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0283 | 4.42 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0679 | 4.84 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.141 | 5.22 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0585 | 5.55 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1242 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0422 | 5.91 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Aroclor-1248 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0208 | 4.84 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0722 | 5.23 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0522 | 5.55 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |

Avg Rsd Col 1: 7.42 Avg Rsd Col 2: 9.85

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pch/chlordane etc.)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 ; Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

8081617 0126

# Form 6
## Initial Calibration

Method: EPA 8082A

Instrument: GC_3

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 3G110264.D | CAL 1660@50PPB | 07/24/18 12:38 | 2 | 3G110265.D | CAL 1660@200PPB | 07/24/18 12:53 |
| 3 | 3G110266.D | CAL 1660@500PPB | 07/24/18 13:08 | 4 | 3G110267.D | CAL 1660@1000PPB | 07/24/18 13:23 |
| 5 | 3G110268.D | CAL 1660@2000PPB | 07/24/18 13:38 | 6 | 3G110269.D | CAL 1660@4000PPB | 07/24/18 13:53 |
| 7 | 3G110259.D | CAL 3268@500PPB | 07/24/18 11:24 | 8 | 3G110260.D | CAL 1242@500PPB | 07/24/18 11:39 |
| 9 | 3G110261.D | CAL 1248@500PPB | 07/24/18 11:54 | 10 | 3G110262.D | CAL 2154@500PPB | 07/24/18 12:09 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1248 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0516 | 6.06 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1248 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0647 | 6.20 | -1 | -1 | Lvl=9 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0986 | 6.41 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0269 | 6.75 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0796 | 7.15 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0264 | 7.67 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1254 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0382 | 8.34 | -1 | -1 | Lvl=10 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0993 | 7.71 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0930 | 8.87 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.107 | 8.98 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.107 | 9.56 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1262 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0263 | 10.09 | -1 | -1 | Lvl=11 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0182 | 8.38 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0307 | 8.42 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.203 | 9.30 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0505 | 9.46 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| Aroclor-1268 | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.600 | 10.09 | -1 | -1 | Lvl=7 | 500.0 | | | | | | | |
| DCB-Surrogate | 2 | 0 | Avg | 2.1096 | 1.9164 | 1.8017 | 1.7369 | 1.6880 | 1.6860 | ---- | ---- | 1.82 | 10.62 | 1.00 | 1.00 | 9.0 | 5.00 | 20.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |

Avg Rsd Col 1: 7.42 Avg Rsd Col 2: 9.85

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pcb/chlordane etc.)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 ; Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

# Form7
Continuing Calibration

Method: EPA 8082A

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | | 3G110742.D | | | 3G110750.D | | | 3G110768.D | | | | | | | | | |
| **Method:** | | | | 8082 | | | 8082 | | | 8082 | | | | | | | | | |
| **Calibration Name:** | | | | CAL 1660@1000PP | | | CAL 1660@1000PP | | | CAL 1660@1000PP | | | | | | | | | |
| **Calibration Date/Time** | | | | 08/23/18 11:07 | | | 08/23/18 15:09 | | | 08/23/18 20:29 | | | | | | | | | |
| Compound | Limit | Col | Mr | Conc | Conc Exp | %Diff | Conc | Conc Exp | %Diff | Conc | Conc Exp | %Diff | Conc | Conc Exp | %Diff | Conc | Conc Exp | %Diff |
| TCMX-Surrogate | 20 | 1 | 0 | 87.98 | 100 | 12.0 | 107.3 | 100 | 7.3 | 102.2 | 100 | 2.2 | | | | | | |
| Aroclor-1016 | 20 | 1 | 1 | 919.1 | 1000 | 8.1 | 1018 | 1000 | 1.8 | 952.9 | 1000 | 4.7 | | | | | | |
| Aroclor-1016 | 20 | 1 | 2 | 1023 | 1000 | 2.3 | 1142 | 1000 | 14.2 | 1081 | 1000 | 8.1 | | | | | | |
| Aroclor-1016 | 20 | 1 | 3 | 906.8 | 1000 | 9.3 | 1028 | 1000 | 2.8 | 974.5 | 1000 | 2.5 | | | | | | |
| Aroclor-1016 | 20 | 1 | 4 | 931.7 | 1000 | 6.8 | 1033 | 1000 | 3.3 | 971.7 | 1000 | 2.8 | | | | | | |
| Aroclor-1016 | 20 | 1 | 5 | 1032 | 1000 | 3.2 | 1147 | 1000 | 14.7 | 1096 | 1000 | 9.6 | | | | | | |
| Aroclor-1260 | 20 | 1 | 1 | 963 | 1000 | 3.7 | 1098 | 1000 | 9.8 | 1049 | 1000 | 4.9 | | | | | | |
| Aroclor-1260 | 20 | 1 | 2 | 865.5 | 1000 | 13.4 | 993.1 | 1000 | 0.7 | 953.8 | 1000 | 4.6 | | | | | | |
| Aroclor-1260 | 20 | 1 | 3 | 867.9 | 1000 | 13.2 | 974.3 | 1000 | 2.6 | 918.3 | 1000 | 8.2 | | | | | | |
| Aroclor-1260 | 20 | 1 | 4 | 838.0 | 1000 | 16.2 | 956.9 | 1000 | 4.3 | 901.4 | 1000 | 9.9 | | | | | | |
| Aroclor-1260 | 20 | 1 | 5 | 774.1 | 1000 | 22.6* | 909.8 | 1000 | 9.0 | 951.6 | 1000 | 4.8 | | | | | | |
| DCB-Surrogate | 20 | 1 | 0 | 78.43 | 100 | 21.6* | 87.94 | 100 | 12.1 | 94.6 | 100 | 5.4 | | | | | | |
| Average Difference | 20 | 1 | 0 | | | 11.0 | | | 6.9 | | | 5.7 | | | | | | |
| TCMX-Surrogate | 20 | 2 | 0 | 98.93 | 100 | 1.1 | 104.6 | 100 | 4.6 | 96.01 | 100 | 4.0 | | | | | | |
| Aroclor-1016 | 20 | 2 | 1 | 1123 | 1000 | 12.3 | 1127 | 1000 | 12.7 | 974.5 | 1000 | 2.5 | | | | | | |
| Aroclor-1016 | 20 | 2 | 2 | 1025 | 1000 | 2.5 | 1070 | 1000 | 7.0 | 955.9 | 1000 | 4.4 | | | | | | |
| Aroclor-1016 | 20 | 2 | 3 | 996.2 | 1000 | 0.4 | 1044 | 1000 | 4.4 | 932.0 | 1000 | 6.8 | | | | | | |
| Aroclor-1016 | 20 | 2 | 4 | 1019 | 1000 | 1.9 | 1086 | 1000 | 8.6 | 962.9 | 1000 | 3.7 | | | | | | |
| Aroclor-1016 | 20 | 2 | 5 | 993.3 | 1000 | 0.7 | 1052 | 1000 | 5.2 | 932.7 | 1000 | 6.7 | | | | | | |
| Aroclor-1260 | 20 | 2 | 1 | 930.8 | 1000 | 6.9 | 977.4 | 1000 | 2.3 | 903.9 | 1000 | 9.6 | | | | | | |
| Aroclor-1260 | 20 | 2 | 2 | 950.0 | 1000 | 5.0 | 1005 | 1000 | 0.5 | 938.3 | 1000 | 6.2 | | | | | | |
| Aroclor-1260 | 20 | 2 | 3 | 982.5 | 1000 | 1.8 | 1054 | 1000 | 5.4 | 996.1 | 1000 | 0.4 | | | | | | |
| Aroclor-1260 | 20 | 2 | 4 | 908.1 | 1000 | 9.2 | 947.4 | 1000 | 5.3 | 900.8 | 1000 | 9.9 | | | | | | |
| Aroclor-1260 | 20 | 2 | 5 | 917.7 | 1000 | 8.2 | 1032 | 1000 | 3.2 | 969.8 | 1000 | 3.0 | | | | | | |
| DCB-Surrogate | 20 | 2 | 0 | 82.79 | 100 | 17.2 | 90.42 | 100 | 9.6 | 86.61 | 100 | 13.4 | | | | | | |
| Average Difference | 20 | 2 | 0 | | | 5.6 | | | 5.7 | | | 5.9 | | | | | | |

***Flags/Notes:*** **** - Values outside of limits for this column/run***

# Form7
RtWindow Summary

**Method**: EPA 8082A

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | 3G110264.D | | 3G110742.D | | 3G110750.D | | | | |
| **Calibration Name:** | | | CAL 1660@50PPB | | CAL 1660@1000PPB | | CAL 1660@1000PPB | | | | |
| **Calibration Date/Time** | | | 7/24/2018 12:38:00 PM | | 8/23/2018 11:07:00 AM | | 8/23/2018 3:09:00 PM | | | | |
| Compound | Col | Mr | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit |
| TCMX-Surrogate | 1 | 0 | 3.78 | (3.72 - 3.84) | 3.78 | (3.72 - 3.84) | 3.78 | (3.72 - 3.84) | | | | |
| Aroclor-1016 | 1 | 1 | 4.25 | (4.21 - 4.29) | 4.26 | (4.22 - 4.30) | 4.25 | (4.21 - 4.29) | | | | |
| Aroclor-1016 | 1 | 2 | 4.60 | (4.56 - 4.64) | 4.61 | (4.57 - 4.65) | 4.60 | (4.56 - 4.64) | | | | |
| Aroclor-1016 | 1 | 3 | 5.07 | (5.03 - 5.11) | 5.08 | (5.04 - 5.12) | 5.07 | (5.03 - 5.11) | | | | |
| Aroclor-1016 | 1 | 4 | 5.30 | (5.26 - 5.34) | 5.30 | (5.26 - 5.34) | 5.30 | (5.26 - 5.34) | | | | |
| Aroclor-1016 | 1 | 5 | 5.42 | (5.38 - 5.46) | 5.42 | (5.38 - 5.46) | 5.41 | (5.37 - 5.45) | | | | |
| Aroclor-1260 | 1 | 1 | 6.90 | (6.86 - 6.94) | 6.90 | (6.86 - 6.94) | 6.90 | (6.86 - 6.94) | | | | |
| Aroclor-1260 | 1 | 2 | 7.15 | (7.11 - 7.19) | 7.16 | (7.12 - 7.20) | 7.15 | (7.11 - 7.19) | | | | |
| Aroclor-1260 | 1 | 3 | 7.34 | (7.30 - 7.38) | 7.35 | (7.31 - 7.39) | 7.34 | (7.30 - 7.38) | | | | |
| Aroclor-1260 | 1 | 4 | 7.92 | (7.88 - 7.96) | 7.93 | (7.89 - 7.97) | 7.92 | (7.88 - 7.96) | | | | |
| Aroclor-1260 | 1 | 5 | 8.63 | (8.59 - 8.67) | 8.64 | (8.60 - 8.68) | 8.63 | (8.59 - 8.67) | | | | |
| Aroclor-1221 | 1 | 1 | 4.06 | (4.02 - 4.10) | | | | | | | | |
| Aroclor-1221 | 1 | 2 | 4.19 | (4.15 - 4.23) | | | | | | | | |
| Aroclor-1221 | 1 | 3 | 4.25 | (4.21 - 4.29) | | | | | | | | |
| Aroclor-1232 | 1 | 1 | 4.25 | (4.21 - 4.29) | | | | | | | | |
| Aroclor-1232 | 1 | 2 | 4.61 | (4.57 - 4.65) | | | | | | | | |
| Aroclor-1232 | 1 | 3 | 5.07 | (5.03 - 5.11) | | | | | | | | |
| Aroclor-1232 | 1 | 4 | 5.20 | (5.16 - 5.24) | | | | | | | | |
| Aroclor-1232 | 1 | 5 | 5.65 | (5.61 - 5.69) | | | | | | | | |
| Aroclor-1242 | 1 | 1 | 4.25 | (4.21 - 4.29) | | | | | | | | |
| Aroclor-1242 | 1 | 2 | 4.60 | (4.56 - 4.64) | | | | | | | | |
| Aroclor-1242 | 1 | 3 | 5.07 | (5.03 - 5.11) | | | | | | | | |
| Aroclor-1242 | 1 | 4 | 5.42 | (5.38 - 5.46) | | | | | | | | |
| Aroclor-1242 | 1 | 5 | 5.65 | (5.61 - 5.69) | | | | | | | | |
| Aroclor-1248 | 1 | 1 | 4.60 | (4.56 - 4.64) | | | | | | | | |
| Aroclor-1248 | 1 | 2 | 5.07 | (5.03 - 5.11) | | | | | | | | |
| Aroclor-1248 | 1 | 3 | 5.41 | (5.37 - 5.45) | | | | | | | | |
| Aroclor-1248 | 1 | 4 | 5.75 | (5.71 - 5.79) | | | | | | | | |
| Aroclor-1248 | 1 | 5 | 6.34 | (6.30 - 6.38) | | | | | | | | |
| Aroclor-1254 | 1 | 1 | 6.54 | (6.50 - 6.58) | | | | | | | | |
| Aroclor-1254 | 1 | 2 | 6.74 | (6.70 - 6.78) | | | | | | | | |
| Aroclor-1254 | 1 | 3 | 6.90 | (6.86 - 6.94) | | | | | | | | |
| Aroclor-1254 | 1 | 4 | 7.03 | (6.99 - 7.07) | | | | | | | | |
| Aroclor-1254 | 1 | 5 | 7.40 | (7.36 - 7.44) | | | | | | | | |
| Aroclor-1262 | 1 | 1 | 7.58 | (7.54 - 7.62) | | | | | | | | |
| Aroclor-1262 | 1 | 2 | 8.57 | (8.53 - 8.61) | | | | | | | | |
| Aroclor-1262 | 1 | 3 | 8.63 | (8.59 - 8.67) | | | | | | | | |
| Aroclor-1262 | 1 | 4 | 9.32 | (9.28 - 9.36) | | | | | | | | |
| Aroclor-1262 | 1 | 5 | 9.67 | (9.63 - 9.71) | | | | | | | | |
| Aroclor-1268 | 1 | 1 | 7.93 | (7.89 - 7.97) | | | | | | | | |
| Aroclor-1268 | 1 | 2 | 8.24 | (8.20 - 8.28) | | | | | | | | |
| Aroclor-1268 | 1 | 3 | 8.82 | (8.78 - 8.86) | | | | | | | | |
| Aroclor-1268 | 1 | 4 | 8.92 | (8.88 - 8.96) | | | | | | | | |
| Aroclor-1268 | 1 | 5 | 9.66 | (9.62 - 9.70) | | | | | | | | |
| DCB-Surrogate | 1 | 0 | 9.89 | (9.83 - 9.95) | 9.89 | (9.83 - 9.95) | 9.89 | (9.83 - 9.95) | | | | |
| TCMX-Surrogate | 2 | 0 | 3.83 | (3.77 - 3.89) | 3.83 | (3.77 - 3.89) | 3.83 | (3.77 - 3.89) | | | | |
| Aroclor-1016 | 2 | 1 | 4.42 | (4.38 - 4.46) | 4.43 | (4.39 - 4.47) | 4.43 | (4.39 - 4.47) | | | | |
| Aroclor-1016 | 2 | 2 | 4.84 | (4.80 - 4.88) | 4.84 | (4.80 - 4.88) | 4.84 | (4.80 - 4.88) | | | | |
| Aroclor-1016 | 2 | 3 | 5.22 | (5.18 - 5.26) | 5.22 | (5.18 - 5.26) | 5.22 | (5.18 - 5.26) | | | | |
| Aroclor-1016 | 2 | 4 | 5.55 | (5.51 - 5.59) | 5.55 | (5.51 - 5.59) | 5.55 | (5.51 - 5.59) | | | | |
| Aroclor-1016 | 2 | 5 | 5.91 | (5.87 - 5.95) | 5.91 | (5.87 - 5.95) | 5.91 | (5.87 - 5.95) | | | | |
| Aroclor-1260 | 2 | 1 | 7.21 | (7.17 - 7.25) | 7.22 | (7.18 - 7.26) | 7.22 | (7.18 - 7.26) | | | | |
| Aroclor-1260 | 2 | 2 | 7.30 | (7.26 - 7.34) | 7.30 | (7.26 - 7.34) | 7.30 | (7.26 - 7.34) | | | | |
| Aroclor-1260 | 2 | 3 | 7.92 | (7.88 - 7.96) | 7.93 | (7.89 - 7.97) | 7.93 | (7.89 - 7.97) | | | | |
| Aroclor-1260 | 2 | 4 | 8.28 | (8.24 - 8.32) | 8.28 | (8.24 - 8.32) | 8.28 | (8.24 - 8.32) | | | | |
| Aroclor-1260 | 2 | 5 | 8.98 | (8.94 - 9.02) | 8.98 | (8.94 - 9.02) | 8.98 | (8.94 - 9.02) | | | | |
| Aroclor-1221 | 2 | 1 | 4.21 | (4.17 - 4.25) | | | | | | | | |
| Aroclor-1221 | 2 | 2 | 4.36 | (4.32 - 4.40) | | | | | | | | |
| Aroclor-1221 | 2 | 3 | 4.42 | (4.38 - 4.46) | | | | | | | | |
| Aroclor-1232 | 2 | 1 | 4.42 | (4.38 - 4.46) | | | | | | | | |
| Aroclor-1232 | 2 | 2 | 4.84 | (4.80 - 4.88) | | | | | | | | |
| Aroclor-1232 | 2 | 3 | 5.23 | (5.19 - 5.27) | | | | | | | | |
| Aroclor-1232 | 2 | 4 | 5.91 | (5.87 - 5.95) | | | | | | | | |
| Aroclor-1232 | 2 | 5 | 6.06 | (6.02 - 6.10) | | | | | | | | |
| Aroclor-1242 | 2 | 1 | 4.42 | (4.38 - 4.46) | | | | | | | | |
| Aroclor-1242 | 2 | 2 | 4.84 | (4.80 - 4.88) | | | | | | | | |
| Aroclor-1242 | 2 | 3 | 5.22 | (5.18 - 5.26) | | | | | | | | |
| Aroclor-1242 | 2 | 4 | 5.55 | (5.51 - 5.59) | | | | | | | | |
| Aroclor-1242 | 2 | 5 | 5.91 | (5.87 - 5.95) | | | | | | | | |
| Aroclor-1248 | 2 | 1 | 4.84 | (4.80 - 4.88) | | | | | | | | |
| Aroclor-1248 | 2 | 2 | 5.22 | (5.18 - 5.26) | | | | | | | | |
| Aroclor-1248 | 2 | 3 | 5.54 | (5.50 - 5.58) | | | | | | | | |
| Aroclor-1248 | 2 | 4 | 6.05 | (6.01 - 6.09) | | | | | | | | |
| Aroclor-1248 | 2 | 5 | 6.19 | (6.15 - 6.23) | | | | | | | | |
| Aroclor-1254 | 2 | 1 | 6.41 | (6.37 - 6.45) | | | | | | | | |
| Aroclor-1254 | 2 | 2 | 6.75 | (6.71 - 6.79) | | | | | | | | |
| Aroclor-1254 | 2 | 3 | 7.15 | (7.11 - 7.19) | | | | | | | | |
| Aroclor-1254 | 2 | 4 | 7.67 | (7.63 - 7.71) | | | | | | | | |
| Aroclor-1254 | 2 | 5 | 8.34 | (8.30 - 8.38) | | | | | | | | |
| Aroclor-1262 | 2 | 1 | 7.71 | (7.67 - 7.75) | | | | | | | | |
| Aroclor-1262 | 2 | 2 | 8.87 | (8.83 - 8.91) | | | | | | | | |
| Aroclor-1262 | 2 | 3 | 8.98 | (8.94 - 9.02) | | | | | | | | |
| Aroclor-1262 | 2 | 4 | 9.56 | (9.52 - 9.60) | | | | | | | | |
| Aroclor-1262 | 2 | 5 | 10.09 | (10.05 - 10.13) | | | | | | | | |
| Aroclor-1268 | 2 | 1 | 8.38 | (8.34 - 8.42) | | | | | | | | |
| Aroclor-1268 | 2 | 2 | 8.42 | (8.38 - 8.46) | | | | | | | | |
| Aroclor-1268 | 2 | 3 | 9.30 | (9.26 - 9.34) | | | | | | | | |
| Aroclor-1268 | 2 | 4 | 9.46 | (9.42 - 9.50) | | | | | | | | |
| Aroclor-1268 | 2 | 5 | 10.09 | (10.05 - 10.13) | | | | | | | | |
| DCB-Surrogate | 2 | 0 | 10.62 | (10.56 - 10.68) | 10.63 | (10.57 - 10.69) | 10.63 | (10.57 - 10.69) | | | | |

8081617 0129

# Pesticide Data

# Form1

ORGANICS PESTICIDE REPORT

Sample Number: AD05999-001
Client Id: SS-1
Data File: 5G79357.D
Analysis Date: 08/24/18 05:45
Date Rec/Extracted: 08/16/18-08/23/18
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8081B
Matrix: Soil
Initial Vol: 20g
Final Vol: 10ml
Dilution: 1
Solids: 95

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 5103-71-9 | a-chlordane | 0.0053 | U | 7421-93-4 | Endrin Aldehyde | 0.0053 | U |
| 309-00-2 | Aldrin | 0.0053 | U | 53494-70-5 | Endrin Ketone | 0.0053 | U |
| 319-84-6 | alpha-BHC | 0.0011 | U | 58-89-9 | gamma-BHC | 0.0011 | U |
| 319-85-7 | beta-BHC | 0.0011 | U | 76-44-8 | Heptachlor | 0.0053 | U |
| 12789-03-6 | Chlordane (Technical) | 0.026 | U | 1024-57-3 | Heptachlor Epoxide | 0.0053 | U |
| 319-86-8 | delta-BHC | 0.0053 | U | 72-43-5 | Methoxychlor | 0.0053 | U |
| 60-57-1 | Dieldrin | 0.0011 | U | 72-54-8 | p,p'-DDD | 0.0026 | U |
| 959-98-8 | Endosulfan I | 0.0053 | U | 72-55-9 | p,p'-DDE | 0.0026 | U |
| 33213-65-9 | Endosulfan II | 0.0053 | U | 50-29-3 | p,p'-DDT | 0.0026 | U |
| 1031-07-8 | Endosulfan Sulfate | 0.0053 | U | 8001-35-2 | Toxaphene | 0.026 | U |
| 72-20-8 | Endrin | 0.0053 | U | 5103-74-2 | y-chlordane | 0.0053 | U |
| 57-74-9 | Chlordane (Total) | 0.0053 | U | | | | |

Worksheet #: 477243

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*

*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2018\GC_5\Data\08-24-18\
Data File : 5G79357.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24-Aug-18, 05:45:53 (#1); 24-Aug-18, 05:45:52 (#2)
Operator : MS/MLC/ZM
Sample : AD05999-001
Misc : S,PEST
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PEST1.E
Integration File signal 2: Pest2.e
Quant Time: Aug 27 11:46:28 2018
Quant Method : G:\GCDATA\2018\GC_5\METHODQT\5G_PEST0821.M
Quant Title : @GC_5,ug,608,8081
QLast Update : Tue Aug 21 08:49:23 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

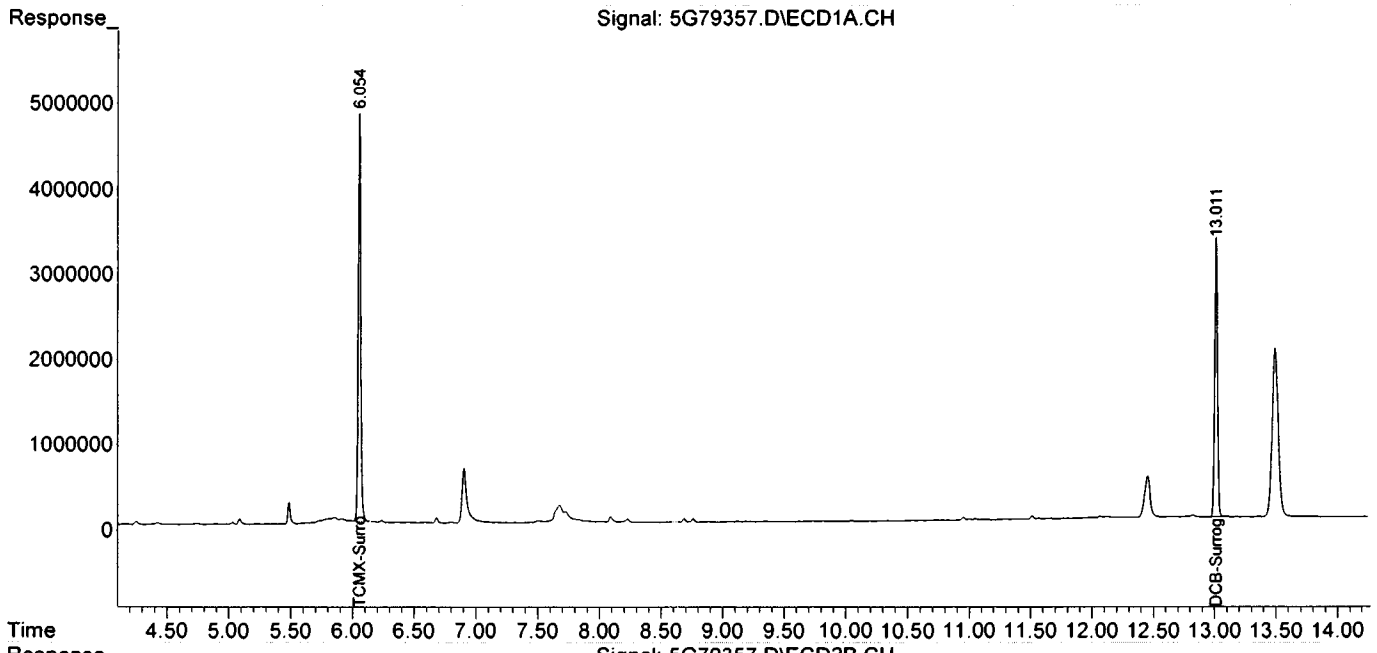
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | pg#1 | pg#2 |
|---|---|---|---|---|---|---|---|
| | Target Compounds | | | | | | |
| 1) | TCMX-Surrogate | 6.054 | 6.137 | 66770518 | 44527722 | 72.162m | 68.716m |
| 22) | DCB-Surrogate | 13.011 | 13.640 | 51991401 | 33874882 | 71.484m | 67.175m |

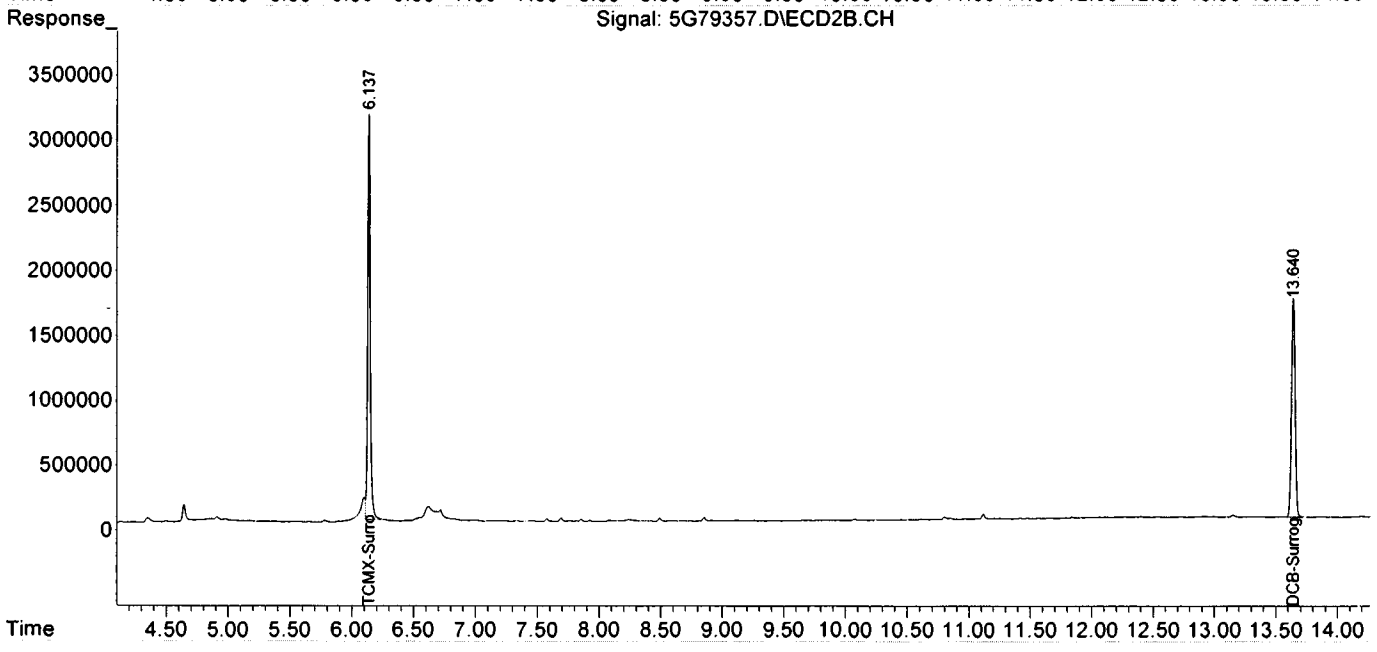
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2018\GC_5\Data\08-24-18\
Data File : 5G79357.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24-Aug-18, 05:45:53 (#1); 24-Aug-18, 05:45:52 (#2)
Operator : MS/MLC/ZM
Sample : AD05999-001
Misc : S,PEST
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PEST1.E
Integration File signal 2: Pest2.e
Quant Time: Aug 27 11:46:28 2018
Quant Method : G:\GCDATA\2018\GC_5\METHODQT\5G_PEST0821.M
Quant Title : @GC_5,ug,608,8081
QLast Update : Tue Aug 21 08:49:23 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# Form1

ORGANICS PESTICIDE REPORT

Sample Number: SMB69976
Client Id:
Data File: 6G91521.D
Analysis Date: 08/23/18 13:43
Date Rec/Extracted: NA-08/23/18
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8081B
Matrix: Soil
Initial Vol: 20g
Final Vol: 10ml
Dilution: 1
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 5103-71-9 | a-chlordane | 0.0050 | U | 7421-93-4 | Endrin Aldehyde | 0.0050 | U |
| 309-00-2 | Aldrin | 0.0050 | U | 53494-70-5 | Endrin Ketone | 0.0050 | U |
| 319-84-6 | alpha-BHC | 0.0010 | U | 58-89-9 | gamma-BHC | 0.0010 | U |
| 319-85-7 | beta-BHC | 0.0010 | U | 76-44-8 | Heptachlor | 0.0050 | U |
| 12789-03-6 | Chlordane (Technical) | 0.025 | U | 1024-57-3 | Heptachlor Epoxide | 0.0050 | U |
| 319-86-8 | delta-BHC | 0.0050 | U | 72-43-5 | Methoxychlor | 0.0050 | U |
| 60-57-1 | Dieldrin | 0.0010 | U | 72-54-8 | p,p'-DDD | 0.0025 | U |
| 959-98-8 | Endosulfan I | 0.0050 | U | 72-55-9 | p,p'-DDE | 0.0025 | U |
| 33213-65-9 | Endosulfan II | 0.0050 | U | 50-29-3 | p,p'-DDT | 0.0025 | U |
| 1031-07-8 | Endosulfan Sulfate | 0.0050 | U | 8001-35-2 | Toxaphene | 0.025 | U |
| 72-20-8 | Endrin | 0.0050 | U | 5103-74-2 | y-chlordane | 0.0050 | U |

Worksheet #: 477243

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2018\GC_6\Data\08-23-18\
Data File : 6G91521.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 23 Aug 2018 13:43
Operator : MS/ZM/MLC
Sample : SMB69976
Misc : S,PEST
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 15:36:17 2018
Quant Method : G:\GCDATA\2018\GC_6\METHODQT\6G_P0822.M
Quant Title : @GC_6,ug,608,8081
QLast Update : Wed Aug 22 13:58:36 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

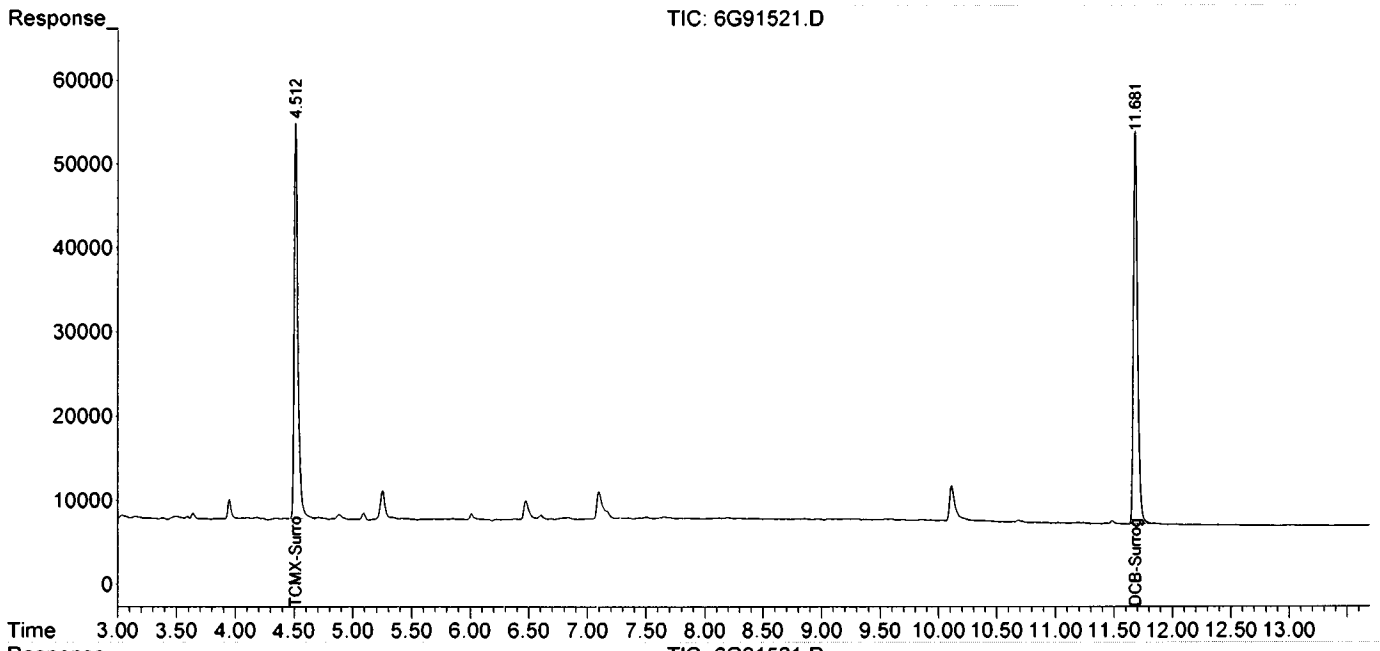
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | pg#1 | pg#2 |
|---|---|---|---|---|---|---|
| Target Compounds | | | | | | |
| 1)TCMX-Surrogate | 4.513 | 4.671 | 1025859 | 331600 | 75.367 | 71.398 |
| 22)DCB-Surrogate | 11.682 | 12.465 | 1145711 | 393861 | 83.279 | 78.367 |

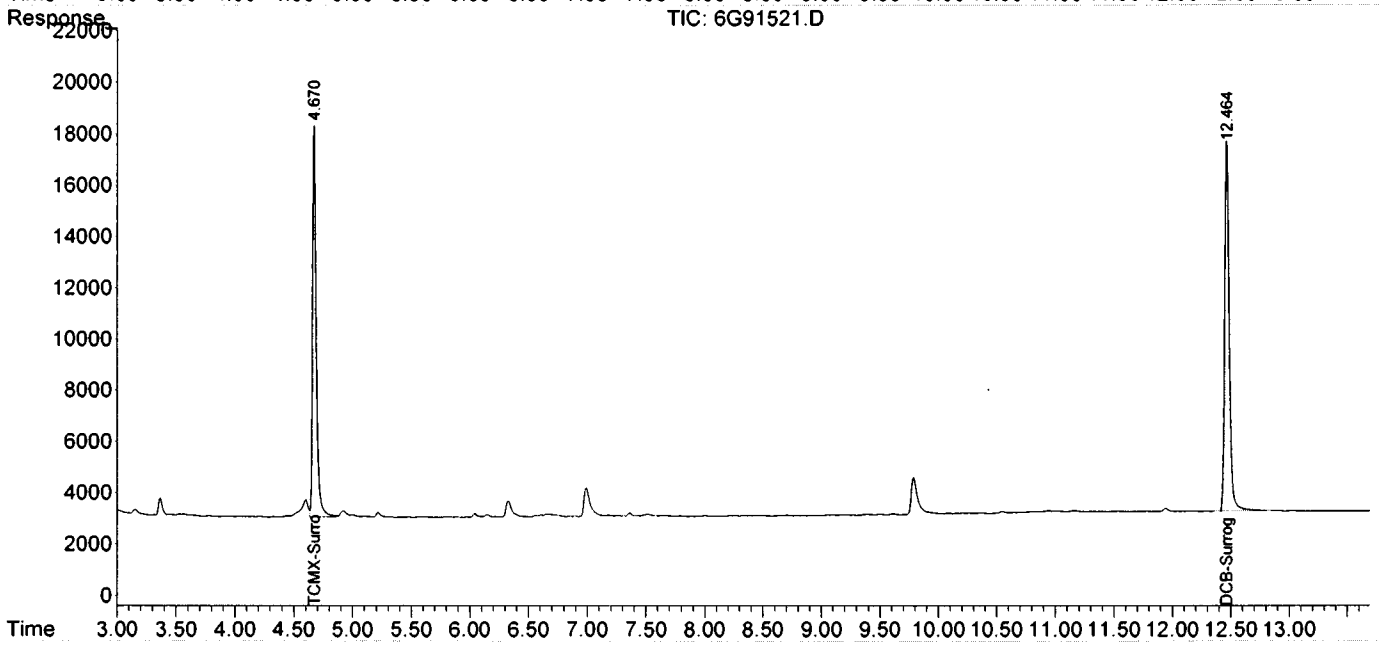
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2018\GC_6\Data\08-23-18\
Data File : 6G91521.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 23 Aug 2018 13:43
Operator : MS/ZM/MLC
Sample : SMB69976
Misc : S,PEST
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 23 15:36:17 2018
Quant Method : G:\GCDATA\2018\GC_6\METHODQT\6G_P0822.M
Quant Title : @GC_6,ug,608,8081
QLast Update : Wed Aug 22 13:58:36 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# FORM2

## Surrogate Recovery

Method: EPA 8081B

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column2 S2 Recov | Column1 S3 Recov | Column2 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6G91521.D | SMB69976 | S | 08/23/18 13:43 | 1 | | 75 | 71 | 83 | 78 | | |
| 5G79357.D | AD05999-001 | S | 08/24/18 05:45 | 1 | | 72 | 69 | 71 | 67 | | |
| 6G91556.D | AD05999-001(MS) | S | 08/24/18 09:57 | 1 | | 91 | 83 | 94 | 90 | | |
| 6G91557.D | AD05999-001(MSD) | S | 08/24/18 10:14 | 1 | | 96 | 91 | 100 | 97 | | |
| 6G91560.D | SMB69976(MS) | S | 08/24/18 11:07 | 1 | | 92 | 85 | 94 | 90 | | |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8081B

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=TCMX-Surrogate | 100 | 37-141 |
| S2=TCMX-Surrogate | 100 | 37-141 |
| S3=DCB-Surrogate | 100 | 33-146 |
| S4=DCB-Surrogate | 100 | 33-146 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69976

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 6G91560.D | SMB69976(MS) | 8/24/2018 11:07:00 AM |
| Non Spike(If applicable): | | | |
| Inst Blank(If applicable): | | | |

Method: 8081 Matrix: Soil QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| alpha-BHC | 1 | 75.66 | 0 | 100 | 76 | 60 | 130 |
| gamma-BHC | 1 | 73.14 | 0 | 100 | 73 | 60 | 130 |
| beta-BHC | 1 | 100.06 | 0 | 100 | 100 | 60 | 130 |
| Heptachlor | 1 | 90.51 | 0 | 100 | 91 | 60 | 130 |
| delta-BHC | 1 | 71.2 | 0 | 100 | 71 | 60 | 130 |
| Aldrin | 1 | 76.71 | 0 | 100 | 77 | 70 | 130 |
| Heptachlor Epoxide | 1 | 83.91 | 0 | 100 | 84 | 70 | 130 |
| y-chlordane | 1 | 80.87 | 0 | 100 | 81 | 70 | 130 |
| a-chlordane | 1 | 82.84 | 0 | 100 | 83 | 70 | 130 |
| Endosulfan I | 1 | 89.46 | 0 | 100 | 89 | 70 | 130 |
| p,p'-DDE | 1 | 76.95 | 0 | 100 | 77 | 70 | 130 |
| Dieldrin | 1 | 83.51 | 0 | 100 | 84 | 70 | 130 |
| Endrin | 1 | 90.18 | 0 | 100 | 90 | 70 | 130 |
| p,p'-DDD | 1 | 84.27 | 0 | 100 | 84 | 70 | 130 |
| Endosulfan II | 1 | 81.76 | 0 | 100 | 82 | 70 | 130 |
| p,p'-DDT | 1 | 77.83 | 0 | 100 | 78 | 70 | 130 |
| Endrin Aldehyde | 1 | 75.85 | 0 | 100 | 76 | 10 | 130 |
| Endosulfan Sulfate | 1 | 87.76 | 0 | 100 | 88 | 70 | 130 |
| Methoxychlor | 1 | 93.21 | 0 | 100 | 93 | 60 | 130 |
| Endrin Ketone | 1 | 80.85 | 0 | 100 | 81 | 70 | 130 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69976

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 6G91556.D | AD05999-001(MS) | 8/24/2018 9:57:00 AM |
| Non Spike(If applicable): | 5G79357.D | AD05999-001 | 8/24/2018 5:45:53 AM |
| Inst Blank(If applicable): | | | |

Method: 8081 Matrix: Soil QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| alpha-BHC | 1 | 80.46 | 0 | 100 | 80 | 60 | 130 |
| gamma-BHC | 1 | 77.39 | 0 | 100 | 77 | 60 | 130 |
| beta-BHC | 1 | 98.91 | 0 | 100 | 99 | 60 | 130 |
| Heptachlor | 1 | 92.14 | 0 | 100 | 92 | 60 | 130 |
| delta-BHC | 1 | 77.59 | 0 | 100 | 78 | 60 | 130 |
| Aldrin | 1 | 82.37 | 0 | 100 | 82 | 70 | 130 |
| Heptachlor Epoxide | 1 | 91.95 | 0 | 100 | 92 | 70 | 130 |
| y-chlordane | 1 | 87.42 | 0 | 100 | 87 | 70 | 130 |
| a-chlordane | 1 | 88.89 | 0 | 100 | 89 | 70 | 130 |
| Endosulfan I | 1 | 96.46 | 0 | 100 | 96 | 70 | 130 |
| p,p'-DDE | 1 | 83.8 | 0 | 100 | 84 | 70 | 130 |
| Dieldrin | 1 | 90.26 | 0 | 100 | 90 | 70 | 130 |
| Endrin | 1 | 98.87 | 0 | 100 | 99 | 70 | 130 |
| p,p'-DDD | 1 | 90.97 | 0 | 100 | 91 | 70 | 130 |
| Endosulfan II | 1 | 86.9 | 0 | 100 | 87 | 70 | 130 |
| p,p'-DDT | 1 | 82.36 | 0 | 100 | 82 | 70 | 130 |
| Endrin Aldehyde | 1 | 82.81 | 0 | 100 | 83 | 10 | 130 |
| Endosulfan Sulfate | 1 | 93.52 | 0 | 100 | 94 | 70 | 130 |
| Methoxychlor | 1 | 95.94 | 0 | 100 | 96 | 60 | 130 |
| Endrin Ketone | 1 | 90.06 | 0 | 100 | 90 | 70 | 130 |

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 6G91557.D | AD05999-001(MSD) | 8/24/2018 10:14:00 AM |
| Non Spike(If applicable): | 5G79357.D | AD05999-001 | 8/24/2018 5:45:53 AM |
| Inst Blank(If applicable): | | | |

Method: 8081 Matrix: Soil QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| alpha-BHC | 1 | 82.42 | 0 | 100 | 82 | 60 | 130 |
| gamma-BHC | 1 | 80.19 | 0 | 100 | 80 | 60 | 130 |
| beta-BHC | 1 | 100.53 | 0 | 100 | 101 | 60 | 130 |
| Heptachlor | 1 | 95.91 | 0 | 100 | 96 | 60 | 130 |
| delta-BHC | 1 | 80.22 | 0 | 100 | 80 | 60 | 130 |
| Aldrin | 1 | 84.73 | 0 | 100 | 85 | 70 | 130 |
| Heptachlor Epoxide | 1 | 94.31 | 0 | 100 | 94 | 70 | 130 |
| y-chlordane | 1 | 89.97 | 0 | 100 | 90 | 70 | 130 |
| a-chlordane | 1 | 91.55 | 0 | 100 | 92 | 70 | 130 |
| Endosulfan I | 1 | 98.73 | 0 | 100 | 99 | 70 | 130 |
| p,p'-DDE | 1 | 85.52 | 0 | 100 | 86 | 70 | 130 |
| Dieldrin | 1 | 92.41 | 0 | 100 | 92 | 70 | 130 |
| Endrin | 1 | 100.01 | 0 | 100 | 100 | 70 | 130 |
| p,p'-DDD | 1 | 92.84 | 0 | 100 | 93 | 70 | 130 |
| Endosulfan II | 1 | 89.96 | 0 | 100 | 90 | 70 | 130 |
| p,p'-DDT | 1 | 83.86 | 0 | 100 | 84 | 70 | 130 |
| Endrin Aldehyde | 1 | 85.16 | 0 | 100 | 85 | 10 | 130 |
| Endosulfan Sulfate | 1 | 94.4 | 0 | 100 | 94 | 70 | 130 |
| Methoxychlor | 1 | 98.78 | 0 | 100 | 99 | 60 | 130 |
| Endrin Ketone | 1 | 88.41 | 0 | 100 | 88 | 70 | 130 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
## RPD Data Laboratory Limits
### QC Batch: SMB69976

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 6G91557.D | AD05999-001(MSD) | 8/24/2018 10:14:00 AM |
| Duplicate(If applicable): | 6G91556.D | AD05999-001(MS) | 8/24/2018 9:57:00 AM |
| Inst Blank(If applicable): | | | |

Method: 8081 Matrix: Soil QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| alpha-BHC | 1 | 82.42 | 80.46 | 2.4 | 40 |
| gamma-BHC | 1 | 80.19 | 77.39 | 3.6 | 40 |
| beta-BHC | 1 | 100.53 | 98.91 | 1.6 | 40 |
| Heptachlor | 1 | 95.91 | 92.14 | 4 | 40 |
| delta-BHC | 1 | 80.22 | 77.59 | 3.3 | 40 |
| Aldrin | 1 | 84.73 | 82.37 | 2.8 | 40 |
| Heptachlor Epoxide | 1 | 94.31 | 91.95 | 2.5 | 40 |
| y-chlordane | 1 | 89.97 | 87.42 | 2.9 | 40 |
| a-chlordane | 1 | 91.55 | 88.89 | 2.9 | 40 |
| Endosulfan I | 1 | 98.73 | 96.46 | 2.3 | 40 |
| p,p'-DDE | 1 | 85.52 | 83.8 | 2 | 40 |
| Dieldrin | 1 | 92.41 | 90.26 | 2.4 | 40 |
| Endrin | 1 | 100.01 | 98.87 | 1.1 | 40 |
| p,p'-DDD | 1 | 92.84 | 90.97 | 2 | 40 |
| Endosulfan II | 1 | 89.96 | 86.9 | 3.5 | 40 |
| p,p'-DDT | 1 | 83.86 | 82.36 | 1.8 | 40 |
| Endrin Aldehyde | 1 | 85.16 | 82.81 | 2.8 | 40 |
| Endosulfan Sulfate | 1 | 94.4 | 93.52 | 0.94 | 40 |
| Methoxychlor | 1 | 98.78 | 95.94 | 2.9 | 40 |
| Endrin Ketone | 1 | 88.41 | 90.06 | 1.8 | 40 |

* - Indicates outside of limits NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: SMB69976
Blank Data File: 6G91521.D
Matrix: Soil

Blank Analysis Date: 08/23/18 13:43
Blank Extraction Date: 08/23/18
(If Applicable)
Method: EPA 8081B

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD05999-001 | 5G79357.D | 08/24/18 05:45 |
| SMB69976(MS) | 6G91560.D | 08/24/18 11:07 |
| AD05999-001(MSD | 6G91557.D | 08/24/18 10:14 |
| AD05999-001(MS) | 6G91556.D | 08/24/18 09:57 |

# Form 5

Method: EPA 8081B
Instrument: GC_5 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 5G79239.D | CAL EVAL | 08/20/18 23:31 | Soil | | | | | |
| 5G79240.D | EVAL | 08/20/18 23:49 | Soil | | | | | |
| 5G79241.D | CAL PEST@50PPB | 08/21/18 00:07 | Soil | 5G79242 | 13.0162 | 0.0061 | 13.6455 | 0.0066 |
| 5G79242.D | CAL PEST@2PPB | 08/21/18 00:25 | Soil | 5G79242 | 13.0170 | 0 | 13.6464 | 0 |
| 5G79243.D | CAL PEST@10PPB | 08/21/18 00:44 | Soil | 5G79242 | 13.0173 | 0.0023 | 13.6462 | 0.0015 |
| 5G79244.D | 2PPB | 08/21/18 01:02 | Soil | 5G79242 | 13.0172 | 0.0015 | 13.6471 | 0.0051 |
| 5G79245.D | CAL PEST@100PPB | 08/21/18 01:20 | Soil | 5G79242 | 13.0148 | 0.0169 | 13.6438 | 0.0191 |
| 5G79246.D | CAL PEST@200PPB | 08/21/18 01:38 | Soil | 5G79242 | 13.0138 | 0.0246 | 13.6434 | 0.022 |
| 5G79247.D | CAL PEST@400PPB | 08/21/18 01:56 | Soil | 5G79242 | 13.0147 | 0.0177 | 13.6430 | 0.0249 |
| 5G79248.D | CAL CHLOR@100PPB | 08/21/18 02:15 | Soil | 5G79242 | 13.0177 | 0.0054 | 13.6472 | 0.0059 |
| 5G79249.D | CAL TOX@500PPB | 08/21/18 02:33 | Soil | 5G79242 | 13.0155 | 0.0115 | 13.6458 | 0.0044 |
| 5G79250.D | ICV | 08/21/18 02:51 | Soil | 5G79242 | 13.0165 | 0.0038 | 13.6455 | 0.0066 |
| 5G79251.D | AD05993-002 | 08/21/18 03:09 | Soil | 5G79242 | 13.0121 | 0.0377 | 13.6404 | 0.044 |
| 5G79252.D | AD05993-003 | 08/21/18 03:27 | Soil | 5G79242 | 13.0114 | 0.043 | 13.6391 | 0.0535 |
| 5G79253.D | AD05993-004 | 08/21/18 03:45 | Soil | 5G79242 | 13.0121 | 0.0377 | 13.6404 | 0.044 |
| 5G79254.D | AD05993-005 | 08/21/18 04:04 | Soil | 5G79242 | 13.0124 | 0.0353 | 13.6410 | 0.0396 |
| 5G79255.D | AD05993-008 | 08/21/18 04:22 | Soil | 5G79242 | 13.0124 | 0.0353 | 13.6411 | 0.0388 |
| 5G79256.D | AD05993-010 | 08/21/18 04:40 | Soil | 5G79242 | 13.0125 | 0.0346 | 13.6411 | 0.0388 |
| 5G79257.D | AD05993-013 | 08/21/18 04:58 | Soil | 5G79242 | 13.0116 | 0.0415 | 13.6406 | 0.0425 |
| 5G79258.D | AD06009-006 | 08/21/18 05:16 | Soil | 5G79242 | 13.0101 | 0.053 | 13.6388 | 0.0557 |
| 5G79259.D | AD06031-001 | 08/21/18 05:34 | Soil | 5G79242 | 13.0127 | 0.033 | 13.6410 | 0.0396 |
| 5G79260.D | AD06031-005 | 08/21/18 05:52 | Soil | 5G79242 | 13.0128 | 0.0323 | 13.6405 | 0.0432 |
| 5G79261.D | AD06031-014 | 08/21/18 06:11 | Soil | 5G79242 | 13.0119 | 0.0392 | 13.6402 | 0.0454 |
| 5G79262.D | AD06031-016 | 08/21/18 06:29 | Soil | 5G79242 | 13.0122 | 0.0369 | 13.6413 | 0.0374 |
| 5G79263.D | AD06031-018 | 08/21/18 06:47 | Soil | 5G79242 | 13.0120 | 0.0384 | 13.6414 | 0.0366 |
| 5G79264.D | AD06031-012 | 08/21/18 07:05 | Soil | 5G79242 | 13.0112 | 0.0446 | 13.6381 | 0.0608 |
| 5G79265.D | CAL EVAL | 08/21/18 09:02 | Soil | | | | | |
| 5G79266.D | CAL PEST@200PPB | 08/21/18 09:23 | Soil | 5G79242 | 13.0137 | 0.0254 | 13.6366 | 0.0718 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8081B
Instrument: GC_6 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 6G91474.D | CAL EVAL | 08/22/18 10:49 | Soil | | | | | |
| 6G91475.D | CAL PEST@50PPB | 08/22/18 11:12 | Soil | 6G91477. | 11.6873 | 0.0205 | 12.4674 | 0.0008 |
| 6G91476.D | CAL PEST@10PPB | 08/22/18 11:30 | Soil | 6G91477. | 11.6852 | 0.0026 | 12.4684 | 0.0072 |
| 6G91477.D | CAL PEST@2PPB | 08/22/18 11:47 | Soil | 6G91477. | 11.6849 | 0 | 12.4675 | 0 |
| 6G91478.D | CAL PEST@100PPB | 08/22/18 12:05 | Soil | 6G91477. | 11.6833 | 0.0137 | 12.4681 | 0.0048 |
| 6G91479.D | CAL PEST@200PPB | 08/22/18 12:23 | Soil | 6G91477. | 11.6851 | 0.0017 | 12.4676 | 0.0008 |
| 6G91480.D | CAL PEST@400PPB | 08/22/18 12:40 | Soil | 6G91477. | 11.6847 | 0.0017 | 12.4684 | 0.0072 |
| 6G91481.D | CAL CHLOR@100PPB | 08/22/18 12:58 | Soil | 6G91477. | 11.6849 | 0 | 12.4694 | 0.0152 |
| 6G91482.D | CAL TOX@500PPB | 08/22/18 13:16 | Soil | 6G91477. | 11.6862 | 0.0111 | 12.4698 | 0.0184 |
| 6G91483.D | ICV | 08/22/18 13:33 | Soil | 6G91477. | 11.6846 | 0.0026 | 12.4684 | 0.0072 |
| 6G91484.D | WMB69967(MS) | 08/22/18 14:07 | Aqueous | 6G91477. | 11.6903 | 0.0462 | 12.4684 | 0.0072 |
| 6G91485.D | SMB69966(MS) | 08/22/18 14:24 | Soil | 6G91477. | 11.6851 | 0.0017 | 12.4680 | 0.004 |
| 6G91486.D | SMB69953(MS) | 08/22/18 14:42 | Soil | 6G91477. | 11.6862 | 0.0111 | 12.4688 | 0.0104 |
| 6G91487.D | SMB69966 | 08/22/18 15:00 | Soil | 6G91477. | 11.6855 | 0.0051 | 12.4676 | 0.0008 |
| 6G91488.D | AD06064-001(T)(MS) | 08/22/18 15:17 | Aqueous | 6G91477. | 11.6846 | 0.0026 | 12.4686 | 0.0088 |
| 6G91489.D | AD06064-001(T)(MSD) | 08/22/18 15:35 | Aqueous | 6G91477. | 11.6856 | 0.006 | 12.4689 | 0.0112 |
| 6G91490.D | AD06064-001(T) | 08/22/18 15:53 | Aqueous | 6G91477. | 11.6856 | 0.006 | 12.4701 | 0.0209 |
| 6G91491.D | AD06064-002(T) | 08/22/18 16:10 | Aqueous | 6G91477. | 11.6861 | 0.0103 | 12.4688 | 0.0104 |
| 6G91492.D | AD06064-003(T) | 08/22/18 16:28 | Aqueous | 6G91477. | 11.6858 | 0.0077 | 12.4698 | 0.0184 |
| 6G91493.D | EF-1-V-285748(8/21) | 08/22/18 16:46 | Aqueous | 6G91477. | 11.6862 | 0.0111 | 12.4696 | 0.0168 |
| 6G91494.D | AD06022-001 | 08/22/18 17:03 | Aqueous | 6G91477. | 11.6860 | 0.0094 | 12.4698 | 0.0184 |
| 6G91495.D | AD06022-003 | 08/22/18 17:21 | Aqueous | 6G91477. | 11.6864 | 0.0128 | 12.4693 | 0.0144 |
| 6G91496.D | AD06057-001 | 08/22/18 17:38 | Aqueous | 6G91477. | 11.6854 | 0.0043 | 12.4687 | 0.0096 |
| 6G91497.D | CAL PEST@200PPB | 08/22/18 18:38 | Aqueous | 6G91477. | 11.6852 | 0.0026 | 12.4685 | 0.008 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8081B
Instrument: GC_6 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 6G91513.D | CAL EVAL | 08/23/18 08:34 | Aqueous | | | | | |
| 6G91514.D | CAL PEST@200PPB | 08/23/18 09:08 | Aqueous | 6G91514. | 11.6861 | 0 | 12.4634 | 0 |
| 6G91515.D | AD06049-001(MS) | 08/23/18 09:49 | Soil | 6G91514. | 11.6860 | 0.0009 | 12.4621 | 0.0104 |
| 6G91516.D | AD06049-001(MSD) | 08/23/18 10:07 | Soil | 6G91514. | 11.6817 | 0.0377 | 12.4630 | 0.0032 |
| 6G91517.D | 69972MBS | 08/23/18 12:32 | Soil | 6G91514. | 11.6853 | 0.0068 | 12.4621 | 0.0104 |
| 6G91518.D | 69976MBS | 08/23/18 12:50 | Soil | 6G91514. | 11.6817 | 0.0377 | 12.4627 | 0.0056 |
| 6G91519.D | 69978MBS | 08/23/18 13:07 | Soil | 6G91514. | 11.6815 | 0.0394 | 12.4643 | 0.0072 |
| 6G91520.D | SMB69972 | 08/23/18 13:25 | Soil | 6G91514. | 11.6816 | 0.0385 | 12.4646 | 0.0096 |
| 6G91521.D | SMB69976 | 08/23/18 13:43 | Soil | 6G91514. | 11.6816 | 0.0385 | 12.4646 | 0.0096 |
| 6G91522.D | SMB69978 | 08/23/18 14:00 | Soil | 6G91514. | 11.6816 | 0.0385 | 12.4647 | 0.0104 |
| 6G91523.D | SMB69971 | 08/23/18 14:18 | Soil | 6G91514. | 11.6818 | 0.0368 | 12.4647 | 0.0104 |
| 6G91524.D | 69971MBS | 08/23/18 14:35 | Soil | 6G91514. | 11.6821 | 0.0342 | 12.4654 | 0.016 |
| 6G91525.D | AD06097-001 | 08/23/18 14:53 | Soil | 6G91514. | 11.6819 | 0.0359 | 12.4666 | 0.0257 |
| 6G91526.D | AD06098-002 | 08/23/18 15:11 | Soil | 6G91514. | 11.6815 | 0.0394 | 12.4649 | 0.012 |
| 6G91527.D | AD06063-002 | 08/23/18 15:28 | Soil | 6G91514. | 11.6832 | 0.0248 | 12.4660 | 0.0209 |
| 6G91528.D | AD06097-001 | 08/23/18 15:46 | Soil | 6G91514. | 11.6834 | 0.0231 | 12.4663 | 0.0233 |
| 6G91529.D | CAL PEST@200PPB | 08/23/18 17:08 | Soil | 6G91514. | 11.6847 | 0.012 | 12.4640 | 0.0048 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8081B
Instrument: GC_5 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 5G79337.D | CAL EVAL | 08/23/18 23:42 | Soil | | | | | |
| 5G79338.D | EVAL | 08/24/18 00:00 | Soil | | | | | |
| 5G79339.D | 100PPB | 08/24/18 00:18 | Soil | | | | | |
| 5G79340.D | CAL PEST@200PPB | 08/24/18 00:36 | Soil | 5G79340. | 13.0149 | 0 | 13.6431 | 0 |
| 5G79341.D | AD06049-044 | 08/24/18 00:55 | Soil | 5G79340. | 13.0111 | 0.0292 | 13.6399 | 0.0235 |
| 5G79342.D | AD06049-046 | 08/24/18 01:13 | Soil | 5G79340. | 13.0102 | 0.0361 | 13.6401 | 0.022 |
| 5G79343.D | AD06049-047 | 08/24/18 01:31 | Soil | 5G79340. | 13.0105 | 0.0338 | 13.6405 | 0.0191 |
| 5G79344.D | AD06049-048 | 08/24/18 01:49 | Soil | 5G79340. | 13.0107 | 0.0323 | 13.6387 | 0.0323 |
| 5G79345.D | AD06049-049 | 08/24/18 02:07 | Soil | 5G79340. | 13.0110 | 0.03 | 13.6386 | 0.033 |
| 5G79346.D | AD06049-050 | 08/24/18 02:25 | Soil | 5G79340. | 13.0102 | 0.0361 | 13.6383 | 0.0352 |
| 5G79347.D | AD06049-035 | 08/24/18 02:44 | Soil | 5G79340. | 13.0105 | 0.0338 | 13.6386 | 0.033 |
| 5G79348.D | AD06049-036 | 08/24/18 03:02 | Soil | 5G79340. | 13.0102 | 0.0361 | 13.6385 | 0.0337 |
| 5G79349.D | AD06049-037 | 08/24/18 03:20 | Soil | 5G79340. | 13.0115 | 0.0261 | 13.6395 | 0.0264 |
| 5G79350.D | AD06049-038 | 08/24/18 03:38 | Soil | 5G79340. | 13.0109 | 0.0307 | 13.6389 | 0.0308 |
| 5G79351.D | AD06049-039 | 08/24/18 03:56 | Soil | 5G79340. | 13.0096 | 0.0407 | 13.6405 | 0.0191 |
| 5G79352.D | AD06049-040 | 08/24/18 04:14 | Soil | 5G79340. | 13.0113 | 0.0277 | 13.6397 | 0.0249 |
| 5G79353.D | AD06051-002 | 08/24/18 04:33 | Soil | 5G79340. | 13.0120 | 0.0223 | 13.6404 | 0.0198 |
| 5G79354.D | AD06051-003 | 08/24/18 04:51 | Soil | 5G79340. | 13.0109 | 0.0307 | 13.6402 | 0.0213 |
| 5G79355.D | AD06051-004 | 08/24/18 05:09 | Soil | 5G79340. | 13.0110 | 0.03 | 13.6405 | 0.0191 |
| 5G79356.D | AD06051-005 | 08/24/18 05:27 | Soil | 5G79340. | 13.0119 | 0.0231 | 13.6404 | 0.0198 |
| 5G79357.D | AD05999-001 | 08/24/18 05:45 | Soil | 5G79340. | 13.0113 | 0.0277 | 13.6403 | 0.0205 |
| 5G79358.D | AD06051-001 | 08/24/18 06:04 | Soil | 5G79340. | 13.0101 | 0.0369 | 13.6400 | 0.0227 |
| 5G79359.D | AD06049-026 | 08/24/18 06:22 | Soil | 5G79340. | 13.0098 | 0.0392 | 13.6390 | 0.0301 |
| 5G79360.D | AD06049-028 | 08/24/18 06:40 | Soil | 5G79340. | 13.0109 | 0.0307 | 13.6397 | 0.0249 |
| 5G79361.D | CAL EVAL | 08/24/18 08:55 | Soil | | | | | |
| 5G79362.D | CAL PEST@200PPB | 08/24/18 09:32 | Soil | 5G79340. | 13.0129 | 0.0154 | 13.6324 | 0.0785 |
| 5G79363.D | AD06049-029 | 08/24/18 09:58 | Soil | 5G79362. | 13.0114 | 0.0115 | 13.6311 | 0.0095 |
| 5G79364.D | AD06049-030 | 08/24/18 10:16 | Soil | 5G79362. | 13.0116 | 0.01 | 13.6386 | 0.0455 |
| 5G79365.D | AD06049-031 | 08/24/18 10:35 | Soil | 5G79362. | 13.0103 | 0.02 | 13.6381 | 0.0418 |
| 5G79366.D | AD06049-032 | 08/24/18 10:53 | Soil | 5G79362. | 13.0119 | 0.0077 | 13.6403 | 0.0579 |
| 5G79367.D | AD06049-041 | 08/24/18 11:11 | Soil | 5G79362. | 13.0101 | 0.0215 | 13.6387 | 0.0462 |
| 5G79368.D | AD06049-042 | 08/24/18 11:29 | Soil | 5G79362. | 13.0114 | 0.0115 | 13.6393 | 0.0506 |
| 5G79369.D | AD06049-043 | 08/24/18 11:47 | Soil | 5G79362. | 13.0098 | 0.0238 | 13.6396 | 0.0528 |
| 5G79370.D | AD06102-002(MS) | 08/24/18 12:05 | Soil | 5G79362. | 13.0142 | 0.01 | 13.6406 | 0.0601 |
| 5G79371.D | AD06102-002(MSD) | 08/24/18 12:24 | Soil | 5G79362. | 13.0137 | 0.0061 | 13.6410 | 0.0631 |
| 5G79372.D | AD06102-002 | 08/24/18 12:42 | Soil | 5G79362. | 13.0144 | 0.0115 | 13.6416 | 0.0675 |
| 5G79373.D | AD06126-003 | 08/24/18 13:00 | Soil | 5G79362. | 13.0121 | 0.0061 | 13.6388 | 0.0469 |
| 5G79374.D | AD06066-001 | 08/24/18 13:18 | Soil | 5G79362. | 13.0116 | 0.01 | 13.6391 | 0.0491 |
| 5G79375.D | CAL PEST@200PPB | 08/24/18 14:29 | Soil | 5G79362. | 13.0114 | 0.0115 | 13.6388 | 0.0469 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8081B

Instrument: GC_6 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 6G91530.D | CAL EVAL | 08/23/18 23:46 | Soil | | | | | |
| 6G91531.D | EVAL | 08/24/18 00:04 | Soil | | | | | |
| 6G91532.D | 100PPB | 08/24/18 00:21 | Soil | | | | | |
| 6G91533.D | CAL PEST@200PPB | 08/24/18 00:39 | Soil | 6G91533. | 11.6775 | 0 | 12.4609 | 0 |
| 6G91534.D | MBS DUP | 08/24/18 00:56 | Soil | 6G91533. | 11.6775 | 0 | 12.4610 | 0.0008 |
| 6G91535.D | MBS DUP | 08/24/18 01:14 | Soil | 6G91533. | 11.6774 | 0.0009 | 12.4620 | 0.0088 |
| 6G91536.D | AD06078-009 | 08/24/18 01:31 | Soil | 6G91533. | 11.6773 | 0.0017 | 12.4615 | 0.0048 |
| 6G91537.D | AD06059-001 | 08/24/18 01:49 | Soil | 6G91533. | 11.6763 | 0.0103 | 12.4541 | 0.0546 |
| 6G91538.D | AD06059-002 | 08/24/18 02:06 | Soil | 6G91533. | 11.6772 | 0.0026 | 12.4519 | 0.0723 |
| 6G91539.D | AD06047-001 | 08/24/18 02:24 | Soil | 6G91533. | 11.6773 | 0.0017 | 12.4544 | 0.0522 |
| 6G91540.D | AD06047-002 | 08/24/18 02:41 | Soil | 6G91533. | 11.6770 | 0.0043 | 12.4597 | 0.0096 |
| 6G91541.D | AD06075-001 | 08/24/18 02:59 | Soil | 6G91533. | 11.6765 | 0.0086 | 12.4596 | 0.0104 |
| 6G91542.D | AD06075-003 | 08/24/18 03:16 | Soil | 6G91533. | 11.6771 | 0.0034 | 12.4577 | 0.0257 |
| 6G91543.D | AD06075-005 | 08/24/18 03:34 | Soil | 6G91533. | 11.6775 | 0 | 12.4606 | 0.0024 |
| 6G91544.D | AD06075-007 | 08/24/18 03:51 | Soil | 6G91533. | 11.6773 | 0.0017 | 12.4609 | 0 |
| 6G91545.D | AD06075-009 | 08/24/18 04:09 | Soil | 6G91533. | 11.6777 | 0.0017 | 12.4603 | 0.0048 |
| 6G91546.D | AD06075-011 | 08/24/18 04:26 | Soil | 6G91533. | 11.6769 | 0.0051 | 12.4603 | 0.0048 |
| 6G91547.D | AD06075-013 | 08/24/18 04:44 | Soil | 6G91533. | 11.6771 | 0.0034 | 12.4584 | 0.0201 |
| 6G91548.D | AD06065-001 | 08/24/18 05:01 | Soil | 6G91533. | 11.6769 | 0.0051 | 12.4594 | 0.012 |
| 6G91549.D | AD06073-001 | 08/24/18 05:19 | Soil | 6G91533. | 11.6764 | 0.0094 | 12.4591 | 0.0145 |
| 6G91550.D | AD06073-002 | 08/24/18 05:36 | Soil | 6G91533. | 11.6756 | 0.0163 | 12.4589 | 0.0161 |
| 6G91551.D | AD06073-003 | 08/24/18 05:54 | Soil | 6G91533. | 11.6767 | 0.0069 | 12.4588 | 0.0169 |
| 6G91552.D | AD06073-004 | 08/24/18 06:11 | Soil | 6G91533. | 11.6775 | 0 | 12.4601 | 0.0064 |
| 6G91553.D | AD06073-005 | 08/24/18 06:29 | Soil | 6G91533. | 11.6767 | 0.0069 | 12.4593 | 0.0128 |
| 6G91554.D | CAL EVAL | 08/24/18 09:07 | Soil | | | | | |
| 6G91555.D | CAL PEST@200PPB | 08/24/18 09:29 | Soil | 6G91533. | 11.6800 | 0.0214 | 12.4592 | 0.0136 |
| 6G91556.D | AD05999-001(MS) | 08/24/18 09:57 | Soil | 6G91555. | 11.6817 | 0.0145 | 12.4607 | 0.012 |
| 6G91557.D | AD05999-001(MSD) | 08/24/18 10:14 | Soil | 6G91555. | 11.6779 | 0.018 | 12.4604 | 0.0096 |
| 6G91558.D | SMB69971(MS) | 08/24/18 10:32 | Soil | 6G91555. | 11.6786 | 0.012 | 12.4613 | 0.0169 |
| 6G91559.D | SMB69972(MS) | 08/24/18 10:49 | Soil | 6G91555. | 11.6778 | 0.0188 | 12.4617 | 0.0201 |
| 6G91560.D | SMB69976(MS) | 08/24/18 11:07 | Soil | 6G91555. | 11.6782 | 0.0154 | 12.4612 | 0.016 |
| 6G91561.D | SMB69978(MS) | 08/24/18 11:25 | Soil | 6G91555. | 11.6788 | 0.0103 | 12.4616 | 0.0193 |
| 6G91562.D | 69983(MS) | 08/24/18 11:42 | Soil | 6G91555. | 11.6793 | 0.006 | 12.4620 | 0.0225 |
| 6G91563.D | SMB69983 | 08/24/18 12:00 | Soil | 6G91555. | 11.6782 | 0.0154 | 12.4624 | 0.0257 |
| 6G91564.D | AD06051-001(MS) | 08/24/18 12:17 | Soil | 6G91555. | 11.6785 | 0.0128 | 12.4625 | 0.0265 |
| 6G91565.D | AD06051-001(MSD) | 08/24/18 12:35 | Soil | 6G91555. | 11.6802 | 0.0017 | 12.4627 | 0.0281 |
| 6G91566.D | AD06049-034 | 08/24/18 12:52 | Soil | 6G91555. | 11.6782 | 0.0154 | 12.4602 | 0.008 |
| 6G91567.D | AD06049-033 | 08/24/18 13:10 | Soil | 6G91555. | 11.6791 | 0.0077 | 12.4614 | 0.0177 |
| 6G91568.D | AD06073-006 | 08/24/18 13:28 | Soil | 6G91555. | 11.6784 | 0.0137 | 12.4617 | 0.0201 |
| 6G91569.D | AD06066-003 | 08/24/18 13:45 | Soil | 6G91555. | 11.6806 | 0.0051 | 12.4629 | 0.0297 |
| 6G91570.D | AD06126-001 | 08/24/18 14:03 | Soil | 6G91555. | 11.6804 | 0.0034 | 12.4628 | 0.0289 |
| 6G91571.D | CAL PEST@200PPB | 08/24/18 14:41 | Soil | 6G91555. | 11.6795 | 0.0043 | 12.4624 | 0.0257 |

Drift Compound: DCB-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

8081617 0146

# Form 6
## Initial Calibration

Method: EPA 8081B

Instrument: GC_5

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 5G79242.D | CAL PEST@2PPB | 08/21/18 00:25 | 2 | 5G79243.D | CAL PEST@10PPB | 08/21/18 00:44 |
| 3 | 5G79241.D | CAL PEST@50PPB | 08/21/18 00:07 | 4 | 5G79245.D | CAL PEST@100PPB | 08/21/18 01:20 |
| 5 | 5G79246.D | CAL PEST@200PPB | 08/21/18 01:38 | 6 | 5G79247.D | CAL PEST@400PPB | 08/21/18 01:56 |
| 7 | 5G79248.D | CAL CHLOR@100PP | 08/21/18 02:15 | 8 | 5G79249.D | CAL TOX@500PPB | 08/21/18 02:33 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMX-Surrogate | 1 | 0 | LinF | 122.86 | 106.84 | 97.479 | 94.182 | 98.074 | 90.951 | ---- | ---- | 102 | 6.06 | 0.999 | 1.00 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| alpha-BHC | 1 | 0 | Avg | 146.30 | 133.60 | 129.21 | 128.63 | 140.15 | 134.33 | ---- | ---- | 135 | 7.32 | 0.999 | 0.999 | 5.0 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| gamma-BHC | 1 | 0 | LinF | 161.25 | 132.53 | 129.60 | 119.96 | 128.34 | 121.79 | ---- | ---- | 132 | 7.84 | 0.999 | 0.999 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| beta-BHC | 1 | 0 | LinF | 66.947 | 55.086 | 50.386 | 48.715 | 52.928 | 50.175 | ---- | ---- | 54.0 | 8.73 | 0.999 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor | 1 | 0 | Avg | 59.769 | 52.804 | 55.375 | 51.245 | 59.108 | 60.074 | ---- | ---- | 56.4 | 8.12 | 0.999 | 0.999 | 6.8 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| delta-BHC | 1 | 0 | Avg | 130.64 | 117.15 | 108.50 | 109.85 | 122.14 | 116.92 | ---- | ---- | 118 | 9.04 | 0.999 | 0.999 | 7.0 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Aldrin | 1 | 0 | Avg | 126.25 | 112.65 | 108.62 | 104.97 | 113.03 | 106.34 | ---- | ---- | 112 | 8.48 | 0.999 | 0.999 | 6.9 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor Epoxide | 1 | 0 | LinF | 137.25 | 108.10 | 96.161 | 91.810 | 98.959 | 93.413 | ---- | ---- | 104 | 9.28 | 0.999 | 0.999 | 16 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| v-chlordane | 1 | 0 | Avg | 120.86 | 103.93 | 98.467 | 95.284 | 105.07 | 100.17 | ---- | ---- | 104 | 9.67 | 0.999 | 0.999 | 8.7 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| a-chlordane | 1 | 0 | LinF | 119.53 | 101.70 | 94.985 | 91.303 | 100.17 | 95.252 | ---- | ---- | 100 | 9.73 | 0.999 | 0.999 | 10 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan I | 1 | 0 | Avg | 98.810 | 86.894 | 83.347 | 80.580 | 88.159 | 84.167 | ---- | ---- | 87.0 | 9.62 | 0.999 | 0.999 | 7.3 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDE | 1 | 0 | Avg | 107.48 | 96.634 | 96.003 | 93.129 | 102.87 | 98.522 | ---- | ---- | 99.1 | 9.82 | 0.999 | 0.999 | 5.3 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Dieldrin | 1 | 0 | Avg | 110.62 | 98.517 | 94.757 | 92.075 | 101.42 | 96.376 | ---- | ---- | 99.0 | 10.05 | 0.999 | 0.999 | 6.6 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin | 1 | 0 | Avg | 72.449 | 69.790 | 71.459 | 67.022 | 76.280 | 71.910 | ---- | ---- | 71.5 | 10.29 | 0.998 | 0.999 | 4.3 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDD | 1 | 0 | LinF | 107.75 | 93.275 | 78.642 | 80.791 | 87.616 | 83.242 | ---- | ---- | 88.6 | 10.72 | 0.999 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan II | 1 | 0 | Avg | 100.08 | 86.928 | 81.520 | 80.277 | 89.251 | 85.705 | ---- | ---- | 87.3 | 10.83 | 0.999 | 0.999 | 8.1 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDT | 1 | 0 | LinF | 9.1089 | 22.149 | 52.903 | 50.206 | 65.665 | 68.575 | ---- | ---- | 44.8 | 10.92 | 0.996 | 0.998 | 54 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Aldehyde | 1 | 0 | Avg | 77.710 | 63.902 | 59.231 | 66.484 | 73.867 | 71.177 | ---- | ---- | 68.7 | 11.29 | 0.999 | 0.999 | 9.9 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan Sulfate | 1 | 0 | Avg | 81.823 | 67.029 | 64.673 | 66.009 | 74.792 | 71.622 | ---- | ---- | 71.0 | 11.64 | 0.999 | 0.999 | 9.2 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Methoxychlor | 1 | 0 | LinF | 11.923 | 15.389 | 26.462 | 25.546 | 32.298 | 33.382 | ---- | ---- | 24.2 | 11.57 | 0.997 | 0.998 | 36 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Ketone | 1 | 0 | Avg | 72.177 | 70.010 | 70.408 | 73.999 | 84.451 | 82.394 | ---- | ---- | 75.6 | 12.11 | 0.999 | 0.999 | 8.3 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| DCB-Surrogate | 1 | 0 | LinF | 102.39 | 79.119 | 69.541 | 67.842 | 75.702 | 72.340 | ---- | ---- | 77.8 | 13.02 | 0.999 | 0.999 | 16 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Chlordane (Technical) | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5.07 | 7.92 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 11.7 | 9.67 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 17.4 | 9.73 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Toxaphene | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.465 | 9.88 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1.70 | 10.41 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 2.16 | 10.86 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1.64 | 11.17 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 2.43 | 11.59 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| TCMX-Surrogate | 2 | 0 | Avg | 76.417 | 66.377 | 61.170 | 59.660 | 64.453 | 60.716 | ---- | ---- | 64.8 | 6.14 | 0.999 | 0.999 | 9.6 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| alpha-BHC | 2 | 0 | Avg | 98.661 | 93.691 | 94.979 | 91.220 | 98.683 | 93.668 | ---- | ---- | 95.2 | 7.15 | 0.999 | 0.999 | 3.1 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| gamma-BHC | 2 | 0 | Avg | 88.509 | 82.093 | 78.092 | 77.092 | 85.202 | 81.213 | ---- | ---- | 82.0 | 7.69 | 0.999 | 0.999 | 5.2 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| beta-BHC | 2 | 0 | LinF | 48.444 | 45.964 | 37.257 | 35.627 | 38.256 | 36.068 | ---- | ---- | 40.3 | 7.78 | 0.999 | 0.999 | 14 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor | 2 | 0 | Avg | 59.589 | 53.234 | 60.115 | 55.272 | 63.248 | 61.541 | ---- | ---- | 58.8 | 8.12 | 0.999 | 0.999 | 6.5 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| delta-BHC | 2 | 0 | LinF | 116.67 | 87.977 | 75.698 | 78.561 | 87.420 | 83.180 | ---- | ---- | 88.3 | 8.27 | 0.999 | 0.999 | 17 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |

Avg Rsd Col 1: 12.43 Avg Rsd Col 2: 13.24

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whehter Avg RF, Linear, or Quadratic Curve was used for compound
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 ; Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

# Form 6
## Initial Calibration

8081617 0147

Method: EPA 8081B

Instrument: GC_5

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 5G79242.D | CAL PEST@2PPB | 08/21/18 00:25 | 2 | 5G79243.D | CAL PEST@10PPB | 08/21/18 00:44 |
| 3 | 5G79241.D | CAL PEST@50PPB | 08/21/18 00:07 | 4 | 5G79245.D | CAL PEST@100PPB | 08/21/18 01:20 |
| 5 | 5G79246.D | CAL PEST@200PPB | 08/21/18 01:38 | 6 | 5G79247.D | CAL PEST@400PPB | 08/21/18 01:56 |
| 7 | 5G79248.D | CAL CHLOR@100PP | 08/21/18 02:15 | 8 | 5G79249.D | CAL TOX@500PPB | 08/21/18 02:33 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aldrin | 2 | 0 | Avg | 88.746 | 78.422 | 73.508 | 71.994 | 77.806 | 72.815 | ---- | ---- | 77.2 | 8.56 | 0.999 | 0.999 | 8.1 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor Epoxide | 2 | 0 | LinF | 83.780 | 70.102 | 64.053 | 61.832 | 66.648 | 62.471 | ---- | ---- | 68.1 | 9.26 | 0.999 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| γ-chlordane | 2 | 0 | Avg | 85.618 | 72.769 | 68.138 | 66.953 | 73.623 | 69.695 | ---- | ---- | 72.8 | 9.46 | 0.999 | 0.999 | 9.3 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| α-chlordane | 2 | 0 | Avg | 73.955 | 62.774 | 59.705 | 59.405 | 66.193 | 63.371 | ---- | ---- | 64.2 | 9.66 | 0.999 | 0.999 | 8.4 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan I | 2 | 0 | LinF | 86.862 | 71.531 | 63.101 | 60.911 | 64.682 | 59.816 | ---- | ---- | 67.8 | 9.71 | 0.998 | 0.999 | 15 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDE | 2 | 0 | Avg | 71.175 | 63.196 | 62.206 | 62.150 | 69.118 | 66.114 | ---- | ---- | 65.7 | 9.94 | 0.999 | 0.999 | 5.8 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Dieldrin | 2 | 0 | Avg | 81.261 | 70.446 | 65.728 | 64.468 | 70.228 | 65.892 | ---- | ---- | 69.7 | 10.08 | 0.999 | 0.999 | 8.9 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin | 2 | 0 | Avg | 38.092 | 37.530 | 41.732 | 37.977 | 44.781 | 43.094 | ---- | ---- | 40.5 | 10.53 | 0.998 | 0.998 | 7.6 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDD | 2 | 0 | LinF | 74.015 | 62.647 | 51.693 | 54.721 | 59.342 | 55.690 | ---- | ---- | 59.7 | 10.61 | 0.999 | 0.999 | 13 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan II | 2 | 0 | LinF | 77.326 | 69.391 | 58.542 | 57.760 | 62.731 | 58.980 | ---- | ---- | 64.1 | 10.74 | 0.999 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDT | 2 | 0 | LinF | 17.131 | 19.602 | 36.791 | 33.988 | 44.799 | 47.202 | ---- | ---- | 33.3 | 10.97 | 0.996 | 0.998 | 38 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Aldehyde | 2 | 0 | LinF | 67.499 | 50.823 | 40.692 | 46.286 | 50.973 | 48.595 | ---- | ---- | 50.8 | 11.12 | 0.999 | 0.999 | 18 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan Sulfate | 2 | 0 | LinF | 63.253 | 48.459 | 44.454 | 44.602 | 50.170 | 47.579 | ---- | ---- | 49.8 | 11.26 | 0.999 | 0.999 | 14 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Methoxychlor | 2 | 0 | LinF | 8.7141 | 12.271 | 18.244 | 16.433 | 20.900 | 21.598 | ---- | ---- | 16.4 | 11.97 | 0.997 | 0.998 | 31 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Ketone | 2 | 0 | LinF | 85.182 | 73.984 | 54.319 | 58.142 | 63.500 | 59.944 | ---- | ---- | 65.8 | 12.19 | 0.999 | 0.999 | 18 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| DCB-Surrogate | 2 | 0 | LinF | 73.597 | 57.824 | 48.746 | 47.571 | 52.628 | 50.076 | ---- | ---- | 55.1 | 13.65 | 0.999 | 0.999 | 18 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Chlordane (Technical) | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 3.38 | 7.91 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 7.52 | 9.46 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 7.69 | 9.66 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Toxaphene | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.589 | 9.82 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1.84 | 10.75 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1.09 | 11.01 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1.40 | 11.72 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1.08 | 11.79 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |

Avg Rsd Col 1: 12.43 Avg Rsd Col 2: 13.24

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 ; Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

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# Form 6
## Initial Calibration

Method: EPA 8081B

Instrument: GC_6

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 6G91477.D | CAL PEST@2PPB | 08/22/18 11:47 | 2 | 6G91476.D | CAL PEST@10PPB | 08/22/18 11:30 |
| 3 | 6G91475.D | CAL PEST@50PPB | 08/22/18 11:12 | 4 | 6G91478.D | CAL PEST@100PPB | 08/22/18 12:05 |
| 5 | 6G91479.D | CAL PEST@200PPB | 08/22/18 12:23 | 6 | 6G91480.D | CAL PEST@400PPB | 08/22/18 12:40 |
| 7 | 6G91481.D | CAL CHLOR@100PP | 08/22/18 12:58 | 8 | 6G91482.D | CAL TOX@500PPB | 08/22/18 13:16 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMX-Surrogate | 1 | 0 | LinF | 2.3095 | 1.8732 | 1.6004 | 1.4526 | 1.4982 | 1.3170 | ---- | ---- | 1.68 | 4.52 | 0.996 | 0.999 | 22 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| alpha-BHC | 1 | 0 | Avg | 2.2105 | 1.9718 | 1.9746 | 1.9175 | 2.1167 | 1.9299 | ---- | ---- | 2.02 | 5.70 | 0.998 | 0.999 | 5.8 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| gamma-BHC | 1 | 0 | Avg | 2.2071 | 1.9192 | 1.8944 | 1.8026 | 1.9585 | 1.7754 | ---- | ---- | 1.93 | 6.22 | 0.997 | 0.999 | 8.0 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| beta-BHC | 1 | 0 | LinF | 1.9449 | 1.3264 | 1.0756 | 0.9871 | 1.0317 | 0.9147 | ---- | ---- | 1.21 | 7.14 | 0.996 | 0.999 | 32 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor | 1 | 0 | LinF | 2.3071 | 1.8106 | 1.6435 | 1.4989 | 1.5980 | 1.4412 | ---- | ---- | 1.72 | 6.52 | 0.997 | 0.999 | 18 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| delta-BHC | 1 | 0 | Avg | 1.9692 | 1.8835 | 1.7473 | 1.7182 | 1.9012 | 1.7289 | ---- | ---- | 1.82 | 7.47 | 0.997 | 0.999 | 5.8 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Aldrin | 1 | 0 | Avg | 2.1327 | 1.8188 | 1.7394 | 1.6519 | 1.7863 | 1.6105 | ---- | ---- | 1.79 | 6.89 | 0.997 | 0.999 | 10 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor Epoxide | 1 | 0 | LinF | 2.2271 | 1.8544 | 1.6636 | 1.5433 | 1.6222 | 1.4481 | ---- | ---- | 1.73 | 7.73 | 0.997 | 0.999 | 16 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| v-chlordane | 1 | 0 | LinF | 2.4312 | 1.9972 | 1.8283 | 1.7363 | 1.8700 | 1.6765 | ---- | ---- | 1.92 | 8.13 | 0.997 | 0.999 | 14 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| a-chlordane | 1 | 0 | LinF | 2.4642 | 2.0113 | 1.7942 | 1.6766 | 1.7850 | 1.6028 | ---- | ---- | 1.89 | 8.20 | 0.997 | 0.999 | 17 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan I | 1 | 0 | LinF | 1.9413 | 1.6049 | 1.4126 | 1.2973 | 1.3279 | 1.1486 | ---- | ---- | 1.46 | 8.08 | 0.994 | 0.999 | 19 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDE | 1 | 0 | Avg | 1.8596 | 1.6265 | 1.5945 | 1.5286 | 1.6567 | 1.4967 | ---- | ---- | 1.63 | 8.29 | 0.997 | 0.999 | 7.9 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Dieldrin | 1 | 0 | LinF | 1.9389 | 1.6400 | 1.5394 | 1.4716 | 1.5874 | 1.4271 | ---- | ---- | 1.60 | 8.53 | 0.997 | 0.999 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin | 1 | 0 | LinF | 1.6634 | 1.4215 | 1.3736 | 1.2774 | 1.3754 | 1.2300 | ---- | ---- | 1.39 | 8.79 | 0.997 | 0.999 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDD | 1 | 0 | LinF | 1.8414 | 1.5058 | 1.2838 | 1.2651 | 1.3502 | 1.2096 | ---- | ---- | 1.41 | 9.25 | 0.997 | 0.999 | 17 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan II | 1 | 0 | LinF | 1.9491 | 1.5865 | 1.4323 | 1.3584 | 1.4426 | 1.2570 | ---- | ---- | 1.50 | 9.36 | 0.995 | 0.999 | 16 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDT | 1 | 0 | LinF | 0.6518 | 0.6736 | 0.9428 | 0.8848 | 1.0283 | 0.9817 | ---- | ---- | 0.861 | 9.46 | 0.999 | 0.999 | 19 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Aldehyde | 1 | 0 | LinF | 1.4404 | 1.3167 | 1.1028 | 1.0958 | 1.1857 | 1.0701 | ---- | ---- | 1.20 | 9.85 | 0.997 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan Sulfate | 1 | 0 | LinF | 1.4591 | 1.2048 | 1.1182 | 1.0805 | 1.1841 | 1.1222 | ---- | ---- | 1.19 | 10.22 | 0.999 | 0.999 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Methoxychlor | 1 | 0 | Avg | 0.5878 | 0.5362 | 0.5866 | 0.5287 | 0.5682 | 0.5067 | ---- | ---- | 0.552 | 10.16 | 0.996 | 0.999 | 6.0 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Ketone | 1 | 0 | Avg | 1.5134 | 1.3316 | 1.2375 | 1.2301 | 1.3406 | 1.2125 | ---- | ---- | 1.31 | 10.73 | 0.997 | 0.999 | 8.6 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| DCB-Surrogate | 1 | 0 | LinF | 2.5615 | 2.0137 | 1.6253 | 1.4821 | 1.5289 | 1.3264 | ---- | ---- | 1.76 | 11.69 | 0.995 | 0.999 | 26 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Chlordane (Technical) | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0919 | 6.31 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.228 | 8.13 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.353 | 8.20 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Toxaphene | 1 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0342 | 8.92 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0214 | 9.05 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0395 | 9.39 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0336 | 9.72 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 1 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0422 | 10.18 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| TCMX-Surrogate | 2 | 0 | LinF | 0.5838 | 0.4869 | 0.4490 | 0.4359 | 0.4907 | 0.4598 | ---- | ---- | 0.484 | 4.67 | 0.998 | 0.999 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| alpha-BHC | 2 | 0 | LinF | 0.5505 | 0.4530 | 0.4907 | 0.5306 | 0.6627 | 0.6574 | ---- | ---- | 0.558 | 5.62 | 0.997 | 0.998 | 15 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| gamma-BHC | 2 | 0 | LinF | 0.5408 | 0.4530 | 0.4794 | 0.5038 | 0.6126 | 0.5991 | ---- | ---- | 0.532 | 6.16 | 0.998 | 0.998 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| beta-BHC | 2 | 0 | LinF | 0.4064 | 0.3463 | 0.3087 | 0.2999 | 0.3370 | 0.3160 | ---- | ---- | 0.336 | 6.25 | 0.998 | 0.999 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor | 2 | 0 | LinF | 0.9232 | 0.4741 | 0.4180 | 0.3964 | 0.4696 | 0.4651 | ---- | ---- | 0.524 | 6.61 | 0.998 | 0.999 | 38 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| delta-BHC | 2 | 0 | LinF | 0.5387 | 0.4257 | 0.4479 | 0.4883 | 0.6084 | 0.5893 | ---- | ---- | 0.516 | 6.75 | 0.997 | 0.997 | 14 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |

Avg Rsd Col 1: 14.28 Avg Rsd Col 2: 14.43

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pcb/chlordane etc.)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 ; Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

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# Form 6
## Initial Calibration

Method: EPA 8081B

Instrument: GC_6

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 6G91477.D | CAL PEST@2PPB | 08/22/18 11:47 | 2 | 6G91476.D | CAL PEST@10PPB | 08/22/18 11:30 |
| 3 | 6G91475.D | CAL PEST@50PPB | 08/22/18 11:12 | 4 | 6G91478.D | CAL PEST@100PPB | 08/22/18 12:05 |
| 5 | 6G91479.D | CAL PEST@200PPB | 08/22/18 12:23 | 6 | 6G91480.D | CAL PEST@400PPB | 08/22/18 12:40 |
| 7 | 6G91481.D | CAL CHLOR@100PP | 08/22/18 12:58 | 8 | 6G91482.D | CAL TOX@500PPB | 08/22/18 13:16 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aldrin | 2 | 0 | LinF | 0.5659 | 0.4307 | 0.4118 | 0.4284 | 0.5203 | 0.5157 | ---- | ---- | 0.479 | 7.06 | 0.998 | 0.998 | 13 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Heptachlor Epoxide | 2 | 0 | LinF | 0.5580 | 0.4414 | 0.4026 | 0.3992 | 0.4701 | 0.4575 | ---- | ---- | 0.455 | 7.79 | 0.998 | 0.998 | 13 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| v-chlordane | 2 | 0 | LinF | 0.5780 | 0.4609 | 0.4234 | 0.4232 | 0.5072 | 0.4992 | ---- | ---- | 0.482 | 8.00 | 0.998 | 0.998 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| a-chlordane | 2 | 0 | LinF | 0.5310 | 0.4278 | 0.3995 | 0.4012 | 0.4695 | 0.4473 | ---- | ---- | 0.446 | 8.21 | 0.998 | 0.998 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan I | 2 | 0 | LinF | 0.5660 | 0.4508 | 0.4105 | 0.4082 | 0.4910 | 0.4892 | ---- | ---- | 0.469 | 8.26 | 0.998 | 0.998 | 13 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDE | 2 | 0 | LinF | 0.4731 | 0.3937 | 0.3793 | 0.3917 | 0.4799 | 0.4772 | ---- | ---- | 0.433 | 8.51 | 0.998 | 0.998 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Dieldrin | 2 | 0 | LinF | 0.4872 | 0.3975 | 0.3754 | 0.3833 | 0.4640 | 0.4613 | ---- | ---- | 0.428 | 8.66 | 0.998 | 0.998 | 11 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin | 2 | 0 | Avg | 0.3761 | 0.3167 | 0.3168 | 0.3107 | 0.3797 | 0.3748 | ---- | ---- | 0.346 | 9.13 | 0.998 | 0.998 | 9.9 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDD | 2 | 0 | LinF | 0.4472 | 0.3769 | 0.3220 | 0.3400 | 0.4004 | 0.3877 | ---- | ---- | 0.379 | 9.22 | 0.998 | 0.998 | 12 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan II | 2 | 0 | LinF | 0.5225 | 0.4172 | 0.3748 | 0.3773 | 0.4454 | 0.4276 | ---- | ---- | 0.428 | 9.35 | 0.998 | 0.998 | 13 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| p,p'-DDT | 2 | 0 | LinF | 0.1972 | 0.1959 | 0.2646 | 0.2416 | 0.3108 | 0.3209 | ---- | ---- | 0.255 | 9.60 | 0.997 | 0.998 | 21 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Aldehyde | 2 | 0 | LinF | 0.5301 | 0.3994 | 0.3253 | 0.3341 | 0.3782 | 0.3577 | ---- | ---- | 0.388 | 9.76 | 0.998 | 0.999 | 19 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endosulfan Sulfate | 2 | 0 | LinF | 0.4447 | 0.3421 | 0.3022 | 0.2993 | 0.3515 | 0.3420 | ---- | ---- | 0.347 | 9.91 | 0.998 | 0.998 | 15 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Methoxychlor | 2 | 0 | Avg | 0.1540 | 0.1472 | 0.1745 | 0.1567 | 0.1805 | 0.1712 | ---- | ---- | 0.164 | 10.67 | 0.998 | 0.999 | 8.0 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Endrin Ketone | 2 | 0 | Avg | 0.5169 | 0.4292 | 0.3984 | 0.4127 | 0.4791 | 0.4575 | ---- | ---- | 0.449 | 10.90 | 0.998 | 0.998 | 9.9 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| DCB-Surrogate | 2 | 0 | LinF | 0.8381 | 0.6503 | 0.5317 | 0.4989 | 0.5385 | 0.4932 | ---- | ---- | 0.592 | 12.47 | 0.998 | 0.999 | 23 | 2.00 | 10.00 | 50.00 | 100.0 | 200.0 | 400.0 | | |
| Chlordane (Technical) | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0234 | 6.40 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0940 | 8.01 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Chlordane (Technical) | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0520 | 8.21 | -1 | -1 | Lvl=7 | 100.0 | | | | | | | |
| Toxaphene | 2 | 1 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00603 | 8.90 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 2 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00743 | 9.16 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 3 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00713 | 9.65 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 4 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.0115 | 10.41 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |
| Toxaphene | 2 | 5 | Avg | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 0.00753 | 10.48 | -1 | -1 | Lvl=8 | 500.0 | | | | | | | |

Avg Rsd Col 1: 14.28  Avg Rsd Col 2: 14.43

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte >0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whehter Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 : Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

# Form7
Continuing Calibration

Method: EPA 8081B

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | | 5G79340.D | | | 5G79362.D | | | 6G91514.D | | | 6G91529.D | | | 6G91555.D | | |
| **Method:** | | | | 8081 | | | 8081 | | | 8081 | | | 8081 | | | 8081 | | |
| **Calibration Name:** | | | | CAL PEST@200PP | | | CAL PEST@200PP | | | CAL PEST@200PP | | | CAL PEST@200PP | | | CAL PEST@200PP | | |
| **Calibration Date/Time** | | | | 08/24/18 00:36 | | | 08/24/18 09:32 | | | 08/23/18 09:08 | | | 08/23/18 17:08 | | | 08/24/18 09:29 | | |
| | | | | Conc | | | Conc | | | Conc | | | Conc | | | Conc | | |
| Compound | Limit | Col | Mr | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff |
| TCMX-Surrogate | 20 | 1 | 0 | 213.0 | 200 | 6.5 | 208.6 | 200 | 4.3 | 201.3 | 200 | 0.7 | 215.2 | 200 | 7.6 | 198.5 | 200 | 0.8 |
| alpha-BHC | 20 | 1 | 0 | 209.0 | 200 | 4.5 | 211.2 | 200 | 5.6 | 193.6 | 200 | 3.2 | 203.6 | 200 | 1.8 | 188 | 200 | 6.0 |
| gamma-BHC | 20 | 1 | 0 | 209.8 | 200 | 4.9 | 207.9 | 200 | 4.0 | 186.8 | 200 | 6.6 | 196.4 | 200 | 1.8 | 182.4 | 200 | 8.8 |
| beta-BHC | 20 | 1 | 0 | 209.1 | 200 | 4.5 | 209.7 | 200 | 4.8 | 206.9 | 200 | 3.5 | 206.8 | 200 | 3.4 | 196.1 | 200 | 1.9 |
| Heptachlor | 20 | 1 | 0 | 232.6 | 200 | 16.3 | 253.4 | 200 | 26.7* | 189.8 | 200 | 5.1 | 202.9 | 200 | 1.4 | 192.4 | 200 | 3.8 |
| delta-BHC | 20 | 1 | 0 | 206.9 | 200 | 3.5 | 208.7 | 200 | 4.3 | 187.5 | 200 | 6.3 | 196.6 | 200 | 1.7 | 183.9 | 200 | 8.1 |
| Aldrin | 20 | 1 | 0 | 202.9 | 200 | 1.4 | 202.4 | 200 | 1.2 | 182.2 | 200 | 8.9 | 192.6 | 200 | 3.7 | 178.6 | 200 | 10.7 |
| Heptachlor Epoxide | 20 | 1 | 0 | 209.8 | 200 | 4.9 | 210.6 | 200 | 5.3 | 207.4 | 200 | 3.7 | 210.7 | 200 | 5.3 | 199.3 | 200 | 0.3 |
| y-chlordane | 20 | 1 | 0 | 200.4 | 200 | 0.2 | 201.5 | 200 | 0.7 | 206.4 | 200 | 3.2 | 206.6 | 200 | 3.3 | 195.6 | 200 | 2.2 |
| a-chlordane | 20 | 1 | 0 | 206.6 | 200 | 3.3 | 208.4 | 200 | 4.2 | 207.0 | 200 | 3.5 | 206.6 | 200 | 3.3 | 195.3 | 200 | 2.3 |
| Endosulfan I | 20 | 1 | 0 | 202.7 | 200 | 1.3 | 209.1 | 200 | 4.5 | 211.4 | 200 | 5.7 | 212.5 | 200 | 6.3 | 203.8 | 200 | 1.9 |
| p,p'-DDE | 20 | 1 | 0 | 204.8 | 200 | 2.4 | 207.6 | 200 | 3.8 | 188.6 | 200 | 5.7 | 196.4 | 200 | 1.8 | 183.8 | 200 | 8.1 |
| Dieldrin | 20 | 1 | 0 | 203 | 200 | 1.5 | 207.1 | 200 | 3.6 | 204.7 | 200 | 2.4 | 207.9 | 200 | 3.9 | 196.3 | 200 | 1.9 |
| Endrin | 20 | 1 | 0 | 212.5 | 200 | 6.3 | 219.7 | 200 | 9.9 | 196.6 | 200 | 1.7 | 217.9 | 200 | 8.9 | 204.2 | 200 | 2.1 |
| p,p'-DDD | 20 | 1 | 0 | 203.7 | 200 | 1.8 | 212.5 | 200 | 6.2 | 198.2 | 200 | 0.9 | 208.0 | 200 | 4.0 | 192.1 | 200 | 3.9 |
| Endosulfan II | 20 | 1 | 0 | 198.4 | 200 | 0.8 | 206.1 | 200 | 3.0 | 213.8 | 200 | 6.9 | 210.6 | 200 | 5.3 | 202.3 | 200 | 1.2 |
| p,p'-DDT | 20 | 1 | 0 | 187.4 | 200 | 6.3 | 196.4 | 200 | 1.8 | 189.8 | 200 | 5.1 | 193.9 | 200 | 3.0 | 187.1 | 200 | 6.4 |
| Endrin Aldehyde | 20 | 1 | 0 | 204.6 | 200 | 2.3 | 212.7 | 200 | 6.4 | 206.5 | 200 | 3.3 | 203.2 | 200 | 1.6 | 188.0 | 200 | 6.0 |
| Endosulfan Sulfate | 20 | 1 | 0 | 202.1 | 200 | 1.0 | 208.1 | 200 | 4.1 | 205.6 | 200 | 2.8 | 186.4 | 200 | 6.8 | 183.4 | 200 | 8.3 |
| Methoxychlor | 20 | 1 | 0 | 186 | 200 | 7.0 | 205.3 | 200 | 2.6 | 184.5 | 200 | 7.8 | 189.1 | 200 | 5.5 | 184.8 | 200 | 7.6 |
| Endrin Ketone | 20 | 1 | 0 | 216.1 | 200 | 8.0 | 231.3 | 200 | 15.7 | 194.7 | 200 | 2.6 | 208.9 | 200 | 4.5 | 185.3 | 200 | 7.4 |
| DCB-Surrogate | 20 | 1 | 0 | 193.9 | 200 | 3.0 | 209.9 | 200 | 4.9 | 219.9 | 200 | 10.0 | 208.8 | 200 | 4.4 | 200.5 | 200 | 0.3 |
| Average Difference | 20 | 1 | 0 | | | 4.2 | | | 5.8 | | | 4.5 | | | 4.1 | | | 4.5 |
| TCMX-Surrogate | 20 | 2 | 0 | 198.7 | 200 | 0.7 | 194.3 | 200 | 2.8 | 203.3 | 200 | 1.6 | 220.8 | 200 | 10.4 | 196.4 | 200 | 1.8 |
| alpha-BHC | 20 | 2 | 0 | 207.4 | 200 | 3.7 | 199.3 | 200 | 0.3 | 198 | 200 | 1.0 | 214.9 | 200 | 7.4 | 188.8 | 200 | 5.6 |
| gamma-BHC | 20 | 2 | 0 | 207.7 | 200 | 3.8 | 201.1 | 200 | 0.6 | 198.9 | 200 | 0.6 | 216.6 | 200 | 8.3 | 190.9 | 200 | 4.6 |
| beta-BHC | 20 | 2 | 0 | 204.4 | 200 | 2.2 | 192.3 | 200 | 3.9 | 205.2 | 200 | 2.6 | 218.5 | 200 | 9.2 | 195.5 | 200 | 2.2 |
| Heptachlor | 20 | 2 | 0 | 211.1 | 200 | 5.6 | 218.5 | 200 | 9.2 | 188.1 | 200 | 5.9 | 214.8 | 200 | 7.4 | 186.3 | 200 | 6.9 |
| delta-BHC | 20 | 2 | 0 | 206.2 | 200 | 3.1 | 198.5 | 200 | 0.8 | 198.3 | 200 | 0.9 | 215.3 | 200 | 7.6 | 190.5 | 200 | 4.8 |
| Aldrin | 20 | 2 | 0 | 198.3 | 200 | 0.8 | 190.8 | 200 | 4.6 | 199.3 | 200 | 0.4 | 213 | 200 | 6.5 | 188.8 | 200 | 5.6 |
| Heptachlor Epoxide | 20 | 2 | 0 | 208.0 | 200 | 4.0 | 203.4 | 200 | 1.7 | 203.2 | 200 | 1.6 | 215.9 | 200 | 8.0 | 193.1 | 200 | 3.4 |
| y-chlordane | 20 | 2 | 0 | 197.2 | 200 | 1.4 | 188.8 | 200 | 5.6 | 201.4 | 200 | 0.7 | 214.1 | 200 | 7.1 | 189.8 | 200 | 5.1 |
| a-chlordane | 20 | 2 | 0 | 202.1 | 200 | 1.0 | 196.1 | 200 | 1.9 | 207.4 | 200 | 3.7 | 217.9 | 200 | 9.0 | 195.2 | 200 | 2.4 |
| Endosulfan I | 20 | 2 | 0 | 206.3 | 200 | 3.2 | 200.1 | 200 | 0.1 | 201.6 | 200 | 0.8 | 211.9 | 200 | 6.0 | 188.9 | 200 | 5.6 |
| p,p'-DDE | 20 | 2 | 0 | 203.7 | 200 | 1.9 | 199.0 | 200 | 0.5 | 200.6 | 200 | 0.3 | 211.9 | 200 | 5.9 | 190.4 | 200 | 4.8 |
| Dieldrin | 20 | 2 | 0 | 196.2 | 200 | 1.9 | 192.1 | 200 | 4.0 | 200.6 | 200 | 0.3 | 213.5 | 200 | 6.7 | 189.4 | 200 | 5.3 |
| Endrin | 20 | 2 | 0 | 225.9 | 200 | 13.0 | 235.1 | 200 | 17.5 | 208.2 | 200 | 4.1 | 241.2 | 200 | 20.6* | 213.9 | 200 | 7.0 |
| p,p'-DDD | 20 | 2 | 0 | 200.3 | 200 | 0.1 | 198.7 | 200 | 0.6 | 194.8 | 200 | 2.6 | 210.3 | 200 | 5.2 | 189.4 | 200 | 5.3 |
| Endosulfan II | 20 | 2 | 0 | 199 | 200 | 0.5 | 198 | 200 | 1.0 | 206.2 | 200 | 3.1 | 215.4 | 200 | 7.7 | 194.9 | 200 | 2.6 |
| p,p'-DDT | 20 | 2 | 0 | 188.9 | 200 | 5.6 | 192.2 | 200 | 3.9 | 180.3 | 200 | 9.9 | 208.5 | 200 | 4.3 | 180.7 | 200 | 9.6 |
| Endrin Aldehyde | 20 | 2 | 0 | 195.1 | 200 | 2.4 | 200.8 | 200 | 0.4 | 205.7 | 200 | 2.8 | 212 | 200 | 6.0 | 191.5 | 200 | 4.2 |
| Endosulfan Sulfate | 20 | 2 | 0 | 201.7 | 200 | 0.8 | 200.3 | 200 | 0.2 | 197.2 | 200 | 1.4 | 211.6 | 200 | 5.8 | 189.7 | 200 | 5.2 |
| Methoxychlor | 20 | 2 | 0 | 187.5 | 200 | 6.3 | 204.7 | 200 | 2.3 | 188.2 | 200 | 5.9 | 231.7 | 200 | 15.8 | 203.5 | 200 | 1.7 |
| Endrin Ketone | 20 | 2 | 0 | 199.5 | 200 | 0.3 | 203.4 | 200 | 1.7 | 209.6 | 200 | 4.8 | 215.8 | 200 | 7.9 | 198.8 | 200 | 0.6 |
| DCB-Surrogate | 20 | 2 | 0 | 192.1 | 200 | 3.9 | 191.9 | 200 | 4.0 | 210 8 | 200 | 5.4 | 214.7 | 200 | 7.4 | 199.6 | 200 | 0.2 |
| Average Difference | 20 | 2 | 0 | | | 3.0 | | | 3.1 | | | 2.7 | | | 8.2 | | | 4.3 |

***Flags/Notes:*** **** - Values outside of limits for this column/run***

# Form7
Continuing Calibration

Method: EPA 8081B

**Data File:** 6G91571.D
**Method:** 8081
**Calibration Name:** CAL PEST@200PP
**Calibration Date/Time** 08/24/18 14:41

| Compound | Limit | Col | Mr | Conc | Conc Exp | %Diff | Conc | Conc Exp | %Diff | Conc | Conc Exp | %Diff | Conc | Conc Exp | %Diff | Conc | Conc Exp | %Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMX-Surrogate | 20 | 1 | 0 | 222.7 | 200 | 11.4 | | | | | | | | | | | | |
| alpha-BHC | 20 | 1 | 0 | 209.1 | 200 | 4.6 | | | | | | | | | | | | |
| gamma-BHC | 20 | 1 | 0 | 203.3 | 200 | 1.6 | | | | | | | | | | | | |
| beta-BHC | 20 | 1 | 0 | 212.5 | 200 | 6.2 | | | | | | | | | | | | |
| Heptachlor | 20 | 1 | 0 | 220.9 | 200 | 10.5 | | | | | | | | | | | | |
| delta-BHC | 20 | 1 | 0 | 203 | 200 | 1.5 | | | | | | | | | | | | |
| Aldrin | 20 | 1 | 0 | 199.1 | 200 | 0.5 | | | | | | | | | | | | |
| Heptachlor Epoxide | 20 | 1 | 0 | 217.4 | 200 | 8.7 | | | | | | | | | | | | |
| y-chlordane | 20 | 1 | 0 | 213.2 | 200 | 6.6 | | | | | | | | | | | | |
| a-chlordane | 20 | 1 | 0 | 211.4 | 200 | 5.7 | | | | | | | | | | | | |
| Endosulfan I | 20 | 1 | 0 | 219.4 | 200 | 9.7 | | | | | | | | | | | | |
| p,p'-DDE | 20 | 1 | 0 | 200.1 | 200 | 0.1 | | | | | | | | | | | | |
| Dieldrin | 20 | 1 | 0 | 212.3 | 200 | 6.1 | | | | | | | | | | | | |
| Endrin | 20 | 1 | 0 | 222.7 | 200 | 11.4 | | | | | | | | | | | | |
| p,p'-DDD | 20 | 1 | 0 | 208.6 | 200 | 4.3 | | | | | | | | | | | | |
| Endosulfan II | 20 | 1 | 0 | 211.5 | 200 | 5.8 | | | | | | | | | | | | |
| p,p'-DDT | 20 | 1 | 0 | 200.9 | 200 | 0.5 | | | | | | | | | | | | |
| Endrin Aldehyde | 20 | 1 | 0 | 200.3 | 200 | 0.2 | | | | | | | | | | | | |
| Endosulfan Sulfate | 20 | 1 | 0 | 205.9 | 200 | 2.9 | | | | | | | | | | | | |
| Methoxychlor | 20 | 1 | 0 | 198.0 | 200 | 1.0 | | | | | | | | | | | | |
| Endrin Ketone | 20 | 1 | 0 | 198.1 | 200 | 0.9 | | | | | | | | | | | | |
| DCB-Surrogate | 20 | 1 | 0 | 211.0 | 200 | 5.5 | | | | | | | | | | | | |
| Average Difference | 20 | 1 | 0 | | | 4.8 | | | | | | | | | | | | |
| TCMX-Surrogate | 20 | 2 | 0 | 220.3 | 200 | 10.1 | | | | | | | | | | | | |
| alpha-BHC | 20 | 2 | 0 | 212.1 | 200 | 6.0 | | | | | | | | | | | | |
| gamma-BHC | 20 | 2 | 0 | 214.7 | 200 | 7.3 | | | | | | | | | | | | |
| beta-BHC | 20 | 2 | 0 | 214.6 | 200 | 7.3 | | | | | | | | | | | | |
| Heptachlor | 20 | 2 | 0 | 220.6 | 200 | 10.3 | | | | | | | | | | | | |
| delta-BHC | 20 | 2 | 0 | 212.3 | 200 | 6.1 | | | | | | | | | | | | |
| Aldrin | 20 | 2 | 0 | 211.6 | 200 | 5.8 | | | | | | | | | | | | |
| Heptachlor Epoxide | 20 | 2 | 0 | 215.4 | 200 | 7.7 | | | | | | | | | | | | |
| y-chlordane | 20 | 2 | 0 | 211.3 | 200 | 5.7 | | | | | | | | | | | | |
| a-chlordane | 20 | 2 | 0 | 215.6 | 200 | 7.8 | | | | | | | | | | | | |
| Endosulfan I | 20 | 2 | 0 | 210.3 | 200 | 5.2 | | | | | | | | | | | | |
| p,p'-DDE | 20 | 2 | 0 | 209.9 | 200 | 4.9 | | | | | | | | | | | | |
| Dieldrin | 20 | 2 | 0 | 211.6 | 200 | 5.8 | | | | | | | | | | | | |
| Endrin | 20 | 2 | 0 | 240.9 | 200 | 20.5 | | | | | | | | | | | | |
| p,p'-DDD | 20 | 2 | 0 | 211.0 | 200 | 5.5 | | | | | | | | | | | | |
| Endosulfan II | 20 | 2 | 0 | 212.6 | 200 | 6.3 | | | | | | | | | | | | |
| p,p'-DDT | 20 | 2 | 0 | 210.4 | 200 | 5.2 | | | | | | | | | | | | |
| Endrin Aldehyde | 20 | 2 | 0 | 209.9 | 200 | 4.9 | | | | | | | | | | | | |
| Endosulfan Sulfate | 20 | 2 | 0 | 216.5 | 200 | 8.3 | | | | | | | | | | | | |
| Methoxychlor | 20 | 2 | 0 | 237.4 | 200 | 18.7 | | | | | | | | | | | | |
| Endrin Ketone | 20 | 2 | 0 | 218.0 | 200 | 9.0 | | | | | | | | | | | | |
| DCB-Surrogate | 20 | 2 | 0 | 219.7 | 200 | 9.9 | | | | | | | | | | | | |
| Average Difference | 20 | 2 | 0 | | | 8.1 | | | | | | | | | | | | |

***Flags/Notes:*** **** - Values outside of limits for this column/run***

# Form7
RtWindow Summary

Method: EPA 8081B

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | 5G79242.D | | 6G91477.D | | 5G79340.D | | 6G91514.D | | 6G91555.D | |
| **Calibration Name:** | | | CAL PEST@2PPB | | CAL PEST@2PPB | | CAL PEST@200PPB | | CAL PEST@200PPB | | CAL PEST@200PPB | |
| **Calibration Date/Time** | | | 8/21/2018 12:25:52 AM | | 8/22/2018 11:47:00 AM | | 8/24/2018 12:36:47 AM | | 8/23/2018 9:08:00 AM | | 8/24/2018 9:29:00 AM | |
| Compound | Col | Mr | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit |
| TCMX-Surrogate | 1 | 0 | 6.06 | (6.00 - 6.12) | 4.51 | (4.45 - 4.57) | 6.06 | (6.00 - 6.12) | 4.52 | (4.46 - 4.58) | 4.51 | (4.45 - 4.57) |
| alpha-BHC | 1 | 0 | 7.32 | (7.28 - 7.36) | 5.70 | (5.66 - 5.74) | 7.31 | (7.27 - 7.35) | 5.70 | (5.66 - 5.74) | 5.69 | (5.65 - 5.73) |
| gamma-BHC | 1 | 0 | 7.84 | (7.80 - 7.88) | 6.22 | (6.18 - 6.26) | 7.84 | (7.80 - 7.88) | 6.22 | (6.18 - 6.26) | 6.22 | (6.18 - 6.26) |
| beta-BHC | 1 | 0 | 8.73 | (8.65 - 8.81) | 7.13 | (7.05 - 7.21) | 8.72 | (8.64 - 8.80) | 7.13 | (7.05 - 7.21) | 7.13 | (7.05 - 7.21) |
| Heptachlor | 1 | 0 | 8.12 | (8.08 - 8.16) | 6.51 | (6.47 - 6.55) | 8.12 | (8.08 - 8.16) | 6.51 | (6.47 - 6.55) | 6.51 | (6.47 - 6.55) |
| delta-BHC | 1 | 0 | 9.04 | (8.96 - 9.12) | 7.46 | (7.38 - 7.54) | 9.04 | (8.96 - 9.12) | 7.47 | (7.39 - 7.55) | 7.46 | (7.38 - 7.54) |
| Aldrin | 1 | 0 | 8.48 | (8.40 - 8.56) | 6.88 | (6.80 - 6.96) | 8.48 | (8.40 - 8.56) | 6.88 | (6.80 - 6.96) | 6.88 | (6.80 - 6.96) |
| Heptachlor Epoxide | 1 | 0 | 9.28 | (9.24 - 9.32) | 7.72 | (7.68 - 7.76) | 9.28 | (9.24 - 9.32) | 7.73 | (7.69 - 7.77) | 7.72 | (7.68 - 7.76) |
| v-chlordane | 1 | 0 | 9.67 | (9.63 - 9.71) | 8.13 | (8.09 - 8.17) | 9.67 | (9.63 - 9.71) | 8.13 | (8.09 - 8.17) | 8.12 | (8.08 - 8.16) |
| a-chlordane | 1 | 0 | 9.73 | (9.69 - 9.77) | 8.20 | (8.16 - 8.24) | 9.73 | (9.69 - 9.77) | 8.20 | (8.16 - 8.24) | 8.19 | (8.15 - 8.23) |
| Endosulfan I | 1 | 0 | 9.62 | (9.58 - 9.66) | 8.08 | (8.04 - 8.12) | 9.62 | (9.58 - 9.66) | 8.08 | (8.04 - 8.12) | 8.08 | (8.04 - 8.12) |
| o,p'-DDE | 1 | 0 | 9.82 | (9.74 - 9.90) | 8.29 | (8.21 - 8.37) | 9.82 | (9.74 - 9.90) | 8.29 | (8.21 - 8.37) | 8.29 | (8.21 - 8.37) |
| Dieldrin | 1 | 0 | 10.05 | (9.97 - 10.13) | 8.53 | (8.45 - 8.61) | 10.05 | (9.97 - 10.13) | 8.53 | (8.45 - 8.61) | 8.53 | (8.45 - 8.61) |
| Endrin | 1 | 0 | 10.29 | (10.25 - 10.33) | 8.79 | (8.75 - 8.83) | 10.29 | (10.25 - 10.33) | 8.79 | (8.75 - 8.83) | 8.78 | (8.74 - 8.82) |
| p,p'-DDD | 1 | 0 | 10.72 | (10.64 - 10.80) | 9.25 | (9.17 - 9.33) | 10.72 | (10.64 - 10.80) | 9.25 | (9.17 - 9.33) | 9.24 | (9.16 - 9.32) |
| Endosulfan II | 1 | 0 | 10.83 | (10.75 - 10.91) | 9.36 | (9.28 - 9.44) | 10.83 | (10.75 - 10.91) | 9.36 | (9.28 - 9.44) | 9.35 | (9.27 - 9.43) |
| p,p'-DDT | 1 | 0 | 10.92 | (10.84 - 11.00) | 9.46 | (9.38 - 9.54) | 10.92 | (10.84 - 11.00) | 9.46 | (9.38 - 9.54) | 9.45 | (9.37 - 9.53) |
| Endrin Aldehyde | 1 | 0 | 11.29 | (11.21 - 11.37) | 9.85 | (9.77 - 9.93) | 11.29 | (11.21 - 11.37) | 9.85 | (9.77 - 9.93) | 9.84 | (9.76 - 9.92) |
| Endosulfan Sulfate | 1 | 0 | 11.64 | (11.60 - 11.68) | 10.22 | (10.18 - 10.26) | 11.64 | (11.60 - 11.68) | 10.22 | (10.18 - 10.26) | 10.21 | (10.17 - 10.25) |
| Methoxychlor | 1 | 0 | 11.57 | (11.53 - 11.61) | 10.16 | (10.12 - 10.20) | 11.57 | (11.53 - 11.61) | 10.16 | (10.12 - 10.20) | 10.16 | (10.12 - 10.20) |
| Endrin Ketone | 1 | 0 | 12.11 | (12.03 - 12.19) | 10.73 | (10.65 - 10.81) | 12.11 | (12.03 - 12.19) | 10.73 | (10.65 - 10.81) | 10.72 | (10.64 - 10.80) |
| DCB-Surrogate | 1 | 0 | 13.02 | (12.96 - 13.08) | 11.69 | (11.63 - 11.75) | 13.01 | (12.95 - 13.07) | 11.69 | (11.63 - 11.75) | 11.68 | (11.62 - 11.74) |
| Chlordane (Technical | 1 | 1 | | | | | | | | | | |
| Chlordane (Technical | 1 | 2 | | | | | | | | | | |
| Chlordane (Technical | 1 | 3 | | | | | | | | | | |
| Toxaphene | 1 | 1 | 9.88 | (9.84 - 9.92) | 8.92 | (8.88 - 8.96) | | | | | | |
| Toxaphene | 1 | 2 | 10.41 | (10.37 - 10.45) | 9.05 | (9.01 - 9.09) | | | | | | |
| Toxaphene | 1 | 3 | 10.86 | (10.82 - 10.90) | 9.39 | (9.35 - 9.43) | | | | | | |
| Toxaphene | 1 | 4 | 11.17 | (11.13 - 11.21) | 9.72 | (9.68 - 9.76) | | | | | | |
| Toxaphene | 1 | 5 | 11.59 | (11.55 - 11.63) | 10.18 | (10.14 - 10.22) | | | | | | |
| TCMX-Surrogate | 2 | 0 | 6.14 | (6.08 - 6.20) | 4.67 | (4.61 - 4.73) | 6.14 | (6.08 - 6.20) | 4.67 | (4.61 - 4.73) | 4.67 | (4.61 - 4.73) |
| alpha-BHC | 2 | 0 | 7.15 | (7.11 - 7.19) | 5.62 | (5.58 - 5.66) | 7.15 | (7.11 - 7.19) | 5.62 | (5.58 - 5.66) | 5.61 | (5.57 - 5.65) |
| gamma-BHC | 2 | 0 | 7.69 | (7.65 - 7.73) | 6.16 | (6.12 - 6.20) | 7.69 | (7.65 - 7.73) | 6.16 | (6.12 - 6.20) | 6.16 | (6.12 - 6.20) |
| beta-BHC | 2 | 0 | 7.78 | (7.70 - 7.86) | 6.25 | (6.17 - 6.33) | 7.77 | (7.69 - 7.85) | 6.24 | (6.16 - 6.32) | 6.24 | (6.16 - 6.32) |
| Heptachlor | 2 | 0 | 8.12 | (8.08 - 8.16) | 6.61 | (6.57 - 6.65) | 8.12 | (8.08 - 8.16) | 6.61 | (6.57 - 6.65) | 6.60 | (6.56 - 6.64) |
| delta-BHC | 2 | 0 | 8.27 | (8.19 - 8.35) | 6.75 | (6.67 - 6.83) | 8.26 | (8.18 - 8.34) | 6.75 | (6.67 - 6.83) | 6.74 | (6.66 - 6.82) |
| Aldrin | 2 | 0 | 8.56 | (8.48 - 8.64) | 7.06 | (6.98 - 7.14) | 8.56 | (8.48 - 8.64) | 7.06 | (6.98 - 7.14) | 7.06 | (6.98 - 7.14) |
| Heptachlor Epoxide | 2 | 0 | 9.26 | (9.22 - 9.30) | 7.79 | (7.75 - 7.83) | 9.26 | (9.22 - 9.30) | 7.79 | (7.75 - 7.83) | 7.79 | (7.75 - 7.83) |
| v-chlordane | 2 | 0 | 9.46 | (9.42 - 9.50) | 8.00 | (7.96 - 8.04) | 9.46 | (9.42 - 9.50) | 8.00 | (7.96 - 8.04) | 8.00 | (7.96 - 8.04) |
| a-chlordane | 2 | 0 | 9.66 | (9.62 - 9.70) | 8.21 | (8.17 - 8.25) | 9.66 | (9.62 - 9.70) | 8.21 | (8.17 - 8.25) | 8.21 | (8.17 - 8.25) |
| Endosulfan I | 2 | 0 | 9.71 | (9.67 - 9.75) | 8.26 | (8.22 - 8.30) | 9.70 | (9.66 - 9.74) | 8.26 | (8.22 - 8.30) | 8.26 | (8.22 - 8.30) |
| o,p'-DDE | 2 | 0 | 9.94 | (9.86 - 10.02) | 8.51 | (8.43 - 8.59) | 9.94 | (9.86 - 10.02) | 8.51 | (8.43 - 8.59) | 8.51 | (8.43 - 8.59) |
| Dieldrin | 2 | 0 | 10.08 | (10.00 - 10.16) | 8.66 | (8.58 - 8.74) | 10.08 | (10.00 - 10.16) | 8.65 | (8.57 - 8.73) | 8.65 | (8.57 - 8.73) |
| Endrin | 2 | 0 | 10.53 | (10.49 - 10.57) | 9.13 | (9.09 - 9.17) | 10.52 | (10.48 - 10.56) | 9.13 | (9.09 - 9.17) | 9.13 | (9.09 - 9.17) |
| p,p'-DDD | 2 | 0 | 10.61 | (10.53 - 10.69) | 9.22 | (9.14 - 9.30) | 10.61 | (10.53 - 10.69) | 9.21 | (9.13 - 9.29) | 9.21 | (9.13 - 9.29) |
| Endosulfan II | 2 | 0 | 10.74 | (10.66 - 10.82) | 9.35 | (9.27 - 9.43) | 10.73 | (10.65 - 10.81) | 9.35 | (9.27 - 9.43) | 9.35 | (9.27 - 9.43) |
| p,p'-DDT | 2 | 0 | 10.97 | (10.89 - 11.05) | 9.60 | (9.52 - 9.68) | 10.96 | (10.88 - 11.04) | 9.60 | (9.52 - 9.68) | 9.60 | (9.52 - 9.68) |
| Endrin Aldehyde | 2 | 0 | 11.12 | (11.04 - 11.20) | 9.76 | (9.68 - 9.84) | 11.12 | (11.04 - 11.20) | 9.76 | (9.68 - 9.84) | 9.76 | (9.68 - 9.84) |
| Endosulfan Sulfate | 2 | 0 | 11.26 | (11.22 - 11.30) | 9.91 | (9.87 - 9.95) | 11.26 | (11.22 - 11.30) | 9.91 | (9.87 - 9.95) | 9.91 | (9.87 - 9.95) |
| Methoxychlor | 2 | 0 | 11.96 | (11.92 - 12.00) | 10.67 | (10.63 - 10.71) | 11.96 | (11.92 - 12.00) | 10.67 | (10.63 - 10.71) | 10.67 | (10.63 - 10.71) |
| Endrin Ketone | 2 | 0 | 12.18 | (12.10 - 12.26) | 10.90 | (10.82 - 10.98) | 12.18 | (12.10 - 12.26) | 10.90 | (10.82 - 10.98) | 10.90 | (10.82 - 10.98) |
| DCB-Surrogate | 2 | 0 | 13.65 | (13.59 - 13.71) | 12.47 | (12.41 - 12.53) | 13.64 | (13.58 - 13.70) | 12.46 | (12.40 - 12.52) | 12.46 | (12.40 - 12.52) |
| Chlordane (Technical | 2 | 1 | | | | | | | | | | |
| Chlordane (Technical | 2 | 2 | | | | | | | | | | |
| Chlordane (Technical | 2 | 3 | | | | | | | | | | |
| Toxaphene | 2 | 1 | 9.82 | (9.78 - 9.86) | 8.90 | (8.86 - 8.94) | | | | | | |
| Toxaphene | 2 | 2 | 10.75 | (10.71 - 10.79) | 9.16 | (9.12 - 9.20) | | | | | | |
| Toxaphene | 2 | 3 | 11.01 | (10.97 - 11.05) | 9.65 | (9.61 - 9.69) | | | | | | |
| Toxaphene | 2 | 4 | 11.72 | (11.68 - 11.76) | 10.41 | (10.37 - 10.45) | | | | | | |
| Toxaphene | 2 | 5 | 11.79 | (11.75 - 11.83) | 10.48 | (10.44 - 10.52) | | | | | | |

8081617 0153

# Herbicide Data

# Form1

ORGANICS HERBICIDE REPORT

Sample Number: AD05999-001
Client Id: SS-1
Data File: 12G18748.D
Analysis Date: 08/20/18 13:40
Date Rec/Extracted: 08/16/18-08/17/18
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8151A
Matrix: Soil
Initial Vol: 50g
Final Vol: 10ml
Dilution: 1
Solids: 95

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 93-76-5 | 2,4,5-T | 0.011 | U | 93-72-1 | Silvex | 0.011 | U |
| 94-75-7 | 2,4-D | 0.011 | U | | | | |

Worksheet #: 476800

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2018\GC_12\Data\08-20-18\
Data File : 12G18748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20-Aug-18, 13:40:22
Operator : MLC/MS/ZM
Sample : AD05999-001
Misc : S,HERB
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 20 17:37:30 2018
Quant Method : G:\GCDATA\2018\GC_12\MethodQt\12G_HERB0806.M
Quant Title : @GC_12,ug,8151
QLast Update : Mon Aug 06 14:43:44 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

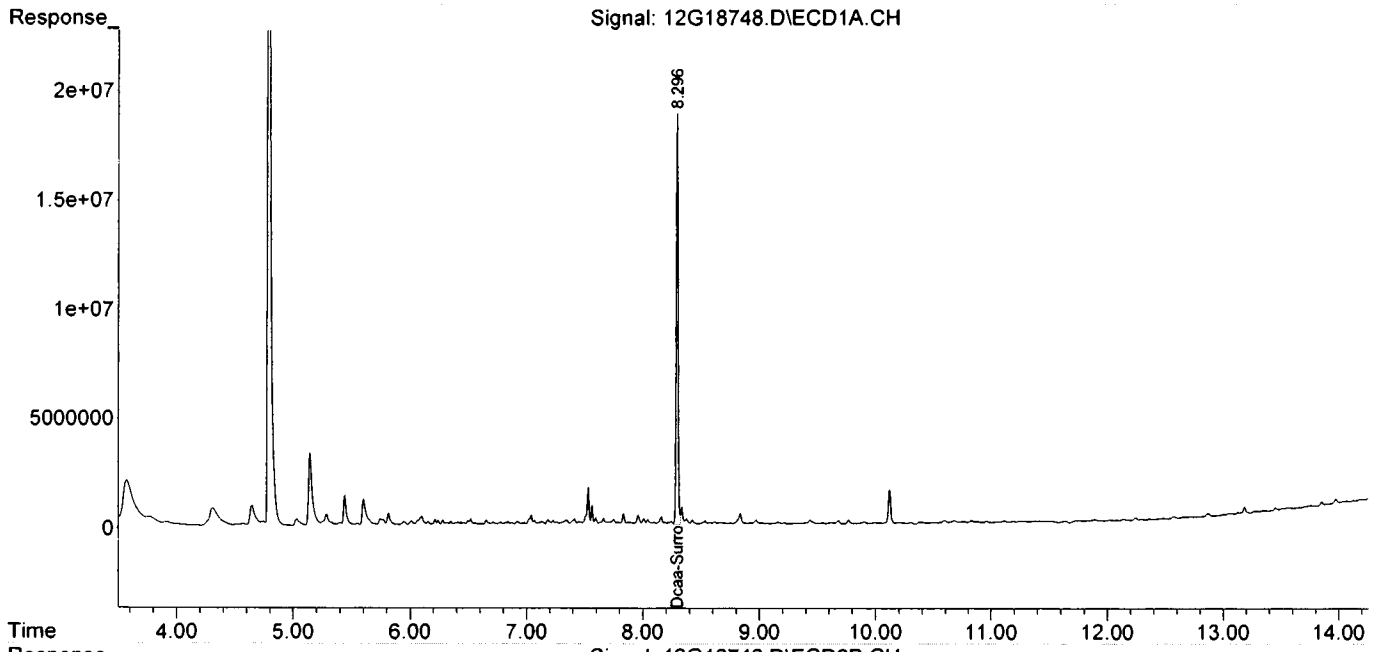
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng#1 | ng#2 |
|---|---|---|---|---|---|---|
| Target Compounds | | | | | | |
| 2)Dcaa-Surrogate | 8.296 | 8.184 | 198.5E6 | 60045635 | 809.496 | 845.963 |

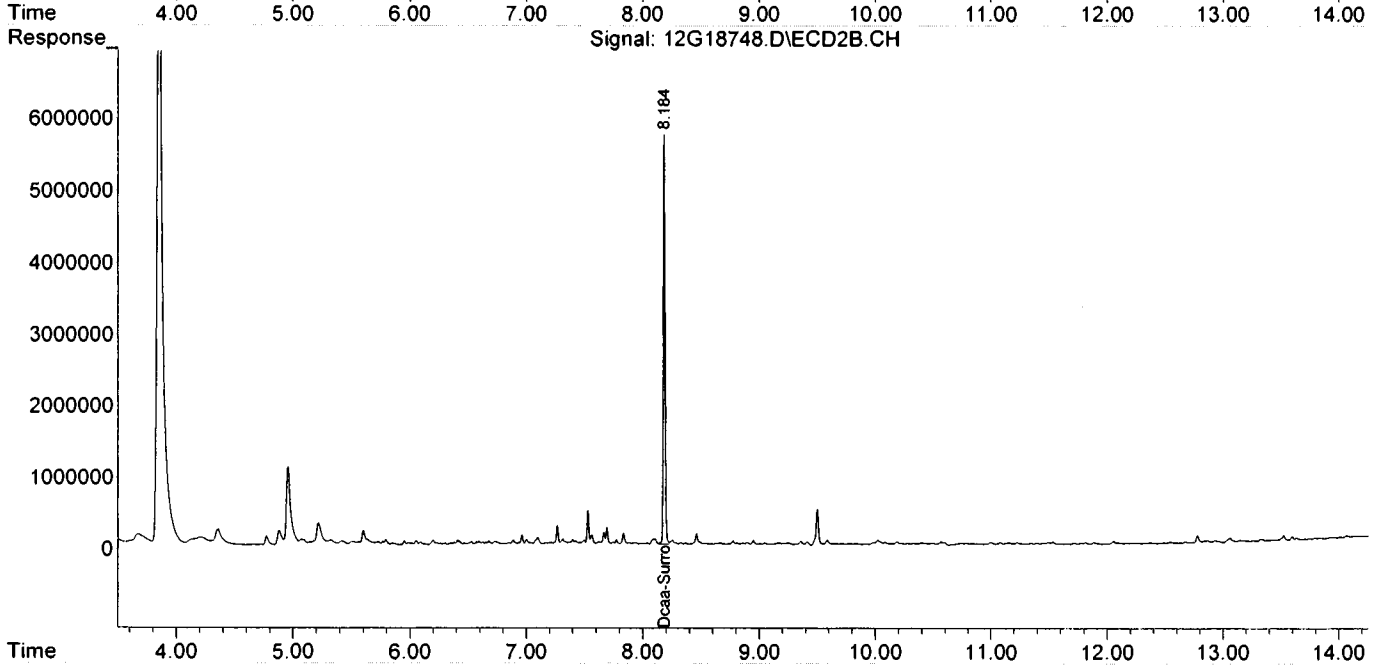
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2018\GC_12\Data\08-20-18\
Data File : 12G18748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20-Aug-18, 13:40:22
Operator : MLC/MS/ZM
Sample : AD05999-001
Misc : S,HERB
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 20 17:37:30 2018
Quant Method : G:\GCDATA\2018\GC_12\MethodQt\12G_HERB0806.M
Quant Title : @GC_12,ug,8151
QLast Update : Mon Aug 06 14:43:44 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# Form1

ORGANICS HERBICIDE REPORT

Sample Number: SMB69832
Client Id:
Data File: 12G18744.D
Analysis Date: 08/20/18 12:22
Date Rec/Extracted: NA-08/17/18
Column: DB-17/1701P 30M 0.32mm ID 0.25um film

Method: EPA 8151A
Matrix: Soil
Initial Vol: 50g
Final Vol: 10ml
Dilution: 1
Solids: 100

**Units: mg/Kg**

| Cas # | Compound | RL | Conc | Cas # | Compound | RL | Conc |
|---|---|---|---|---|---|---|---|
| 93-76-5 | 2,4,5-T | 0.010 | U | 93-72-1 | Silvex | 0.010 | U |
| 94-75-7 | 2,4-D | 0.010 | U | | | | |

Worksheet #: 476800

***Total Target Concentration*** 0

ColumnID: (^) Indicates results from 2nd column

*U - Indicates the compound was analyzed but not detected.*
*B - Indicates the analyte was found in the blank as well as in the sample.*
*E - Indicates the analyte concentration exceeds the calibration range of the instrument.*
*R - Retention Time Out*
*J - Indicates an estimated value when a compound is detected at less than the specified detection limit.*
*d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used*
*Chlordane (Total) is sum of a-Chlordane and y-Chlordane.*

Data Path : G:\Gcdata\2018\GC_12\Data\08-20-18\
Data File : 12G18744.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20-Aug-18, 12:22:53
Operator : MLC/MS/ZM
Sample : SMB69832
Misc : S,HERB
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 20 17:34:58 2018
Quant Method : G:\GCDATA\2018\GC_12\MethodQt\12G_HERB0806.M
Quant Title : @GC_12,ug,8151
QLast Update : Mon Aug 06 14:43:44 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32

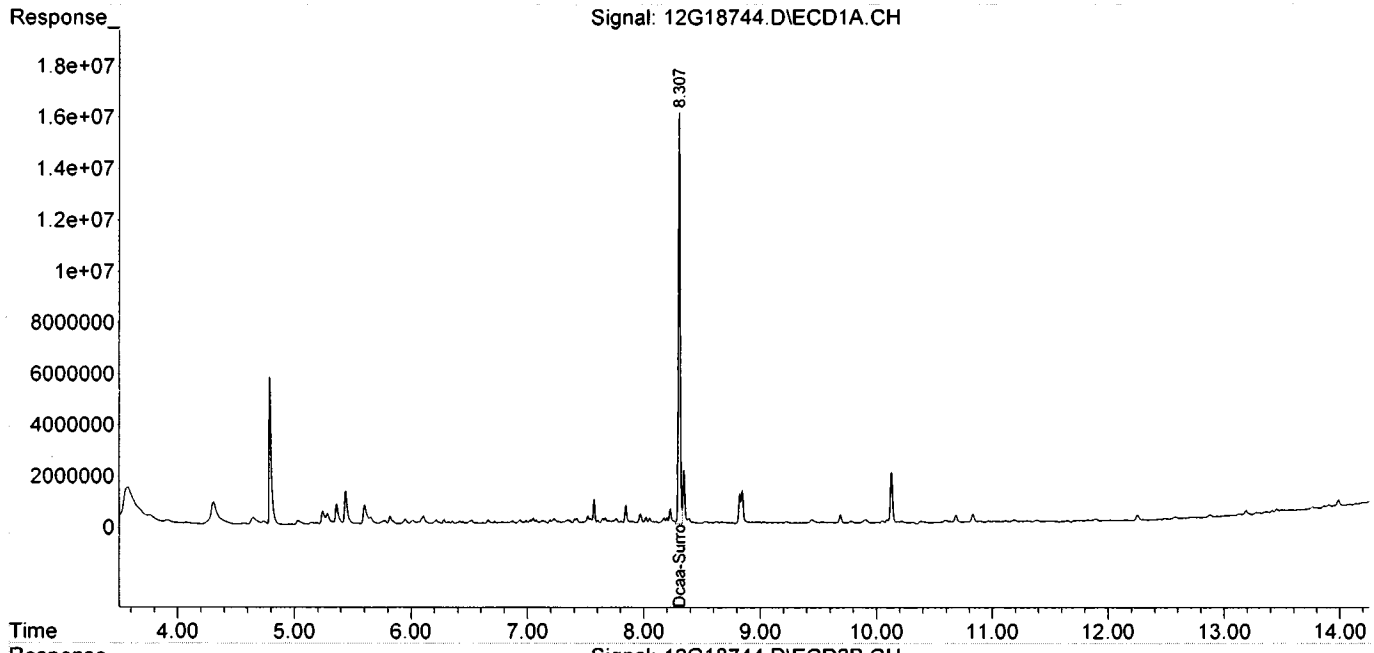
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng#1 | ng#2 |
|---|---|---|---|---|---|---|
| Target Compounds | | | | | | |
| 2)Dcaa-Surrogate | 8.308 | 8.191 | 168.3E6 | 52291599 | 686.276 | 736.719 |

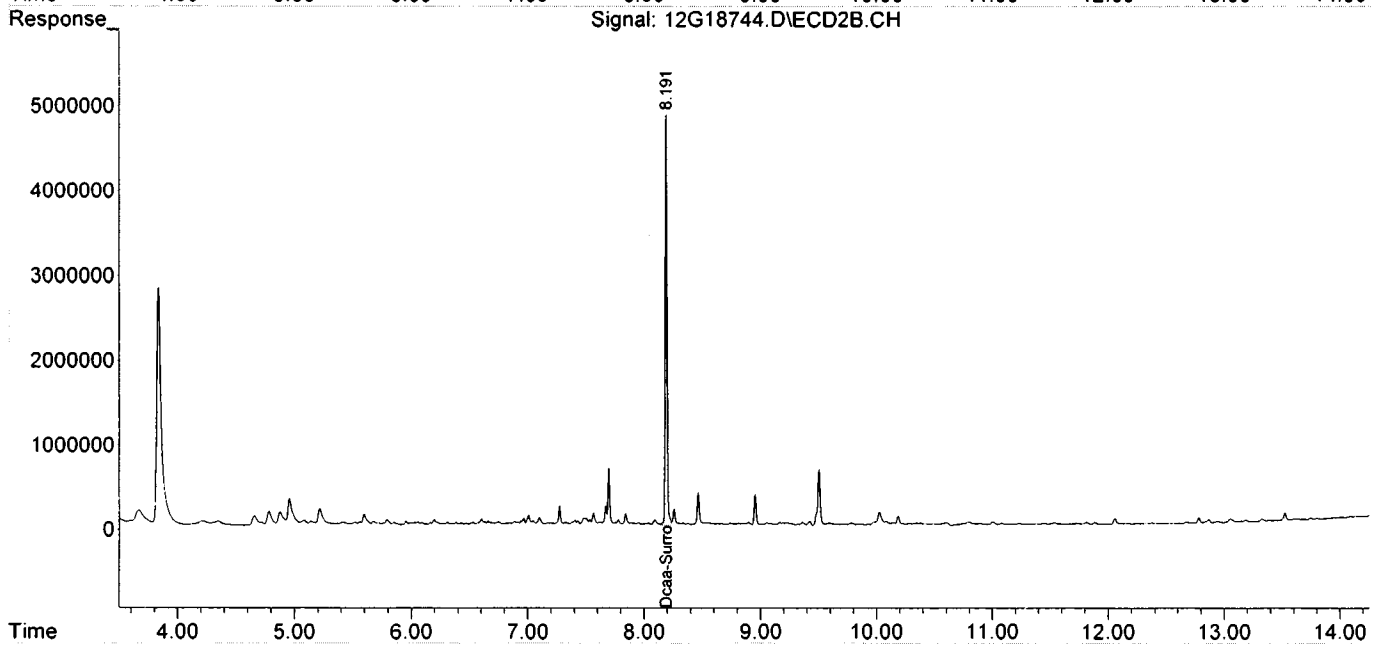
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\Gcdata\2018\GC_12\Data\08-20-18\
Data File : 12G18744.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20-Aug-18, 12:22:53
Operator : MLC/MS/ZM
Sample : SMB69832
Misc : S,HERB
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 20 17:34:58 2018
Quant Method : G:\GCDATA\2018\GC_12\MethodQt\12G_HERB0806.M
Quant Title : @GC_12,ug,8151
QLast Update : Mon Aug 06 14:43:44 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : db-1701P Signal #2 Phase: db-17
Signal #1 Info : .32 Signal #2 Info : .32



# FORM2

## Surrogate Recovery

Method: EPA 8151A

| Dfile | Sample# | Matrix | Date/Time | Surr Dil | Dilute Out Flag | Column1 S1 Recov | Column2 S2 Recov | Column0 S3 Recov | Column0 S4 Recov | Column0 S5 Recov | Column0 S6 Recov |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12G18744.D | SMB69832 | S | 08/20/18 12:22 | 1 | | 69 | 74 | | | | |
| 12G18748.D | AD05999-001 | S | 08/20/18 13:40 | 1 | | 81 | 85 | | | | |
| 12G18745.D | SMB69832(MS) | S | 08/20/18 12:42 | 1 | | 78 | 90 | | | | |
| 12G18746.D | AD05999-001(MS) | S | 08/20/18 13:01 | 1 | | 79 | 90 | | | | |
| 12G18747.D | AD05999-001(MSD) | S | 08/20/18 13:20 | 1 | | 53 | 61 | | | | |

**Flags:** SD=Surrogate diluted out
*=Surrogate out

**Method:** EPA 8151A

### Soil Laboratory Limits

| Compound | Spike Amt | Limits |
|---|---|---|
| S1=Dcaa-Surrogate | 1000 | 25-138 |
| S2=Dcaa-Surrogate | 1000 | 25-138 |

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69832

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 12G18745.D | SMB69832(MS) | 8/20/2018 12:42:09 PM |
| Non Spike(If applicable): | | | |
| Inst Blank(If applicable): | | | |

Method: 8151 Matrix: Soil QC Type: MBS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Dicamba | 1 | 303.08 | 0 | 400 | 76 | 25 | 130 |
| 2,4-D | 1 | 299.9 | 0 | 400 | 75 | 10 | 130 |
| Silvex | 1 | 306.28 | 0 | 400 | 77 | 25 | 130 |
| 2,4,5-T | 1 | 311.6 | 0 | 400 | 78 | 25 | 130 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
## Recovery Data Laboratory Limits
### QC Batch: SMB69832

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 12G18746.D | AD05999-001(MS) | 8/20/2018 1:01:30 PM |
| Non Spike(If applicable): | 12G18748.D | AD05999-001 | 8/20/2018 1:40:22 PM |
| Inst Blank(If applicable): | | | |

Method: 8151 Matrix: Soil QC Type: MS

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Dicamba | 1 | 317.3 | 0 | 400 | 79 | 25 | 130 |
| 2,4-D | 1 | 303.58 | 0 | 400 | 76 | 10 | 130 |
| Silvex | 1 | 322.46 | 0 | 400 | 81 | 25 | 130 |
| 2,4,5-T | 1 | 323.11 | 0 | 400 | 81 | 25 | 130 |

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 12G18747.D | AD05999-001(MSD) | 8/20/2018 1:20:53 PM |
| Non Spike(If applicable): | 12G18748.D | AD05999-001 | 8/20/2018 1:40:22 PM |
| Inst Blank(If applicable): | | | |

Method: 8151 Matrix: Soil QC Type: MSD

| Analyte: | Col | Spike Conc | Sample Conc | Expected Conc | Recovery | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|---|
| Dicamba | 1 | 216.77 | 0 | 400 | 54 | 25 | 130 |
| 2,4-D | 1 | 209.44 | 0 | 400 | 52 | 10 | 130 |
| Silvex | 1 | 217.17 | 0 | 400 | 54 | 25 | 130 |
| 2,4,5-T | 1 | 217.25 | 0 | 400 | 54 | 25 | 130 |

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

# Form3
# RPD Data Laboratory Limits
## QC Batch: SMB69832

| | Data File | Sample ID: | Analysis Date |
|---|---|---|---|
| Spike or Dup: | 12G18747.D | AD05999-001(MSD) | 8/20/2018 1:20:53 PM |
| Duplicate(If applicable): | 12G18746.D | AD05999-001(MS) | 8/20/2018 1:01:30 PM |
| Inst Blank(If applicable): | | | |

Method: 8151 Matrix: Soil QC Type: MSD

| Analyte: | Column | Dup/MSD/MBSD Conc | Sample/MS/MBS Conc | RPD | Limit |
|---|---|---|---|---|---|
| Dicamba | 1 | 216.77 | 317.3 | 38 | 40 |
| 2,4-D | 1 | 209.44 | 303.58 | 37 | 40 |
| Silvex | 1 | 217.17 | 322.46 | 39 | 40 |
| 2,4,5-T | 1 | 217.25 | 323.11 | 39 | 40 |

* - Indicates outside of limits NA - Both concentrations=0... no result can be calculated

# FORM 4
Blank Summary

Blank Number: SMB69832
Blank Data File: 12G18744.D
Matrix: Soil

Blank Analysis Date: 08/20/18 12:22
Blank Extraction Date: 08/17/18
(If Applicable)
Method: EPA 8151A

| Sample Number | Data File | Analysis Date |
|---|---|---|
| AD05999-001 | 12G18748.D | 08/20/18 13:40 |
| AD05999-001(MSD | 12G18747.D | 08/20/18 13:20 |
| AD05999-001(MS) | 12G18746.D | 08/20/18 13:01 |
| SMB69832(MS) | 12G18745.D | 08/20/18 12:42 |

# Form 5

Method: EPA 8151A
Instrument: GC_12 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 12G18627.D | 200PPB | 08/06/18 11:00 | Soil | | | | | |
| 12G18628.D | CAL HERB@200PPB | 08/06/18 11:55 | Soil | 12G1862 | 8.3070 | 0.053 | 8.1940 | 0.0073 |
| 12G18629.D | CAL HERB@50PPB | 08/06/18 12:19 | Soil | 12G1862 | 8.3114 | 0 | 8.1946 | 0 |
| 12G18630.D | CAL HERB@100PPB | 08/06/18 12:38 | Soil | 12G1862 | 8.3017 | 0.1168 | 8.1864 | 0.1001 |
| 12G18631.D | CAL HERB@400PPB | 08/06/18 12:58 | Soil | 12G1862 | 8.3021 | 0.112 | 8.1868 | 0.0952 |
| 12G18632.D | CAL HERB@500PPB | 08/06/18 13:17 | Soil | 12G1862 | 8.3049 | 0.0782 | 8.1893 | 0.0647 |
| 12G18633.D | CAL HERB@600PPB | 08/06/18 13:37 | Soil | 12G1862 | 8.3025 | 0.1071 | 8.1868 | 0.0952 |
| 12G18634.D | ICV | 08/06/18 14:09 | Soil | 12G1862 | 8.3072 | 0.0505 | 8.1887 | 0.072 |
| 12G18635.D | SMB69715 | 08/06/18 15:05 | Soil | 12G1862 | 8.3102 | 0.0144 | 8.1916 | 0.0366 |
| 12G18636.D | SMB69715(MS) | 08/06/18 15:24 | Soil | 12G1862 | 8.3011 | 0.124 | 8.1852 | 0.1148 |
| 12G18637.D | WMB69725 | 08/06/18 15:44 | Aqueous | 12G1862 | 8.2974 | 0.1686 | 8.1823 | 0.1502 |
| 12G18638.D | WMB69725(MS) | 08/06/18 16:03 | Aqueous | 12G1862 | 8.3016 | 0.118 | 8.1856 | 0.1099 |
| 12G18639.D | AD05776-002 | 08/06/18 16:23 | Soil | 12G1862 | 8.3032 | 0.0987 | 8.1890 | 0.0684 |
| 12G18640.D | AD05758-001(T) | 08/06/18 16:43 | Aqueous | 12G1862 | 8.3033 | 0.0975 | 8.1890 | 0.0684 |
| 12G18641.D | EF-2-V-283958(8/2) | 08/06/18 17:02 | Aqueous | 12G1862 | 8.2980 | 0.1614 | 8.1833 | 0.138 |
| 12G18642.D | AD05737-001(T)(MS) | 08/06/18 17:22 | Aqueous | 12G1862 | 8.2974 | 0.1686 | 8.1817 | 0.1575 |
| 12G18643.D | AD05737-001(T)(MSD) | 08/06/18 17:41 | Aqueous | 12G1862 | 8.2971 | 0.1722 | 8.1824 | 0.149 |
| 12G18644.D | AD05737-001(T) | 08/06/18 18:01 | Aqueous | 12G1862 | 8.2972 | 0.171 | 8.1822 | 0.1514 |
| 12G18645.D | EF-1-V-284733(8/2) | 08/06/18 18:21 | Aqueous | 12G1862 | 8.2971 | 0.1722 | 8.1819 | 0.1551 |
| 12G18646.D | CAL HERB@200PPB | 08/06/18 18:40 | Aqueous | 12G1862 | 8.2979 | 0.1626 | 8.1829 | 0.1429 |
| 12G18647.D | AD05789-002(MS) | 08/06/18 19:00 | Soil | 12G1864 | 8.2973 | 0.0072 | 8.1823 | 0.0073 |
| 12G18648.D | AD05789-002(MSD) | 08/06/18 19:20 | Soil | 12G1864 | 8.2964 | 0.0181 | 8.1820 | 0.011 |
| 12G18649.D | AD05789-002 | 08/06/18 19:39 | Soil | 12G1864 | 8.2968 | 0.0133 | 8.1826 | 0.0037 |
| 12G18650.D | AD05789-004 | 08/06/18 19:59 | Soil | 12G1864 | 8.2962 | 0.0205 | 8.1821 | 0.0098 |
| 12G18651.D | AD05789-006 | 08/06/18 20:18 | Soil | 12G1864 | 8.2951 | 0.0337 | 8.1825 | 0.0049 |
| 12G18652.D | AD05789-008 | 08/06/18 20:38 | Soil | 12G1864 | 8.2973 | 0.0072 | 8.1830 | 0.0012 |
| 12G18653.D | AD05789-010 | 08/06/18 20:58 | Soil | 12G1864 | 8.2967 | 0.0145 | 8.1822 | 0.0086 |
| 12G18654.D | 200PPB | 08/06/18 21:17 | Soil | 12G1864 | 8.2975 | 0.0048 | 8.1822 | 0.0086 |
| 12G18655.D | CAL HERB@200PPB | 08/06/18 21:37 | Soil | 12G1864 | 8.2977 | 0.0024 | 8.1823 | 0.0073 |

Drift Compound: Dcaa-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 5

Method: EPA 8151A
Instrument: GC_12 Column: DB-17/1701P 30M 0.32mm ID 0.25um film

| Data File | Sample# | Analysis Date/Time | Matrix | Reference File | Column 1 RT | Column 1 % Drift | Column 2 RT | Column 2 % Drift |
|---|---|---|---|---|---|---|---|---|
| 12G18743.D | CAL HERB@200PPB | 08/20/18 11:43 | Aqueous | 12G1874 | 8.2927 | 0 | 8.1824 | 0 |
| 12G18744.D | SMB69832 | 08/20/18 12:22 | Soil | 12G1874 | 8.3076 | 0.1795 | 8.1915 | 0.1112 |
| 12G18745.D | SMB69832(MS) | 08/20/18 12:42 | Soil | 12G1874 | 8.2956 | 0.035 | 8.1823 | 0.0012 |
| 12G18746.D | AD05999-001(MS) | 08/20/18 13:01 | Soil | 12G1874 | 8.2924 | 0.0036 | 8.1796 | 0.0342 |
| 12G18747.D | AD05999-001(MSD) | 08/20/18 13:20 | Soil | 12G1874 | 8.2930 | 0.0036 | 8.1812 | 0.0147 |
| 12G18748.D | AD05999-001 | 08/20/18 13:40 | Soil | 12G1874 | 8.2963 | 0.0434 | 8.1843 | 0.0232 |
| 12G18749.D | AD05945-014 | 08/20/18 13:59 | Soil | 12G1874 | 8.2954 | 0.0326 | 8.1830 | 0.0073 |
| 12G18750.D | AD05945-015 | 08/20/18 14:19 | Soil | 12G1874 | 8.2936 | 0.0109 | 8.1810 | 0.0171 |
| 12G18751.D | AD05965-002 | 08/20/18 14:38 | Soil | 12G1874 | 8.2927 | 0 | 8.1810 | 0.0171 |
| 12G18752.D | AD05965-004 | 08/20/18 14:58 | Soil | 12G1874 | 8.2922 | 0.006 | 8.1806 | 0.022 |
| 12G18753.D | AD05965-006 | 08/20/18 15:17 | Soil | 12G1874 | 8.2926 | 0.0012 | 8.1816 | 0.0098 |
| 12G18754.D | AD05965-008 | 08/20/18 15:36 | Soil | 12G1874 | 8.2925 | 0.0024 | 8.1807 | 0.0208 |
| 12G18755.D | AD05965-010 | 08/20/18 15:56 | Soil | 12G1874 | 8.2935 | 0.0096 | 8.1822 | 0.0024 |
| 12G18756.D | AD05965-012 | 08/20/18 16:15 | Soil | 12G1874 | 8.2925 | 0.0024 | 8.1812 | 0.0147 |
| 12G18757.D | AD06007-002 | 08/20/18 16:35 | Soil | 12G1874 | 8.2955 | 0.0338 | 8.1836 | 0.0147 |
| 12G18758.D | AD06007-004 | 08/20/18 16:54 | Soil | 12G1874 | 8.2936 | 0.0109 | 8.1817 | 0.0086 |
| 12G18759.D | CAL HERB@200PPB | 08/20/18 17:14 | Soil | 12G1874 | 8.2942 | 0.0181 | 8.1821 | 0.0037 |

Drift Compound: Dcaa-Surrogate Drift Limit(s): 0.5 (Pest/Pcb) 1.5(Herb/Tph) * - Values outside of limits for this column/run

# Form 6
## Initial Calibration

8081617 0167

Method: EPA 8151A

Instrument: GC_12

| Level #: | Data File: | Cal Identifier: | Analysis Date/Time | Level #: | Data File: | Cal Identifier: | Analysis Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | 12G18629.D | CAL HERB@50PPB | 08/06/18 12:19 | 2 | 12G18630.D | CAL HERB@100PPB | 08/06/18 12:38 |
| 3 | 12G18628.D | CAL HERB@200PPB | 08/06/18 11:55 | 4 | 12G18631.D | CAL HERB@400PPB | 08/06/18 12:58 |
| 5 | 12G18632.D | CAL HERB@500PPB | 08/06/18 13:17 | 6 | 12G18633.D | CAL HERB@600PPB | 08/06/18 13:37 |

| Compound | Col | Mr | Fit: | RF1 | RF2 | RF3 | RF4 | RF5 | RF6 | RF7 | RF8 | AvgRf | RT | Corr1 | Corr2 | %Rsd | Calibration Level Concentrations Lvl1 | Lvl2 | Lvl3 | Lvl4 | Lvl5 | Lvl6 | Lvl7 | Lvl8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dalapon | 1 | 0 | Avg | 31.852 | 31.217 | 31.032 | 31.618 | 28.180 | 28.350 | ---- | ---- | 30.4 | 4.63 | 0.994 | 0.997 | 5.5 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dcaa-Surrogate | 1 | 0 | Avg | 22.471 | 22.512 | 25.563 | 27.707 | 24.273 | 24.607 | ---- | ---- | 24.5 | 8.31 | 0.991 | 0.995 | 8.1 | 250.0 | 500.0 | 1000. | 2000. | 2500. | 3000. | | |
| Dicamba | 1 | 0 | Avg | 82.795 | 83.019 | 90.163 | 94.606 | 81.955 | 82.768 | ---- | ---- | 85.9 | 8.46 | 0.989 | 0.995 | 6.1 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dichloroprop | 1 | 0 | Avg | 22.638 | 22.107 | 23.006 | 23.440 | 20.035 | 20.003 | ---- | ---- | 21.9 | 9.03 | 0.986 | 0.994 | 6.9 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4-D | 1 | 0 | Avg | 27.574 | 27.279 | 28.818 | 29.191 | 25.086 | 25.029 | ---- | ---- | 27.2 | 9.33 | 0.987 | 0.995 | 6.6 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Silvex | 1 | 0 | Avg | 121.62 | 123.09 | 137.45 | 145.07 | 123.98 | 126.88 | ---- | ---- | 130 | 9.92 | 0.988 | 0.993 | 7.3 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4,5-T | 1 | 0 | Avg | 114.61 | 116.13 | 130.54 | 138.37 | 117.96 | 119.19 | ---- | ---- | 123 | 10.31 | 0.986 | 0.993 | 7.7 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4-DB | 1 | 0 | Avg | 18.554 | 16.253 | 18.537 | 17.920 | 15.270 | 15.229 | ---- | ---- | 17.0 | 10.73 | 0.984 | 0.994 | 9.2 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dinoseb | 1 | 0 | Avg | 74.135 | 67.990 | 83.028 | 87.647 | 75.497 | 74.676 | ---- | ---- | 77.2 | 11.23 | 0.985 | 0.994 | 9.1 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Picloram | 1 | 0 | Avg | 142.83 | 141.55 | 173.56 | 187.51 | 173.15 | 175.23 | ---- | ---- | 166 | 12.25 | 0.996 | 0.998 | 11 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dalapon | 2 | 0 | Avg | 9.9485 | 9.2934 | 9.6218 | 9.4052 | 8.4629 | 8.4248 | ---- | ---- | 9.19 | 4.41 | 0.994 | 0.998 | 6.8 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dcaa-Surrogate | 2 | 0 | Avg | 7.0278 | 6.8469 | 7.6809 | 7.7211 | 6.6345 | 6.6760 | ---- | ---- | 7.10 | 8.19 | 0.987 | 0.995 | 6.9 | 250.0 | 500.0 | 1000. | 2000. | 2500. | 3000. | | |
| Dicamba | 2 | 0 | Avg | 25.950 | 25.288 | 27.762 | 27.382 | 23.471 | 23.373 | ---- | ---- | 25.5 | 8.38 | 0.985 | 0.995 | 7.3 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dichloroprop | 2 | 0 | Avg | 7.3420 | 6.9789 | 7.3080 | 7.0813 | 5.9973 | 5.9518 | ---- | ---- | 6.78 | 8.77 | 0.983 | 0.994 | 9.4 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4-D | 2 | 0 | Avg | 9.0639 | 8.5318 | 9.1742 | 8.8313 | 7.4514 | 7.4141 | ---- | ---- | 8.41 | 9.10 | 0.982 | 0.994 | 9.4 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Silvex | 2 | 0 | Avg | 38.137 | 37.496 | 41.259 | 40.663 | 34.594 | 34.544 | ---- | ---- | 37.8 | 9.62 | 0.984 | 0.994 | 7.6 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4,5-T | 2 | 0 | Avg | 34.877 | 34.911 | 36.486 | 37.719 | 32.510 | 32.507 | ---- | ---- | 34.8 | 10.04 | 0.992 | 0.996 | 6.0 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| 2,4-DB | 2 | 0 | Avg | 5.1090 | 4.9351 | 5.3706 | 5.2595 | 4.4494 | 4.4275 | ---- | ---- | 4.93 | 10.40 | 0.983 | 0.994 | 8.2 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Dinoseb | 2 | 0 | Avg | 25.817 | 23.143 | 26.860 | 26.719 | 22.354 | 22.409 | ---- | ---- | 24.6 | 10.13 | 0.981 | 0.992 | 8.7 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |
| Picloram | 2 | 0 | Avg | 44.774 | 43.374 | 51.687 | 51.992 | 47.064 | 47.206 | ---- | ---- | 47.7 | 12.05 | 0.994 | 0.997 | 7.4 | 50.00 | 100.0 | 200.0 | 400.0 | 500.0 | 600.0 | | |

Avg Rsd Col 1: 7.78  Avg Rsd Col 2: 7.77

***Flags***

c - failed the initial calibration criteria(if applicable)

***Note:***

Col = Column Number
Mr = MultiPeak Analyte 0=single peak analyte, >0=multi peak analyte (i.e. pcb/chlordane etc..)
Fit = Indicates whether Avg RF, Linear, or Quadratic Curve was used for compound.
Corr 1 = Correlation Coefficient for linear Eq.
Corr 2 = Correlation Coefficient for quad Eq.

All Response Factors = Response Factors / 10000
Initial Calibration Criteria: either %RSD <=20 or Corr >= .995
Columns: Signal #1 db-1701 ; Signal #2 db-608

^Lvl: These compounds use a single pt calibration as specified by the method. The file used to update this calibration point is listed in the header under level #

# Form7
Continuing Calibration

Method: EPA 8151A

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | | 12G18743.D | | | 12G18759.D | | | | | | | | | | |
| **Method:** | | | | 8151 | | | 8151 | | | | | | | | | | |
| **Calibration Name:** | | | | CAL HERB@200P | | | CAL HERB@200P | | | | | | | | | | |
| **Calibration Date/Time** | | | | 08/20/18 11:43 | | | 08/20/18 17:14 | | | | | | | | | | |
| | | | | Conc | | | Conc | | | Conc | | | Conc | | | Conc | | |
| Compound | Limit | Col | Mr | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff | Conc | Exp | %Diff |
| Dalapon | 15 | 1 | 0 | 199.6 | 200 | 0.2 | 206.8 | 200 | 3.4 | | | | | | | | | |
| Dcaa-Surrogate | 15 | 1 | 0 | 1072 | 1000 | 7.2 | 1070 | 1000 | 7.0 | | | | | | | | | |
| Dicamba | 15 | 1 | 0 | 221.7 | 200 | 10.9 | 218.4 | 200 | 9.2 | | | | | | | | | |
| Dichloroprop | 15 | 1 | 0 | 218.3 | 200 | 9.2 | 217.9 | 200 | 8.9 | | | | | | | | | |
| 2,4-D | 15 | 1 | 0 | 222.5 | 200 | 11.2 | 211.2 | 200 | 5.6 | | | | | | | | | |
| Silvex | 15 | 1 | 0 | 220.7 | 200 | 10.4 | 214.1 | 200 | 7.0 | | | | | | | | | |
| 2,4,5-T | 15 | 1 | 0 | 220.1 | 200 | 10.0 | 214.1 | 200 | 7.0 | | | | | | | | | |
| 2,4-DB | 15 | 1 | 0 | 216 | 200 | 8.0 | 214.3 | 200 | 7.2 | | | | | | | | | |
| Dinoseb | 15 | 1 | 0 | 242.1 | 200 | 21.0* | 227.9 | 200 | 14.0 | | | | | | | | | |
| Picloram | 15 | 1 | 0 | 203.7 | 200 | 1.8 | 207.0 | 200 | 3.5 | | | | | | | | | |
| Average Difference | 15 | 1 | 0 | | | 9.0 | | | 7.3 | | | | | | | | | |
| Dalapon | 15 | 2 | 0 | 196.8 | 200 | 1.6 | 198.8 | 200 | 0.6 | | | | | | | | | |
| Dcaa-Surrogate | 15 | 2 | 0 | 1082 | 1000 | 8.2 | 1069 | 1000 | 6.9 | | | | | | | | | |
| Dicamba | 15 | 2 | 0 | 220.2 | 200 | 10.1 | 213.5 | 200 | 6.7 | | | | | | | | | |
| Dichloroprop | 15 | 2 | 0 | 220.4 | 200 | 10.2 | 210 | 200 | 5.0 | | | | | | | | | |
| 2,4-D | 15 | 2 | 0 | 220.7 | 200 | 10.4 | 207.4 | 200 | 3.7 | | | | | | | | | |
| Silvex | 15 | 2 | 0 | 223.7 | 200 | 11.8 | 216.6 | 200 | 8.3 | | | | | | | | | |
| 2,4,5-T | 15 | 2 | 0 | 208.3 | 200 | 4.1 | 209.8 | 200 | 4.9 | | | | | | | | | |
| 2,4-DB | 15 | 2 | 0 | 226.8 | 200 | 13.4 | 217.3 | 200 | 8.7 | | | | | | | | | |
| Dinoseb | 15 | 2 | 0 | 250 | 200 | 25.0* | 230.3 | 200 | 15.2 | | | | | | | | | |
| Picloram | 15 | 2 | 0 | 209.4 | 200 | 4.7 | 212.3 | 200 | 6.2 | | | | | | | | | |
| Average Difference | 15 | 2 | 0 | | | 10.0 | | | 6.6 | | | | | | | | | |

***Flags/Notes:*** **** - Values outside of limits for this column/run***

# Form7
RtWindow Summary

Method: EPA 8151A

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Data File:** | | | 12G18629.D | | 12G18743.D | | | | | | |
| **Calibration Name:** | | | CAL HERB@50PPB | | CAL HERB@200PPB | | | | | | |
| **Calibration Date/Time** | | | 8/6/2018 12:19:20 PM | | 8/20/2018 11:43:09 AM | | | | | | |
| Compound | Col | Mr | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit | Cal RT | Limit |
| Dalapon | 1 | 0 | 4.63 | (4.59 - 4.67) | 4.63 | (4.59 - 4.67) | | | | | | |
| Dcaa-Surrogate | 1 | 0 | | | | | | | | | | |
| Dicamba | 1 | 0 | 8.45 | (8.41 - 8.49) | 8.44 | (8.40 - 8.48) | | | | | | |
| Dichloroprop | 1 | 0 | 9.03 | (8.99 - 9.07) | 9.01 | (8.97 - 9.05) | | | | | | |
| 2,4-D | 1 | 0 | 9.33 | (9.29 - 9.37) | 9.32 | (9.28 - 9.36) | | | | | | |
| Silvex | 1 | 0 | 9.92 | (9.88 - 9.96) | 9.91 | (9.87 - 9.95) | | | | | | |
| 2,4,5-T | 1 | 0 | 10.31 | (10.27 - 10.35) | 10.30 | (10.26 - 10.34) | | | | | | |
| 2,4-DB | 1 | 0 | 10.73 | (10.69 - 10.77) | 10.72 | (10.68 - 10.76) | | | | | | |
| Dinoseb | 1 | 0 | 11.23 | (11.19 - 11.27) | 11.22 | (11.18 - 11.26) | | | | | | |
| Picloram | 1 | 0 | 12.25 | (12.21 - 12.29) | 12.24 | (12.20 - 12.28) | | | | | | |
| Dalapon | 2 | 0 | 4.41 | (4.37 - 4.45) | 4.41 | (4.37 - 4.45) | | | | | | |
| Dcaa-Surrogate | 2 | 0 | | | | | | | | | | |
| Dicamba | 2 | 0 | 8.37 | (8.33 - 8.41) | 8.36 | (8.32 - 8.40) | | | | | | |
| Dichloroprop | 2 | 0 | 8.77 | (8.73 - 8.81) | 8.76 | (8.72 - 8.80) | | | | | | |
| 2,4-D | 2 | 0 | 9.10 | (9.06 - 9.14) | 9.09 | (9.05 - 9.13) | | | | | | |
| Silvex | 2 | 0 | 9.61 | (9.57 - 9.65) | 9.61 | (9.57 - 9.65) | | | | | | |
| 2,4,5-T | 2 | 0 | 10.04 | (10.00 - 10.08) | 10.03 | (9.99 - 10.07) | | | | | | |
| 2,4-DB | 2 | 0 | 10.40 | (10.36 - 10.44) | 10.40 | (10.36 - 10.44) | | | | | | |
| Dinoseb | 2 | 0 | 10.13 | (10.09 - 10.17) | 10.12 | (10.08 - 10.16) | | | | | | |
| Picloram | 2 | 0 | 12.05 | (12.01 - 12.09) | 12.05 | (12.01 - 12.09) | | | | | | |

# Metal Data

# Form1
## Inorganic Analysis Data Sheet

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID: | AD05999-001 | % Solid: | 95 | Lab Name: | Hampton-Clarke | Nras No: | |
| Client Id: | SS-1 | Units: | MG/KG | Lab Code: | | Sdg No: | |
| Matrix: | SOIL | Date Rec: | 8/16/2018 | Contract: | | Case No: | |
| Level: | LOW | | | | | | |

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 210 | 610 | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A2 | 16 | P | PEICPRAD2A |
| 7440-39-3 | Barium | 11 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |
| 7440-70-2 | Calcium | 1100 | 1100 | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A2 | 16 | P | PEICPRAD2A |
| 7440-47-3 | Chromium | 5.3 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |
| 7440-48-4 | Cobalt | 2.6 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |
| 7440-50-8 | Copper | 5.3 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |
| 7439-89-6 | Iron | 210 | 1400 | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A2 | 16 | P | PEICPRAD2A |
| 7439-92-1 | Lead | 5.3 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |
| 7439-95-4 | Magnesium | 530 | 730 | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A2 | 16 | P | PEICPRAD2A |
| 7439-96-5 | Manganese | 11 | 18 | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |
| 7439-97-6 | Mercury | 0.088 | ND | 1 | 0.15 | 25 | 08/23/18 | 70604 | H22993S | 16 | CV | HGCV1A |
| 7440-02-0 | Nickel | 5.3 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |
| 7440-09-7 | Potassium | 530 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A2 | 16 | P | PEICPRAD2A |
| 7440-23-5 | Sodium | 260 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A2 | 16 | P | PEICPRAD2A |
| 7440-62-2 | Vanadium | 11 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |
| 7440-66-6 | Zinc | 11 | ND | 1 | 1 | 100 | 08/24/18 | 70604 | S22993A3 | 16 | P | PEICP3A |

Comments: _____

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Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID: | AD05999-001 | % Solid: | 95 | Lab Name: | Hampton-Clarke | Nras No: | |
| Client Id: | SS-1 | Units: | MG/KG | Lab Code: | | Sdg No: | |
| Matrix: | SOIL | Date Rec: | 8/16/2018 | Contract: | | Case No: | |
| Level: | LOW | | | | | | |

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-36-0 | Antimony | 0.84 | ND | 1 | 0.5 | 100 | 08/24/18 | 706052318BNEW | | 55 | MS | MS3_7700SWA |
| 7440-38-2 | Arsenic | 0.21 | 0.39 | 1 | 0.5 | 100 | 08/24/18 | 706052318BNEW | | 55 | MS | MS3_7700SWA |
| 7440-41-7 | Beryllium | 0.21 | ND | 1 | 0.5 | 100 | 08/24/18 | 706052318BNEW | | 55 | MS | MS3_7700SWA |
| 7440-43-9 | Cadmium | 0.42 | ND | 1 | 0.5 | 100 | 08/24/18 | 706052318BNEW | | 55 | MS | MS3_7700SWA |
| 7782-49-2 | Selenium | 2.1 | ND | 1 | 0.5 | 100 | 08/24/18 | 706052318BNEW | | 55 | MS | MS3_7700SWA |
| 7440-22-4 | Silver | 0.21 | ND | 1 | 0.5 | 100 | 08/24/18 | 706052318BNEW | | 55 | MS | MS3_7700SWA |
| 7440-28-0 | Thallium | 0.42 | ND | 1 | 0.5 | 100 | 08/24/18 | 706052318BNEW | | 55 | MS | MS3_7700SWA |

Comments: _____

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Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 70604 (100) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 70604 (100) Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 200 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A2 | 13 | P | PEICPRAD2A |
| 7440-36-0 | Antimony | 4.0 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-39-3 | Barium | 10 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-41-7 | Beryllium | 1.2 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-70-2 | Calcium | 1000 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A2 | 13 | P | PEICPRAD2A |
| 7440-47-3 | Chromium | 5.0 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-48-4 | Cobalt | 2.5 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-50-8 | Copper | 5.0 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7439-89-6 | Iron | 200 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A2 | 13 | P | PEICPRAD2A |
| 7439-92-1 | Lead | 5.0 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7439-95-4 | Magnesium | 500 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A2 | 13 | P | PEICPRAD2A |
| 7439-96-5 | Manganese | 10 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7439-98-7 | Molybdenum | 2.5 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-02-0 | Nickel | 5.0 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-09-7 | Potassium | 500 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A2 | 13 | P | PEICPRAD2A |
| 7440-23-5 | Sodium | 250 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A2 | 13 | P | PEICPRAD2A |
| 7440-28-0 | Thallium | 5.0 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-31-5 | Tin | 20 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-32-6 | Titanium | 10 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-62-2 | Vanadium | 10 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |
| 7440-66-6 | Zinc | 10 | ND | 1 | 0.5 | 50 | 08/24/18 | 70604 | S22993A3 | 13 | P | PEICP3A |

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 70605 (100) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 70605 (100) Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-36-0 | Antimony | 0.80 | ND | 1 | 0.5 | 100 | 08/24/18 | 70605 | 2318BNEW | 52 | MS | MS3_7700SWA |
| 7440-38-2 | Arsenic | 0.20 | ND | 1 | 0.5 | 100 | 08/24/18 | 70605 | 2318BNEW | 52 | MS | MS3_7700SWA |
| 7440-41-7 | Beryllium | 0.20 | ND | 1 | 0.5 | 100 | 08/24/18 | 70605 | 2318BNEW | 52 | MS | MS3_7700SWA |
| 7440-43-9 | Cadmium | 0.40 | ND | 1 | 0.5 | 100 | 08/24/18 | 70605 | 2318BNEW | 52 | MS | MS3_7700SWA |
| 7782-49-2 | Selenium | 2.0 | ND | 1 | 0.5 | 100 | 08/24/18 | 70605 | 2318BNEW | 52 | MS | MS3_7700SWA |
| 7440-22-4 | Silver | 0.20 | ND | 1 | 0.5 | 100 | 08/24/18 | 70605 | 2318BNEW | 52 | MS | MS3_7700SWA |
| 7440-28-0 | Thallium | 0.40 | ND | 1 | 0.5 | 100 | 08/24/18 | 70605 | 2318BNEW | 52 | MS | MS3_7700SWA |

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 70604 (167) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 70604 (167) Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.083 | ND | 1 | 0.15 | 25 | 08/23/18 | 70604 | H22993S | 11 | CV | HGCV1A |

Comments: _____

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Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# FORM 2
# (ICV/CCV Summary)

Date Analyzed: 08/23/18
Data File: S082318BNEW
Prep Batch: 70605
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: MS3_7700SWA
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| Analyte | ICV/CCV Amt | ICV V-285828-8 | Rec | CCV V-285832-16 | Rec | CCV V-285832-28 | Rec | CCV V-285832-40 | Rec | CCV V-285832-50 | Rec | CCV V-285832-62 | Rec | CCV V-285832-74 | Rec | CCV V-285832-81 | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 50/50 | 50.57300 | 101 | 50.94500 | 102 | 50.83500 | 102 | 50.81700 | 102 | 51.19200 | 102 | 52.43800 | 105 | 50.27900 | 101 | 49.55800 | 99 |
| Arsenic | 50/50 | 52.05600 | 104 | 50.93700 | 102 | 50.84300 | 102 | 51.17200 | 102 | 50.23700 | 100 | 50.75300 | 102 | 45.68100 | 91 | 49.99300 | 100 |
| Beryllium | 50/50 | 52.04800 | 104 | 50.30700 | 101 | 49.96900 | 100 | 49.39300 | 99 | 50.32200 | 101 | 52.34600 | 105 | 49.53900 | 99 | 47.51800 | 95 |
| Cadmium | 50/50 | 52.54700 | 105 | 50.71600 | 101 | 51.08700 | 102 | 50.90600 | 102 | 51.37300 | 103 | 52.80200 | 106 | 50.68000 | 101 | 50.16200 | 100 |
| Selenium | 50/250 | 52.43100 | 105 | 254.15700 | 102 | 256.49700 | 103 | 256.11100 | 102 | 252.35700 | 101 | 252.94700 | 101 | 229.81500 | 92 | 249.59500 | 100 |
| Silver | 10/50 | 10.21700 | 102 | 50.87700 | 102 | 51.47000 | 103 | 51.22900 | 102 | 51.69100 | 103 | 53.01700 | 106 | 51.28600 | 103 | 50.44600 | 101 |
| Thallium | 50/50 | 52.67100 | 105 | 52.34400 | 105 | 52.39400 | 105 | 52.27000 | 105 | 53.39900 | 107 | 54.40400 | 109 | 52.77000 | 106 | 52.05400 | 104 |

**Notes:** a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

**Qc Limits:** ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

# FORM 2
## LLQCS/LRS Summary)

Date Analyzed: 08/23/18
Data File: S082318BNEW CB 9/6/18
Prep Batch: ~~70615~~ 70605
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: MS3_7700SWA
Units: All units in ppm except Hg and icp-ms in ppb

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
LLQCS/LRS SOURCE: SPEX

| Analyte | LLQCS Spike Amount | LLICV V-285833 | Recovery | Low Limit | High Limit | | LRS Spike Amount | LRS V-285831 | Recovery | Low Limit | High Limit | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Copper** | 10 | 10.308 | 103 | 80 | 120 | | 500 | 498.893 | 100 | 90 | 110 | |
| **Sodium** | 500 | 492.599 | 99 | 80 | 120 | | 50000 | 52427.078 | 105 | 90 | 110 | |
| **Magnesium** | 500 | 523.545 | 105 | 80 | 120 | | 50000 | 51658.191 | 103 | 90 | 110 | |
| **Aluminum** | 500 | 511.608 | 102 | 80 | 120 | | 15000 | 15283.207 | 102 | 90 | 110 | |
| **Potassium** | 500 | 516.807 | 103 | 80 | 120 | | 50000 | 51603.186 | 103 | 90 | 110 | |
| **Calcium** | 500 | 510.225 | 102 | 80 | 120 | | 50000 | 53014.017 | 106 | 90 | 110 | |
| **Vanadium** | 1 | 1.036 | 104 | 80 | 120 | | 500 | 524.446 | 105 | 90 | 110 | |
| **Chromium** | 2 | 2.078 | 104 | 80 | 120 | | 500 | 512.497 | 102 | 90 | 110 | |
| **Manganese** | 6 | 6.128 | 102 | 80 | 120 | | 500 | 511.128 | 102 | 90 | 110 | |
| **Iron** | 500 | 510.105 | 102 | 80 | 120 | | 50000 | 51019.799 | 102 | 90 | 110 | |
| **Beryllium** | 1 | 1.045 | 104 | 80 | 120 | | 500 | 527.561 | 106 | 90 | 110 | |
| **Nickel** | 3 | 3.153 | 105 | 80 | 120 | | 500 | 498.446 | 100 | 90 | 110 | |
| **Lead** | 2 | 2.040 | 102 | 80 | 120 | | 500 | 504.137 | 101 | 90 | 110 | |
| **Zinc** | 20 | 20.029 | 100 | 80 | 120 | | 500 | 485.204 | 97 | 90 | 110 | |
| **Arsenic** | 1 | 1.046 | 105 | 80 | 120 | | 500 | 539.674 | 108 | 90 | 110 | |
| **Selenium** | 10 | 10.497 | 105 | 80 | 120 | | 2500 | 2613.705 | 105 | 90 | 110 | |
| **Molybdenum** | 1 | 1.037 | 104 | 80 | 120 | | 500 | 549.661 | 110 | 90 | 110 | |
| **Silver** | 1 | 1.018 | 102 | 80 | 120 | | 500 | 514.498 | 103 | 90 | 110 | |
| **Cadmium** | 2 | 1.972 | 99 | 80 | 120 | | 500 | 524.703 | 105 | 90 | 110 | |
| **Antimony** | 4 | 4.226 | 106 | 80 | 120 | | 500 | 537.369 | 107 | 90 | 110 | |
| **Barium** | 5 | 5.050 | 101 | 80 | 120 | | 500 | 525.984 | 105 | 90 | 110 | |
| **Thallium** | 2 | 2.029 | 101 | 80 | 120 | | 500 | 506.060 | 101 | 90 | 110 | |
| **Cobalt** | 2 | 2.023 | 101 | 80 | 120 | | 500 | 501.744 | 100 | 90 | 110 | |

**Notes:** a-indicates analyte is outsite the limits.

If linear range sample (LRS) exceeds criteria, high standard becomes upper limit criteria

# FORM 2
## (ICV/CCV Summary)

Date Analyzed: 08/24/18
Data File: S22993A2
Prep Batch: 70604
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: PEICPRAD2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| Analyte | ICV/CCV Amt | ICV V-282698-5 | Rec | CCV V-282698-11 | Rec | CCV V-282698-22 | Rec | CCV V-282698-31 | Rec | CCV V-282698-41 | Rec | | Rec | | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5/5 | 4.95850 | 99 | 5.05266 | 101 | 5.00161 | 100 | 5.04582 | 101 | 5.00360 | 100 | | | | |
| Calcium | 50/50 | 50.61330 | 101 | 51.21670 | 102 | 51.49600 | 103 | 51.45760 | 103 | 51.07640 | 102 | | | | |
| Iron | 5/5 | 4.77135 | 95 | 4.83630 | 97 | 4.84372 | 97 | 4.85921 | 97 | 4.86034 | 97 | | | | |
| Magnesium | 50/50 | 51.33300 | 103 | 52.04960 | 104 | 51.79800 | 104 | 51.73240 | 103 | 51.78590 | 104 | | | | |
| Potassium | 50/50 | 49.54330 | 99 | 51.27680 | 103 | 49.90550 | 100 | 49.27250 | 99 | 48.43290 | 97 | | | | |
| Sodium | 50/50 | 50.64260 | 101 | 51.80820 | 104 | 50.49080 | 101 | 50.07060 | 100 | 49.46380 | 99 | | | | |

**Notes:** a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

**Qc Limits:** ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

# FORM 2
# LLQCS/LRS Summary)

Date Analyzed: 08/24/18
Data File: S22993A2
Prep Batch: 70604
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: PEICPRAD2A
Units: All units in ppm except Hg and icp-ms in ppb

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
LLQCS/LRS SOURCE: SPEX

| Analyte | LLQCS Spike Amount | LLICV V-281815 | Recovery | Low Limit | High Limit | LRS Spike Amount | LRS V-283372 | Recovery | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 0.1 | 0.100195 | 100 | 80 | 120 | 10 | 9.56245 | 96 | 90 | 110 |
| Aluminum | 2.0 | 2.05076 | 103 | 80 | 120 | 500 | 491.366 | 98 | 90 | 110 |
| Boron | 0.2 | 0.214979 | 107 | 80 | 120 | 5 | 4.41883 | 88 a | 90 | 110 |
| Barium | 0.1 | 0.101676 | 102 | 80 | 120 | 20 | 18.8298 | 94 | 90 | 110 |
| Calcium | 10 | 10.2347 | 102 | 80 | 120 | 500 | 470.454 | 94 | 90 | 110 |
| Copper | 0.05 | 0.0461992 | 92 | 80 | 120 | 10 | 9.81311 | 98 | 90 | 110 |
| Iron | 2.0 | 1.96229 | 98 | 80 | 120 | 400 | 393.515 | 98 | 90 | 110 |
| Silicon | 0.1 | 0.113837 | 114 | 80 | 120 | 25 | 24.3027 | 97 | 90 | 110 |
| Magnesium | 5.0 | 5.17999 | 104 | 80 | 120 | 500 | 462.340 | 92 | 90 | 110 |
| Zinc | 0.1 | 0.101608 | 102 | 80 | 120 | 10 | 9.43071 | 94 | 90 | 110 |
| Molybdenum | 0.025 | 0.0201297 | 81 | 80 | 120 | 20 | 18.6733 | 93 | 90 | 110 |
| Sodium | 2.5 | 2.72891 | 109 | 80 | 120 | 1000 | 962.600 | 96 | 90 | 110 |
| Nickel | 0.05 | 0.0501826 | 100 | 80 | 120 | 20 | 18.7575 | 94 | 90 | 110 |
| Selenium | 0.05 | 0.0566964 | 113 | 80 | 120 | 20 | 20.5930 | 103 | 90 | 110 |
| Tin | 0.2 | 0.211872 | 106 | 80 | 120 | 10 | 9.15185 | 92 | 90 | 110 |
| Titanium | 0.1 | 0.101992 | 102 | 80 | 120 | 10 | 9.70859 | 97 | 90 | 110 |
| Vanadium | 0.1 | 0.100207 | 100 | 80 | 120 | 20 | 19.3579 | 97 | 90 | 110 |
| Potassium | 5.0 | 5.76682 | 115 | 80 | 120 | 500 | 525.860 | 105 | 90 | 110 |

**Notes:** a-indicates analyte is outsite the limits.

If linear range sample (LRS) exceeds criteria, high standard becomes upper limit criteria

# FORM 2
## (ICV/CCV Summary)

Date Analyzed: 08/24/18
Data File: S22993A3
Prep Batch: 70604
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: PEICP3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| Analyte | ICV/CCV Amt | ICV V-285444-5 | Rec | CCV V-285444-11 | Rec | CCV V-285444-22 | Rec | CCV V-285444-33 | Rec | CCV V-285444-45 | Rec | CCV V-285444-51 | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | .5/.5 | 0.49085 | 98 | 0.46607 | 93 | 0.48695 | 97 | 0.45620 | 91 | 0.45254 | 91 | 0.44736 | 89 c | | |
| Chromium | .5/.5 | 0.50078 | 100 | 0.47784 | 96 | 0.49944 | 100 | 0.47034 | 94 | 0.47173 | 94 | 0.46882 | 94 | | |
| Cobalt | .5/.5 | 0.51476 | 103 | 0.48904 | 98 | 0.51505 | 103 | 0.48283 | 97 | 0.47702 | 95 | 0.47574 | 95 | | |
| Copper | .5/.5 | 0.51091 | 102 | 0.48356 | 97 | 0.51119 | 102 | 0.48518 | 97 | 0.49518 | 99 | 0.49192 | 98 | | |
| Lead | .5/.5 | 0.49799 | 100 | 0.47461 | 95 | 0.49635 | 99 | 0.46654 | 93 | 0.46354 | 93 | 0.46104 | 92 | | |
| Manganese | .5/.5 | 0.49333 | 99 | 0.46982 | 94 | 0.48974 | 98 | 0.46208 | 92 | 0.46310 | 93 | 0.45805 | 92 | | |
| Nickel | .5/.5 | 0.51795 | 104 | 0.49322 | 99 | 0.51896 | 104 | 0.48610 | 97 | 0.48117 | 96 | 0.48368 | 97 | | |
| Vanadium | .5/.5 | 0.51046 | 102 | 0.48522 | 97 | 0.50722 | 101 | 0.47776 | 96 | 0.48081 | 96 | 0.47960 | 96 | | |
| Zinc | .5/.5 | 0.50954 | 102 | 0.47820 | 96 | 0.50737 | 101 | 0.47467 | 95 | 0.46314 | 93 | 0.46551 | 93 | | |

**Notes:** a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

**Qc Limits:** ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

# FORM 2
## LLQCS/LRS Summary)

Date Analyzed: 08/24/18
Data File: S22993A3
Prep Batch: 70604
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: PEICP3A
Units: All units in ppm except Hg and icp-ms in ppb

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
LLQCS/LRS SOURCE: SPEX

| Analyte | LLQCS Spike Amount | LLICV V-285929 | Recovery | Low Limit | High Limit | LRS Spike Amount | LRS V-285664 | Recovery | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Magnesium | 5.0 | 4.98051 | 100 | 80 | 120 | 500 | 490.902 | 98 | 90 | 110 |
| Silver | 0.015 | 0.0151451 | 101 | 80 | 120 | 0.8 | 0.812244 | 102 | 90 | 110 |
| Aluminum | 2.0 | 1.86055 | 93 | 80 | 120 | 500 | 524.251 | 105 | 90 | 110 |
| Arsenic | 0.04 | 0.0382359 | 96 | 80 | 120 | 20 | 20.6894 | 103 | 90 | 110 |
| Boron | 0.2 | 0.198210 | 99 | 80 | 120 | 5 | 3.87760 | 78 a | 90 | 110 |
| Barium | 0.1 | 0.0934684 | 93 | 80 | 120 | 20 | 19.6128 | 98 | 90 | 110 |
| Beryllium | 0.012 | 0.0125613 | 105 | 80 | 120 | 2 | 1.89962 | 95 | 90 | 110 |
| Calcium | 10 | 9.55008 | 96 | 80 | 120 | 500 | 476.159 | 95 | 90 | 110 |
| Cadmium | 0.012 | 0.0080298 | 67 a | 80 | 120 | 10 | 10.2785 | 103 | 90 | 110 |
| Cobalt | 0.025 | 0.0215498 | 86 | 80 | 120 | 20 | 19.0708 | 95 | 90 | 110 |
| Chromium | 0.05 | 0.0489980 | 98 | 80 | 120 | 20 | 18.9390 | 95 | 90 | 110 |
| Copper | 0.05 | 0.0573797 | 115 | 80 | 120 | 10 | 10.3090 | 103 | 90 | 110 |
| Silicon | 0.1 | 0.100410 | 100 | 80 | 120 | 25 | 22.0027 | 88 a | 90 | 110 |
| Potassium | NA | 8.02727 | | 80 | 120 | 500 | 4323.92 | 865 a | 90 | 110 |
| Zinc | 0.1 | 0.0889962 | 89 | 80 | 120 | 10 | 9.37291 | 94 | 90 | 110 |
| Manganese | 0.1 | 0.0954599 | 95 | 80 | 120 | 10 | 9.51482 | 95 | 90 | 110 |
| Molybdenum | 0.025 | 0.0258050 | 103 | 80 | 120 | 20 | 18.7704 | 94 | 90 | 110 |
| Sodium | NA | 2.97972 | | 80 | 120 | 1000 | 1424.84 | 142 a | 90 | 110 |
| Nickel | 0.05 | 0.0439150 | 88 | 80 | 120 | 20 | 18.3832 | 92 | 90 | 110 |
| Lead | 0.05 | 0.0512586 | 103 | 80 | 120 | 20 | 18.9954 | 95 | 90 | 110 |
| Antimony | 0.04 | 0.0390740 | 98 | 80 | 120 | 20 | 20.1360 | 101 | 90 | 110 |
| Selenium | 0.05 | 0.0457948 | 92 | 80 | 120 | 20 | 19.6541 | 98 | 90 | 110 |
| Tin | 0.2 | 0.198335 | 99 | 80 | 120 | 10 | 10.2737 | 103 | 90 | 110 |
| Titanium | 0.1 | 0.0962652 | 96 | 80 | 120 | 10 | 9.71554 | 97 | 90 | 110 |
| Thallium | 0.05 | 0.0433586 | 87 | 80 | 120 | 20 | 18.3585 | 92 | 90 | 110 |
| Vanadium | 0.1 | 0.0951385 | 95 | 80 | 120 | 20 | 18.9789 | 95 | 90 | 110 |
| Iron | 2.0 | 1.89885 | 95 | 80 | 120 | 400 | 390.358 | 98 | 90 | 110 |

**Notes:** a-indicates analyte is outsite the limits.

If linear range sample (LRS) exceeds criteria, high standard becomes upper limit criteria

# FORM 2
## (ICV/CCV Summary)

Date Analyzed: 08/23/18
Data File: H22993S
Prep Batch: 70604
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV1A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| | | ICV (2)-9 | | CCV-21 | | CCV-33 | | CCV-37 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | ICV/CCV Amt | | Rec | | Rec | | Rec | | Rec | Rec | Rec | Rec | Rec | Rec | Rec |
| Mercury | 20/10 | 20.40030 | 102 | 10.22799 | 102 | 10.27335 | 103 | 10.17527 | 102 | | | | | | |

**Notes:**
a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

**Qc Limits:**
ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 08/23/18
Data File: S082318BNEW
Prep Batch: 70605
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: MS3_7700SWA
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB V-285829-10 | CCB V-285829-17 | CCB V-285829-29 | CCB V-285829-41 | CCB V-285829-51 | CCB V-285829-63 | CCB V-285829-75 | CCB V-285829-82 |
|---|---|---|---|---|---|---|---|---|
| Antimony | 2 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Arsenic | .5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Beryllium | .5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | 1 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Selenium | 5 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Silver | .5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Thallium | 1 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |

| Analyte | MB 70605 (100)-52 |
|---|---|
| Antimony | 400 U |
| Arsenic | 100 U |
| Beryllium | 100 U |
| Cadmium | 200 U |
| Selenium | 1000 U |
| Silver | 100 U |
| Thallium | 200 U |

**Notes:** a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 08/24/18
Data File: S22993A2
Prep Batch: 70604
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: PEICPRAD2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB V-282340-6 | CCB V-282340-12 | CCB V-282340-23 | CCB V-282340-32 | CCB V-282340-42 | MB 70604 (100)-13 |
|---|---|---|---|---|---|---|
| Aluminum | 1 U | 2 U | 2 U | 2 U | 2 U | 100 U |
| Calcium | 5 U | 10 U | 10 U | 10 U | 10 U | 500 U |
| Iron | 1 U | 2 U | 2 U | 2 U | 2 U | 100 U |
| Magnesium | 2.5 U | 5 U | 5 U | 5 U | 5 U | 250 U |
| Potassium | 2.5 U | 5 U | 5 U | 5 U | 5 U | 250 U |
| Sodium | 1.25 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 125 U |

**Notes:** a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 08/24/18
Data File: S22993A3
Prep Batch: 70604
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: PEICP3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB V-283171-6 | CCB V-283171-12 | CCB V-283171-23 | CCB V-283171-34 | CCB V-283171-46 | CCB V-283171-52 | MB 70604 (100)-13 |
|---|---|---|---|---|---|---|---|
| Barium | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | 5 U |
| Chromium | .025 U | .05 U | .05 U | .05 U | .05 U | .05 U | 2.5 U |
| Cobalt | .0125 U | .025 U | .025 U | .025 U | .025 U | .025 U | 1.3 U |
| Copper | .025 U | .05 U | .05 U | .05 U | .05 U | .05 U | 2.5 U |
| Lead | .025 U | .05 U | .05 U | .05 U | .05 U | .05 U | 2.5 U |
| Manganese | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | 5 U |
| Nickel | .025 U | .05 U | .05 U | .05 U | .05 U | .05 U | 2.5 U |
| Vanadium | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | 5 U |
| Zinc | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | 5 U |

**Notes:** a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 08/23/18
Data File: H22993S
Prep Batch: 70604
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV1A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB-10 | CCB-22 | CCB-34 | CCB-38 | MB 70604 (167)-11 |
|---|---|---|---|---|---|
| Mercury | .5 U | .5 U | .5 U | .5 U | 83 U |

**Notes:** a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

# FORM 4
## (ICSA/ICSAB Summary)

Date Analyzed: 08/23/18
Data File: S082318BNEW
Prep Batch: 70605
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: MS3_7700SWA
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICSA/ICSAB: SOURCE: SCP Science

| Analyte | Spk Amt | ICSA V-285830-13 | Rec | Rec | Rec | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 50000 | 48817.92 | 98 | | | | | | | |
| Antimony | 0 | U | | | | | | | | |
| Arsenic | 0 | U | | | | | | | | |
| Beryllium | 0 | U | | | | | | | | |
| Cadmium | 0 | U | | | | | | | | |
| Calcium | 150000 | 153896.6 | 103 | | | | | | | |
| Iron | 125000 | 124469.4 | 100 | | | | | | | |
| Magnesium | 50000 | 49508.79 | 99 | | | | | | | |
| Selenium | 0 | U | | | | | | | | |
| Silver | 0 | U | | | | | | | | |
| Thallium | 0 | U | | | | | | | | |

**Notes:** a-indicates absolute value of the concentration > 2 * Reporting Limits In the ICSA
b-indicates absolute value of the concentration above Reporting Limits but < 2 * Reporting Limits in the ICSA
c-indicates the recovery failed the Qc Criteria in the ICSAB
u-indicates the absolute value of the concentration was below the reporting limit

**Qc Limits:** 200.7, 6020B < 2 * Reporting Limit
6010D < Reporting Limit

# FORM 4
## (ICSA/ICSAB Summary)

Date Analyzed: 08/24/18
Data File: S22993A2
Prep Batch: 70604
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: PEICPRAD2A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICSA/ICSAB: SOURCE: SCP Science

| Analyte | Spk Amt | ICSA V-282430-10 | Rec | Rec | Rec | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 500 | 499.947 | 100 | | | | | | | |
| Calcium | 500 | 494.852 | 99 | | | | | | | |
| Iron | 200 | 196.229 | 98 | | | | | | | |
| Magnesium | 500 | 496.902 | 99 | | | | | | | |
| Sodium | 0 | U | | | | | | | | |

**Notes:** a-indicates absolute value of the concentration > 2 * Reporting Limits In the ICSA
b-indicates absolute value of the concentration above Reporting Limits but < 2 * Reporting Limits in the ICSA
c-indicates the recovery failed the Qc Criteria in the ICSAB
u-indicates the absolute value of the concentration was below the reporting limit

**Qc Limits:** 200.7, 6020B < 2 * Reporting Limit
6010D < Reporting Limit

# FORM 4
## (ICSA/ICSAB Summary)

Date Analyzed: 08/24/18
Data File: S22993A3
Prep Batch: 70604
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: PEICP3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICSA/ICSAB: SOURCE: SCP Science

| Analyte | Spk Amt | ICSA V-285079-10 | Rec | Rec | Rec | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 500 | 484.78 | 97 | | | | | | | |
| Barium | 0 | U | | | | | | | | |
| Calcium | 500 | 466.513 | 93 | | | | | | | |
| Chromium | 0 | U | | | | | | | | |
| Cobalt | 0 | U | | | | | | | | |
| Copper | 0 | U | | | | | | | | |
| Iron | 200 | 184.355 | 92 | | | | | | | |
| Lead | 0 | U | | | | | | | | |
| Magnesium | 500 | 494.143 | 99 | | | | | | | |
| Manganese | 0 | U | | | | | | | | |
| Nickel | 0 | U | | | | | | | | |
| Vanadium | 0 | U | | | | | | | | |
| Zinc | 0 | U | | | | | | | | |

**Notes:** a-indicates absolute value of the concentration > 2 * Reporting Limits In the ICSA
b-indicates absolute value of the concentration above Reporting Limits but < 2 * Reporting Limits in the ICSA
c-indicates the recovery failed the Qc Criteria in the ICSAB
u-indicates the absolute value of the concentration was below the reporting limit

**Qc Limits:** 200.7, 6020B < 2 * Reporting Limit
6010D < Reporting Limit

# FORM5/FORM7

## SPIKE RECOVERY DATA

PREP BATCH: 70604

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 70604

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 70604 | 1 | S22993A2 | 15 | 75.5644 | 87.2 | 87 | | 52 | 148 |
| Barium | 70604 | 1 | S22993A3 | 15 | 1.6612 | 1.83 | 91 | | 82 | 119 |
| Calcium | 70604 | 1 | S22993A2 | 15 | 43.3925 | 46.0 | 94 | | 81 | 119 |
| Chromium | 70604 | 1 | S22993A3 | 15 | 0.6083 | 0.649 | 94 | | 81 | 119 |
| Cobalt | 70604 | 1 | S22993A3 | 15 | 0.4362 | 0.450 | 97 | | 84 | 116 |
| Copper | 70604 | 1 | S22993A3 | 15 | 1.0876 | 1.13 | 96 | | 83 | 117 |
| Iron | 70604 | 1 | S22993A2 | 15 | 136.6090 | 136 | 100 | | 59 | 141 |
| Lead | 70604 | 1 | S22993A3 | 15 | 1.5272 | 1.61 | 95 | | 81 | 119 |
| Magnesium | 70604 | 1 | S22993A2 | 15 | 22.0593 | 23.1 | 95 | | 76 | 124 |
| Manganese | 70604 | 1 | S22993A3 | 15 | 1.9131 | 2.19 | 87 | | 82 | 119 |
| Mercury | 70604 | 5 | H22993S | 15 | 14.7642 | 70.8 | 104 | | 70 | 130 |
| Nickel | 70604 | 1 | S22993A3 | 15 | 1.3989 | 1.47 | 95 | | 82 | 118 |
| Potassium | 70604 | 1 | S22993A2 | 15 | 19.3101 | 20.3 | 95 | | 70 | 130 |
| Sodium | 70604 | 1 | S22993A2 | 15 | 25.1531 | 24.3 | 104 | | 73 | 126 |
| Vanadium | 70604 | 1 | S22993A3 | 15 | 1.1205 | 1.25 | 90 | | 78 | 122 |
| Zinc | 70604 | 1 | S22993A3 | 15 | 1.0983 | 1.21 | 91 | | 80 | 119 |

TxtQcType: LCS Matrix: SOIL SampleID: LCS 70604

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 70604 | 1 | S22993A2 | 14 | 73.6207 | 87.2 | 84 | | 52 | 148 |
| Barium | 70604 | 1 | S22993A3 | 14 | 1.6408 | 1.83 | 90 | | 82 | 119 |
| Calcium | 70604 | 1 | S22993A2 | 14 | 41.3278 | 46.0 | 90 | | 81 | 119 |
| Chromium | 70604 | 1 | S22993A3 | 14 | 0.5894 | 0.649 | 91 | | 81 | 119 |
| Cobalt | 70604 | 1 | S22993A3 | 14 | 0.4302 | 0.450 | 96 | | 84 | 116 |
| Copper | 70604 | 1 | S22993A3 | 14 | 1.0683 | 1.13 | 95 | | 83 | 117 |
| Iron | 70604 | 1 | S22993A2 | 14 | 133.8560 | 136 | 98 | | 59 | 141 |
| Lead | 70604 | 1 | S22993A3 | 14 | 1.5028 | 1.61 | 93 | | 81 | 119 |
| Magnesium | 70604 | 1 | S22993A2 | 14 | 21.3796 | 23.1 | 93 | | 76 | 124 |
| Manganese | 70604 | 1 | S22993A3 | 14 | 1.8916 | 2.19 | 86 | | 82 | 119 |
| Mercury | 70604 | 5 | H22993S | 14 | 13.9133 | 70.8 | 98 | | 70 | 130 |
| Nickel | 70604 | 1 | S22993A3 | 14 | 1.3779 | 1.47 | 94 | | 82 | 118 |
| Potassium | 70604 | 1 | S22993A2 | 14 | 19.2020 | 20.3 | 95 | | 70 | 130 |
| Sodium | 70604 | 1 | S22993A2 | 14 | 24.0957 | 24.3 | 99 | | 73 | 126 |
| Vanadium | 70604 | 1 | S22993A3 | 14 | 1.1018 | 1.25 | 88 | | 78 | 122 |
| Zinc | 70604 | 1 | S22993A3 | 14 | 1.0964 | 1.21 | 91 | | 80 | 119 |

TxtQcType: MSD Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 70604 | 1 | S22993A2 | 19 | S22993A2 | 16 | 12.5238 | 5.7971 | 5.0 | 135 | a | 75 | 125 |
| Barium | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.4984 | 0.1U | 0.5 | 100 | | 75 | 125 |
| Calcium | 70604 | 1 | S22993A2 | 19 | S22993A2 | 16 | 50.5624 | 10.1886 | 50 | 81 | | 75 | 125 |
| Chromium | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.4920 | 0.05U | 0.5 | 98 | | 75 | 125 |
| Cobalt | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.4885 | 0.025U | 0.5 | 98 | | 75 | 125 |
| Copper | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.4985 | 0.05U | 0.5 | 100 | | 75 | 125 |
| Iron | 70604 | 1 | S22993A2 | 19 | S22993A2 | 16 | 24.6525 | 13.3407 | 5.0 | 226 | a | 75 | 125 |
| Lead | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.4794 | 0.05U | 0.5 | 96 | | 75 | 125 |
| Magnesium | 70604 | 1 | S22993A2 | 19 | S22993A2 | 16 | 51.2276 | 6.9691 | 50 | 89 | | 75 | 125 |
| Manganese | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.7375 | 0.1736 | 0.5 | 113 | | 75 | 125 |
| Mercury | 70604 | 1 | H22993S | 19 | H22993S | 16 | 10.2438 | .5U | 10 | 102 | | 75 | 125 |
| Nickel | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.4961 | 0.05U | 0.5 | 99 | | 75 | 125 |
| Potassium | 70604 | 1 | S22993A2 | 19 | S22993A2 | 16 | 48.5644 | 5U | 50 | 97 | | 75 | 125 |
| Sodium | 70604 | 1 | S22993A2 | 19 | S22993A2 | 16 | 48.9376 | 2.5U | 50 | 98 | | 75 | 125 |
| Vanadium | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.5202 | 0.1U | 0.5 | 104 | | 75 | 125 |
| Zinc | 70604 | 1 | S22993A3 | 19 | S22993A3 | 16 | 0.5153 | 0.1U | 0.5 | 103 | | 75 | 125 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7

## SPIKE RECOVERY DATA

PREP BATCH: 70604

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: MS Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 70604 | 1 | S22993A2 | 18 | S22993A2 | 16 | 10.9998 | 5.7971 | 5.000 | 104 | | 75 | 125 |
| Barium | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.4997 | 0.1U | 0.5 | 100 | | 75 | 125 |
| Calcium | 70604 | 1 | S22993A2 | 18 | S22993A2 | 16 | 50.6709 | 10.1886 | 50.000 | 81 | | 75 | 125 |
| Chromium | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.5068 | 0.05U | 0.5 | 101 | | 75 | 125 |
| Cobalt | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.4906 | 0.025U | 0.5 | 98 | | 75 | 125 |
| Copper | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.5084 | 0.05U | 0.5 | 102 | | 75 | 125 |
| Iron | 70604 | 1 | S22993A2 | 18 | S22993A2 | 16 | 21.0229 | 13.3407 | 5.000 | 154 | a | 75 | 125 |
| Lead | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.4738 | 0.05U | 0.5 | 95 | | 75 | 125 |
| Magnesium | 70604 | 1 | S22993A2 | 18 | S22993A2 | 16 | 51.3202 | 6.9691 | 50.000 | 89 | | 75 | 125 |
| Manganese | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.6576 | 0.1736 | 0.5 | 97 | | 75 | 125 |
| Mercury | 70604 | 1 | H22993S | 18 | H22993S | 16 | 10.3985 | .5U | 10 | 104 | | 75 | 125 |
| Nickel | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.4978 | 0.05U | 0.5 | 100 | | 75 | 125 |
| Potassium | 70604 | 1 | S22993A2 | 18 | S22993A2 | 16 | 49.3918 | 5U | 50.00 | 99 | | 75 | 125 |
| Sodium | 70604 | 1 | S22993A2 | 18 | S22993A2 | 16 | 49.8599 | 2.5U | 50.00 | 100 | | 75 | 125 |
| Vanadium | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.5156 | 0.1U | 0.5 | 103 | | 75 | 125 |
| Zinc | 70604 | 1 | S22993A3 | 18 | S22993A3 | 16 | 0.4963 | 0.1U | 0.5 | 99 | | 75 | 125 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7

## SPIKE RECOVERY DATA

PREP BATCH: 70604

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: PS Matrix: SOIL SampleID: AD05999-001

| Analyte | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 1 | S22993A2 | 20 | S22993A2 | 16 | 10.8209 | 5.7971 | 5.0 | 100 | | 75 | 125 |
| Barium | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.5339 | 0.1U | 0.50 | 107 | | 75 | 125 |
| Calcium | 1 | S22993A2 | 20 | S22993A2 | 16 | 61.6854 | 10.1886 | 50 | 103 | | 75 | 125 |
| Chromium | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.5305 | 0.05U | 0.50 | 106 | | 75 | 125 |
| Cobalt | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.5243 | 0.025U | 0.50 | 105 | | 75 | 125 |
| Copper | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.5285 | 0.05U | 0.50 | 106 | | 75 | 125 |
| Iron | 1 | S22993A2 | 20 | S22993A2 | 16 | 18.1878 | 13.3407 | 5.0 | 97 | | 75 | 125 |
| Lead | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.5088 | 0.05U | 0.50 | 102 | | 75 | 125 |
| Magnesium | 1 | S22993A2 | 20 | S22993A2 | 16 | 57.8714 | 6.9691 | 50 | 102 | | 75 | 125 |
| Manganese | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.6765 | 0.1736 | 0.50 | 101 | | 75 | 125 |
| Nickel | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.5348 | 0.05U | 0.50 | 107 | | 75 | 125 |
| Potassium | 1 | S22993A2 | 20 | S22993A2 | 16 | 52.6585 | 5U | 50 | 105 | | 75 | 125 |
| Sodium | 1 | S22993A2 | 20 | S22993A2 | 16 | 52.1080 | 2.5U | 50 | 104 | | 75 | 125 |
| Vanadium | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.5469 | 0.1U | 0.50 | 109 | | 75 | 125 |
| Zinc | 1 | S22993A3 | 20 | S22993A3 | 16 | 0.5338 | 0.1U | 0.50 | 107 | | 75 | 125 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7
## SPIKE RECOVERY DATA
PREP BATCH: 70605

Instrument Type: ICPMS
Analytical Method(s):6020B/200.8

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 70605

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70605 | 1 | S082318B | 54 | 24.3010 | 94.1 | 26 | | 0.021 | 206 |
| Arsenic | 70605 | 1 | S082318B | 54 | 61.1710 | 58.5 | 105 | | 83 | 117 |
| Beryllium | 70605 | 1 | S082318B | 54 | 59.6850 | 59.7 | 100 | | 83 | 118 |
| Cadmium | 70605 | 1 | S082318B | 54 | 269.0190 | 249 | 108 | | 82 | 118 |
| Selenium | 70605 | 1 | S082318B | 54 | 155.0720 | 145 | 107 | | 78 | 121 |
| Silver | 70605 | 1 | S082318B | 54 | 55.2150 | 51.0 | 108 | | 79 | 121 |
| Thallium | 70605 | 1 | S082318B | 54 | 203.0550 | 188 | 108 | | 80 | 120 |

TxtQcType: LCS Matrix: SOIL SampleID: LCS 70605

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70605 | 1 | S082318B | 53 | 24.5290 | 94.1 | 26 | | 0.021 | 206 |
| Arsenic | 70605 | 1 | S082318B | 53 | 60.0520 | 58.5 | 103 | | 83 | 117 |
| Beryllium | 70605 | 1 | S082318B | 53 | 56.7630 | 59.7 | 95 | | 83 | 118 |
| Cadmium | 70605 | 1 | S082318B | 53 | 263.1360 | 249 | 106 | | 82 | 118 |
| Selenium | 70605 | 1 | S082318B | 53 | 150.6230 | 145 | 104 | | 78 | 121 |
| Silver | 70605 | 1 | S082318B | 53 | 54.1690 | 51.0 | 106 | | 79 | 121 |
| Thallium | 70605 | 1 | S082318B | 53 | 203.4530 | 188 | 108 | | 80 | 120 |

TxtQcType: MSD Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70605 | 1 | S082318B | 58 | S082318B | 55 | 202.0970 | 4U | 250 | 81 | | 75 | 125 |
| Arsenic | 70605 | 1 | S082318B | 58 | S082318B | 55 | 213.3350 | 1.8490 | 250 | 85 | | 75 | 125 |
| Beryllium | 70605 | 1 | S082318B | 58 | S082318B | 55 | 199.2510 | 1U | 250 | 80 | | 75 | 125 |
| Cadmium | 70605 | 1 | S082318B | 58 | S082318B | 55 | 215.1880 | 2U | 250 | 86 | | 75 | 125 |
| Selenium | 70605 | 1 | S082318B | 58 | S082318B | 55 | 212.4530 | 10U | 250 | 85 | | 75 | 125 |
| Silver | 70605 | 1 | S082318B | 58 | S082318B | 55 | 37.2330 | 1U | 50 | 74 | a | 75 | 125 |
| Thallium | 70605 | 1 | S082318B | 58 | S082318B | 55 | 215.2220 | 2U | 250 | 86 | | 75 | 125 |

TxtQcType: MS Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70605 | 1 | S082318B | 57 | S082318B | 55 | 182.2480 | 4U | 250 | 73 | a | 75 | 125 |
| Arsenic | 70605 | 1 | S082318B | 57 | S082318B | 55 | 205.4420 | 1.8490 | 250 | 81 | | 75 | 125 |
| Beryllium | 70605 | 1 | S082318B | 57 | S082318B | 55 | 185.5830 | 1U | 250 | 74 | a | 75 | 125 |
| Cadmium | 70605 | 1 | S082318B | 57 | S082318B | 55 | 209.1600 | 2U | 250 | 84 | | 75 | 125 |
| Selenium | 70605 | 1 | S082318B | 57 | S082318B | 55 | 202.4520 | 10U | 250 | 81 | | 75 | 125 |
| Silver | 70605 | 1 | S082318B | 57 | S082318B | 55 | 37.0480 | 1U | 50 | 74 | a | 75 | 125 |
| Thallium | 70605 | 1 | S082318B | 57 | S082318B | 55 | 207.9690 | 2U | 250 | 83 | | 75 | 125 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7
## SPIKE RECOVERY DATA
PREP BATCH: 70605

Instrument Type: ICPMS
Analytical Method(s):6020B/200.8

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: PS  Matrix: SOIL  SampleID: AD05999-001

| Analyte | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 1 | S082318B | 59 | S082318B | 55 | 50.3900 | 4U | 50 | 101 | | 75 | 125 |
| Arsenic | 1 | S082318B | 59 | S082318B | 55 | 51.9980 | 1.8490 | 50 | 100 | | 75 | 125 |
| Beryllium | 1 | S082318B | 59 | S082318B | 55 | 45.8400 | 1U | 50 | 92 | | 75 | 125 |
| Cadmium | 1 | S082318B | 59 | S082318B | 55 | 49.7360 | 2U | 50 | 99 | | 75 | 125 |
| Selenium | 1 | S082318B | 59 | S082318B | 55 | 246.6980 | 10U | 250 | 99 | | 75 | 125 |
| Silver | 1 | S082318B | 59 | S082318B | 55 | 50.6190 | 1U | 50 | 101 | | 75 | 125 |
| Thallium | 1 | S082318B | 59 | S082318B | 55 | 51.3450 | 2U | 50 | 103 | | 75 | 125 |

a-Indicates Recovery Failed the criteria  b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM6/FORM9

## RPD/%Difference Data

PREP BATCH: 70604

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 70604

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 70604 | S22993A2 | 15 | S22993A2 | 14 | 75.5644 | 73.6207 | 2.6 | | 20 |
| Barium | 70604 | S22993A3 | 15 | S22993A3 | 14 | 1.6612 | 1.6408 | 1.2 | | 20 |
| Calcium | 70604 | S22993A2 | 15 | S22993A2 | 14 | 43.3925 | 41.3278 | 4.9 | | 20 |
| Chromium | 70604 | S22993A3 | 15 | S22993A3 | 14 | 0.6083 | 0.5894 | 3.1 | | 20 |
| Cobalt | 70604 | S22993A3 | 15 | S22993A3 | 14 | 0.4362 | 0.4302 | 1.4 | | 20 |
| Copper | 70604 | S22993A3 | 15 | S22993A3 | 14 | 1.0876 | 1.0683 | 1.8 | | 20 |
| Iron | 70604 | S22993A2 | 15 | S22993A2 | 14 | 136.6090 | 133.8560 | 2 | | 20 |
| Lead | 70604 | S22993A3 | 15 | S22993A3 | 14 | 1.5272 | 1.5028 | 1.6 | | 20 |
| Magnesium | 70604 | S22993A2 | 15 | S22993A2 | 14 | 22.0593 | 21.3796 | 3.1 | | 20 |
| Manganese | 70604 | S22993A3 | 15 | S22993A3 | 14 | 1.9131 | 1.8916 | 1.1 | | 20 |
| Mercury | 70604 | H22993S | 15 | H22993S | 14 | 14.7642 | 13.9133 | 5.9 | | 20 |
| Nickel | 70604 | S22993A3 | 15 | S22993A3 | 14 | 1.3989 | 1.3779 | 1.5 | | 20 |
| Potassium | 70604 | S22993A2 | 15 | S22993A2 | 14 | 19.3101 | 19.2020 | .56 | | 20 |
| Sodium | 70604 | S22993A2 | 15 | S22993A2 | 14 | 25.1531 | 24.0957 | 4.3 | | 20 |
| Vanadium | 70604 | S22993A3 | 15 | S22993A3 | 14 | 1.1205 | 1.1018 | 1.7 | | 20 |
| Zinc | 70604 | S22993A3 | 15 | S22993A3 | 14 | 1.0983 | 1.0964 | .18 | | 20 |

TxtQcType: MR Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 70604 | S22993A2 | 17 | S22993A2 | 16 | 6.0582 | 5.7971 | 4.4 | | 20 |
| Barium | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.1U | 0.1U | --- | | 20 |
| Calcium | 70604 | S22993A2 | 17 | S22993A2 | 16 | 10U | 10.1886 | --- | | 20 |
| Chromium | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.05U | 0.05U | --- | | 20 |
| Cobalt | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.025U | 0.025U | --- | | 20 |
| Copper | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.05U | 0.05U | --- | | 20 |
| Iron | 70604 | S22993A2 | 17 | S22993A2 | 16 | 19.5359 | 13.3407 | 38 | a | 20 |
| Lead | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.05U | 0.05U | --- | | 20 |
| Magnesium | 70604 | S22993A2 | 17 | S22993A2 | 16 | 5U | 6.9691 | --- | | 20 |
| Manganese | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.2006 | 0.1736 | 14 | | 20 |
| Mercury | 70604 | H22993S | 17 | H22993S | 16 | .5U | .5U | --- | | 20 |
| Nickel | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.05U | 0.05U | --- | | 20 |
| Potassium | 70604 | S22993A2 | 17 | S22993A2 | 16 | 5U | 5U | --- | | 20 |
| Sodium | 70604 | S22993A2 | 17 | S22993A2 | 16 | 2.5U | 2.5U | --- | | 20 |
| Vanadium | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.1U | 0.1U | --- | | 20 |
| Zinc | 70604 | S22993A3 | 17 | S22993A3 | 16 | 0.1U | 0.1U | --- | | 20 |

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

# FORM6/FORM9

## RPD/%Difference Data

PREP BATCH: 70604

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: MSD Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | Data Fil | Seq#: | MS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 70604 | S22993A2 | 19 | S22993A2 | 18 | 12.5238 | 10.9998 | 13 | 20 |
| Barium | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.4984 | 0.4997 | .27 | 20 |
| Calcium | 70604 | S22993A2 | 19 | S22993A2 | 18 | 50.5624 | 50.6709 | .21 | 20 |
| Chromium | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.4920 | 0.5068 | 3 | 20 |
| Cobalt | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.4885 | 0.4906 | .42 | 20 |
| Copper | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.4985 | 0.5084 | 2 | 20 |
| Iron | 70604 | S22993A2 | 19 | S22993A2 | 18 | 24.6525 | 21.0229 | 16 | 20 |
| Lead | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.4794 | 0.4738 | 1.2 | 20 |
| Magnesium | 70604 | S22993A2 | 19 | S22993A2 | 18 | 51.2276 | 51.3202 | .18 | 20 |
| Manganese | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.7375 | 0.6576 | 11 | 20 |
| Mercury | 70604 | H22993S | 19 | H22993S | 18 | 10.2438 | 10.3985 | 1.5 | 20 |
| Nickel | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.4961 | 0.4978 | .35 | 20 |
| Potassium | 70604 | S22993A2 | 19 | S22993A2 | 18 | 48.5644 | 49.3918 | 1.7 | 20 |
| Sodium | 70604 | S22993A2 | 19 | S22993A2 | 18 | 48.9376 | 49.8599 | 1.9 | 20 |
| Vanadium | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.5202 | 0.5156 | .89 | 20 |
| Zinc | 70604 | S22993A3 | 19 | S22993A3 | 18 | 0.5153 | 0.4963 | 3.7 | 20 |

TxtQcType: SD Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | DF | Result 1 | Result 2 | %Diff | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 70604 | S22993A2 | 21 | S22993A2 | 16 | 5 | 1.1690 | 5.7971 | 0.83 | | 10 |
| Barium | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | 0.0059 | 0.0334 | 11 | a | 10 |
| Calcium | 70604 | S22993A2 | 21 | S22993A2 | 16 | 5 | 1.9235 | 10.1886 | 5.6 | | 10 |
| Chromium | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | 0.0030 | 0.0229 | 34 | c | 10 |
| Cobalt | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | -0.0055 | -0.0011 | --- | | 10 |
| Copper | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | 0.0068 | 0.0207 | 64 | c | 10 |
| Iron | 70604 | S22993A2 | 21 | S22993A2 | 16 | 5 | 2.7034 | 13.3407 | 1.3 | | 10 |
| Lead | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | -0.0002 | 0.0085 | --- | | 10 |
| Magnesium | 70604 | S22993A2 | 21 | S22993A2 | 16 | 5 | 1.2937 | 6.9691 | 7.2 | | 10 |
| Manganese | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | 0.0351 | 0.1736 | 0.98 | | 10 |
| Nickel | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | -0.0086 | -0.0011 | --- | | 10 |
| Potassium | 70604 | S22993A2 | 21 | S22993A2 | 16 | 5 | 0.2505 | 0.7962 | 57 | c | 10 |
| Sodium | 70604 | S22993A2 | 21 | S22993A2 | 16 | 5 | -0.2098 | -0.0873 | --- | | 10 |
| Vanadium | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | 0.0074 | 0.0315 | 17 | c | 10 |
| Zinc | 70604 | S22993A3 | 21 | S22993A3 | 16 | 5 | -0.0022 | 0.0158 | --- | | 10 |

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

# FORM6/FORM9

## RPD/%Difference Data

PREP BATCH: 70605

Instrument Type: ICPMS

Analytical Method(s):6020B/200.8

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 70605

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70605 | S082318B | 54 | S082318B | 53 | 24.3010 | 24.5290 | .93 | 20 |
| Arsenic | 70605 | S082318B | 54 | S082318B | 53 | 61.1710 | 60.0520 | 1.8 | 20 |
| Beryllium | 70605 | S082318B | 54 | S082318B | 53 | 59.6850 | 56.7630 | 5 | 20 |
| Cadmium | 70605 | S082318B | 54 | S082318B | 53 | 269.0190 | 263.1360 | 2.2 | 20 |
| Selenium | 70605 | S082318B | 54 | S082318B | 53 | 155.0720 | 150.6230 | 2.9 | 20 |
| Silver | 70605 | S082318B | 54 | S082318B | 53 | 55.2150 | 54.1690 | 1.9 | 20 |
| Thallium | 70605 | S082318B | 54 | S082318B | 53 | 203.0550 | 203.4530 | .2 | 20 |

TxtQcType: MR Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70605 | S082318B | 56 | S082318B | 55 | 4U | 4U | --- | 20 |
| Arsenic | 70605 | S082318B | 56 | S082318B | 55 | 1.8310 | 1.8490 | 0.98 | 20 |
| Beryllium | 70605 | S082318B | 56 | S082318B | 55 | 1U | 1U | --- | 20 |
| Cadmium | 70605 | S082318B | 56 | S082318B | 55 | 2U | 2U | --- | 20 |
| Selenium | 70605 | S082318B | 56 | S082318B | 55 | 10U | 10U | --- | 20 |
| Silver | 70605 | S082318B | 56 | S082318B | 55 | 1U | 1U | --- | 20 |
| Thallium | 70605 | S082318B | 56 | S082318B | 55 | 2U | 2U | --- | 20 |

TxtQcType: MSD Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | Data Fil | Seq#: | MS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70605 | S082318B | 58 | S082318B | 57 | 202.0970 | 182.2480 | 10 | 20 |
| Arsenic | 70605 | S082318B | 58 | S082318B | 57 | 213.3350 | 205.4420 | 3.8 | 20 |
| Beryllium | 70605 | S082318B | 58 | S082318B | 57 | 199.2510 | 185.5830 | 7.1 | 20 |
| Cadmium | 70605 | S082318B | 58 | S082318B | 57 | 215.1880 | 209.1600 | 2.8 | 20 |
| Selenium | 70605 | S082318B | 58 | S082318B | 57 | 212.4530 | 202.4520 | 4.8 | 20 |
| Silver | 70605 | S082318B | 58 | S082318B | 57 | 37.2330 | 37.0480 | .5 | 20 |
| Thallium | 70605 | S082318B | 58 | S082318B | 57 | 215.2220 | 207.9690 | 3.4 | 20 |

TxtQcType: SD Matrix: SOIL SampleID: AD05999-001

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | DF | Result 1 | Result 2 | %Diff | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70605 | S082318B | 60 | S082318B | 55 | 5 | 0.0590 | 0.0270 | 993 | c | 20 |
| Arsenic | 70605 | S082318B | 60 | S082318B | 55 | 5 | 0.4890 | 1.8490 | 32 | a | 20 |
| Beryllium | 70605 | S082318B | 60 | S082318B | 55 | 5 | 0.2560 | 0.2230 | 474 | c | 20 |
| Cadmium | 70605 | S082318B | 60 | S082318B | 55 | 5 | 0.0320 | 0.0820 | 95 | c | 20 |
| Selenium | 70605 | S082318B | 60 | S082318B | 55 | 5 | 0.2910 | 0.3020 | 382 | c | 20 |
| Silver | 70605 | S082318B | 60 | S082318B | 55 | 5 | 0.0510 | 0.0470 | 443 | c | 20 |
| Thallium | 70605 | S082318B | 60 | S082318B | 55 | 5 | 0.0390 | 0.0900 | 117 | c | 20 |

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

*Hampton-Clarke*

# ICP SAMPLE PREPARATION LOG

**ANALYTICAL METHOD: 3010A 3005A (3050B) 200.7/200.8 OTHER_____**

Batch No.: 22993 Analyst:

QC Number: 70604 Prep Date: 8/21/18

Matrix: Soil Reviewed By: JB

| LAB ID# | ICP | | ICP-MS (Secondary dil) | | TCLP | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | Initial | Final | Aliquot | Final | Eff | TCLP | |
| Method blank | 50ml | 50ml | | | | – | |
| LCS | 0.5g | | | | | – | |
| LCSD | | | | | | – | |
| 1. D05999-001 | | | | | | | Samples are combined prior to analysis to provide extra sample volume for analysis |
| 1. Analytical Duplicate | | | | | | | |
| MR05999-001 | | | | | | | |
| MS05999-001 | | | | | | | Balance used: B-033 |
| MSD05999-001 | | | | | | | Pipettes used: 149, 152 |
| 2. 05721-002 | | | | | | | |
| 3. 06016-002 | | | | | | | Hot Block used: 5 |
| 4. 06018-001 | | | | | | | |
| 5. 06031-001 | | | | | | | |
| 6. -003 | | | | | | | |
| 7. -005 | | | | | | | |
| 8. -007 | | | | | | | |
| 9. -009 | | | | | | | |
| 10. -012 | | | | | | | |
| 11. -014 | | | | | | | |
| 12. -016 | | | | | | | |
| 13. -018 | | | | | | | |
| 14. -020 | | | | | | | |
| 15. 06080-001 | | | | | | | |
| 16. 05917-012 | | | | | | | |
| 17. -013 | | | | | | | |
| 18. -014 | | | | | | | |
| 19. -015 | | | | | | | |
| 20. | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Hot Plate Temperature: 93.6 C (90-95° C) Start Time: 10:45 End Time: 15:10

| | Volume mL | Lot # |
|---|---|---|
| LCS, LCSD | 0.5g | V- 11655 |
| LLLCS, LLLCSD | " | V- |
| MS, MSD | 0.5ml | V- 11732, 11348 |
| LLMS, LLMSD | 0.25ml | V- 28548S |

| Acid | Vol mL | Lot# |
|---|---|---|
| $HNO_3$ | 2.5ml | V-11784 11859 |
| HCl | 5ml | V-11785 |
| $H_2O_2$ | 1.5ml | V-11645 |
| | | |

| Acid | Vol mL | Lot# |
|---|---|---|
| 1:1 $HNO_3$ | 5ml | V-280092 |
| 1:1 HCl | | V- |
| | | |
| | | |

Relinquished By_____ Date 8/21/18

Received By_____ Date 8/22/18

*Hampton-Clarke*

# ICP SAMPLE PREPARATION LOG

**ANALYTICAL METHOD: 3010A 3005A (3050B) 200.7/200.8 OTHER_____**

Batch No.: 22994 Analyst: [signature]

QC Number: 10605 Prep Date: 8/21/18

Matrix: Co20 Soil Reviewed By: SB

| LAB ID# | ICP | | ICP-MS (Secondary dil) | | TCLP | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | Initial | Final | Aliquot | Final | Eff | TCLP | |
| Method blank | 50ml | 50ml | 2.5ml | 50ml | | -- | |
| LCS | 0.1g | | | | | -- | |
| LCSD | ↓ | | | | | -- | |
| 1. D05999-001 Analytical Duplicate | 0.5g | | | | | | Samples are combined prior to analysis to provide extra sample volume for analysis |
| MR D5999-001 | | | | | | | |
| MS D5999-001 | | | | | | | Balance used: B-033 |
| MSD D5999-001 | | | | | | | Pipettes used: 149, 152 |
| 2. D5721-002 | | | | | | | |
| 3. C6016-002 | | | | | | | Hot Block used: 5 |
| 4. D6018-001 | | | | | | | |
| 5. D6031-001 | | | | | | | |
| 6. -003 | | | | | | | |
| 7. -005 | | | | | | | |
| 8. -007 | | | | | | | |
| 9. -009 | | | | | | | |
| 10. -012 | | | | | | | |
| 11. -014 | | | | | | | |
| 12. -016 | | | | | | | |
| 13. -018 | | | | | | | |
| 14. -020 | ↓ | ↓ | ↓ | ↓ | | | |
| 15. | | | | | | | |
| 16. | | | | | | | |
| 17. | | | | | | | |
| 18. | | | | | | | |
| 19. | | | | | | | |
| 20. | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Hot Plate Temperature: 93.8 C (90-95° C) Start Time: 10:45 End Time: 15:08

| | Volume mL | Lot # |
|---|---|---|
| LCS, LCSD | 0.1g | V- 11655 |
| LLLCS, LLLCSD | | V- |
| MS, MSD | 0.5ml | V- 11732, 11348 |
| LLMS, LLMSD | 0.25ml | V- 26548 5 |

| Acid | Vol mL | Lot# |
|---|---|---|
| $HNO_3$ | 2.5ml | V- 11888 59 |
| HCl | | V- |
| $H_2O_2$ | 1.5ml | V- 11645 |
| | | |

| Acid | Vol mL | Lot# |
|---|---|---|
| 1:1 $HNO_3$ | 5ml | V- 28004 2 |
| 1:1 HCl | | V- |
| | | |
| | | |

Relinquished By [signature] Date 8/21/18

Received By [signature] Date 8/22/18

# HG SAMPLE PREPARATION LOG

Hampton-Clarke/Veritech

**ANALYTICAL METHOD:** 245.1 7470A 7471B **OTHER**_____

Batch No.:* 22993

QC Number: 70604

Matrix: Soil

Analyst: [signature]

Prep Date: 8/21/18

Review By: [signature]

| LAB ID# | MERCURY INITIAL | MERCURY FINAL | COMMENTS | STANDARDS |
|---|---|---|---|---|
| Method blank | 25ml | 25ml | | CAL CURVE BLK 0ppb V-286009 |
| LCS | 0.15g | | | |
| LCSD | | | | STD 0.2 ppb V-286010 |
| 05999-001 | | | | STD 0.5 ppb V-286011 |
| MR 05999-001 | | | | STD 1.0 ppb V-286012 |
| MS 05999-001 | | | | STD 2.0 ppb V-286013 |
| MSD 05999-001 | | | | STD 5.0 ppb V-286014 |
| 2 05721-002 | | | | STD 10.0 ppb V-286015 |
| 3 06016-002 | | | | STD 25.0 ppb V-286016 |
| 4 06018-001 | | | | ICV 10.0 ppb V-286007 |
| 5 06031-001 | | | | CCV 20.0 ppb V-286008 |
| 6 -003 | | | | |
| 7 -005 | | | | |
| 8 -007 | | | | Balance used: B-033 |
| 9 -009 | | | | Pipettes used: 121, 159, 135 |
| 10 -012 | | | | |
| 11 -014 | | | | Hot Block used: 6 |
| 12 -016 | | | | |
| 13 -018 | | | | |
| 14 -020 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |
| | | | | |

| Lot Numbers | Volume (mL) | Acid | Volume (mL) | Lot # |
|---|---|---|---|---|
| $KMnO_4$: V-284158 | 3.75ml | $HNO_3$ | | V- |
| $K_2S_2O_8$: V- | | HCl | | V- |
| $NH_2OH$: V-284160 | 1.5ml | $H_2SO_4$ | | V- |
| | | Aqua Regia | 1.25ml | V-286006 |

**Block Temp.: 93.7 °C

Time in Block: 11:30

Time Out of Block: 12:30

Spike Volume & Lot #

☐ LCS V-11655 0.15g 0.25 ml

☐ MS 285772 0.250 ml

☐ Standards/Control Batch B-25561

Start time: 10:45 End Time: 12:00

**Temperature 245.1 / 7470A: 90-95C 7471B : 92-98C

Relinquished By: [signature]

*25 mLs of each standard was digested with this batch using the same reagents and at the same time as the above samples. The preparation of each standard may be referenced in Veriprog using the standard batch number and the corresponding V #s.

HG PREP 2016

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\HGCV1A\H22993S.txt

**Analysis Date:** 08/23/18 **Instrument:** HGCV1A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calibration Blank | 1 | CAL | 16:11 | 1 | | | | | | | 0 |
| .2 PPB | 1 | CAL | 16:13 | 2 | | | | | | | 0 |
| .5 PPB | 1 | CAL | 16:14 | 3 | | | | | | | 0 |
| 1 PPB | 1 | CAL | 16:16 | 4 | | | | | | | 0 |
| 2 PPB | 1 | CAL | 16:17 | 5 | | | | | | | 0 |
| 5 PPB | 1 | CAL | 16:19 | 6 | | | | | | | 0 |
| 10 PPB | 1 | CAL | 16:20 | 7 | | | | | | | 0 |
| 25 PPB | 1 | CAL | 16:22 | 8 | | | | | | | 0 |
| ICV (2) | 1 | ICV | 16:24 | 9 | | | | | | | 0 |
| ICB | 1 | ICB | 16:26 | 10 | | | | | | | 0 |
| MB 70604 (167) | 1 | MB | 16:28 | 11 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| LCS 70604 | 1 | NA | 16:29 | 12 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | CONC.HIGH | 0 |
| LCS MR 70604 | 1 | NA | 16:31 | 13 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | CONC.HIGH | 0 |
| LCS 5D | 5 | LCS | 16:33 | 14 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| LCS MR 5D | 5 | LCS | 16:35 | 15 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD05999-001 | 1 | SMP | 16:37 | 16 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD05999-001 | 1 | MR | 16:39 | 17 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD05999-001 | 1 | MS | 16:40 | 18 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD05999-001 | 1 | MSD | 16:42 | 19 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD05721-002 | 1 | SMP | 16:44 | 20 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| CCV | 1 | CCV | 16:46 | 21 | | | | | | | 0 |
| CCB | 1 | CCB | 16:48 | 22 | | | | | | | 0 |
| AD06016-002 | 1 | SMP | 16:49 | 23 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06018-001 | 1 | SMP | 16:51 | 24 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-001 | 1 | SMP | 16:52 | 25 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-003 | 1 | SMP | 16:54 | 26 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-005 | 1 | SMP | 16:55 | 27 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-007 | 1 | SMP | 16:57 | 28 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-009 | 1 | SMP | 16:58 | 29 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-012 | 1 | SMP | 17:00 | 30 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-014 | 1 | SMP | 17:01 | 31 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-016 | 1 | SMP | 17:03 | 32 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| CCV | 1 | CCV | 17:04 | 33 | | | | | | | 0 |
| CCB | 1 | CCB | 17:06 | 34 | | | | | | | 0 |
| AD06031-018 | 1 | SMP | 17:08 | 35 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| AD06031-020 | 1 | SMP | 17:09 | 36 | HG-SOIL | SOIL | SOIL | SW846 | 70604 | | 0 |
| CCV | 1 | CCV | 17:11 | 37 | | | | | | | 0 |
| CCB | 1 | CCB | 17:13 | 38 | | | | | | | 0 |

**Comments/Reviewedby:**

carmela
192.168.1.70 8/23/2018 5:50:34 PM

OK

8/23/18

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

V-286198

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\MS3_7700SWA\S082318BNEW.txt

**Analysis Date:** 08/23/18 **Instrument:** MS3_7700SWA

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RINSE | 1 | NA | 21:30 | 1 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| CalBlk V-285822 | 1 | ISBLK | 21:34 | 2 | | SOIL | SOIL | | | | V-285822(Cal Blk WARNING) |
| CalStd1 V-285823 | 1 | CAL | 21:39 | 3 | | | | | | | V-285823(Cal Std-1 WARNING) |
| CalStd2 V-285824 | 1 | CAL | 21:43 | 4 | | | | | | | V-285824(Cal Std-2 WARNING) |
| CalStd3 V-285825 | 1 | CAL | 21:47 | 5 | | | | | | | V-285825(Cal Std-3 WARNING) |
| CalStd4 V-285826 | 1 | CAL | 21:51 | 6 | | | | | | | V-285826(Cal Std-4 WARNING) |
| CalStd5 V-285827 | 1 | CAL | 21:56 | 7 | | | | | | | V-285827(Cal Std-5 WARNING) |
| ICV V-285828 | 1 | ICV | 22:00 | 8 | | | | | | | V-285828(ICV WARNING) |
| LLICV V-285833 | 1 | LLICV | 22:04 | 9 | | SOIL | SOIL | SW846 | 70615 | | V-285833(LL-ICV/CCV SOIL WARNING) |
| ICB V-285829 | 1 | ICB | 22:08 | 10 | | | | | | | V-285829(ICB/CCB WARNING) |
| LRS V-285831 | 1 | LRS | 22:13 | 11 | | SOIL | SOIL | SW846 | 70615 | | V-285831(LRS WARNING) |
| RINSE | 1 | NA | 22:18 | 12 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| ICSA V-285830 | 1 | ICSA | 22:22 | 13 | | | | | | | V-285830(ICSA WARNING) |
| RINSE | 1 | NA | 22:26 | 14 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| RINSE | 1 | NA | 22:31 | 15 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| CCV V-285832 | 1 | CCV | 22:35 | 16 | | | | | | | V-285832(CCV WARNING) |
| CCB V-285829 | 1 | CCB | 22:39 | 17 | | | | | | | V-285829(ICB/CCB WARNING) |
| MB 70615 (100) | 1 | MB | 22:43 | 18 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| LCS 70615 | 1 | LCS | 22:48 | 19 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| LCS MR 70615 | 1 | LCS | 22:52 | 20 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06078-004 | 1 | SMP | 22:56 | 21 | MET-5-6020 | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06078-004 | 1 | MR | 23:00 | 22 | MET-5-6020 | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06078-004 | 1 | MS | 23:05 | 23 | MET-5-6020 | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06078-004 | 1 | MSD | 23:09 | 24 | MET-5-6020 | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06078-004 | 1 | PS | 23:13 | 25 | MET-5-6020 | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06078-004 | 5 | SD | 23:17 | 26 | MET-5-6020 | SOIL | SOIL | SW846 | 70615 | | 0 |
| RINSE | 1 | NA | 23:21 | 27 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| CCV V-285832 | 1 | CCV | 23:26 | 28 | | | | | | | V-285832(CCV WARNING) |
| CCB V-285829 | 1 | CCB | 23:30 | 29 | | | | | | | V-285829(ICB/CCB WARNING) |
| AD06078-009 | 1 | SMP | 23:34 | 30 | MET-5-6020 | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06078-013 | 1 | SMP | 23:39 | 31 | MET-5-6020 | SOIL | SOIL | SW846 | 70615 | Be not reported (Sc1 failed) | 0 |
| AD06065-001 | 1 | SMP | 23:43 | 32 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06059-001 | 1 | SMP | 23:47 | 33 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06059-002 | 1 | SMP | 23:51 | 34 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06066-001 | 1 | SMP | 23:55 | 35 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06066-002 | 1 | SMP | 00:00 | 36 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06066-003 | 1 | SMP | 00:04 | 37 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06066-004 | 1 | SMP | 00:08 | 38 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| RINSE | 1 | NA | 00:12 | 39 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| CCV V-285832 | 1 | CCV | 00:16 | 40 | | | | | | | V-285832(CCV WARNING) |
| CCB V-285829 | 1 | CCB | 00:21 | 41 | | | | | | | V-285829(ICB/CCB WARNING) |
| AD06051-001 | 1 | SMP | 00:25 | 42 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06051-002 | 1 | SMP | 00:29 | 43 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06051-003 | 1 | SMP | 00:33 | 44 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06051-004 | 1 | SMP | 00:38 | 45 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06051-005 | 1 | SMP | 00:42 | 46 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06047-001 | 1 | SMP | 00:46 | 47 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| AD06047-002 | 1 | SMP | 00:50 | 48 | MET-TAL6020S | SOIL | SOIL | SW846 | 70615 | | 0 |
| RINSE | 1 | NA | 00:55 | 49 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| CCV V-285832 | 1 | CCV | 00:59 | 50 | | | | | | | V-285832(CCV WARNING) |
| CCB V-285829 | 1 | CCB | 01:03 | 51 | | | | | | | V-285829(ICB/CCB WARNING) |
| MB 70605 (100) | 1 | MB | 01:08 | 52 | | SOIL | SOIL | SW846 | 70605 | | 0 |
| LCS 70605 | 1 | LCS | 01:12 | 53 | | SOIL | SOIL | SW846 | 70605 | | 0 |
| LCS MR 70605 | 1 | LCS | 01:16 | 54 | | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD05999-001 | 1 | SMP | 01:20 | 55 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD05999-001 | 1 | MR | 01:25 | 56 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD05999-001 | 1 | MS | 01:29 | 57 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD05999-001 | 1 | MSD | 01:33 | 58 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD05999-001 | 1 | PS | 01:37 | 59 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD05999-001 | 5 | SD | 01:42 | 60 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |

**Comments/Reviewedby:**

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sean
192.168.1.38 8/24/2018 11:09:14 AM

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OK

8/27/18

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\MS3_7700SWA\S082318BNEW.txt

**Analysis Date:** 08/24/18

**Instrument:** MS3_7700SWA

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RINSE | 1 | NA | 01:46 | 61 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| CCV V-285832 | 1 | CCV | 01:50 | 62 | | | | | | | V-285832(CCV WARNING) |
| CCB V-285829 | 1 | CCB | 01:54 | 63 | | | | | | | V-285829(ICB/CCB WARNING) |
| AD05721-002 | 1 | SMP | 01:59 | 64 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06016-002 | 1 | SMP | 02:03 | 65 | MET-RCRA-MS | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06018-001 | 1 | SMP | 02:07 | 66 | MET-RCRA-MS | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06031-001 | 1 | SMP | 02:11 | 67 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | Be not reported (Scl failed) | 0 |
| AD06031-003 | 1 | SMP | 02:16 | 68 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06031-005 | 1 | SMP | 02:20 | 69 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06031-007 | 1 | SMP | 02:24 | 70 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | Be not reported (Scl failed) | 0 |
| AD06031-009 | 1 | SMP | 02:28 | 71 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06031-012 | 1 | SMP | 02:33 | 72 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| RINSE | 1 | NA | 02:37 | 73 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| CCV V-285832 | 1 | CCV | 02:41 | 74 | | | | | | | V-285832(CCV WARNING) |
| CCB V-285829 | 1 | CCB | 02:45 | 75 | | | | | | | V-285829(ICB/CCB WARNING) |
| AD06031-014 | 1 | SMP | 02:50 | 76 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06031-016 | 1 | SMP | 02:54 | 77 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06031-018 | 1 | SMP | 02:58 | 78 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| AD06031-020 | 1 | SMP | 03:02 | 79 | MET-TAL6020S | SOIL | SOIL | SW846 | 70605 | | 0 |
| RINSE | 1 | NA | 03:06 | 80 | | SOIL | SOIL | SW846 | 70615 | | 0 |
| CCV V-285832 | 1 | CCV | 03:11 | 81 | | | | | | | V-285832(CCV WARNING) |
| CCB V-285829 | 1 | CCB | 03:15 | 82 | | | | | | | V-285829(ICB/CCB WARNING) |

**Comments/Reviewedby:**

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sean
192.168.1.38 8/24/2018 11:09:14 AM

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OK

8/27/18

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\PEICP3A\S22993A3.txt

**Analysis Date:** 08/24/18 **Instrument:** PEICP3A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CALBLK V-283171 | 1 | CAL | 06:36 | 1 | | | | | | | V-283171(ICB/CCB) |
| CALST2 V-285929 | 1 | CAL | 06:40 | 2 | | | | | | | V-285929(LLICV/LLCCV soil) |
| CALST3 V-285445 | 1 | CAL | 06:43 | 3 | | | | | | | V-285445(ICS3 - Middle Std) |
| CALST4 V-285446 | 1 | CAL | 06:47 | 4 | | | | | | | V-285446(ICS4 High std) |
| ICV V-285444 | 1 | ICV | 06:51 | 5 | | | | | | | V-285444(CCV) |
| ICB V-283171 | 1 | ICB | 06:55 | 6 | | | | | | | V-283171(ICB/CCB) |
| LRS V-285664 | 1 | LRS | 06:59 | 7 | | SOIL | SOIL | SW846 | 70604 | | V-285664(LRS) |
| ICS3 V-285445 | 1 | ICS | 07:03 | 8 | | | | | | | V-285445(ICS3 - Middle Std) |
| LLICV V-285929 | 1 | LLICV | 07:06 | 9 | | SOIL | SOIL | SW846 | 70604 | | V-285929(LLICV/LLCCV soil) |
| ICSA V-285079 | 1 | ICSA | 07:10 | 10 | | | | | | | V-285079(ICSA) |
| CCV V-285444 | 1 | CCV | 07:15 | 11 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 07:19 | 12 | | | | | | | V-283171(ICB/CCB) |
| MB 70604 (100) | 1 | MB | 07:22 | 13 | | SOIL | SOIL | SW846 | 70604 | | () |
| LCS 70604 | 1 | LCS | 07:26 | 14 | | SOIL | SOIL | SW846 | 70604 | | () |
| LCS MR 70604 | 1 | LCS | 07:30 | 15 | | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | SMP | 07:35 | 16 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | MR | 07:38 | 17 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | MS | 07:42 | 18 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | MSD | 07:46 | 19 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | PS | 07:50 | 20 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 5 | SD | 07:54 | 21 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| CCV V-285444 | 1 | CCV | 07:57 | 22 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 08:01 | 23 | | | | | | | V-283171(ICB/CCB) |
| AD05721-002 | 1 | SMP | 08:05 | 24 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | V NOT reported (Fe> LR) | () |
| AD06016-002 | 1 | SMP | 08:09 | 25 | MET-RCRA-S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06018-001 | 1 | SMP | 08:13 | 26 | MET-RCRA-S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-001 | 1 | SMP | 08:18 | 27 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-003 | 1 | SMP | 08:22 | 28 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | V NOT reported (Fe> LR) | () |
| AD06031-005 | 1 | SMP | 08:27 | 29 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-007 | 1 | SMP | 08:31 | 30 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-009 | 1 | SMP | 08:36 | 31 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-012 | 1 | SMP | 08:40 | 32 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| CCV V-285444 | 1 | CCV | 08:44 | 33 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 08:48 | 34 | | | | | | | V-283171(ICB/CCB) |
| AD06031-014 | 1 | SMP | 08:52 | 35 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-016 | 1 | SMP | 08:56 | 36 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-018 | 1 | SMP | 09:00 | 37 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-020 | 1 | SMP | 09:05 | 38 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06000-001 | 1 | NA | 09:09 | 39 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | Pb over LR | () |
| AD05917-012 | 1 | NA | 09:14 | 40 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | high internal std | () |
| AD05917-013 | 1 | NA | 09:19 | 41 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | high internal std | () |
| AD05917-014 | 1 | NA | 09:23 | 42 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | high internal std | () |
| AD05917-015 | 1 | NA | 09:28 | 43 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | high internal std | () |
| AD06000-001 | 10 | SMP | 09:32 | 44 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | Pb reported | () |
| CCV V-285444 | 1 | CCV | 09:36 | 45 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 09:40 | 46 | | | | | | | V-283171(ICB/CCB) |
| AD05917-012 | 4 | SMP | 09:44 | 47 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | Pb reported | () |
| AD05917-013 | 4 | SMP | 09:48 | 48 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | Pb reported | () |
| AD05917-014 | 4 | SMP | 09:52 | 49 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | Pb reported | () |
| AD05917-015 | 4 | SMP | 09:57 | 50 | PB-SOIL | SOIL | SOIL | SW846 | 70604 | Pb reported | () |
| CCV V-285444 | 1 | CCV | 10:01 | 51 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 10:05 | 52 | | | | | | | V-283171(ICB/CCB) |

**Comments/Reviewedby:**

olufemi
192.168.1.76 8/24/2018 11:34:47 AM

RUN IS OK
All elements reported, except earth elements

8/27/18

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\PEICPRAD2A\S22993A2.txt

**Analysis Date:** 08/24/18 **Instrument:** PEICPRAD2A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CALBLK V-282340 | 1 | CAL | 00:54 | 1 | | | | | | | V-282340(ICB/CCB) |
| CALST2 V-281815 | 1 | CAL | 00:57 | 2 | | | | | | | V-281815(LLICV/LLCCV soil) |
| CALST3 V-282202 | 1 | CAL | 01:01 | 3 | | | | | | | V-282202(ICS3 - Middle Std) |
| CALST4 V-282204 | 1 | CAL | 01:07 | 4 | | | | | | | V-282204(ICS4 High std) |
| ICV V-282698 | 1 | ICV | 01:12 | 5 | | | | | | | V-282698(CCV) |
| ICB V-282340 | 1 | ICB | 01:18 | 6 | | | | | | | V-282340(ICB/CCB) |
| LRS V-283372 | 1 | LRS | 01:21 | 7 | | SOIL | SOIL | SW846 | 70604 | | V-283372(LRS) |
| ICS3 V-282202 | 1 | ICS | 01:27 | 8 | | | | | | | V-282202(ICS3 - Middle Std) |
| LLICV V-281815 | 1 | LLICV | 01:32 | 9 | | SOIL | SOIL | SW846 | 70604 | | V-281815(LLICV/LLCCV soil) |
| ICSA V-282430 | 1 | ICSA | 01:36 | 10 | | | | | | | V-282430(ICSA) |
| CCV V-282698 | 1 | CCV | 01:42 | 11 | | | | | | | V-282698(CCV) |
| CCB V-282340 | 1 | CCB | 01:47 | 12 | | | | | | | V-282340(ICB/CCB) |
| MB 70604 (100) | 1 | MB | 01:51 | 13 | | SOIL | SOIL | SW846 | 70604 | | () |
| LCS 70604 | 1 | LCS | 01:55 | 14 | | SOIL | SOIL | SW846 | 70604 | | () |
| LCS MR 70604 | 1 | LCS | 02:00 | 15 | | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | SMP | 02:05 | 16 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | MR | 02:11 | 17 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | MS | 02:16 | 18 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | MSD | 02:21 | 19 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 1 | PS | 02:27 | 20 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05999-001 | 5 | SD | 02:32 | 21 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| CCV V-282698 | 1 | CCV | 02:36 | 22 | | | | | | | V-282698(CCV) |
| CCB V-282340 | 1 | CCB | 02:42 | 23 | | | | | | | V-282340(ICB/CCB) |
| AD05721-002 | 1 | SMP | 02:45 | 24 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | Fe NOT reported (Fe> LR) | () |
| AD06016-002 | 1 | SMP | 02:51 | 25 | MET-RCRA-S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06018-001 | 1 | SMP | 02:56 | 26 | MET-RCRA-S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-001 | 1 | SMP | 03:01 | 27 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-003 | 1 | SMP | 03:07 | 28 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | Fe NOT reported (Fe> LR) | () |
| AD06031-005 | 1 | SMP | 03:12 | 29 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-007 | 1 | SMP | 03:17 | 30 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| CCV V-282698 | 1 | CCV | 03:23 | 31 | | | | | | | V-282698(CCV) |
| CCB V-282340 | 1 | CCB | 03:28 | 32 | | | | | | | V-282340(ICB/CCB) |
| AD06031-009 | 1 | SMP | 03:32 | 33 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-012 | 1 | SMP | 03:37 | 34 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-014 | 1 | SMP | 03:43 | 35 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-016 | 1 | SMP | 03:48 | 36 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-018 | 1 | SMP | 03:53 | 37 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD06031-020 | 1 | SMP | 03:58 | 38 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | | () |
| AD05721-002 | 2 | SMP | 04:04 | 39 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | Fe reported | () |
| AD06031-003 | 2 | SMP | 04:09 | 40 | MET-TAL6010S | SOIL | SOIL | SW846 | 70604 | Fe reported | () |
| CCV V-282698 | 1 | CCV | 04:14 | 41 | | | | | | | V-282698(CCV) |
| CCB V-282340 | 1 | CCB | 04:20 | 42 | | | | | | | V-282340(ICB/CCB) |

**Comments/Reviewedby:**

olufemi
192.168.1.76 8/24/2018 5:25:53 AM

RUN IS OK
Earth elements reported

8/27/18

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# ICPMS Internal Standard Summary Report

TuneID: 1

Batch/FileID: S082318BN Sample ID: CalBlk V-285822 Sample Date 08/23/18 Sample Time: 21:34

| IS ID: | Area | Area Limit | | |
|---|---|---|---|---|
| Ho-1 | 1923640.75 | 1346548.525 | - | 2887384.76575 |
| In-1 | 1174711.60 | 822298.12 | - | 1763242.1116 |
| Sc-1 | 608862.29 | 426203.603 | - | 913902.29729 |
| Tb-1 | 1923810.14 | 1346667.098 | - | 2887639.02014 |

| QcType | txtSamId: | Pos | Ho-1 Area | In-1 Area | Sc-1 Area | Tb-1 Area | Area | Area | Area | Area |
|---|---|---|---|---|---|---|---|---|---|---|
| ISBLK | CalBlk V-285822 | 2 | 1923640. | 1174711. | 608862.2 | 1923810. | | | | |
| SMP | RINSE | 1 | 1935549. | 1198124. | 618115.9 | 1947312. | | | | |
| CAL | CalStd1 V-28582 | 3 | 1921457. | 1195944. | 614100.2 | 1947823. | | | | |
| CAL | CalStd2 V-28582 | 4 | 1960639. | 1220030. | 631149.4 | 1983359. | | | | |
| CAL | CalStd3 V-28582 | 5 | 1958711. | 1205401. | 625952.7 | 1984999. | | | | |
| CAL | CalStd4 V-28582 | 6 | 1943926. | 1188185. | 618716.0 | 1966486. | | | | |
| CAL | CalStd5 V-28582 | 7 | 1946697. | 1151434. | 597728.0 | 1949006. | | | | |
| ICV | ICV V-285828 | 8 | 1911026. | 1151536. | 595628.3 | 1931286. | | | | |
| LLICV | LLICV V-285833 | 9 | 1930189. | 1194097. | 611477.2 | 1967852. | | | | |
| ICB | ICB V-285829 | 10 | 1867073. | 1151849. | 593427.1 | 1921558. | | | | |
| LRS | LRS V-285831 | 11 | 1899335. | 1096072. | 594484.1 | 1911273. | | | | |
| SMP | RINSE | 12 | 1922195. | 1180622. | 606883.6 | 1959054. | | | | |
| ICSA | ICSA V-285830 | 13 | 1990056. | 1122764. | 592962.5 | 2015177. | | | | |
| SMP | RINSE | 14 | 2032438. | 1238305. | 616486.7 | 2048684. | | | | |
| SMP | RINSE | 15 | 1990251. | 1207056. | 604205.9 | 2012236. | | | | |
| CCV | CCV V-285832 | 16 | 2034018. | 1228893. | 626427.0 | 2069145. | | | | |
| CCB | CCB V-285829 | 17 | 1993014. | 1215496. | 611122.1 | 2002087. | | | | |
| MB | MB 70615 (100) | 18 | 1974266. | 1207189. | 606001.6 | 2012596. | | | | |
| LCS | LCS 70615 | 19 | 2068678. | 1259714. | 697405.0 | 2110442. | | | | |
| MR | LCS MR 70615 | 20 | 2101231. | 1273528. | 698099.4 | 2125639. | | | | |
| SMP | AD06078-004 | 21 | 2152717. | 1272138. | 816636.1 | 2179447. | | | | |
| MR | AD06078-004 | 22 | 2198072. | 1295106. | 825681.2 | 2223320. | | | | |
| MS | AD06078-004 | 23 | 2108248. | 1228548. | 800757.9 | 2118836. | | | | |
| MSD | AD06078-004 | 24 | 2130623. | 1229382. | 784401.8 | 2153119. | | | | |
| PS | AD06078-004 | 25 | 2188935. | 1274291. | 819965.0 | 2219517. | | | | |
| SD | AD06078-004 | 26 | 2147708. | 1328420. | 730489.1 | 2179542. | | | | |
| SMP | RINSE | 27 | 2033065. | 1281020. | 670560.8 | 2072124. | | | | |
| CCV | CCV V-285832 | 28 | 2029543. | 1247459. | 652184.4 | 2066768. | | | | |
| CCB | CCB V-285829 | 29 | 1941924. | 1203785. | 613731.3 | 1977536. | | | | |
| SMP | AD06078-009 | 30 | 2273151. | 1221263. | 803269.7 | 2306956. | | | | |
| SMP | AD06078-013 | 31 | 2167254. | 1227072. | 1189050. * | 2200118. | | | | |
| SMP | AD06065-001 | 32 | 2196941. | 1308009. | 873715.2 | 2212448. | | | | |
| SMP | AD06059-001 | 33 | 1998165. | 1150178. | 708601.8 | 2026674. | | | | |
| SMP | AD06059-002 | 34 | 2029524. | 1152436. | 752734.5 | 2035141. | | | | |
| SMP | AD06066-001 | 35 | 2134251. | 1277615. | 776700.4 | 2155612. | | | | |
| SMP | AD06066-002 | 36 | 2065679. | 1204223. | 791860.6 | 2081086. | | | | |
| SMP | AD06066-003 | 37 | 2074468. | 1237262. | 737528.8 | 2109210. | | | | |
| SMP | AD06066-004 | 38 | 2005608. | 1180626. | 704474.0 | 2016535. | | | | |
| SMP | RINSE | 39 | 1898544. | 1166796. | 584799.6 | 1925023. | | | | |
| CCV | CCV V-285832 | 40 | 1939897. | 1184263. | 612003.9 | 1973602. | | | | |
| CCB | CCB V-285829 | 41 | 1902016. | 1183850. | 601174.1 | 1934720. | | | | |
| SMP | AD06051-001 | 42 | 1884900. | 1058949. | 668360.1 | 1887110. | | | | |
| SMP | AD06051-002 | 43 | 1878111. | 1046151. | 690322.0 | 1882844. | | | | |
| SMP | AD06051-003 | 44 | 1895464. | 1080560. | 662850.1 | 1899990. | | | | |
| SMP | AD06051-004 | 45 | 1890952. | 1089027. | 673043.7 | 1923116. | | | | |
| SMP | AD06051-005 | 46 | 1882028. | 1064816. | 649431.4 | 1882468. | | | | |
| SMP | AD06047-001 | 47 | 1979635. | 1168195. | 826253.7 | 2022601. | | | | |
| SMP | AD06047-002 | 48 | 1923297. | 1127867. | 698815.0 | 1930185. | | | | |

* Indicates Internal Standard Area outside of limits

# ICPMS Internal Standard Summary Report

TuneID: 1

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SMP | RINSE | 49 | 1764769. | 1080581. | 541314.7 | | 1783097. |
| CCV | CCV V-285832 | 50 | 1779660. | 1077917. | 548107.1 | | 1802328. |
| CCB | CCB V-285829 | 51 | 1741884. | 1076922. | 538914.5 | | 1775770. |
| MB | MB 70605 (100) | 52 | 1770221. | 1085257. | 544039.0 | | 1777480. |
| LCS | LCS 70605 | 53 | 1881352. | 1135783. | 613448.7 | | 1900521. |
| MR | LCS MR 70605 | 54 | 1883654. | 1130496. | 607826.3 | | 1912667. |
| SMP | AD05999-001 | 55 | 1838584. | 1118948. | 614181.9 | | 1866629. |
| MR | AD05999-001 | 56 | 1810754. | 1098624. | 598537.0 | | 1849107. |
| MS | AD05999-001 | 57 | 1799679. | 1069907. | 602078.5 | | 1813983. |
| MSD | AD05999-001 | 58 | 1811356. | 1088457. | 595520.4 | | 1838219. |
| PS | AD05999-001 | 59 | 1868818. | 1110963. | 614421.1 | | 1883415. |
| SD | AD05999-001 | 60 | 1791431. | 1111658. | 574723.0 | | 1832491. |
| SMP | RINSE | 61 | 1741663. | 1067656. | 543926.0 | | 1763159. |
| CCV | CCV V-285832 | 62 | 1724484. | 1037750. | 535981.4 | | 1750453. |
| CCB | CCB V-285829 | 63 | 1663636. | 1029490. | 516074.0 | | 1673286. |
| SMP | AD05721-002 | 64 | 1869812. | 1066283. | 870633.5 | | 1877534. |
| SMP | AD06016-002 | 65 | 1839080. | 1080396. | 723248.8 | | 1863046. |
| SMP | AD06018-001 | 66 | 1844465. | 1079480. | 687035.9 | | 1877134. |
| SMP | AD06031-001 | 67 | 1991998. | 1082375. | 914402.7 | * | 2043416. |
| SMP | AD06031-003 | 68 | 1982309. | 1072277. | 868241.9 | | 2002326. |
| SMP | AD06031-005 | 69 | 1983453. | 1066080. | 888277.0 | | 2026427. |
| SMP | AD06031-007 | 70 | 1929342. | 1052790. | 1011224. | * | 1957998. |
| SMP | AD06031-009 | 71 | 1768017. | 963309.8 | 855271.7 | | 1768625. |
| SMP | AD06031-012 | 72 | 1922837. | 1057052. | 845245.0 | | 1947605. |
| SMP | RINSE | 73 | 1750889. | 1083945. | 557975.6 | | 1777999. |
| CCV | CCV V-285832 | 74 | 1702057. | 1041733. | 540019.4 | | 1739746. |
| CCB | CCB V-285829 | 75 | 1648435. | 1039262. | 522718.4 | | 1685570. |
| SMP | AD06031-014 | 76 | 1931712. | 1033551. | 868053.8 | | 1961207. |
| SMP | AD06031-016 | 77 | 1894222. | 1060646. | 853283.2 | | 1928285. |
| SMP | AD06031-018 | 78 | 1993452. | 1091359. | 879585.9 | | 2033055. |
| SMP | AD06031-020 | 79 | 1864460. | 1044414. | 823102.8 | | 1874128. |
| SMP | RINSE | 80 | 1702057. | 1065708. | 532651.0 | | 1712477. |
| CCV | CCV V-285832 | 81 | 1740052. | 1065141. | 547801.2 | | 1762329. |
| CCB | CCB V-285829 | 82 | 1671493. | 1055840. | 530879.0 | | 1724204. |

* Indicates Internal Standard Area outside of limits

# ICPMS Internal Standard Summary Report

TuneID: 2

Batch/FileID: S082318BN Sample ID: CalBlk V-285822 Sample Date 08/23/18 Sample Time: 21:34

| IS ID: | Area | Area Limit | | |
|---|---|---|---|---|
| Ho-2 | 1483608.71 | 1038526.097 | - | 2226896.67371 |
| In-2 | 763959.83 | 534771.881 | - | 1146703.70483 |
| Sc-2 | 115445.47 | 80811.829 | - | 173283.65047 |
| Tb-2 | 1518253.75 | 1062777.625 | - | 2278898.87875 |

| QcType | txtSamId: | Pos | Ho-2 Area | In-2 Area | Sc-2 Area | Tb-2 Area | Area | Area | Area | Area |
|---|---|---|---|---|---|---|---|---|---|---|
| ISBLK | CalBlk V-285822 | 2 | 1483608. | 763959.8 | 115445.4 | 1518253. | | | | |
| SMP | RINSE | 1 | 1490760. | 769967.4 | 116212.4 | 1528224. | | | | |
| CAL | CalStd1 V-28582 | 3 | 1502228. | 775576.6 | 116662.3 | 1531155. | | | | |
| CAL | CalStd2 V-28582 | 4 | 1529278. | 788823.6 | 118474.7 | 1565629. | | | | |
| CAL | CalStd3 V-28582 | 5 | 1518739. | 788370.7 | 118046.4 | 1553872. | | | | |
| CAL | CalStd4 V-28582 | 6 | 1509999. | 768778.4 | 116164.4 | 1541506. | | | | |
| CAL | CalStd5 V-28582 | 7 | 1503707. | 749329.9 | 112580.4 | 1527081. | | | | |
| ICV | ICV V-285828 | 8 | 1511028. | 765315.8 | 114989.3 | 1550281. | | | | |
| LLICV | LLICV V-285833 | 9 | 1510123. | 775140.6 | 115542.2 | 1547065. | | | | |
| ICB | ICB V-285829 | 10 | 1480300. | 760855.3 | 114081.6 | 1506504. | | | | |
| LRS | LRS V-285831 | 11 | 1527648. | 730684.9 | 114534.3 | 1551124. | | | | |
| SMP | RINSE | 12 | 1511842. | 761502.9 | 113802.8 | 1538903. | | | | |
| ICSA | ICSA V-285830 | 13 | 1608549. | 735272.2 | 112957.3 | 1643146. | | | | |
| SMP | RINSE | 14 | 1582579. | 790083.5 | 115048.4 | 1622520. | | | | |
| SMP | RINSE | 15 | 1549881. | 777420.7 | 113561.7 | 1575065. | | | | |
| CCV | CCV V-285832 | 16 | 1585653. | 789431.4 | 117190.1 | 1606968. | | | | |
| CCB | CCB V-285829 | 17 | 1532508. | 773821.4 | 114210.4 | 1567435. | | | | |
| MB | MB 70615 (100) | 18 | 1540335. | 773395.7 | 113905.9 | 1564307. | | | | |
| LCS | LCS 70615 | 19 | 1620655. | 807689.3 | 128751.2 | 1672396. | | | | |
| MR | LCS MR 70615 | 20 | 1610499. | 810570.8 | 128230.6 | 1665527. | | | | |
| SMP | AD06078-004 | 21 | 1711712. | 819472.9 | 153575.8 | 1772991. | | | | |
| MR | AD06078-004 | 22 | 1715901. | 830327.4 | 155136.4 | 1765960. | | | | |
| MS | AD06078-004 | 23 | 1674450. | 793558.9 | 147361.7 | 1707036. | | | | |
| MSD | AD06078-004 | 24 | 1667032. | 787536.3 | 146405.5 | 1751637. | | | | |
| PS | AD06078-004 | 25 | 1704520. | 835411.5 | 155560.7 | 1771649. | | | | |
| SD | AD06078-004 | 26 | 1669237. | 852254.2 | 136948.3 | 1746770. | | | | |
| SMP | RINSE | 27 | 1586691. | 831602.6 | 126490.0 | 1628945. | | | | |
| CCV | CCV V-285832 | 28 | 1581199. | 801950.5 | 121469.9 | 1655335. | | | | |
| CCB | CCB V-285829 | 29 | 1512888. | 777458.2 | 116702.7 | 1536622. | | | | |
| SMP | AD06078-009 | 30 | 1799646. | 790037.5 | 150519.4 | 1888485. | | | | |
| SMP | AD06078-013 | 31 | 1690788. | 793005.8 | 221959.9 * | 1763234. | | | | |
| SMP | AD06065-001 | 32 | 1697883. | 836066.7 | 162339.3 | 1770928. | | | | |
| SMP | AD06059-001 | 33 | 1560172. | 726062.3 | 128307.8 | 1577772. | | | | |
| SMP | AD06059-002 | 34 | 1575759. | 737808.8 | 140149.8 | 1600891. | | | | |
| SMP | AD06066-001 | 35 | 1640147. | 817661.0 | 145319.4 | 1671112. | | | | |
| SMP | AD06066-002 | 36 | 1588894. | 761963.1 | 145162.6 | 1613720. | | | | |
| SMP | AD06066-003 | 37 | 1596064. | 791494.1 | 137212.7 | 1650451. | | | | |
| SMP | AD06066-004 | 38 | 1545710. | 745598.0 | 128462.2 | 1576030. | | | | |
| SMP | RINSE | 39 | 1469025. | 742213.4 | 108314.0 | 1502923. | | | | |
| CCV | CCV V-285832 | 40 | 1507678. | 762236.9 | 115012.7 | 1539347. | | | | |
| CCB | CCB V-285829 | 41 | 1478639. | 759631.9 | 112487.1 | 1507511. | | | | |
| SMP | AD06051-001 | 42 | 1458461. | 675369.4 | 124759.0 | 1475634. | | | | |
| SMP | AD06051-002 | 43 | 1445555. | 665144.1 | 128325.0 | 1469964. | | | | |
| SMP | AD06051-003 | 44 | 1461211. | 683682.4 | 121256.1 | 1484632. | | | | |
| SMP | AD06051-004 | 45 | 1479781. | 698752.3 | 127253.2 | 1501170. | | | | |
| SMP | AD06051-005 | 46 | 1454105. | 686711.9 | 121710.6 | 1479605. | | | | |
| SMP | AD06047-001 | 47 | 1547512. | 740866.5 | 152214.0 | 1574068. | | | | |
| SMP | AD06047-002 | 48 | 1492450. | 718855.7 | 128208.9 | 1516017. | | | | |

* Indicates Internal Standard Area outside of limits

# ICPMS Internal Standard Summary Report

TuneID: 2

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SMP | RINSE | 49 | 1381396. | 698252.0 | 102014.9 | | 1406517. |
| CCV | CCV V-285832 | 50 | 1410654. | 703901.1 | 102295.6 | | 1437777. |
| CCB | CCB V-285829 | 51 | 1380833. | 698521.2 | 101045.4 | | 1401962. |
| MB | MB 70605 (100) | 52 | 1387033. | 702939.2 | 102153.4 | | 1414992. |
| LCS | LCS 70605 | 53 | 1451717. | 729364.6 | 114567.3 | | 1479188. |
| MR | LCS MR 70605 | 54 | 1445817. | 728076.9 | 113823.6 | | 1481364. |
| SMP | AD05999-001 | 55 | 1426913. | 722802.5 | 112249.8 | | 1455574. |
| MR | AD05999-001 | 56 | 1435033. | 714307.6 | 111009.9 | | 1466540. |
| MS | AD05999-001 | 57 | 1399942. | 693205.8 | 110875.0 | | 1431030. |
| MSD | AD05999-001 | 58 | 1429812. | 706361.6 | 109881.6 | | 1451738. |
| PS | AD05999-001 | 59 | 1456553. | 725101.4 | 115764.6 | | 1484001. |
| SD | AD05999-001 | 60 | 1429760. | 730701.8 | 110057.5 | | 1461670. |
| SMP | RINSE | 61 | 1379666. | 701313.9 | 102796.6 | | 1405328. |
| CCV | CCV V-285832 | 62 | 1404208. | 697586.6 | 102912.1 | | 1426101. |
| CCB | CCB V-285829 | 63 | 1350608. | 683442.1 | 100119.0 | | 1371133. |
| SMP | AD05721-002 | 64 | 1481894. | 691328.8 | 160749.9 | | 1497976. |
| SMP | AD06016-002 | 65 | 1434073. | 690812.1 | 132466.2 | | 1455863. |
| SMP | AD06018-001 | 66 | 1462204. | 690172.1 | 126804.1 | | 1484446. |
| SMP | AD06031-001 | 67 | 1539760. | 686998.3 | 167997.5 | | 1587339. |
| SMP | AD06031-003 | 68 | 1545543. | 694285.3 | 160808.4 | | 1585103. |
| SMP | AD06031-005 | 69 | 1541510. | 684359.1 | 166460.3 | | 1585068. |
| SMP | AD06031-007 | 70 | 1498256. | 668264.7 | 182746.8 | * | 1521233. |
| SMP | AD06031-009 | 71 | 1381599. | 617231.7 | 144395.1 | | 1411913. |
| SMP | AD06031-012 | 72 | 1485853. | 672594.2 | 155481.5 | | 1522364. |
| SMP | RINSE | 73 | 1341688. | 694194.5 | 103236.9 | | 1375044. |
| CCV | CCV V-285832 | 74 | 1485143. | 743839.3 | 110371.5 | | 1524603. |
| CCB | CCB V-285829 | 75 | 1306043. | 668843.1 | 97578.50 | | 1339151. |
| SMP | AD06031-014 | 76 | 1514673. | 662190.3 | 160661.2 | | 1551852. |
| SMP | AD06031-016 | 77 | 1504578. | 693524.9 | 159861.7 | | 1537831. |
| SMP | AD06031-018 | 78 | 1550040. | 698484.6 | 163080.4 | | 1596488. |
| SMP | AD06031-020 | 79 | 1447214. | 665100.2 | 147547.8 | | 1475755. |
| SMP | RINSE | 80 | 1346523. | 687631.9 | 99549.88 | | 1374604. |
| CCV | CCV V-285832 | 81 | 1361799. | 685318.3 | 100333.5 | | 1385674. |
| CCB | CCB V-285829 | 82 | 1327347. | 677638.0 | 98418.48 | | 1351986. |

* Indicates Internal Standard Area outside of limits

# TCLP Metal Data

# Form1
## Inorganic Analysis Data Sheet

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID: | AD05999-001 | % Solid: | 0 | Lab Name: | Hampton-Clarke | Nras No: | |
| Client Id: | SS-1 | Units: | MG/L | Lab Code: | | Sdg No: | |
| Matrix: | TCLP | Date Rec: | 8/16/2018 | Contract: | | Case No: | |
| Level: | LOW | | | | | | |

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 94 | P | PEICP4A |
| 7440-39-3 | Barium | 0.25 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 94 | P | PEICP4A |
| 7440-43-9 | Cadmium | 0.050 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 94 | P | PEICP4A |
| 7440-47-3 | Chromium | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 94 | P | PEICP4A |
| 7439-92-1 | Lead | 0.050 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 94 | P | PEICP4A |
| 7439-97-6 | Mercury | 0.00050 | ND | 1 | 25 | 25 | 08/23/18 | 70599 | H22988T | 19 | CV | HGCV3A |
| 7782-49-2 | Selenium | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 94 | P | PEICP4A |
| 7440-22-4 | Silver | 0.050 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 94 | P | PEICP4A |

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# Form1
## Inorganic Analysis Data Sheet

Sample ID: MB 70599 (1) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 70599 (1) Units: MG/L Lab Code:
Matrix: TCLP
Level: LOW

| Cas No. | Analyte | RL | Conc | Dil Fact | Initial Wt/Vol | Final Wt/Vol | Analysis Date | Prep Batch | File: | Seq Num | M | Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 1.0 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-36-0 | Antimony | 0.070 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-38-2 | Arsenic | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-39-3 | Barium | 0.25 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-41-7 | Beryllium | 0.012 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-42-8 | Boron | 0.20 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-43-9 | Cadmium | 0.050 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-70-2 | Calcium | 5.0 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-47-3 | Chromium | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-48-4 | Cobalt | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-50-8 | Copper | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7439-89-6 | Iron | 1.0 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7439-92-1 | Lead | 0.050 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7439-95-4 | Magnesium | 5.0 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7439-96-5 | Manganese | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7439-97-6 | Mercury | 0.00050 | ND | 1 | 25 | 25 | 08/23/18 | 70599 | H22988T | 11 | CV | HGCV3A |
| 7439-98-7 | Molybdenum | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-02-0 | Nickel | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7782-49-2 | Selenium | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-21-3 | Silicon | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-22-4 | Silver | 0.050 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-28-0 | Thallium | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-31-5 | Tin | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-32-6 | Titanium | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-62-2 | Vanadium | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |
| 7440-66-6 | Zinc | 0.10 | ND | 1 | 50 | 50 | 08/21/18 | 70599 | T22981A4 | 80 | P | PEICP4A |

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

# FORM 2
## (ICV/CCV Summary)

Date Analyzed: 08/21/18
Data File: T22981A4
Prep Batch: 70599
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| Analyte | ICV/CCV Amt | ICV V-285444-5 | Rec | CCV V-285444-11 | Rec | CCV V-285444-21 | Rec | CCV V-285444-31 | Rec | CCV V-285444-41 | Rec | CCV V-285444-49 | Rec | CCV V-285444-56 | Rec | CCV V-285444-67 | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | .5/.5 | 0.50037 | 100 | 0.51685 | 103 | 0.51188 | 102 | 0.51795 | 104 | 0.52503 | 105 | 0.51775 | 104 | 0.50997 | 102 | 0.50146 | 100 |
| Barium | .5/.5 | 0.49839 | 100 | 0.50702 | 101 | 0.50576 | 101 | 0.50974 | 102 | 0.51231 | 102 | 0.51067 | 102 | 0.50895 | 102 | 0.50632 | 101 |
| Beryllium | .5/.5 | 0.50106 | 100 | 0.50416 | 101 | 0.51863 | 104 | 0.51438 | 103 | 0.51736 | 103 | 0.51493 | 103 | 0.51330 | 103 | 0.51433 | 103 |
| Cadmium | .5/.5 | 0.51395 | 103 | 0.52056 | 104 | 0.51599 | 103 | 0.52030 | 104 | 0.52148 | 104 | 0.52432 | 105 | 0.52224 | 104 | 0.51863 | 104 |
| Chromium | .5/.5 | 0.50676 | 101 | 0.51304 | 103 | 0.50925 | 102 | 0.51101 | 102 | 0.51334 | 103 | 0.51217 | 102 | 0.50788 | 102 | 0.50679 | 101 |
| Copper | .5/.5 | 0.50864 | 102 | 0.51769 | 104 | 0.51751 | 104 | 0.51871 | 104 | 0.51873 | 104 | 0.51747 | 103 | 0.51524 | 103 | 0.51553 | 103 |
| Lead | .5/.5 | 0.50733 | 101 | 0.51642 | 103 | 0.50357 | 101 | 0.51030 | 102 | 0.51303 | 103 | 0.51809 | 104 | 0.51374 | 103 | 0.50776 | 102 |
| Nickel | .5/.5 | 0.50489 | 101 | 0.51684 | 103 | 0.51578 | 103 | 0.52235 | 104 | 0.52699 | 105 | 0.52894 | 106 | 0.52517 | 105 | 0.52224 | 104 |
| Selenium | .5/.5 | 0.47044 | 94 | 0.51812 | 104 | 0.51856 | 104 | 0.52946 | 106 | 0.52441 | 105 | 0.51840 | 104 | 0.54371 | 109 | 0.52190 | 104 |
| Silver | 0.1/0.1 | 0.10133 | 101 | 0.10388 | 104 | 0.10424 | 104 | 0.10509 | 105 | 0.10540 | 105 | 0.10449 | 104 | 0.10480 | 105 | 0.10505 | 105 |
| Zinc | .5/.5 | 0.50500 | 101 | 0.51422 | 103 | 0.51453 | 103 | 0.51808 | 104 | 0.52218 | 104 | 0.51967 | 104 | 0.51835 | 104 | 0.51333 | 103 |

| Analyte | ICV/CCV Amt | ICV V-285444-5 | Rec | CCV V-285444-78 | Rec | CCV V-285444-90 | Rec | CCV V-285444-100 | Rec | CCV V-285444-108 | Rec | | Rec | | Rec | | Rec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | .5/.5 | 0.50037 | 100 | 0.51771 | 104 | 0.51449 | 103 | 0.51090 | 102 | 0.52286 | 105 | | | | | | |
| Barium | .5/.5 | 0.49839 | 100 | 0.50525 | 101 | 0.51302 | 103 | 0.50727 | 101 | 0.50865 | 102 | | | | | | |
| Beryllium | .5/.5 | 0.50106 | 100 | 0.51636 | 103 | 0.51714 | 103 | 0.51561 | 103 | 0.51521 | 103 | | | | | | |
| Cadmium | .5/.5 | 0.51395 | 103 | 0.51926 | 104 | 0.52292 | 105 | 0.52088 | 104 | 0.52309 | 105 | | | | | | |
| Chromium | .5/.5 | 0.50676 | 101 | 0.50408 | 101 | 0.51376 | 103 | 0.50926 | 102 | 0.50969 | 102 | | | | | | |
| Copper | .5/.5 | 0.50864 | 102 | 0.51138 | 102 | 0.51757 | 104 | 0.51323 | 103 | 0.51778 | 104 | | | | | | |
| Lead | .5/.5 | 0.50733 | 101 | 0.51198 | 102 | 0.51517 | 103 | 0.51397 | 103 | 0.51089 | 102 | | | | | | |
| Nickel | .5/.5 | 0.50489 | 101 | 0.52296 | 105 | 0.52839 | 106 | 0.52443 | 105 | 0.52399 | 105 | | | | | | |
| Selenium | .5/.5 | 0.47044 | 94 | 0.53962 | 108 | 0.51430 | 103 | 0.53393 | 107 | 0.53888 | 108 | | | | | | |
| Silver | .5/.5 | 0.10133 | 101 | 0.10413 | 104 | 0.10562 | 106 | 0.10342 | 103 | 0.10446 | 104 | | | | | | |
| Zinc | .5/.5 | 0.50500 | 101 | 0.51651 | 103 | 0.52095 | 104 | 0.51901 | 104 | 0.51804 | 104 | | | | | | |

**Notes:** a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

**Qc Limits:** ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

# FORM 2
## LLQCS/LRS Summary)

Date Analyzed: 08/21/18
Data File: T22981A4
Prep Batch: ~~60144~~ 70599 CB 8/29/18
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
LLQCS/LRS SOURCE: SPEX

| Analyte | LLQCS Spike Amount | LLICV V-282467 | Recovery | Low Limit | High Limit | LRS Spike Amount | LRS V-285234 | Recovery | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.1 | 0.0987657 | 99 | 80 | 120 | 20 | 18.4795 | 92 | 90 | 110 |
| Aluminum | 1.0 | 0.992878 | 99 | 80 | 120 | 500 | 550.894 | 110 | 90 | 110 |
| Arsenic | 0.1 | 0.109099 | 109 | 80 | 120 | 20 | 22.6807 | 113 a | 90 | 110 |
| Barium | 0.25 | 0.245755 | 98 | 80 | 120 | 20 | 19.4548 | 97 | 90 | 110 |
| Beryllium | 0.012 | 0.0128055 | 107 | 80 | 120 | 2 | 1.99446 | 100 | 90 | 110 |
| Calcium | 5.0 | 4.98433 | 100 | 80 | 120 | 500 | 496.252 | 99 | 90 | 110 |
| Cadmium | 0.05 | 0.0483893 | 97 | 80 | 120 | 10 | 10.8875 | 109 | 90 | 110 |
| Cobalt | 0.1 | 0.100415 | 100 | 80 | 120 | 20 | 18.5224 | 93 | 90 | 110 |
| Chromium | 0.1 | 0.0997576 | 100 | 80 | 120 | 20 | 19.3087 | 97 | 90 | 110 |
| Copper | 0.1 | 0.0998186 | 100 | 80 | 120 | 10 | 11.0025 | 110 | 90 | 110 |
| Iron | 1.0 | 0.989316 | 99 | 80 | 120 | 400 | 383.290 | 96 | 90 | 110 |
| Potassium | NA | 12.2343 | | 80 | 120 | 500 | 4677.05 | 935 a | 90 | 110 |
| Silver | 0.05 | 0.0508846 | 102 | 80 | 120 | 0.8 | 0.896001 | 112 a | 90 | 110 |
| Manganese | 0.1 | 0.0971326 | 97 | 80 | 120 | 10 | 9.95637 | 100 | 90 | 110 |
| Silicon | 0.1 | 0.0892673 | 89 | 80 | 120 | 25 | 24.2371 | 97 | 90 | 110 |
| Sodium | NA | 23.4009 | | 80 | 120 | 1000 | 1354.92 | 135 a | 90 | 110 |
| Nickel | 0.1 | 0.0998056 | 100 | 80 | 120 | 20 | 17.7725 | 89 a | 90 | 110 |
| Lead | 0.05 | 0.0553173 | 111 | 80 | 120 | 20 | 19.5731 | 98 | 90 | 110 |
| Antimony | 0.07 | 0.0745821 | 107 | 80 | 120 | 20 | 21.2359 | 106 | 90 | 110 |
| Selenium | 0.1 | 0.0802401 | 80 | 80 | 120 | 20 | 22.5477 | 113 a | 90 | 110 |
| Tin | 0.1 | 0.101088 | 101 | 80 | 120 | 10 | 9.10820 | 91 | 90 | 110 |
| Titanium | 0.1 | 0.102007 | 102 | 80 | 120 | 10 | 10.4599 | 105 | 90 | 110 |
| Thallium | 0.1 | 0.0965567 | 97 | 80 | 120 | 20 | 18.4047 | 92 | 90 | 110 |
| Vanadium | 0.1 | 0.105003 | 105 | 80 | 120 | 20 | 20.3782 | 102 | 90 | 110 |
| Zinc | 0.1 | 0.101409 | 101 | 80 | 120 | 10 | 9.61217 | 96 | 90 | 110 |
| Boron | 0.2 | 0.231638 | 116 | 80 | 120 | 5 | 3.74050 | 75 a | 90 | 110 |
| Magnesium | 5.0 | 5.18098 | 104 | 80 | 120 | 500 | 514.723 | 103 | 90 | 110 |

**Notes:** a-indicates analyte is outsite the limits.

If linear range sample (LRS) exceeds criteria, high standard becomes upper limit criteria

# FORM 2
## (ICV/CCV Summary)

Date Analyzed: 08/23/18
Data File: H22988T
Prep Batch: 70599
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

| | | ICV (2)-9 | | CCV-21 | | CCV-32 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | ICV/CCV Amt | | Rec | | Rec | | Rec | Rec | Rec | Rec | Rec | Rec | |
| Mercury | 20/10 | 18.64000 | 93 | 9.43100 | 94 | 9.17300 | 92 | | | | | | |

**Notes:** a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

**Qc Limits:** ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 08/21/18
Data File: T22981A4
Prep Batch: 70599
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB V-283171-6 | CCB V-283171-12 | CCB V-283171-22 | CCB V-283171-32 | CCB V-283171-42 | CCB V-283171-50 | CCB V-283171-57 | CCB V-283171-68 |
|---|---|---|---|---|---|---|---|---|
| Arsenic | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U |
| Barium | .125 U | .25 U | .25 U | .25 U | .25 U | .25 U | .25 U | .25 U |
| Beryllium | .006 U | .012 U | .012 U | .012 U | .012 U | .012 U | .012 U | .012 U |
| Cadmium | .025 U | .05 U | .05 U | .05 U | .05 U | .05 U | .05 U | .05 U |
| Chromium | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U |
| Copper | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U |
| Lead | .025 U | .05 U | .05 U | .05 U | .05 U | .05 U | .05 U | .05 U |
| Nickel | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U |
| Selenium | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U |
| Silver | .025 U | .05 U | .05 U | .05 U | .05 U | .05 U | .05 U | .05 U |
| Zinc | .05 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U | .1 U |

8 CB 9/5/18

| Analyte | CCB V-283171-79 | CCB V-283171-91 | CCB V-283171-101 | CCB V-283171-109 | MB 70599 (1)-80 | EF-V-285748-88 | EF-V-283958-89 |
|---|---|---|---|---|---|---|---|
| Arsenic | .1 U | .1 U | .1 U | .1 U | .05 U | .1 U | .1 U |
| Barium | .25 U | .25 U | .25 U | .25 U | .13 U | .25 U | .25 U |
| Beryllium | .012 U | .012 U | .012 U | .012 U | .006 U | .012 U | .012 U |
| Cadmium | .05 U | .05 U | .05 U | .05 U | .025 U | .05 U | .05 U |
| Chromium | .1 U | .1 U | .1 U | .1 U | .05 U | .1 U | .1 U |
| Copper | .1 U | .1 U | .1 U | .1 U | .05 U | .1 U | .1 U |
| Lead | .05 U | .05 U | .05 U | .05 U | .025 U | .05 U | .05 U |
| Nickel | .1 U | .1 U | .1 U | .1 U | .05 U | .1 U | .1 U |
| Selenium | .1 U | .1 U | .1 U | .1 U | .05 U | .1 U | .1 U |
| Silver | .05 U | .05 U | .05 U | .05 U | .025 U | .05 U | .05 U |
| Zinc | .1 U | .1 U | .1 U | .1 U | .05 U | .1 U | .1 U |

**Notes:** a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

# FORM 3
## (ICB/CCB/MB Summary)

Date Analyzed: 08/23/18
Data File: H22988T
Prep Batch: 70599
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

| Analyte | ICB-10 | CCB-22 | CCB-33 | MB 70599 (1)-11 | EF V-285748-30 | EF V-283958-31 |
|---|---|---|---|---|---|---|
| Mercury | .5 U | .5 U | .5 U | .5 U | .5 U | .5 U |

**Notes:** a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

# FORM 4
## (ICSA/ICSAB Summary)

Date Analyzed: 08/21/18
Data File: T22981A4
Prep Batch: 70599
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: PEICP4A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 8081617

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICSA/ICSAB: SOURCE: SCP Science

| Analyte | Spk Amt | ICSA V-285079-10 | Rec | Rec | Rec | Rec | Rec | Rec | Rec | Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 500 | 504.236 | 101 | | | | | | | |
| Arsenic | 0 | U | | | | | | | | |
| Barium | 0 | U | | | | | | | | |
| Beryllium | 0 | U | | | | | | | | |
| Cadmium | 0 | U | | | | | | | | |
| Calcium | 500 | 465.443 | 93 | | | | | | | |
| Chromium | 0 | U | | | | | | | | |
| Copper | 0 | U | | | | | | | | |
| Iron | 200 | 176.705 | 88 | | | | | | | |
| Lead | 0 | U | | | | | | | | |
| Magnesium | 500 | 497.23 | 99 | | | | | | | |
| Nickel | 0 | U | | | | | | | | |
| Selenium | 0 | U | | | | | | | | |
| Silver | 0 | U | | | | | | | | |
| Zinc | 0 | U | | | | | | | | |

**Notes:** a-indicates absolute value of the concentration > 2 * Reporting Limits In the ICSA
b-indicates absolute value of the concentration above Reporting Limits but < 2 * Reporting Limits in the ICSA
c-indicates the recovery failed the Qc Criteria in the ICSAB
u-indicates the absolute value of the concentration was below the reporting limit

**Qc Limits:** 200.7, 6020B < 2 * Reporting Limit
6010D < Reporting Limit

# FORM5/FORM7

## SPIKE RECOVERY DATA

PREP BATCH: 70599

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: TCLP SampleID: LCSW MR 70599

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 70599 | 1 | T22981A4 | 82 | 0.5401 | 0.50 | 108 | | 80 | 120 |
| Barium | 70599 | 1 | T22981A4 | 82 | 0.5394 | 0.50 | 108 | | 80 | 120 |
| Cadmium | 70599 | 1 | T22981A4 | 82 | 0.5430 | 0.50 | 109 | | 80 | 120 |
| Chromium | 70599 | 1 | T22981A4 | 82 | 0.5310 | 0.50 | 106 | | 80 | 120 |
| Lead | 70599 | 1 | T22981A4 | 82 | 0.5261 | 0.50 | 105 | | 80 | 120 |
| Mercury | 70599 | 1 | H22988T | 13 | 10.2600 | 10 | 103 | | 80 | 120 |
| Selenium | 70599 | 1 | T22981A4 | 82 | 0.5586 | 0.50 | 112 | | 80 | 120 |
| Silver | 70599 | 1 | T22981A4 | 82 | 0.1077 | 0.100 | 108 | | 80 | 120 |

TxtQcType: LCS Matrix: TCLP SampleID: LCSW 70599

| Analyte | BatchId | DF | Data Fil | Seq#: | Spk Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 70599 | 1 | T22981A4 | 81 | 0.5174 | 0.50 | 103 | | 80 | 120 |
| Barium | 70599 | 1 | T22981A4 | 81 | 0.5283 | 0.50 | 106 | | 80 | 120 |
| Cadmium | 70599 | 1 | T22981A4 | 81 | 0.5350 | 0.50 | 107 | | 80 | 120 |
| Chromium | 70599 | 1 | T22981A4 | 81 | 0.5226 | 0.50 | 105 | | 80 | 120 |
| Lead | 70599 | 1 | T22981A4 | 81 | 0.5197 | 0.50 | 104 | | 80 | 120 |
| Mercury | 70599 | 1 | H22988T | 12 | 10.3500 | 10 | 104 | | 80 | 120 |
| Selenium | 70599 | 1 | T22981A4 | 81 | 0.5163 | 0.50 | 103 | | 80 | 120 |
| Silver | 70599 | 1 | T22981A4 | 81 | 0.1055 | 0.100 | 106 | | 80 | 120 |

TxtQcType: MS Matrix: TCLP SampleID: AD05993-014

| Analyte | BatchId | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 70599 | 1 | T22981A4 | 85 | T22981A4 | 83 | 0.5636 | 0.1U | 0.50 | 113 | | 50 | |
| Barium | 70599 | 1 | T22981A4 | 85 | T22981A4 | 83 | 0.8793 | 0.3703 | 0.50 | 102 | | 50 | |
| Cadmium | 70599 | 1 | T22981A4 | 85 | T22981A4 | 83 | 0.5534 | 0.05U | 0.50 | 111 | | 50 | |
| Chromium | 70599 | 1 | T22981A4 | 85 | T22981A4 | 83 | 0.5061 | 0.1U | 0.50 | 101 | | 50 | |
| Lead | 70599 | 1 | T22981A4 | 85 | T22981A4 | 83 | 0.4973 | 0.05U | 0.50 | 99 | | 50 | |
| Mercury | 70599 | 1 | H22988T | 16 | H22988T | 14 | 10.3800 | 0.50U | 10 | 104 | | 50 | |
| Selenium | 70599 | 1 | T22981A4 | 85 | T22981A4 | 83 | 0.5866 | 0.1U | 0.50 | 117 | | 50 | |
| Silver | 70599 | 1 | T22981A4 | 85 | T22981A4 | 83 | 0.1094 | 0.05U | 0.100 | 109 | | 50 | |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM5/FORM7

## SPIKE RECOVERY DATA

PREP BATCH: 70599

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: PS Matrix: TCLP SampleID: AD05993-014

| Analyte | DF | Data Fil | Seq#: | NS Data Fil | Seq# | Spk Conc: | NS Conc: | Spk Adde | Recov | Qual | Lo Lim | Hi Lim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 1 | T22981A4 | 86 | T22981A4 | 83 | 0.5370 | 0.1U | 0.5 | 107 | | 75 | 125 |
| Barium | 1 | T22981A4 | 86 | T22981A4 | 83 | 0.8539 | 0.3703 | 0.5 | 97 | | 75 | 125 |
| Cadmium | 1 | T22981A4 | 86 | T22981A4 | 83 | 0.5428 | 0.05U | 0.5 | 109 | | 75 | 125 |
| Chromium | 1 | T22981A4 | 86 | T22981A4 | 83 | 0.5040 | 0.1U | 0.5 | 101 | | 75 | 125 |
| Lead | 1 | T22981A4 | 86 | T22981A4 | 83 | 0.4961 | 0.05U | 0.5 | 99 | | 75 | 125 |
| Selenium | 1 | T22981A4 | 86 | T22981A4 | 83 | 0.6018 | 0.1U | 0.5 | 120 | | 75 | 125 |
| Silver | 1 | T22981A4 | 86 | T22981A4 | 83 | 0.0962 | 0.05U | 0.1 | 96 | | 75 | 125 |

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

# FORM6/FORM9

## RPD/%Difference Data

PREP BATCH: 70599

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: TCLP SampleID: LCSW MR 70599

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 70599 | T22981A4 | 82 | T22981A4 | 81 | 0.5401 | 0.5174 | 4.3 | 20 |
| Barium | 70599 | T22981A4 | 82 | T22981A4 | 81 | 0.5394 | 0.5283 | 2.1 | 20 |
| Cadmium | 70599 | T22981A4 | 82 | T22981A4 | 81 | 0.5430 | 0.5350 | 1.5 | 20 |
| Chromium | 70599 | T22981A4 | 82 | T22981A4 | 81 | 0.5310 | 0.5226 | 1.6 | 20 |
| Lead | 70599 | T22981A4 | 82 | T22981A4 | 81 | 0.5261 | 0.5197 | 1.2 | 20 |
| Mercury | 70599 | H22988T | 13 | H22988T | 12 | 10.2600 | 10.3500 | .87 | 20 |
| Selenium | 70599 | T22981A4 | 82 | T22981A4 | 81 | 0.5586 | 0.5163 | 7.9 | 20 |
| Silver | 70599 | T22981A4 | 82 | T22981A4 | 81 | 0.1077 | 0.1055 | 2 | 20 |

TxtQcType: MR Matrix: TCLP SampleID: AD05993-014

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | Result 1 | Result 2 | RPD | Limit |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 70599 | T22981A4 | 84 | T22981A4 | 83 | 0.1U | 0.1U | --- | 20 |
| Barium | 70599 | T22981A4 | 84 | T22981A4 | 83 | 0.3603 | 0.3703 | 2.8 | 20 |
| Cadmium | 70599 | T22981A4 | 84 | T22981A4 | 83 | 0.05U | 0.05U | --- | 20 |
| Chromium | 70599 | T22981A4 | 84 | T22981A4 | 83 | 0.1U | 0.1U | --- | 20 |
| Lead | 70599 | T22981A4 | 84 | T22981A4 | 83 | 0.05U | 0.05U | --- | 20 |
| Mercury | 70599 | H22988T | 15 | H22988T | 14 | 0.50U | 0.50U | --- | 20 |
| Selenium | 70599 | T22981A4 | 84 | T22981A4 | 83 | 0.1U | 0.1U | --- | 20 |
| Silver | 70599 | T22981A4 | 84 | T22981A4 | 83 | 0.05U | 0.05U | --- | 20 |

TxtQcType: SD Matrix: TCLP SampleID: AD05993-014

| Analyte | BatchId | Data Fil | Seq#: | NS File | Seq# | DF | Result 1 | Result 2 | %Diff | | Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 70599 | T22981A4 | 87 | T22981A4 | 83 | 5 | 0.0070 | -0.0113 | --- | | 10 |
| Barium | 70599 | T22981A4 | 87 | T22981A4 | 83 | 5 | 0.0791 | 0.3703 | 6.8 | | 10 |
| Cadmium | 70599 | T22981A4 | 87 | T22981A4 | 83 | 5 | -0.0003 | 0.0008 | --- | | 10 |
| Chromium | 70599 | T22981A4 | 87 | T22981A4 | 83 | 5 | 0.0040 | 0.0110 | 82 | c | 10 |
| Lead | 70599 | T22981A4 | 87 | T22981A4 | 83 | 5 | -0.0105 | -0.0009 | --- | | 10 |
| Selenium | 70599 | T22981A4 | 87 | T22981A4 | 83 | 5 | 0.0084 | -0.0260 | --- | | 10 |
| Silver | 70599 | T22981A4 | 87 | T22981A4 | 83 | 5 | 0.0009 | 0.0018 | --- | | 10 |

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

*Hampton-Clarke*

# ICP SAMPLE PREPARATION LOG

**ANALYTICAL METHOD:** (3010A) 3005A 3050B 200.7/200.8 OTHER_____

Batch No.: 22987 Analyst: BA

QC Number: 70595 Prep Date: 8/21/18

Matrix: TCLP Reviewed By: BA

| LAB ID# | ICP | | ICP-MS (Secondary dil) | | TCLP | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | Initial | Final | Aliquot | Final | Eff | TCLP | |
| Method blank | 50ml | 50ml | | | | – | |
| LCS | | | | | | – | |
| LCSD | | | | | | – | |
| 1. MJ 05993-014 | | | | | V-285748 | 05993-014 | Samples are combined prior to analysis to provide extra sample volume for analysis |
| 1. Analytical Duplicate | " | | | | " | " | |
| MR 05993-014 | | | | | " | " | |
| MS 05993-014 | | | | | | | Balance used: N/A |
| MSD | | | | | | | Pipettes used: 169, 153 |
| 2. 06006-002 | | | | | V-285753 | 06006-002 | |
| 3. 86016-002 | | | | | V-285748 | 06016-002 | Hot Block used: 1 |
| 4. 05995-001 | | | | | | | |
| 5. 86002-001 | | | | | | | |
| 6. " -002 | | | | | | | |
| 7. 06017 -001 | | | | | | | |
| 8. 06027 -001 | | | | | | | |
| 9. 06046-005 | | | | | | | |
| 10. 06045-002 | | | | | | | |
| 11. 05907-002 | | | | | | | |
| 12. 06063-002 | | | | | | | |
| 13. 06064-001 | | | | | | | |
| 14. " -002 | | | | | | | |
| 15. " -003 | | | | | | | |
| 16. V-285748 | 8/22/18 | | | | | | |
| 17. V-285753 | " | " | | | V-285753 | | |
| 18. | | | | | | | |
| 19. | | | | | | | |
| 20. | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Hot Plate Temperature: 92-4C (90-95° C) Start Time: 10:20 End Time: 16:20

| | Volume mL | Lot # |
|---|---|---|
| LCSD | 0.25ml | V-11604, 11603 |
| MS/LLLCSD | | V- |
| MSD | 0.25ml | V- 11604, 11603 |
| MS/LLMSD | 0.25ml | V-285748 |

| Acid | Vol mL | Lot# |
|---|---|---|
| $HNO_3$ | 3ml | V-11660 |
| HCl | | V- |
| $H_2O_2$ | | V- |
| | | |

| Acid | Vol mL | Lot# |
|---|---|---|
| 1:1 $HNO_3$ | | V- |
| 1:1 HCl | 5ml | V-28500 |
| | | |
| | | |

Relinquished By BA Date 8/21/18

Received By BA. Date 08/21/2018

## HG SAMPLE PREPARATION LOG

Hampton-Clarke/Veritech

ANALYTICAL METHOD: 245.1 (7470A) 7471B OTHER_____

Batch No.:* 22987

QC Number: 70599

Matrix: TCLP

Analyst: BA

Prep Date: 8/21/18

Review By: [signature]

| LAB ID# | MERCURY INITIAL | MERCURY FINAL | COMMENTS | STANDARDS |
|---|---|---|---|---|
| Method blank | 25ml | 25ml | | CAL CURVE BLK 0ppb V- 285986 |
| LCS | @-1657 | | | |
| LCSD | | | | STD 0.2 ppb V- 285987 |
| MB 05993-014 | | | | STD 0.5 ppb V- 285988 |
| MR 05993-014 | | | | STD 1.0 ppb V- 285989 |
| MS 05993-014 | | | | STD 2.0 ppb V- 285990 |
| MSD 05993-014 | | | | STD 5.0 ppb V- 285991 |
| 06006-002 | | | | STD 10.0 ppb V- 285992 |
| 06006-002 | | | | STD 25.0 ppb V- 285993 |
| 05995-001 | | | | ICV 10.0 ppb V- 285984 |
| 06018-001 | | | | CCV 20.0 ppb V- 285985 |
| 06027-001 | | | | |
| 06046-005 | | | | |
| 06045-002 | | | | Balance used: N/A |
| 06062-010 | | | | Pipettes used: 121, 150, 135 |
| 06064-001 | | | | |
| -002 | | | | Hot Block used: 7 |
| -003 | | | | |
| V-285743 | | | | |
| V-283958 | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| Lot Numbers | Volume (mL) | Acid | Volume (mL) | Lot # | **Block Temp.: °C |
|---|---|---|---|---|---|
| $KMnO_4$: V-284158 | 3.75ml | HNO3 | 0.625ml | V- 11509 | Time in Block: 11:30 |
| $K_2S_2O_8$: V-284159 | 2ml | HCl | | V- | |
| NH4OH: V-284160 | 1.5ml | H2SO4 | 1.25ml | V- 11491 | Time Out of Block: 13:30 |
| | | Aqua Regia | | V- | |

Spike Volume & Lot #

☐ LCS V-285972 0.25 / 0.25 ml

☐ MS V-285972 0.250 ml

☐ Standards/Control Batch #- 25562

Start time: 10:00 End Time: 13:30

**Temperature
245.1 / 7470A: 90-95C
7471B: 92-98C

Relinquished by: BA

*25 mLs of each standard was digested with this batch using the same reagents and at the same time as the above samples. The preparation of each standard may be referenced in Veriprog using the standard batch number and the corresponding V #s.

HG PREP 2016

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\PEICP4A\T22981A4.txt

**Analysis Date:** 08/21/18 **Instrument:** PEICP4A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CALBLK V-283171 | 1 | CAL | 14:05 | 1 | | | | | | | V-283171(ICB/CCB) |
| CALST2 V-282467 | 1 | CAL | 14:09 | 2 | | | | | | | V-282467(LLICV/CCV leachate) |
| CALST3 V-285445 | 1 | CAL | 14:13 | 3 | | | | | | | V-285445(ICS3 - Middle Std) |
| CALST4 V-285446 | 1 | CAL | 14:18 | 4 | | | | | | | V-285446(ICS4 High std) |
| ICV V-285444 | 1 | ICV | 14:23 | 5 | | | | | | | V-285444(CCV) |
| ICB V-283171 | 1 | ICB | 14:27 | 6 | | | | | | | V-283171(ICB/CCB) |
| LRS V-285234 | 1 | LRS | 14:31 | 7 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | V-285234(LRS) |
| ICS3 V-285445 | 1 | ICS | 14:36 | 8 | | | | | | | V-285445(ICS3 - Middle Std) |
| LLICV V-282467 | 1 | LLICV | 14:40 | 9 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | V-282467(LLICV/CCV leachate) |
| ICSA V-285079 | 1 | ICSA | 14:44 | 10 | | | | | | | V-285079(ICSA) |
| CCV V-285444 | 1 | CCV | 14:50 | 11 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 14:54 | 12 | | | | | | | V-283171(ICB/CCB) |
| MB 69144 (1) | 1 | MB | 14:58 | 13 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| LCSW 69144 | 1 | LCS | 15:02 | 14 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| LCSW MR 69144 | 1 | LCS | 15:06 | 15 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD06012-001 | 1 | SMP | 15:10 | 16 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn NOT reported | () |
| AD06012-001 | 1 | MR | 15:15 | 17 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn NOT reported | () |
| AD06012-001 | 1 | MS | 15:21 | 18 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn NOT reported (Zn > LR) | () |
| AD06012-001 | 1 | PS | 15:26 | 19 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn NOT reported (Zn > LR) | () |
| AD06012-001 | 5 | SD | 15:31 | 20 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn NOT reported | () |
| CCV V-285444 | 1 | CCV | 15:36 | 21 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 15:40 | 22 | | | | | | | V-283171(ICB/CCB) |
| AD05963-001 | 1 | SMP | 15:44 | 23 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05967-010 | 1 | SMP | 15:49 | 24 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05967-012 | 1 | SMP | 15:53 | 25 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD06011-001 | 1 | SMP | 15:58 | 26 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Se NOT reported (Si > LR) | () |
| AD06011-002 | 1 | SMP | 16:02 | 27 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn NOT reported (Zn > LR) | () |
| EF-V-285748 | 1 | EF | 16:07 | 28 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | V-285748(EF-1 WARNING) |
| EF-V-283958 | 1 | EF | 16:11 | 29 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | V-283958(EF-2 WARNING) |
| AD06011-001 | 5 | SMP | 16:15 | 30 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Se reported | () |
| CCV V-285444 | 1 | CCV | 16:19 | 31 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 16:23 | 32 | | | | | | | V-283171(ICB/CCB) |
| AD05941-001 | 1 | SMP | 16:28 | 33 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Ni (over LR); Se (Si >LR) NOT reported | () |
| AD05941-004 | 1 | SMP | 16:32 | 34 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Ni (over LR); Se (Si >LR) NOT reported | () |
| AD05963-001 | 1 | NA | 16:37 | 35 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Already analysed (see sequence 23) | () |
| AD05941-001 | 10 | SMP | 16:41 | 36 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Ni, Se reported | () |
| AD05941-004 | 10 | SMP | 16:45 | 37 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Ni, Se reported | () |
| AD05850-002 | 1 | SMP | 16:49 | 38 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05850-004 | 1 | SMP | 16:53 | 39 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05850-014 | 1 | SMP | 16:57 | 40 | PB-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| CCV V-285444 | 1 | CCV | 17:02 | 41 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 17:06 | 42 | | | | | | | V-283171(ICB/CCB) |
| AD05965-002 | 1 | SMP | 17:10 | 43 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05965-004 | 1 | SMP | 17:14 | 44 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05965-006 | 1 | SMP | 17:18 | 45 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05965-008 | 1 | SMP | 17:22 | 46 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05965-010 | 1 | SMP | 17:26 | 47 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| AD05965-012 | 1 | SMP | 17:31 | 48 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | | () |
| CCV V-285444 | 1 | CCV | 17:35 | 49 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 17:39 | 50 | | | | | | | V-283171(ICB/CCB) |
| AD06012-001 | 2 | SMP | 17:43 | 51 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn reported | () |
| AD06012-001 | 2 | MR | 17:47 | 52 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn reported | () |
| AD06012-001 | 2 | MS | 17:51 | 53 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn reported | () |
| AD06012-001 | 1 | PS | 17:56 | 54 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn reported | () |
| AD06012-001 | 10 | SD | 18:01 | 55 | METALS-TCLP | TCLP | TCLP | SW846 | 69144 | Zn reported | () |
| CCV V-285444 | 1 | CCV | 18:05 | 56 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 18:09 | 57 | | | | | | | V-283171(ICB/CCB) |
| MB 70594 (1) | 1 | MB | 18:13 | 58 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | () |
| LCSW 70594 | 1 | LCS | 18:17 | 59 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | () |

**Comments/Reviewedby:**

olufemi
192.168.1.76 8/21/2018 5:24:09 PM

RUN IS OK
All elements reported

8/23/18

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\PEICP4A\T22981A4.txt

**Analysis Date:** 08/21/18 **Instrument:** PEICP4A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LCSW MR 70594 | 1 | LCS | 18:21 | 60 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-002 | 1 | SMP | 18:25 | 61 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-002 | 1 | MR | 18:29 | 62 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-002 | 1 | MS | 18:34 | 63 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-002 | 1 | PS | 18:38 | 64 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-002 | 5 | SD | 18:42 | 65 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| EF-V-285248 | 1 | EF | 18:47 | 66 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | V-285248(EF-1 WARNING) |
| CCV V-285444 | 1 | CCV | 18:51 | 67 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 18:55 | 68 | | | | | | | V-283171(ICB/CCB) |
| AD05984-004 | 1 | SMP | 18:59 | 69 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-006 | 1 | SMP | 19:03 | 70 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | Se NOT reported (Si > LR) | 0 |
| AD05984-008 | 1 | SMP | 19:07 | 71 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-006 | 2 | SMP | 19:11 | 72 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | Se reported | 0 |
| AD05984-011 | 1 | SMP | 19:15 | 73 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-015 | 1 | SMP | 19:19 | 74 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-016 | 1 | SMP | 19:24 | 75 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-017 | 1 | SMP | 19:28 | 76 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| AD05984-019 | 1 | SMP | 19:32 | 77 | METALS-TCLP | TCLP | TCLP | SW846 | 70594 | | 0 |
| CCV V-285444 | 1 | CCV | 19:36 | 78 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 19:40 | 79 | | | | | | | V-283171(ICB/CCB) |
| MB 70599 (1) | 1 | MB | 19:44 | 80 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| LCSW 70599 | 1 | LCS | 19:48 | 81 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| LCSW MR 70599 | 1 | LCS | 19:52 | 82 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05993-014 | 1 | SMP | 19:56 | 83 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05993-014 | 1 | MR | 20:00 | 84 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05993-014 | 1 | MS | 20:05 | 85 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05993-014 | 1 | PS | 20:09 | 86 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05993-014 | 5 | SD | 20:13 | 87 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| EF-V-285743 78 OS 8/24/18 | 1 | EF | 20:17 | 88 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | V-285743(Hg AQ standard 2 ppb) |
| EF-V-283958 | 1 | EF | 20:21 | 89 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | V-283958(EF-2 WARNING) |
| CCV V-285444 | 1 | CCV | 20:25 | 90 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 20:29 | 91 | | | | | | | V-283171(ICB/CCB) |
| AD06006-002 | 1 | SMP | 20:33 | 92 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06016-002 | 1 | SMP | 20:38 | 93 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05999-001 | 1 | SMP | 20:42 | 94 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06002-001 | 1 | SMP | 20:46 | 95 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06002-002 | 1 | SMP | 20:50 | 96 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06018-001 | 1 | SMP | 20:54 | 97 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06027-001 | 1 | SMP | 20:58 | 98 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06046-005 | 1 | SMP | 21:02 | 99 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| CCV V-285444 | 1 | CCV | 21:06 | 100 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 21:10 | 101 | | | | | | | V-283171(ICB/CCB) |
| AD06045-002 | 1 | SMP | 21:14 | 102 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05907-010 | 1 | SMP | 21:19 | 103 | PB-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06063-002 | 1 | SMP | 21:23 | 104 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06064-001 | 1 | SMP | 21:28 | 105 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06064-002 | 1 | SMP | 21:32 | 106 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06064-003 | 1 | SMP | 21:36 | 107 | METALS-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| CCV V-285444 | 1 | CCV | 21:41 | 108 | | | | | | | V-285444(CCV) |
| CCB V-283171 | 1 | CCB | 21:45 | 109 | | | | | | | V-283171(ICB/CCB) |

**Comments/Reviewedby:**

olufemi
192.168.1.76 8/21/2018 5:24:09 PM

RUN IS OK
All elements reported

8/23/18

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

# Run Log

**Data File:** W:\METALS.FRM\ICPDATA\New\HGCV3A\H22988T.txt

**Analysis Date:** 08/23/18 **Instrument:** HGCV3A

| Sample Id | DF | Qc Type | Time | Run # | Test Group | Rept Limit Matrix | Qc Matrix | Anal Method | Prep Batch | Comments: | Stds: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calibration Blank | 1 | CAL | 10:55 | 1 | | | | | | | 0 |
| .2 PPB | 1 | CAL | 10:56 | 2 | | | | | | | 0 |
| .5 PPB | 1 | CAL | 10:58 | 3 | | | | | | | 0 |
| 1 PPB | 1 | CAL | 10:59 | 4 | | | | | | | 0 |
| 2 PPB | 1 | CAL | 11:00 | 5 | | | | | | | 0 |
| 5 PPB | 1 | CAL | 11:02 | 6 | | | | | | | 0 |
| 10 PPB | 1 | CAL | 11:03 | 7 | | | | | | | 0 |
| 25 PPB | 1 | CAL | 11:05 | 8 | | | | | | | 0 |
| ICV (2) | 1 | ICV | 11:06 | 9 | | | | | | | 0 |
| ICB | 1 | ICB | 11:08 | 10 | | | | | | | 0 |
| MB 70599 (1) | 1 | MB | 11:10 | 11 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| LCS 70599 | 1 | LCS | 11:11 | 12 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| LCS MR 70599 | 1 | LCS | 11:13 | 13 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05993-014 | 1 | SMP | 11:14 | 14 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05993-014 | 1 | MR | 11:16 | 15 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05993-014 | 1 | MS | 11:17 | 16 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06006-002 | 1 | SMP | 11:19 | 17 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06016-002 | 1 | SMP | 11:20 | 18 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD05999-001 | 1 | SMP | 11:21 | 19 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06018-001 | 1 | SMP | 11:23 | 20 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| CCV | 1 | CCV | 11:24 | 21 | | | | | | | 0 |
| CCB | 1 | CCB | 11:26 | 22 | | | | | | | 0 |
| AD06027-001 | 1 | SMP | 11:27 | 23 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06046-005 | 1 | SMP | 11:28 | 24 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06045-002 | 1 | SMP | 11:30 | 25 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06063-002 | 1 | SMP | 11:31 | 26 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06064-001 | 1 | SMP | 11:32 | 27 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06064-002 | 1 | SMP | 11:34 | 28 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| AD06064-003 | 1 | SMP | 11:35 | 29 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | 0 |
| EF V-285748 | 1 | EF | 11:36 | 30 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | V-285748(EF-1 WARNING) |
| EF V-283958 | 1 | EF | 11:38 | 31 | HG-TCLP | TCLP | TCLP | SW846 | 70599 | | V-283958(EF-2 WARNING) |
| CCV | 1 | CCV | 11:39 | 32 | | | | | | | 0 |
| CCB | 1 | CCB | 11:41 | 33 | | | | | | | 0 |

**Comments/Reviewedby:**

carmela
192.168.1.120 8/23/2018 11:50:41 AM

OK

8/23/18

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

**Standard/Batch/SnCl2 Lot #:**

V-286189

# Wet Chemistry Data

# VERITECH Wet Chem Form1 Analysis Summary

Lab#: AD05999-001
Matrix Soil
Client SampleID: SS-1

Project Number: 8081617
Received Date: 8/16/2018
Collect Date: 8/15/2018

| Analysis | TestGroup | Dilution: | Result | Units: | RL | Prep Date: | Analysis Date: |
|---|---|---|---|---|---|---|---|
| Cyanide | CN-S-9012 | 1 | ND | mg/Kg | 0.25 | 08/17/18 | 08/17/18 |
| Sulfur Content | SULFUR | 1 | ND | % | 0.15 | 08/23/18 | 08/23/18 |

# VERITECH Wet Chem Form1 Analysis Summary
## % Solids

**TestGroupName: % Solids SM2540G** **Project #: 8081617**

**TestGroup: %SOLIDS**

| Lab# | Client SampleID | Matrix | Dilution: | Result | Units: | RL | Prep Date | Analysis Date | Received Date | Collect Date |
|---|---|---|---|---|---|---|---|---|---|---|
| AD05999-001 | SS-1 | Soil | 1 | 95 | Percent | | | 08/17/18 | 08/16/18 | 08/15/18 |

# % Solids Report

Analysis Type: SOLIDS-SS
BatchID: SOLIDS-SS-8271

| QcType | SampleID: | Rounded Result | Raw Result | Units | Tare Weight | Wet Weight | Dry Weight | Analysis Date | Analyzed By | QC RPD | Rpd Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DUP | AD05973-001 | 95 | 94.91115 | Percent | 1.35 | 13.73 | 13.11 | 08/17/18 | jessica | 2.1 | 5 |
| Sample | AD05973-001 | 93 | 92.90484 | Percent | 1.35 | 13.33 | 12.48 | 08/17/18 | jessica | | |
| Sample | AD05973-002 | 90 | 90.19608 | Percent | 1.35 | 10.53 | 9.62 | 08/17/18 | jessica | | |
| Sample | AD05973-005 | 89 | 88.70968 | Percent | 1.35 | 14.99 | 13.45 | 08/17/18 | jessica | | |
| Sample | AD05973-007 | 92 | 92.20404 | Percent | 1.36 | 11.75 | 10.94 | 08/17/18 | jessica | | |
| Sample | AD05973-008 | 92 | 91.74018 | Percent | 1.33 | 13.80 | 12.77 | 08/17/18 | jessica | | |
| Sample | AD05973-009 | 97 | 97.34727 | Percent | 1.35 | 13.79 | 13.46 | 08/17/18 | jessica | | |
| Sample | AD05973-010 | 99 | 99.00990 | Percent | 1.35 | 12.46 | 12.35 | 08/17/18 | jessica | | |
| Sample | AD05973-011 | 96 | 95.76523 | Percent | 1.37 | 14.83 | 14.26 | 08/17/18 | jessica | | |
| Sample | AD05973-012 | 99 | 98.93404 | Percent | 1.35 | 16.36 | 16.20 | 08/17/18 | jessica | | |
| Sample | AD05973-013 | 95 | 94.94557 | Percent | 1.36 | 14.22 | 13.56 | 08/17/18 | jessica | | |
| Sample | AD05973-014 | 88 | 87.66667 | Percent | 1.36 | 13.36 | 11.88 | 08/17/18 | jessica | | |
| Sample | AD05991-005 | 87 | 86.88073 | Percent | 1.35 | 12.25 | 10.81 | 08/17/18 | jessica | | |
| Sample | AD05991-006 | 89 | 88.95522 | Percent | 1.34 | 11.39 | 10.27 | 08/17/18 | jessica | | |
| Sample | AD05999-001 | 95 | 95.16393 | Percent | 1.33 | 13.53 | 12.95 | 08/17/18 | jessica | | |
| Sample | AD06009-001 | 86 | 86.17157 | Percent | 1.35 | 9.16 | 8.07 | 08/17/18 | jessica | | |
| Sample | AD06009-002 | 86 | 86.00746 | Percent | 1.35 | 12.07 | 10.57 | 08/17/18 | jessica | | |
| Sample | AD06009-003 | 76 | 76.22222 | Percent | 1.33 | 10.33 | 8.19 | 08/17/18 | jessica | | |
| Sample | AD06009-004 | 80 | 79.66102 | Percent | 1.35 | 13.74 | 11.21 | 08/17/18 | jessica | | |
| Sample | AD06009-005 | 77 | 76.51515 | Percent | 1.36 | 9.28 | 7.42 | 08/17/18 | jessica | | |
| Sample | AD06009-006 | 75 | 74.66987 | Percent | 1.35 | 9.68 | 7.57 | 08/17/18 | jessica | | |

* - Indicates Failed Rpd Criteria

Sulfur ASTM D1552

| Batch # | 202 | | | | | Sulfur Soil Calculation Results | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| analyst | DP | | | | | | | | | | | | |
| date | 8/23/2018 | | | | | | | | | | | | |
| | | | | | | | Theoretical Value (%) | Result(%) | % REC | Limits (%) | Flags | | |
| | | | | | | LCS | 2.53 | 2.58 | 102 | 75-125 | | | |
| | | | | | | MS | 2.66 | 2.71 | 102 | 75-125 | | | |
| | | | | | | MSD | 2.66 | 2.69 | 101 | 75-125 | | | |
| | | 0.139 | | Sample | | | | ND | RPD | | | | |
| | | | | Sample Dup | | | | ND | #VALUE! | 20 | | | |
| | | | | MS | | | | 2.71 | RPD | | | | |
| | | | | MSD | | | | 2.69 | 0 | 20 | | | |

| | Samples # | weight (g) | % (average) | Solid Factor | Dilution factor | Sulfur (%) | RL(%) | Prep. Date | Prep By | Analyzed Date | Analyzed By | % Recovery | True value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ICV | 0.2507 | 2.57 | 1.00 | 1 | 2.57000 | 0.1390 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | 102 | 2.53 |
| | ICB | 1.0000 | 0.00524 | 1.00 | 1 | 0.00524 | 0.1390 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | | |
| | MB | 1.0000 | 0.00403 | 1.00 | 1 | 0.00403 | 0.1390 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | | |
| | LCS (V-11549) | 0.2508 | 2.58 | 1.00 | 1 | 2.58000 | 0.1390 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | 102 | 2.53 |
| | AD05999-001 | 0.2502 | 0.0207 | 0.95 | 1 | 0.02179 | 0.1463 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | | |
| | AD05999-001 DUP | 0.2505 | 0.0196 | 0.95 | 1 | 0.02063 | 0.1463 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | | |
| | AD05999-001 MS | 0.2511 | 2.57 | 0.95 | 1 | 2.70526 | 0.1463 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | | |
| | AD05999-001 MSD | 0.2511 | 2.56 | 0.95 | 1 | 2.69474 | 0.1463 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | | |
| | AD06030-012 | 0.2508 | 0.0789 | 0.89 | 1 | 0.08865 | 0.1562 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | | |
| | CCV(V-11549) | 0.2502 | 2.4800 | 1.00 | 1 | 2.48 | 0.1390 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | 98 | 2.53 |
| | CCB | 1.0000 | 0.00363 | 1.00 | 1 | 0.00363 | 0.1390 | 8/23/2018 | DP/JW | 8/23/2018 | DP/JW | | |

JW 8/29/18

# MS/MSD/DUP Recovery

8081617 0232

Prep Batch: S-2009 Sample ID: AD05999-001
Method: EPA 9012B Matrix: Soil

| Qc Type: DUP | Limits | | DUP | Sample | | | MS/MSD/DUP | | | Non Spike | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Rpd | Dil | Conc | Conc | Rpd | Flag | Batch | RunID | Analysis Date | Batch | RunID | Analysis Date |
| Cyanide | 35 | 1 | 0 | 0 | NA | | 20180817113 | 15 | 08/17/18 12:03 | 20180817113 | 14 | 08/17/18 12:01 |

| Qc Type: MS | | Limits | | MS | Sample | | | MS/MSD/DUP | | | Non Spike | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Amt | Recov | Dil | Conc | Conc | % Rec | Flag | Batch | RunID | Analysis Date | Batch | RunID | Analysis Date |
| Cyanide | 0.4 | 75-125 | 1 | 0.3662 | 0 | 92 | | 20180817113 | 16 | 08/17/18 12:05 | 20180817113 | 14 | 08/17/18 12:01 |

| Qc Type: MSD | | Limits | | MSD | Sample | | | | MS/MSD/DUP | | | Non Spike | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Amt | Recov | Rpd | Dil | Conc | Conc | % Rec | Rpd | Flag | Batch | RunID | Analysis Date | Batch | RunID | Analysis Date |
| Cyanide | 0.4 | 75-125 | 20 | 1 | 0.3684 | 0 | 92 | 0.6 | | 20180817113 | 17 | 08/17/18 12:08 | 20180817113 | 14 | 08/17/18 12:01 |

# LCS Recoveries

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | BatchRunID/RunID:===> | | 201808171130-12 | | | | | | |
| | QcBatchID:===> | | LCSS-2009 | | | | | | |
| | Date/Time:===> | | 08/17/18 11:56 | | | | | | |
| | Analytical Method:===> | | EPA 9012B | | | | | | |
| | Matrix:===> | | Soil | | Soil | | Soil | | Soil | |
| | EPA 9012B | | | | | | | | | |
| Analyte | Amt | Limits | Amt | Limits | % Rec | Flags | % Rec | Flags | % Rec | Flags | % Rec | Flags | % Rec | Flags |
| Cyanide | 0.4 | 80-120 | | | 103 | | | | | | | | | |

# Calibration Summary:

8081617 0234

Instrument: DA1
Analysis Meth: EPA 9012B

| Analyte | Batch ID | Run# | Qc Type | Recov | Spk Amt | Limit |
|---|---|---|---|---|---|---|
| Cyanide | 20180817113 | 9 | ICV | 106 | 0.4 | 85-115 |
| Cyanide | 20180817113 | 21 | CCV | 103 | 0.4 | 85-115 |
| Cyanide | 20180817113 | 33 | CCV | 103 | 0.4 | 85-115 |
| Cyanide | 20180817113 | 40 | CCV | 103 | 0.4 | 85-115 |

# Blank Summary

Instrument: DA1

Qc Type: Method Blank Summary Prep Date: 8/17/18

| Run Batch ID | Analysis Date/Time | Sample ID | Run# | Analyte | Conc | RL |
|---|---|---|---|---|---|---|
| 20180817113 | 8/17/18 11:54 | MBS-2009 | 11 | Cyanide | ND | 0.020 |

Qc Type: ICB Summary Prep Date: NA

| Run Batch ID | Analysis Date/Time | Sample ID | Run# | Analyte | Conc | RL |
|---|---|---|---|---|---|---|
| 20180817113 | 8/17/18 11:51 | CCB | 10 | Cyanide | ND | 0.020 |

Qc Type: CCB Summary Prep Date: NA

| Run Batch ID | Analysis Date/Time | Sample ID | Run# | Analyte | Conc | RL |
|---|---|---|---|---|---|---|
| 20180817113 | 8/17/18 12:19 | CCB | 22 | Cyanide | ND | 0.020 |
| 20180817113 | 8/17/18 12:47 | CCB | 34 | Cyanide | ND | 0.020 |
| 20180817113 | 8/17/18 13:00 | CCB | 41 | Cyanide | ND | 0.020 |

# Miscellaneous Data

# ZERO HEADSPACE EXTRACTION- SAMPLE ENTRY

| Sample ID | Vessel # | Initial Pressure | Final Pressure | Ext. Fluid # | Wt./Vol. Of Sample | Start Date | Start Time | Finish Date | Finish Time | Ext. Type * | pH of HCl preserv vial | Analyst(s) | Transfer To** | Transfer To** | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AD05962 -025 | #5 | 10 | 10 | EF-1 116966 | 31.22g 500ml | 8/15/18 | PM 7:45 | 8/16/18 | 1:04 | S | 22 | JP | | | |
| -026 | #7 | | | | 20.10g ml | | | | | | | | | | |
| -027 | #18 | | | | 20.88g 500ml | | | | | | | | | | |
| -028 | #21 | | | | 20.55g ml | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| EF-1 285748 | #17 | 10 | 10 | EF-1 285748 | 500ml | 8/21/18 | AM 12:43 | 8/21/18 | PM 8:43 | T | 22 | JP | | | |
| AD06006 -001 | #22 | | | | 25g 50ml | | | | | | | | | | |
| AD05999 -001 | #14 | | | | | | | | | | | | | | |
| AD06027 -001 | #19 | | | | | | | | | | | | | | |
| AD06064 -001 | #35 | | | | | | | | | | | | | | |
| -002 | #08 | | | | | | | | | | | | | | |
| -003 | #15 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

*Ext. Type TCLP=T ASTM=A SPLP=S MEP = M

** Initials of person taking custody of extractions

0900

Hampton-Clarke, Inc.

# LEACHATE PREPARATION LOG
## (TCLP, SPLP)

Start Date: 8/20/18 TIME: 16:40 Finish Date: 8/21/18

**TCLP Ext. Fluid #1 pH: 4.88 (criteria: 4.93 ± 0.05)
**TCLP Ext. Fluid #2 pH: 2.88 (criteria: 2.88 ± 0.05)
**SPLP Ext. Fluid #3 pH: 4.26 (criteria: 4.20 ± 0.05)

| Sample # | pH (units) | pH in HCL (units) | Final pH (units) | Ext. Fluid (number) | Wt./Vol of Sample (g or mL) | Start Time | Finish Time | Filter Time | Analyst (s) | Ext. Type* | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 05930-006 | — | — | 8.62 | SPLP 285163 | 100g/2L | 17:00 | 10:45 | 12:48 | BK | P | Balance ID: 037 Organics only |
| -007 | ↓ | ↓ | 8.31 | ↓ | ↓ | ↓ | ↓ | 12:50 | ↓ | ↓ | pH Meter ID: 838168 |
| -013 | ↓ | ↓ | 8.46 | ↓ | ↓ | ↓ | ↓ | 12:39 | ↓ | ↓ | Pipette ID: 152 |
| SPLP 285163 | 4.26 | — | 10.16 | ↓ | 2L | ↓ | ↓ | 12:40 | ↓ | ↓ | ↓ |
| 05993-014 | 9.27 | 1.83 | 5.61 | EF1 285748 | 100g/2L | 18:30 | ↓ | 11:50 | ↓ | T | Metals only. |
| 06006-002 | 11.79 | 9.41 | 5.99 | EF2 283958 | 150g/3L | ↓ | ↓ | 11:20 | ↓ | ↓ | Metals & Org. |
| 06016-002 | 8.26 | 1.73 | 5.11 | EF1 285748 | 100g/2L | ↓ | ↓ | 11:57 | ↓ | ↓ | Metals only |
| 05999-001 | 7.11 | 1.61 | 5.06 | ↓ | ↓ | ↓ | ↓ | 11:32 | ↓ | ↓ | ↓ |
| 06002-001 | 10.33 | 1.53 | 5.81 | ↓ | ↓ | ↓ | ↓ | 11:34 | ↓ | ↓ | ↓ |
| 06002-002 | 2.57 | — | 4.89 | ↓ | ↓ | ↓ | ↓ | 11:35 | ↓ | ↓ | ↓ |
| 06018-001 | 9.12 | 1.75 | 5.27 | ↓ | ↓ | ↓ | ↓ | 11:43 | ↓ | ↓ | ↓ |
| 06027-001 | 8.72 | 1.78 | 5.14 | ↓ | 150g/3L | ↓ | ↓ | 12:10 | ↓ | ↓ | Metals & Org. |
| 06046-005 | 9.81 | 1.82 | 5.62 | ↓ | 100g/2L | ↓ | ↓ | 12:32 | ↓ | ↓ | Metals only. |
| 06045-002 | 9.68 | 1.80 | 5.51 | ↓ | ↓ | ↓ | ↓ | 11:23 | ↓ | ↓ | ↓ |
| 05907-010 | 8.99 | 1.79 | 5.15 | ↓ | ↓ | ↓ | ↓ | 12:00 | ↓ | ↓ | ↓ |
| 06064-001 | 9.72 | 1.81 | 5.42 | ↓ | 150g/3L | ↓ | ↓ | 12:08 | ↓ | ↓ | ↓ |
| -06064-002 | 9.76 | 1.81 | 5.58 | ↓ | 150g/3L | ↓ | ↓ | 12:20 | ↓ | ↓ | Metals & Org. |
| -06064-003 | 9.94 | 1.83 | 5.61 | ↓ | ↓ | ↓ | ↓ | 12:23 | ↓ | ↓ | ↓ |
| -06063-002 | 9.95 | 1.85 | 5.67 | ↓ | 100g/2L | ↓ | ↓ | 12:30 | ↓ | ↓ | ↓ |
| EF1 285748 | 4.89 | — | 5.00 | ↓ | 3L | ↓ | ↓ | 11:10 | ↓ | ↓ | ↓ |
| EF2 283958 | 2.88 | — | 3.00 | EF2 283958 | ↓ | ↓ | ↓ | 11:12 | ↓ | ↓ | ↓ |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

* Ext. Type: TCLP = T (Method 1311) LAMP=L (Methods 1311 / ANSI/NEMA C78.LL 1256-2003)
SPLP = P (Method 1312) MEP=M (Method 1320)
ZHE = Z (Method 1311/1312)

** The pH of the extraction fluid must be checked prior to use and must be within limits specified above

# Subcontracted Data

This is the last page of the data generated by Hampton-Clarke.
The following pages were submitted to HC by subcontracted laboratories.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

Job Number: 460-162840-1

Job Description: 8081617

For:
Hampton-Clarke Veritech
175 Rt 46 West
Fairfield, NJ 07004

Attention: Sub Data Results



Approved for release.
Rehana X Aqeel
Project Management Assistant I
8/28/2018 3:39 PM

Designee for
Marie A Meidhof, Senior Project Manager
777 New Durham Road, Edison, NJ, 08817
marie.meidhof@testamericainc.com
08/28/2018

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

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# CASE NARRATIVE

## Client: Hampton-Clarke Veritech

## Project: 8081617

## Report Number: 460-162840-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

**RECEIPT**
The sample was received on 8/17/2018 9:25 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

**ORGANOPHOSPHOROUS PESTICIDES (GC)**
Sample AD05999-001 (460-162840-1) was analyzed for Organophosphorous Pesticides (GC) in accordance with EPA SW-846 Method 8141B. The samples were prepared on 08/22/2018 and analyzed on 08/23/2018.

No difficulties were encountered during the pesticides analysis.

All quality control parameters were within the acceptance limits.

**PERCENT SOLIDS/PERCENT MOISTURE**
Sample AD05999-001 (460-162840-1) was analyzed for percent solids/percent moisture in accordance with EPA Method CLPISM01.2 (Exhibit D) Modified. The samples were analyzed on 08/23/2018.

No difficulties were encountered during the %solids/moisture analysis.

All quality control parameters were within the acceptance limits.

# Sample Summary

Client: Hampton-Clarke Veritech
Project/Site: 8081617

TestAmerica Job ID: 460-162840-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 460-162840-1 | AD05999-001 | Solid | 08/15/18 14:00 | 08/17/18 09:25 |

# Detection Summary

Client: Hampton-Clarke Veritech
Project/Site: 8081617

TestAmerica Job ID: 460-162840-1

**Client Sample ID: AD05999-001** **Lab Sample ID: 460-162840-1**

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: Hampton-Clarke Veritech
Project/Site: 8081617

TestAmerica Job ID: 460-162840-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| EPA 8141B | Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique | SW846 | TAL PIT |
| 2540G | SM 2540G | SM22 | TAL PIT |
| 3541 | Automated Soxhlet Extraction | SW846 | TAL PIT |

**Protocol References:**

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Client Sample ID: AD05999-001**
**Date Collected: 08/15/18 14:00**
**Date Received: 08/17/18 09:25**

**Lab Sample ID: 460-162840-1**
**Matrix: Solid**
**Percent Solids: 80.3**

## Method: EPA 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Parathion | 5.2 | U | 41 | 5.2 | ug/Kg | ☼ | 08/22/18 11:30 | 08/23/18 07:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tributyl phosphate* | *77* | | *20 - 150* | *08/22/18 11:30* | *08/23/18 07:30* | *1* |
| *Tributyl phosphate* | *69* | | *20 - 150* | *08/22/18 11:30* | *08/23/18 07:30* | *1* |
| *Triphenylphosphate* | *86* | | *34 - 150* | *08/22/18 11:30* | *08/23/18 07:30* | *1* |
| *Triphenylphosphate* | *90* | | *34 - 150* | *08/22/18 11:30* | *08/23/18 07:30* | *1* |

## Qualifiers

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Lab Chronicle

Client: Hampton-Clarke Veritech
Project/Site: 8081617

TestAmerica Job ID: 460-162840-1

## Client Sample ID: AD05999-001
**Date Collected: 08/15/18 14:00**
**Date Received: 08/17/18 09:25**

## Lab Sample ID: 460-162840-1
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 2540G | | 1 | 254822 | 08/23/18 12:21 | CLL | TAL PIT |

## Client Sample ID: AD05999-001
**Date Collected: 08/15/18 14:00**
**Date Received: 08/17/18 09:25**

## Lab Sample ID: 460-162840-1
**Matrix: Solid**
**Percent Solids: 80.3**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3541 | | | 254675 | 08/22/18 11:30 | SAC | TAL PIT |
| Total/NA | Analysis | EPA 8141B | | 1 | 254752 | 08/23/18 07:30 | JMO | TAL PIT |

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Accreditation/Certification Summary

Client: Hampton-Clarke Veritech
Project/Site: 8081617

TestAmerica Job ID: 460-162840-1

## Laboratory: TestAmerica Edison

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| New Jersey | NELAP | 2 | 12028 | 06-30-19 |

## Laboratory: TestAmerica Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Arkansas DEQ | State Program | 6 | 88-0690 | 06-27-19 |
| California | State Program | 9 | 2891 | 04-30-19 |
| Connecticut | State Program | 1 | PH-0688 | 09-30-18 |
| Florida | NELAP | 4 | E871008 | 06-30-19 |
| Illinois | NELAP | 5 | 200005 | 06-30-19 |
| Kansas | NELAP | 7 | E-10350 | 01-31-19 |
| Louisiana | NELAP | 6 | 04041 | 06-30-19 |
| Nevada | State Program | 9 | PA00164 | 07-31-19 |
| New Hampshire | NELAP | 1 | 2030 | 04-04-19 |
| New Jersey | NELAP | 2 | PA005 | 06-30-19 |
| New York | NELAP | 2 | 11182 | 03-31-19 |
| North Carolina (WW/SW) | State Program | 4 | 434 | 12-31-18 |
| Oregon | NELAP | 10 | PA-2151 | 01-28-19 |
| Pennsylvania | NELAP | 3 | 02-00416 | 04-30-19 |
| South Carolina | State Program | 4 | 89014 | 04-30-19 |
| Texas | NELAP | 6 | T104704528-15-2 | 03-31-19 |
| US Fish & Wildlife | Federal | | LE94312A-1 | 07-31-19 |
| USDA | Federal | | P330-16-00211 | 06-26-19 |
| Utah | NELAP | 8 | PA001462015-4 | 05-31-19 |
| Virginia | NELAP | 3 | 460189 | 09-14-18 * |
| West Virginia DEP | State Program | 3 | 142 | 01-31-19 |
| Wisconsin | State Program | 5 | 998027800 | 08-31-18 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Instrument ID: CHGC5 Analysis Batch Number: 240093

Lab Sample ID: IC 180-240093/1 Client Sample ID:

Date Analyzed: 03/21/18 08:43 Lab File ID: L0321005.D GC Column: RTX-OPP1 ID: 0.53(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Mocap | 10.82 | Split Peak | oravecj | 03/22/18 08:14 |

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Instrument ID: CHGC5 Analysis Batch Number: 254752

Lab Sample ID: CCVRT 180-254752/1 Client Sample ID:

Date Analyzed: 08/23/18 06:24 Lab File ID: L0082301.D GC Column: RTX-OPP1 ID: 0.53(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Disulfoton | 11.77 | Split Peak | oravecj | 08/23/18 08:32 |

Lab Sample ID: CCV 180-254752/7 Client Sample ID:

Date Analyzed: 08/23/18 09:42 Lab File ID: L0082307.D GC Column: RTX-OPP1 ID: 0.53(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Disulfoton | 11.77 | Split Peak | oravecj | 08/23/18 10:53 |

# Method 8141B

## Organophosphorous Pesticides (GC/MS) by Method 8141B

FORM II
GC SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): RTX-OPP1 ID: 0.53(mm) GC Column (2): RTX-OPP2 ID: 0.53(mm)

| Client Sample ID | Lab Sample ID | TBPH1 # | TBPH2 # | TPP1 # | TPP2 # |
|---|---|---|---|---|---|
| AD05999-001 | 460-162840-1 | 77 | 69 | 86 | 90 |
| | MB 180-254675/1-A | 81 | 71 | 87 | 92 |
| | LCS 180-254675/2-A | 87 | 82 | 88 | 92 |
| AD05999-001 MS | 460-162840-1 MS | 72 | 69 | 77 | 85 |
| AD05999-001 MSD | 460-162840-1 MSD | 79 | 74 | 81 | 87 |

| | QC LIMITS |
|---|---|
| TBPH = Tributyl phosphate | 20-150 |
| TPP = Triphenylphosphate | 34-150 |

# Column to be used to flag recovery values

FORM II EPA 8141B

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: L0082306.D

Lab ID: LCS 180-254675/2-A Client ID:

| COMPOUND | SPIKE ADDED (ug/Kg) | LCS CONCENTRATION (ug/Kg) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Parathion | 333 | 300 | 90 | 71-150 | |

# Column to be used to flag recovery and RPD values

FORM III EPA 8141B

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: L0082304.D

Lab ID: 460-162840-1 MS Client ID: AD05999-001 MS

| COMPOUND | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/Kg) | MS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|---|
| Parathion | 415 | 5.2 U | 341 | 82 | 71-150 | |

# Column to be used to flag recovery and RPD values

FORM III EPA 8141B

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: L0082305.D

Lab ID: 460-162840-1 MSD Client ID: AD05999-001 MSD

| COMPOUND | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Parathion | 415 | 374 | 90 | 9 | 15 | 71-150 | |

# Column to be used to flag recovery and RPD values

FORM III EPA 8141B

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: MB 180-254675/1-A

Matrix: Solid Date Extracted: 08/22/2018 11:30

Lab File ID:(1) L0082302.D Lab File ID:(2) L0082302.D

Date Analyzed:(1) 08/23/2018 06:57 Date Analyzed:(2) 08/23/2018 06:57

Instrument ID:(1) CHGC5 Instrument ID:(2) CHGC5

GC Column:(1) RTX-OPP1 ID: 0.53(mm) GC Column:(2) RTX-OPP2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | DATE ANALYZED 1 | DATE ANALYZED 2 |
|---|---|---|---|
| AD05999-001 | 460-162840-1 | 08/23/2018 07:30 | 08/23/2018 07:30 |
| AD05999-001 MS | 460-162840-1 MS | 08/23/2018 08:03 | 08/23/2018 08:03 |
| AD05999-001 MSD | 460-162840-1 MSD | 08/23/2018 08:36 | 08/23/2018 08:36 |
| | LCS 180-254675/2-A | 08/23/2018 09:09 | 08/23/2018 09:09 |

FORM VIII
GC SEMI VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Pittsburgh  Job No.: 460-162840-1

SDG No.:

Sample No.: CCVRT 180-254752/1  Date Analyzed: 08/23/2018 06:24

Instrument ID: CHGC5  GC Column: RTX-OPP1  ID: 0.53(mm)

Lab File ID (Standard): L0082301.D  Heated Purge: (Y/N) N

Calibration ID: 37534

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

| | | | | TBPH | TPP | |
|---|---|---|---|---|---|---|
| | | | | RT # | RT # | |
| CONTINUING CALIBRATION SURROGATE | | | | 11.04 | 20.60 | |
| UPPER LIMIT | | | | 11.07 | 20.63 | |
| LOWER LIMIT | | | | 11.01 | 20.57 | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | LAB FILE ID | | | |
| CCVRT 180-254752/1 | | 08/23/2018 06:24 | L0082301.D | 11.04 | 20.60 | |
| MB 180-254675/1-A | | 08/23/2018 06:57 | L0082302.D | 11.04 | 20.60 | |
| 460-162840-1 | AD05999-001 | 08/23/2018 07:30 | L0082303.D | 11.04 | 20.60 | |
| 460-162840-1 MS | AD05999-001 MS | 08/23/2018 08:03 | L0082304.D | 11.04 | 20.60 | |
| 460-162840-1 MSD | AD05999-001 MSD | 08/23/2018 08:36 | L0082305.D | 11.04 | 20.60 | |
| LCS 180-254675/2-A | | 08/23/2018 09:09 | L0082306.D | 11.04 | 20.60 | |
| CCV 180-254752/7 | | 08/23/2018 09:42 | L0082307.D | 11.04 | 20.60 | |

TBPH = Tributyl phosphate
TPP = Triphenylphosphate

TBPH RT Limit = ± 0.03 minutes of surrogate RT
TPP RT Limit = ± 0.03 minutes of surrogate RT

# Column used to flag values outside QC limits

FORM VIII EPA 8141B

FORM VIII
GC SEMI VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Pittsburgh  Job No.: 460-162840-1

SDG No.:

Sample No.: CCVRT 180-254752/1  Date Analyzed: 08/23/2018 06:24

Instrument ID: CHGC5  GC Column: RTX-OPP2  ID: 0.53(mm)

Lab File ID (Standard): L0082301.D  Heated Purge: (Y/N) N

Calibration ID: 37535

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

| | | | | TBPH | TPP | |
|---|---|---|---|---|---|---|
| | | | | RT # | RT # | |
| CONTINUING CALIBRATION SURROGATE | | | | 10.72 | 22.27 | |
| UPPER LIMIT | | | | 10.75 | 22.30 | |
| LOWER LIMIT | | | | 10.69 | 22.24 | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | LAB FILE ID | | | |
| CCVRT 180-254752/1 | | 08/23/2018 06:24 | L0082301.D | 10.72 | 22.27 | |
| MB 180-254675/1-A | | 08/23/2018 06:57 | L0082302.D | 10.72 | 22.27 | |
| 460-162840-1 | AD05999-001 | 08/23/2018 07:30 | L0082303.D | 10.72 | 22.27 | |
| 460-162840-1 MS | AD05999-001 MS | 08/23/2018 08:03 | L0082304.D | 10.72 | 22.27 | |
| 460-162840-1 MSD | AD05999-001 MSD | 08/23/2018 08:36 | L0082305.D | 10.72 | 22.27 | |
| LCS 180-254675/2-A | | 08/23/2018 09:09 | L0082306.D | 10.72 | 22.27 | |
| CCV 180-254752/7 | | 08/23/2018 09:42 | L0082307.D | 10.72 | 22.27 | |

TBPH = Tributyl phosphate
TPP = Triphenylphosphate

TBPH RT Limit = ± 0.03 minutes of surrogate RT
TPP RT Limit = ± 0.03 minutes of surrogate RT

# Column used to flag values outside QC limits

FORM VIII EPA 8141B

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-254675/2-A

Instrument ID (1): CHGC5 Instrument ID (2): CHGC5

Date Analyzed (1): 08/23/2018 09:09 Date Analyzed (2): 08/23/2018 09:09

GC Column (1): RTX-OPP1 ID: 0.53(mm) GC Column (2): RTX-OPP2 ID: 0.53(mm)

| ANALYTE | COL | PEAK | RT | RT WINDOW | | CONCENTRATION | | RPD |
|---|---|---|---|---|---|---|---|---|
| | | | | FROM | TO | PEAK | MEAN | |
| Parathion | 1 | | 16.21 | 16.18 | 16.24 | 293 | | 2.3 |
| | 2 | | 15.81 | 15.78 | 15.84 | 300 | | |

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Client Sample ID: AD05999-001 MS Lab Sample ID: 460-162840-1 MS

Instrument ID (1): CHGC5 Instrument ID (2): CHGC5

Date Analyzed (1): 08/23/2018 08:03 Date Analyzed (2): 08/23/2018 08:03

GC Column (1): RTX-OPP1 ID: 0.53(mm) GC Column (2): RTX-OPP2 ID: 0.53(mm)

| ANALYTE | COL | PEAK | RT | RT WINDOW | | CONCENTRATION | | RPD |
|---|---|---|---|---|---|---|---|---|
| | | | | FROM | TO | PEAK | MEAN | |
| Parathion | 1 | | 16.21 | 16.18 | 16.24 | 331 | | 3.0 |
| | 2 | | 15.81 | 15.78 | 15.84 | 341 | | |

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Client Sample ID: AD05999-001 MSD Lab Sample ID: 460-162840-1 MSD

Instrument ID (1): CHGC5 Instrument ID (2): CHGC5

Date Analyzed (1): 08/23/2018 08:36 Date Analyzed (2): 08/23/2018 08:36

GC Column (1): RTX-OPP1 ID: 0.53(mm) GC Column (2): RTX-OPP2 ID: 0.53(mm)

| ANALYTE | COL | PEAK | RT | RT WINDOW | | CONCENTRATION | | RPD |
|---|---|---|---|---|---|---|---|---|
| | | | | FROM | TO | PEAK | MEAN | |
| Parathion | 1 | | 16.21 | 16.18 | 16.24 | 363 | | 3.0 |
| | 2 | | 15.81 | 15.78 | 15.84 | 374 | | |

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: AD05999-001 | Lab Sample ID: 460-162840-1

Matrix: Solid | Lab File ID: L0082303.D

Analysis Method: EPA 8141B | Date Collected: 08/15/2018 14:00

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 07:30

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP1 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 56-38-2 | Parathion | 5.2 | U | 41 | 5.2 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 77 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 86 | | 34-150 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082303.D
Lims ID: 460-162840-A-1-C
Client ID: AD05999-001
Sample Type: Client
Inject. Date: 23-Aug-2018 07:30:16 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-003
Operator ID: 402331 Instrument ID: CHGC5

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:25 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 08:33:57

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | |
| 1 | 11.041 | 11.043 | -0.002 | 70438945 | 1.55 | H |
| 2 | 10.719 | 10.718 | 0.001 | 73864137 | 1.38 | H |
| | | | | | RPD = 11.74 | |
| $ 2 Triphenylphosphate | | | | | | |
| 1 | 20.601 | 20.604 | -0.003 | 28925267 | 1.71 | H |
| 2 | 22.268 | 22.270 | -0.002 | 34225166 | 1.80 | H |
| | | | | | RPD = 5.03 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | |
| 1 | | 4.895 | | | ND | |
| 2 | | 5.044 | | | | |
| 4 Dichlorvos | | | | | | |
| 1 | | 6.906 | | | ND | |
| 2 | | 6.305 | | | | |
| 5 Mevinphos | | | | | | |
| 1 | | 9.474 | | | ND | |
| 2 | | 8.652 | | | | |
| 6 Demeton-O | | | | | | |
| 1 | | 9.947 | | | ND | |
| 2 | | 10.578 | | | | |
| 7 Thionazin | | | | | | |
| 1 | | 10.136 | | | ND | |
| 2 | | 10.683 | | | | |
| 8 Ethoprop | | | | | | |
| 1 | | 10.550 | | | ND | |
| 2 | | 10.862 | | | | |
| 9 Phorate | | | | | | |
| 1 | | 10.599 | | | ND | |
| 2 | | 11.503 | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|
| 10 Sulfotepp | | | | | | |
| 1 | | 10.973 | | | ND | |
| 2 | | 11.464 | | | | |
| 11 Diazinon | | | | | | |
| 1 | | 11.413 | | | ND | |
| 2 | | 12.565 | | | | |
| 12 Disulfoton | | | | | | |
| 1 | | 11.771 | | | ND | |
| 2 | | 12.767 | | | | |
| 13 Demeton-S | | | | | | |
| 1 | | 11.798 | | | ND | |
| 2 | | 11.946 | | | | |
| 14 Dimethoate | | | | | | U |
| 1 | | 12.583 | | | ND | |
| 2 | | 12.348 | | | | |
| 15 Ronnel | | | | | | |
| 1 | | 12.907 | | | ND | |
| 2 | | 14.328 | | | | |
| 16 Chlorpyrifos | | | | | | |
| 1 | | 13.619 | | | ND | |
| 2 | | 15.610 | | | | |
| 17 Fenthion | | | | | | |
| 1 | | 13.829 | | | ND | |
| 2 | | 15.879 | | | | |
| 18 Trichloronate | | | | | | |
| 1 | | 13.902 | | | ND | |
| 2 | | 15.747 | | | | |
| 19 Methyl parathion | | | | | | |
| 1 | | 14.635 | | | ND | |
| 2 | | 14.270 | | | | |
| 20 Malathion | | | | | | |
| 1 | | 14.981 | | | ND | |
| 2 | | 15.491 | | | | |
| 21 Tokuthion | | | | | | |
| 1 | | 16.055 | | | ND | |
| 2 | | 18.406 | | | | |
| 22 Ethyl Parathion | | | | | | |
| 1 | | 16.211 | | | ND | |
| 2 | | 15.808 | | | | |
| 23 Stirophos | | | | | | |
| 1 | | 17.224 | | | ND | |
| 2 | | 18.210 | | | | |
| 24 Bolstar | | | | | | |
| 1 | | 18.304 | | | ND | |
| 2 | | 20.896 | | | | |
| 25 Fensulfothion | | | | | | |
| 1 | | 21.195 | | | ND | |
| 2 | | 20.658 | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|
| 26 EPN | | | | | | |
| 1 | | 22.255 | | | ND | |
| 2 | | 22.963 | | | | |
| 27 Famphur | | | | | | |
| 1 | | 22.500 | | | ND | |
| 2 | | 21.586 | | | | |
| 28 Azinphos-methyl | | | | | | |
| 1 | | 22.894 | | | ND | |
| 2 | | 24.147 | | | | |
| 29 Coumaphos | | | | | | |
| 1 | | 25.547 | | | ND | |
| 2 | | 25.392 | | | | |
| S 30 Demeton, Total | | | | | | |
| 1 | | 10.230 | | | ND | |
| 2 | | 10.611 | | | | |

## QC Flag Legend

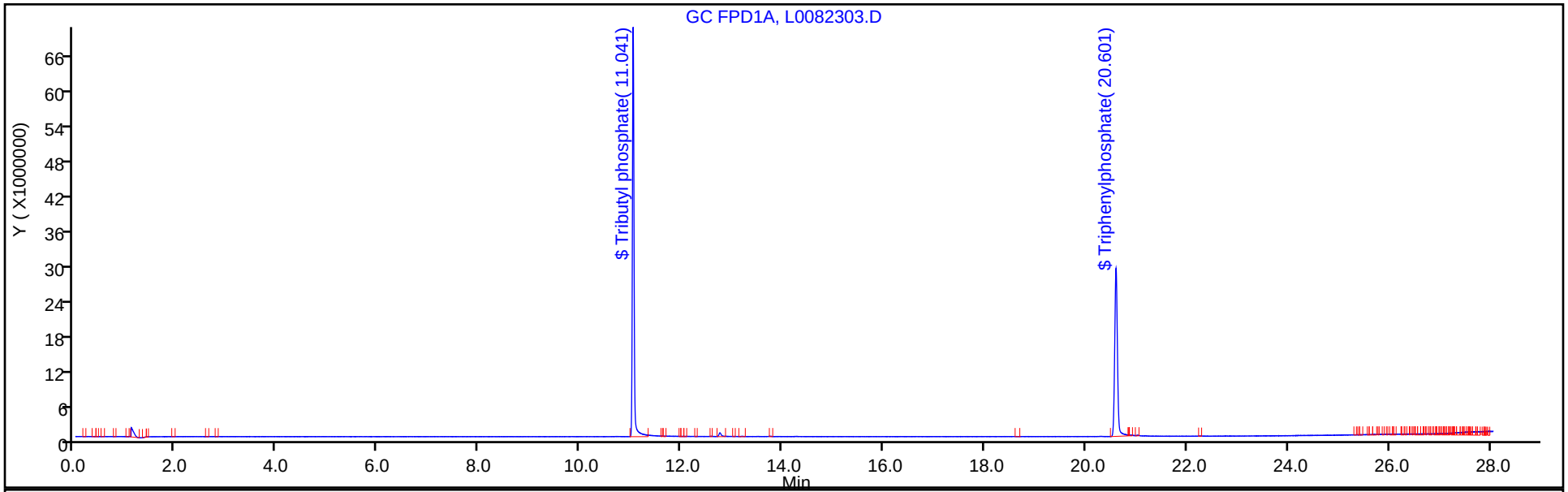
Review Flags

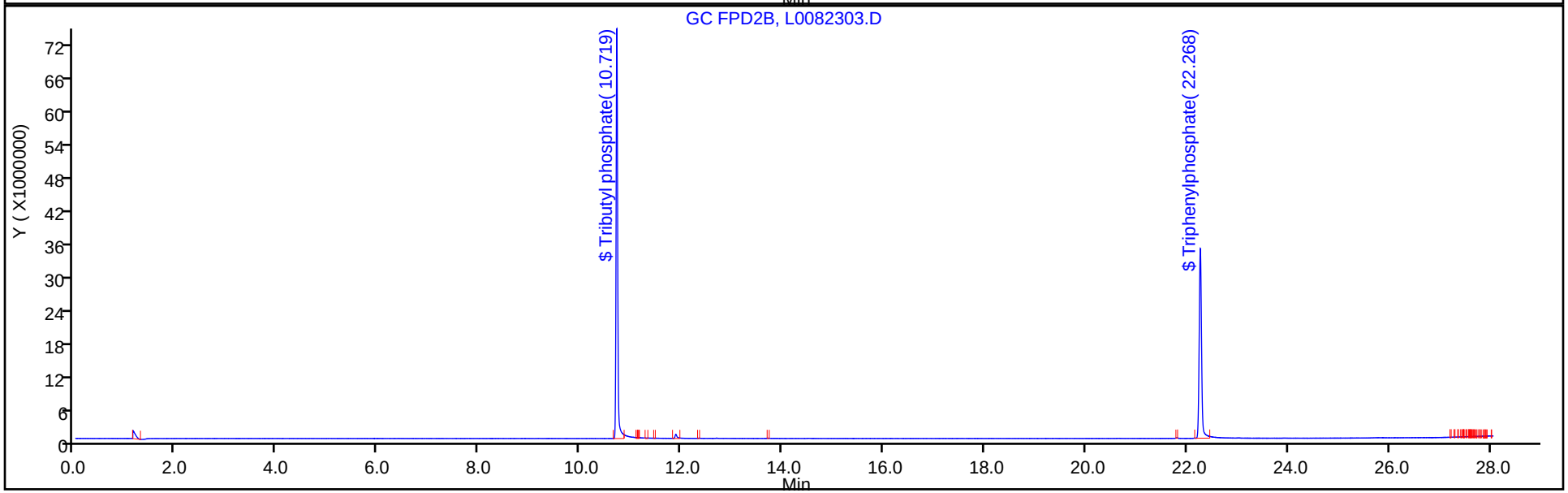
U - Marked Undetected

Report Date: 23-Aug-2018 10:54:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082303.D | | | | |
| Injection Date: | 23-Aug-2018 07:30:16 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | 460-162840-A-1-C | Lab Sample ID: | 180-162840-1 | Worklist Smp#: | 3 |
| Client ID: | AD05999-001 | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Client Sample ID: AD05999-001 Lab Sample ID: 460-162840-1

Matrix: Solid Lab File ID: L0082303.D

Analysis Method: EPA 8141B Date Collected: 08/15/2018 14:00

Extraction Method: 3541 Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) Date Analyzed: 08/23/2018 07:30

Con. Extract Vol.: 2.5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: RTX-OPP2 ID: 0.53(mm)

% Moisture: 19.7 GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 Units: ug/Kg

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 69 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 90 | | 34-150 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082303.D
Lims ID: 460-162840-A-1-C
Client ID: AD05999-001
Sample Type: Client
Inject. Date: 23-Aug-2018 07:30:16 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-003
Operator ID: 402331 Instrument ID: CHGC5

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:25 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 08:33:57

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | |
| 1 | 11.041 | 11.043 | -0.002 | 70438945 | H 1.55 | |
| 2 | 10.719 | 10.718 | 0.001 | 73864137 | H 1.38 | |
| | | | | | RPD = 11.74 | |
| $ 2 Triphenylphosphate | | | | | | |
| 1 | 20.601 | 20.604 | -0.003 | 28925267 | H 1.71 | |
| 2 | 22.268 | 22.270 | -0.002 | 34225166 | H 1.80 | |
| | | | | | RPD = 5.03 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | |
| 1 | | 4.895 | | | ND | |
| 2 | | 5.044 | | | | |
| 4 Dichlorvos | | | | | | |
| 1 | | 6.906 | | | ND | |
| 2 | | 6.305 | | | | |
| 5 Mevinphos | | | | | | |
| 1 | | 9.474 | | | ND | |
| 2 | | 8.652 | | | | |
| 6 Demeton-O | | | | | | |
| 1 | | 9.947 | | | ND | |
| 2 | | 10.578 | | | | |
| 7 Thionazin | | | | | | |
| 1 | | 10.136 | | | ND | |
| 2 | | 10.683 | | | | |
| 8 Ethoprop | | | | | | |
| 1 | | 10.550 | | | ND | |
| 2 | | 10.862 | | | | |
| 9 Phorate | | | | | | |
| 1 | | 10.599 | | | ND | |
| 2 | | 11.503 | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|
| 10 Sulfotepp | | | | | | |
| 1 | | 10.973 | | | ND | |
| 2 | | 11.464 | | | | |
| 11 Diazinon | | | | | | |
| 1 | | 11.413 | | | ND | |
| 2 | | 12.565 | | | | |
| 12 Disulfoton | | | | | | |
| 1 | | 11.771 | | | ND | |
| 2 | | 12.767 | | | | |
| 13 Demeton-S | | | | | | |
| 1 | | 11.798 | | | ND | |
| 2 | | 11.946 | | | | |
| 14 Dimethoate | | | | | | U |
| 1 | | 12.583 | | | ND | |
| 2 | | 12.348 | | | | |
| 15 Ronnel | | | | | | |
| 1 | | 12.907 | | | ND | |
| 2 | | 14.328 | | | | |
| 16 Chlorpyrifos | | | | | | |
| 1 | | 13.619 | | | ND | |
| 2 | | 15.610 | | | | |
| 17 Fenthion | | | | | | |
| 1 | | 13.829 | | | ND | |
| 2 | | 15.879 | | | | |
| 18 Trichloronate | | | | | | |
| 1 | | 13.902 | | | ND | |
| 2 | | 15.747 | | | | |
| 19 Methyl parathion | | | | | | |
| 1 | | 14.635 | | | ND | |
| 2 | | 14.270 | | | | |
| 20 Malathion | | | | | | |
| 1 | | 14.981 | | | ND | |
| 2 | | 15.491 | | | | |
| 21 Tokuthion | | | | | | |
| 1 | | 16.055 | | | ND | |
| 2 | | 18.406 | | | | |
| 22 Ethyl Parathion | | | | | | |
| 1 | | 16.211 | | | ND | |
| 2 | | 15.808 | | | | |
| 23 Stirophos | | | | | | |
| 1 | | 17.224 | | | ND | |
| 2 | | 18.210 | | | | |
| 24 Bolstar | | | | | | |
| 1 | | 18.304 | | | ND | |
| 2 | | 20.896 | | | | |
| 25 Fensulfothion | | | | | | |
| 1 | | 21.195 | | | ND | |
| 2 | | 20.658 | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|
| 26 EPN | | | | | | |
| 1 | | 22.255 | | | ND | |
| 2 | | 22.963 | | | | |
| 27 Famphur | | | | | | |
| 1 | | 22.500 | | | ND | |
| 2 | | 21.586 | | | | |
| 28 Azinphos-methyl | | | | | | |
| 1 | | 22.894 | | | ND | |
| 2 | | 24.147 | | | | |
| 29 Coumaphos | | | | | | |
| 1 | | 25.547 | | | ND | |
| 2 | | 25.392 | | | | |
| S 30 Demeton, Total | | | | | | |
| 1 | | 10.230 | | | ND | |
| 2 | | 10.611 | | | | |

## QC Flag Legend

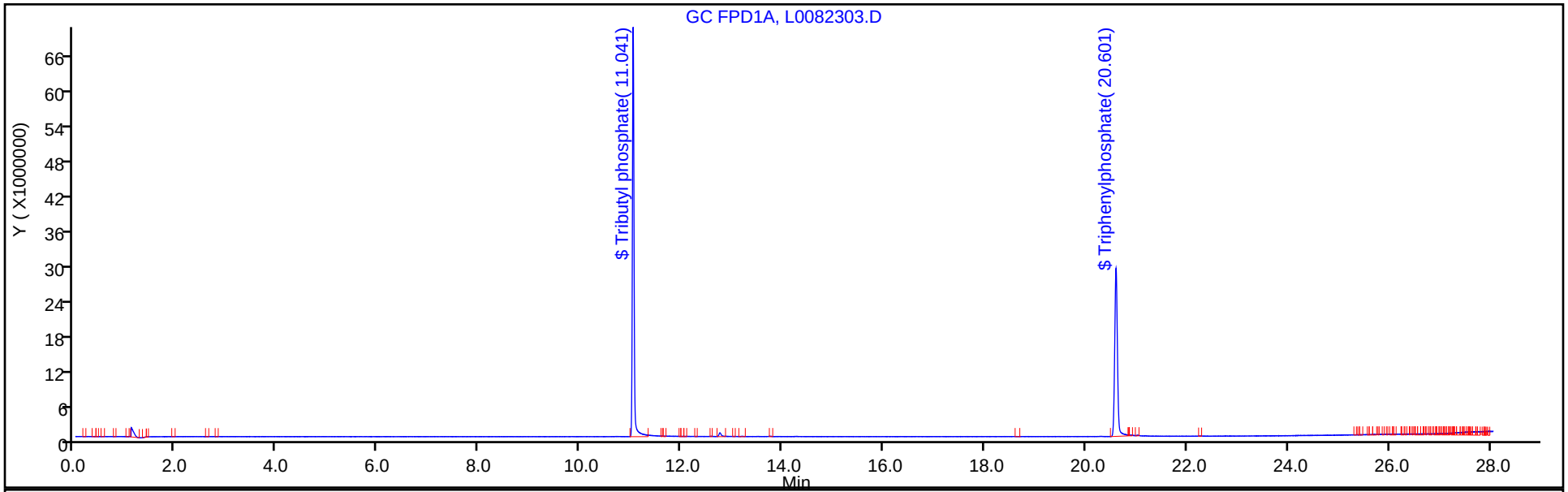
Review Flags

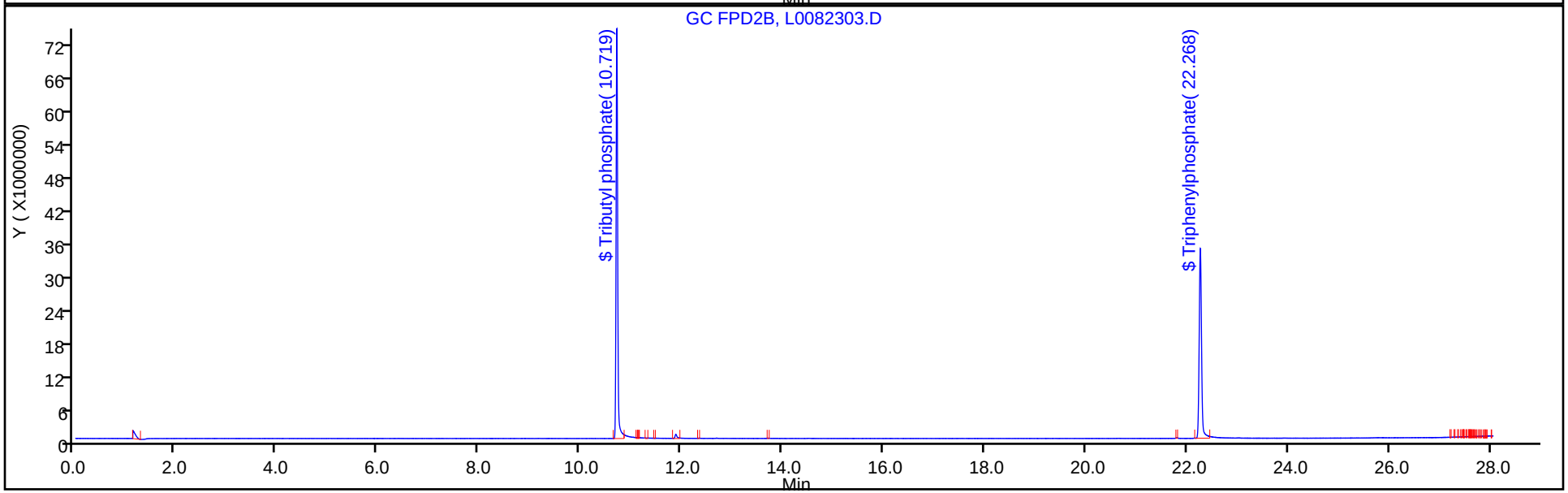
U - Marked Undetected

Report Date: 23-Aug-2018 10:54:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082303.D | | | | |
| Injection Date: | 23-Aug-2018 07:30:16 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | 460-162840-A-1-C | Lab Sample ID: | 180-162840-1 | Worklist Smp#: | 3 |
| Client ID: | AD05999-001 | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1 Analy Batch No.: 240093

SDG No.:

Instrument ID: CHGC5 GC Column: RTX-OPP1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2018 08:43 Calibration End Date: 03/21/2018 10:55 Calibration ID: 37534

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 180-240093/1 | L0321005.D |
| Level 2 | IC 180-240093/2 | L0321006.D |
| Level 3 | ICRT 180-240093/3 | L0321007.D |
| Level 4 | IC 180-240093/4 | L0321008.D |
| Level 5 | IC 180-240093/5 | L0321009.D |

| ANALYTE | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | | | | | | RT WINDOW | AVG RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O,O,O-Triethyl phosphorothioate | 5.102 | 5.102 | 5.103 | 5.105 | 5.105 | | | | | | 5.075 - 5.135 | 5.103 |
| Dichlorvos | 7.176 | 7.177 | 7.177 | 7.179 | 7.178 | | | | | | 7.149 - 7.209 | 7.177 |
| Mevinphos | 9.771 | 9.771 | 9.772 | 9.774 | 9.774 | | | | | | 9.744 - 9.804 | 9.772 |
| Demeton-O | 10.196 | 10.196 | 10.197 | 10.200 | 10.200 | | | | | | 10.170 - 10.230 | 10.198 |
| Thionazin | 10.399 | 10.398 | 10.400 | 10.403 | 10.402 | | | | | | 10.373 - 10.433 | 10.400 |
| Mocap | 10.823 | 10.823 | 10.823 | 10.827 | 10.824 | | | | | | 10.797 - 10.857 | 10.824 |
| Phorate | 10.846 | 10.848 | 10.850 | 10.854 | 10.853 | | | | | | 10.824 - 10.884 | 10.850 |
| Sulfotepp | 11.237 | 11.237 | 11.239 | 11.241 | 11.242 | | | | | | 11.211 - 11.271 | 11.239 |
| Diazinon | 11.648 | 11.647 | 11.648 | 11.652 | 11.651 | | | | | | 11.622 - 11.682 | 11.649 |
| Disulfoton | 12.021 | 12.021 | 12.022 | 12.025 | 12.024 | | | | | | 11.995 - 12.055 | 12.023 |
| Demeton-S | 12.071 | 12.071 | 12.071 | 12.075 | 12.073 | | | | | | 12.045 - 12.105 | 12.072 |
| Dimethoate | 12.969 | 12.967 | 12.969 | 12.973 | 12.973 | | | | | | 12.943 - 13.003 | 12.970 |
| Ronnel | 13.248 | 13.246 | 13.247 | 13.253 | 13.250 | | | | | | 13.223 - 13.283 | 13.249 |
| Chlorpyrifos | 14.011 | 14.012 | 14.013 | 14.018 | 14.017 | | | | | | 13.988 - 14.048 | 14.014 |
| Fenthion | 14.258 | 14.257 | 14.261 | 14.266 | 14.265 | | | | | | 14.236 - 14.296 | 14.261 |
| Trichloronate | 14.320 | 14.318 | 14.317 | 14.325 | 14.325 | | | | | | 14.295 - 14.355 | 14.321 |
| Methyl parathion | 15.222 | 15.221 | 15.223 | 15.230 | 15.225 | | | | | | 15.200 - 15.260 | 15.224 |
| Malathion | 15.536 | 15.537 | 15.535 | 15.544 | 15.542 | | | | | | 15.514 - 15.574 | 15.539 |
| Tokuthion | 16.519 | 16.522 | 16.523 | 16.529 | 16.528 | | | | | | 16.499 - 16.559 | 16.524 |
| Parathion | 16.766 | 16.768 | 16.768 | 16.775 | 16.772 | | | | | | 16.745 - 16.805 | 16.770 |
| Stirophos | 17.739 | 17.739 | 17.738 | 17.745 | 17.742 | | | | | | 17.715 - 17.775 | 17.741 |
| Bolstar | 18.757 | 18.757 | 18.756 | 18.762 | 18.762 | | | | | | 18.732 - 18.792 | 18.759 |
| Fensulfothion | 21.722 | 21.721 | 21.721 | 21.727 | 21.726 | | | | | | 21.697 - 21.757 | 21.723 |
| EPN | 22.694 | 22.692 | 22.693 | 22.698 | 22.698 | | | | | | 22.668 - 22.728 | 22.695 |
| Famphur | 22.988 | 22.985 | 22.986 | 22.990 | 22.990 | | | | | | 22.960 - 23.020 | 22.988 |
| Azinphos-methyl | 23.316 | 23.317 | 23.315 | 23.320 | 23.319 | | | | | | 23.290 - 23.350 | 23.317 |
| Coumaphos | 25.949 | 25.950 | 25.952 | 25.955 | 25.954 | | | | | | 25.925 - 25.985 | 25.952 |
| Tributyl phosphate | 11.315 | 11.314 | 11.316 | 11.319 | 11.317 | | | | | | 11.289 - 11.349 | 11.316 |
| Triphenylphosphate | 21.086 | 21.087 | 21.086 | 21.092 | 21.090 | | | | | | 21.062 - 21.122 | 21.088 |

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1 Analy Batch No.: 240093

SDG No.:

Instrument ID: CHGC5 GC Column: RTX-OPP1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2018 08:43 Calibration End Date: 03/21/2018 10:55 Calibration ID: 37534

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 180-240093/1 | L0321005.D |
| Level 2 | IC 180-240093/2 | L0321006.D |
| Level 3 | ICRT 180-240093/3 | L0321007.D |
| Level 4 | IC 180-240093/4 | L0321008.D |
| Level 5 | IC 180-240093/5 | L0321009.D |

| ANALYTE | CF | | | | CURVE TYPE | COEFFICIENT | | | # | MIN CF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 5 | LVL 2 | LVL 3 | LVL 4 | | B | M1 | M2 | | | | | | | | |
| O,O,O-Triethyl phosphorothioate | 81883545<br>77383944 | 77538978 | 78392076 | 76248461 | Ave | | 78289400.8 | | | | 2.7 | | 20.0 | | | |
| Dichlorvos | 69751465<br>65642493 | 66736524 | 66530767 | 65698033 | Ave | | 66871856.3 | | | | 2.5 | | 20.0 | | | |
| Mevinphos | 47959000<br>51553991 | 49793408 | 50765314 | 50498051 | Ave | | 50113952.8 | | | | 2.7 | | 20.0 | | | |
| Demeton-O | 51357735<br>47786343 | 49801941 | 49549182 | 48920934 | Ave | | 49483227.1 | | | | 2.6 | | 20.0 | | | |
| Thionazin | 55194820<br>51045267 | 53447722 | 55029146 | 51853890 | Ave | | 53314169.0 | | | | 3.5 | | 20.0 | | | |
| Mocap | 60526315<br>55380175 | 58339098 | 57807649 | 56860244 | Ave | | 57782696.0 | | | | 3.3 | | 20.0 | | | |
| Phorate | 56534790<br>50275744 | 55253664 | 54530307 | 53202340 | Ave | | 53959369.0 | | | | 4.4 | | 20.0 | | | |
| Sulfotepp | 84074935<br>78259708 | 81540992 | 80925598 | 80764547 | Ave | | 81113156.0 | | | | 2.6 | | 20.0 | | | |
| Diazinon | 44482580<br>40465150 | 43510790 | 41559264 | 42034445 | Ave | | 42410445.8 | | | | 3.8 | | 20.0 | | | |
| Disulfoton | 45792810<br>42335877 | 44867756 | 44201505 | 43741166 | Ave | | 44187822.8 | | | | 2.9 | | 20.0 | | | |
| Demeton-S | 48102439<br>47646062 | 48869315 | 49338464 | 49623730 | Ave | | 48716002.0 | | | | 1.7 | | 20.0 | | | |
| Dimethoate | 33890325<br>41964932 | 37850172 | 40176448 | 42023988 | Ave | | 39181172.9 | | | | 8.7 | | 20.0 | | | |
| Ronnel | 31078740<br>29828690 | 31009306 | 30207519 | 30738772 | Ave | | 30572605.4 | | | | 1.8 | | 20.0 | | | |
| Chlorpyrifos | 24379355<br>22370379 | 24000456 | 23008160 | 23314135 | Ave | | 23414497.0 | | | | 3.4 | | 20.0 | | | |
| Fenthion | 31304750<br>28585875 | 30765094 | 29703150 | 29887215 | Ave | | 30049216.7 | | | | 3.5 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1 Analy Batch No.: 240093

SDG No.:

Instrument ID: CHGC5 GC Column: RTX-OPP1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2018 08:43 Calibration End Date: 03/21/2018 10:55 Calibration ID: 37534

| ANALYTE | CF | | | | CURVE TYPE | COEFFICIENT | | | # | MIN CF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 5 | LVL 2 | LVL 3 | LVL 4 | | B | M1 | M2 | | | | | | | | |
| Trichloronate | 25143980<br>22564702 | 24523622 | 23644079 | 23480015 | Ave | | 23871279.5 | | | | 4.2 | | 20.0 | | | |
| Methyl parathion | 26401670<br>25634658 | 26050866 | 26051755 | 26092348 | Ave | | 26046259.3 | | | | 1.0 | | 20.0 | | | |
| Malathion | 20503860<br>19333388 | 20004092 | 20037214 | 20059510 | Ave | | 19987612.8 | | | | 2.1 | | 20.0 | | | |
| Tokuthion | 19907765<br>17916371 | 19294430 | 18797273 | 18792343 | Ave | | 18941636.4 | | | | 3.9 | | 20.0 | | | |
| Parathion | 25367945<br>23731839 | 24477080 | 24905189 | 24214398 | Ave | | 24539290.2 | | | | 2.6 | | 20.0 | | | |
| Stirophos | 17787910<br>18089727 | 18161754 | 18087189 | 18496356 | Ave | | 18124587.2 | | | | 1.4 | | 20.0 | | | |
| Bolstar | 21758575<br>20041792 | 21519258 | 20927762 | 20950281 | Ave | | 21039533.5 | | | | 3.2 | | 20.0 | | | |
| Fensulfothion | 22266380<br>25974854 | 24876360 | 24829487 | 26673629 | Ave | | 24924141.9 | | | | 6.7 | | 20.0 | | | |
| EPN | 22810660<br>24255821 | 23225090 | 23864536 | 23988515 | Ave | | 23628924.4 | | | | 2.5 | | 20.0 | | | |
| Famphur | 26576310<br>27499746 | 26814170 | 27119203 | 27520843 | Ave | | 27106054.4 | | | | 1.5 | | 20.0 | | | |
| Azinphos-methyl | 20362990<br>23907711 | 21945708 | 22710262 | 24230376 | Ave | | 22631409.4 | | | | 6.9 | | 20.0 | | | |
| Coumaphos | 24008155<br>24131424 | 24631552 | 24072784 | 24188751 | Ave | | 24206533.2 | | | | 1.0 | | 20.0 | | | |
| Tributyl phosphate | 52697130<br>40713910 | 44541962 | 44628477 | 44903208 | Ave | | 45496937.4 | | | | 9.6 | | 20.0 | | | |
| Triphenylphosphate | 18216960<br>16308843 | 16341200 | 16435853 | 17065667 | Ave | | 16873704.4 | | | | 4.8 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1 Analy Batch No.: 240093

SDG No.:

Instrument ID: CHGC5 GC Column: RTX-OPP1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2018 08:43 Calibration End Date: 03/21/2018 10:55 Calibration ID: 37534

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 180-240093/1 | L0321005.D |
| Level 2 | IC 180-240093/2 | L0321006.D |
| Level 3 | ICRT 180-240093/3 | L0321007.D |
| Level 4 | IC 180-240093/4 | L0321008.D |
| Level 5 | IC 180-240093/5 | L0321009.D |

| ANALYTE | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| O,O,O-Triethyl phosphorothioate | Ave | 16376709 | 38769489 | 78392076 | 152496922 | 309535776 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Dichlorvos | Ave | 13950293 | 33368262 | 66530767 | 131396065 | 262569972 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Mevinphos | Ave | 9591800 | 24896704 | 50765314 | 100996102 | 206215964 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Demeton-O | Ave | 3492326 | 8466330 | 16846722 | 33266235 | 64989426 | 0.0680 | 0.170 | 0.340 | 0.680 | 1.36 |
| Thionazin | Ave | 11038964 | 26723861 | 55029146 | 103707780 | 204181067 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Mocap | Ave | 12105263 | 29169549 | 57807649 | 113720487 | 221520698 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Phorate | Ave | 11306958 | 27626832 | 54530307 | 106404680 | 201102975 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Sulfotepp | Ave | 16814987 | 40770496 | 80925598 | 161529094 | 313038831 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Diazinon | Ave | 8896516 | 21755395 | 41559264 | 84068890 | 161860599 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Disulfoton | Ave | 9158562 | 22433878 | 44201505 | 87482331 | 169343509 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Demeton-S | Ave | 6349522 | 16126874 | 32563386 | 65503323 | 125785604 | 0.132 | 0.330 | 0.660 | 1.32 | 2.64 |
| Dimethoate | Ave | 6778065 | 18925086 | 40176448 | 84047975 | 167859727 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Ronnel | Ave | 6215748 | 15504653 | 30207519 | 61477543 | 119314761 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Chlorpyrifos | Ave | 4875871 | 12000228 | 23008160 | 46628269 | 89481517 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Fenthion | Ave | 6260950 | 15382547 | 29703150 | 59774429 | 114343499 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Trichloronate | Ave | 5028796 | 12261811 | 23644079 | 46960029 | 90258807 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Methyl parathion | Ave | 5280334 | 13025433 | 26051755 | 52184695 | 102538632 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Malathion | Ave | 4100772 | 10002046 | 20037214 | 40119020 | 77333552 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Tokuthion | Ave | 3981553 | 9647215 | 18797273 | 37584686 | 71665483 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Parathion | Ave | 5073589 | 12238540 | 24905189 | 48428796 | 94927355 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Stirophos | Ave | 3557582 | 9080877 | 18087189 | 36992711 | 72358909 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Bolstar | Ave | 4351715 | 10759629 | 20927762 | 41900561 | 80167167 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Fensulfothion | Ave | 4453276 | 12438180 | 24829487 | 53347257 | 103899415 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| EPN | Ave | 4562132 | 11612545 | 23864536 | 47977030 | 97023283 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Famphur | Ave | 5315262 | 13407085 | 27119203 | 55041686 | 109998984 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Azinphos-methyl | Ave | 4072598 | 10972854 | 22710262 | 48460752 | 95630844 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Coumaphos | Ave | 4801631 | 12315776 | 24072784 | 48377501 | 96525697 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Tributyl phosphate | Ave | 10539426 | 22270981 | 44628477 | 89806415 | 162855641 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Triphenylphosphate | Ave | 3643392 | 8170600 | 16435853 | 34131333 | 65235370 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |

Curve Type Legend:
Ave = Average by Height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321005.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Mar-2018 08:43:17 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-001
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:17:17 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

First Level Reviewer: oravecj Date: 22-Mar-2018 08:14:23

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.315 | 11.319 | -0.004 | 10539426H | 0.2000 | 0.2317 | |
| 2 | 10.689 | 10.694 | -0.005 | 12005643H | 0.2000 | 0.2237 | |
| | | | | | | RPD = 3.48 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.086 | 21.092 | -0.006 | 3643392H | 0.2000 | 0.2159 | |
| 2 | 22.257 | 22.264 | -0.007 | 4097552H | 0.2000 | 0.2158 | |
| | | | | | | RPD = 0.05 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.102 | 5.105 | -0.003 | 16376709H | 0.2000 | 0.2092 | |
| 2 | 5.020 | 5.023 | -0.003 | 18629962H | 0.2000 | 0.2089 | |
| | | | | | | RPD = 0.14 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.176 | 7.179 | -0.003 | 13950293H | 0.2000 | 0.2086 | |
| 2 | 6.281 | 6.284 | -0.003 | 14793580H | 0.2000 | 0.2074 | |
| | | | | | | RPD = 0.57 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.771 | 9.774 | -0.003 | 9591800H | 0.2000 | 0.1914 | |
| 2 | 8.628 | 8.631 | -0.003 | 9752991H | 0.2000 | 0.1944 | |
| | | | | | | RPD = 1.55 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.196 | 10.200 | -0.004 | 3492326H | 0.0680 | 0.0706 | |
| 2 | 10.555 | 10.559 | -0.004 | 3791130H | 0.0680 | 0.0697 | |
| | | | | | | RPD = 1.28 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.399 | 10.403 | -0.004 | 11038964H | 0.2000 | 0.2071 | |
| 2 | 10.661 | 10.665 | -0.004 | 12675240H | 0.2000 | 0.2064 | |
| | | | | | | RPD = 0.31 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | M |
| 1 | 10.823 | 10.827 | -0.004 | 12105263H | 0.2000 | 0.2095 | |
| 2 | 10.838 | 10.842 | -0.004 | 12136462H | 0.2000 | 0.2048 | |
| | | | | | | RPD = 2.29 | |
| 9 Phorate | | | | | | | M |
| 1 | 10.846 | 10.854 | -0.008 | 11306958H | 0.2000 | 0.2095 | |
| 2 | 11.477 | 11.482 | -0.005 | 12336038H | 0.2000 | 0.2103 | |
| | | | | | | RPD = 0.36 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.237 | 11.241 | -0.004 | 16814987H | 0.2000 | 0.2073 | |
| 2 | 11.446 | 11.450 | -0.004 | 18664771H | 0.2000 | 0.2059 | |
| | | | | | | RPD = 0.69 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.648 | 11.652 | -0.004 | 8896516H | 0.2000 | 0.2098 | |
| 2 | 12.539 | 12.544 | -0.005 | 8317243H | 0.2000 | 0.2056 | |
| | | | | | | RPD = 2.02 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.021 | 12.025 | -0.004 | 9158562H | 0.2000 | 0.2073 | |
| 2 | 12.737 | 12.744 | -0.007 | 8381636H | 0.2000 | 0.2066 | |
| | | | | | | RPD = 0.31 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.071 | 12.075 | -0.004 | 6349522H | 0.1320 | 0.1303 | |
| 2 | 11.916 | 11.920 | -0.004 | 6829000H | 0.1320 | 0.1284 | |
| | | | | | | RPD = 1.46 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.969 | 12.973 | -0.004 | 6778065H | 0.2000 | 0.1730 | |
| 2 | 12.319 | 12.325 | -0.006 | 8599046H | 0.2000 | 0.1724 | |
| | | | | | | RPD = 0.34 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.248 | 13.253 | -0.005 | 6215748H | 0.2000 | 0.2033 | |
| 2 | 14.292 | 14.300 | -0.008 | 5778996H | 0.2000 | 0.2051 | |
| | | | | | | RPD = 0.88 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.011 | 14.018 | -0.007 | 4875871H | 0.2000 | 0.2082 | |
| 2 | 15.581 | 15.589 | -0.008 | 4541277H | 0.2000 | 0.2062 | |
| | | | | | | RPD = 0.98 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.258 | 14.266 | -0.008 | 6260950H | 0.2000 | 0.2084 | |
| 2 | 15.850 | 15.860 | -0.010 | 6090110H | 0.2000 | 0.2048 | |
| | | | | | | RPD = 1.70 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.320 | 14.325 | -0.005 | 5028796H | 0.2000 | 0.2107 | |
| 2 | 15.708 | 15.716 | -0.008 | 4751160H | 0.2000 | 0.2049 | |
| | | | | | | RPD = 2.77 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.222 | 15.230 | -0.008 | 5280334H | 0.2000 | 0.2027 | |
| 2 | 14.236 | 14.242 | -0.006 | 6610359H | 0.2000 | 0.2005 | |
| | | | | | | RPD = 1.10 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.536 | 15.544 | -0.008 | 4100772H | 0.2000 | 0.2052 | |
| 2 | 15.463 | 15.473 | -0.010 | 4266763H | 0.2000 | 0.2023 | |
| | | | | | | RPD = 1.41 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.519 | 16.529 | -0.010 | 3981553H | 0.2000 | 0.2102 | |
| 2 | 18.372 | 18.382 | -0.010 | 4518954H | 0.2000 | 0.2054 | |
| | | | | | | RPD = 2.32 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.766 | 16.775 | -0.009 | 5073589H | 0.2000 | 0.2068 | |
| 2 | 15.772 | 15.783 | -0.011 | 5661346H | 0.2000 | 0.2036 | |
| | | | | | | RPD = 1.54 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.739 | 17.745 | -0.006 | 3557582H | 0.2000 | 0.1963 | |
| 2 | 18.182 | 18.189 | -0.007 | 3680602H | 0.2000 | 0.1944 | |
| | | | | | | RPD = 0.99 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.757 | 18.762 | -0.005 | 4351715H | 0.2000 | 0.2068 | |
| 2 | 20.877 | 20.884 | -0.007 | 4868562H | 0.2000 | 0.2064 | |
| | | | | | | RPD = 0.21 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.722 | 21.727 | -0.005 | 4453276H | 0.2000 | 0.1787 | |
| 2 | 20.635 | 20.641 | -0.006 | 4194747H | 0.2000 | 0.1740 | |
| | | | | | | RPD = 2.65 | |
| 26 EPN | | | | | | | |
| 1 | 22.694 | 22.698 | -0.004 | 4562132H | 0.2000 | 0.1931 | |
| 2 | 22.947 | 22.953 | -0.006 | 5102442H | 0.2000 | 0.1933 | |
| | | | | | | RPD = 0.12 | |
| 27 Famphur | | | | | | | |
| 1 | 22.988 | 22.990 | -0.002 | 5315262H | 0.2000 | 0.1961 | |
| 2 | 21.572 | 21.580 | -0.008 | 5228054H | 0.2000 | 0.1978 | |
| | | | | | | RPD = 0.85 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.316 | 23.320 | -0.004 | 4072598H | 0.2000 | 0.1800 | |
| 2 | 24.138 | 24.144 | -0.006 | 4558480H | 0.2000 | 0.1803 | |
| | | | | | | RPD = 0.21 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.949 | 25.955 | -0.006 | 4801631H | 0.2000 | 0.1984 | |
| 2 | 25.381 | 25.386 | -0.005 | 5504900H | 0.2000 | 0.1971 | |
| | | | | | | RPD = 0.62 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 0.2000 | 0.2009 | |
| 2 | | | | | 0.2000 | 0.1981 | |
| | | | | | | RPD = 1.40 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

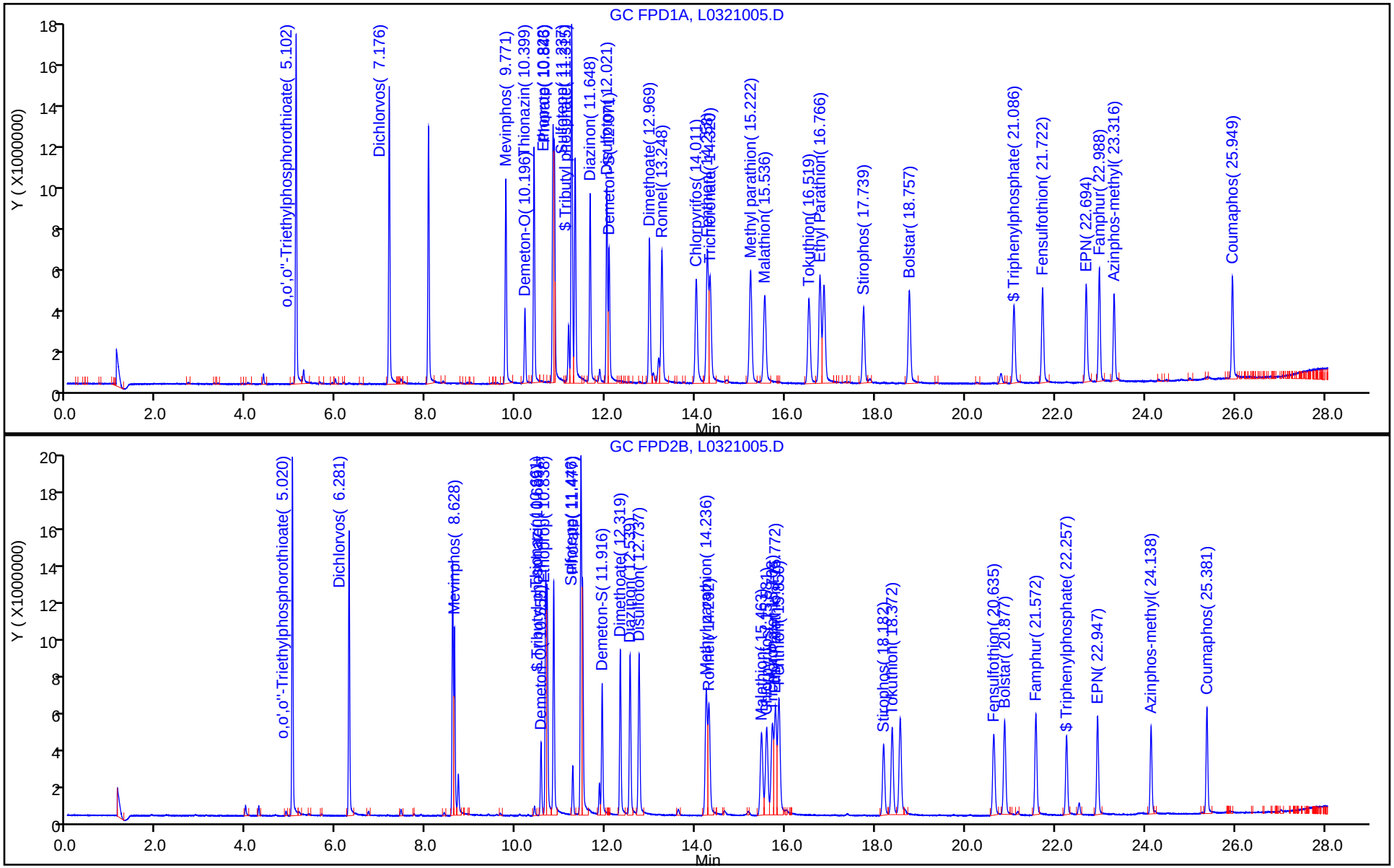
GCOPPLEVEL1_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:17:18 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321005.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Mar-2018 08:43:17 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | IC | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321006.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Mar-2018 09:16:22 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-002
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:17:11 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.314 | 11.319 | -0.005 | 22270981H | 0.5000 | 0.4895 | |
| 2 | 10.689 | 10.694 | -0.005 | 26120068H | 0.5000 | 0.4868 | |
| | | | | | | RPD = 0.56 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.087 | 21.092 | -0.005 | 8170600H | 0.5000 | 0.4842 | |
| 2 | 22.258 | 22.264 | -0.006 | 9063082H | 0.5000 | 0.4774 | |
| | | | | | | RPD = 1.43 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.102 | 5.105 | -0.003 | 38769489H | 0.5000 | 0.4952 | |
| 2 | 5.019 | 5.023 | -0.004 | 44375309H | 0.5000 | 0.4976 | |
| | | | | | | RPD = 0.48 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.177 | 7.179 | -0.002 | 33368262H | 0.5000 | 0.4990 | |
| 2 | 6.280 | 6.284 | -0.004 | 35622974H | 0.5000 | 0.4995 | |
| | | | | | | RPD = 0.10 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.771 | 9.774 | -0.003 | 24896704H | 0.5000 | 0.4968 | |
| 2 | 8.627 | 8.631 | -0.004 | 25090545H | 0.5000 | 0.5001 | |
| | | | | | | RPD = 0.66 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.196 | 10.200 | -0.004 | 8466330H | 0.1700 | 0.1711 | |
| 2 | 10.554 | 10.559 | -0.005 | 9268996H | 0.1700 | 0.1704 | |
| | | | | | | RPD = 0.43 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.398 | 10.403 | -0.005 | 26723861H | 0.5000 | 0.5013 | |
| 2 | 10.660 | 10.665 | -0.005 | 30585900H | 0.5000 | 0.4981 | |
| | | | | | | RPD = 0.64 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.823 | 10.827 | -0.004 | 29169549H | 0.5000 | 0.5048 | |
| 2 | 10.837 | 10.842 | -0.005 | 29977459H | 0.5000 | 0.5058 | |
| | | | | | | RPD = 0.19 | |
| 9 Phorate | | | | | | | |
| 1 | 10.848 | 10.854 | -0.006 | 27626832H | 0.5000 | 0.5120 | |
| 2 | 11.477 | 11.482 | -0.005 | 29933904H | 0.5000 | 0.5103 | |
| | | | | | | RPD = 0.33 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.237 | 11.241 | -0.004 | 40770496H | 0.5000 | 0.5026 | |
| 2 | 11.445 | 11.450 | -0.005 | 45101838H | 0.5000 | 0.4975 | |
| | | | | | | RPD = 1.03 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.647 | 11.652 | -0.005 | 21755395H | 0.5000 | 0.5130 | |
| 2 | 12.537 | 12.544 | -0.007 | 20791242H | 0.5000 | 0.5139 | |
| | | | | | | RPD = 0.18 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.021 | 12.025 | -0.004 | 22433878H | 0.5000 | 0.5077 | |
| 2 | 12.738 | 12.744 | -0.006 | 20570314H | 0.5000 | 0.5071 | |
| | | | | | | RPD = 0.12 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.071 | 12.075 | -0.004 | 16126874H | 0.3300 | 0.3310 | |
| 2 | 11.917 | 11.920 | -0.003 | 17377131H | 0.3300 | 0.3268 | |
| | | | | | | RPD = 1.27 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.967 | 12.973 | -0.006 | 18925086H | 0.5000 | 0.4830 | |
| 2 | 12.319 | 12.325 | -0.006 | 24049688H | 0.5000 | 0.4822 | |
| | | | | | | RPD = 0.18 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.246 | 13.253 | -0.007 | 15504653H | 0.5000 | 0.5071 | |
| 2 | 14.292 | 14.300 | -0.008 | 14238707H | 0.5000 | 0.5054 | |
| | | | | | | RPD = 0.35 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.012 | 14.018 | -0.006 | 12000228H | 0.5000 | 0.5125 | |
| 2 | 15.581 | 15.589 | -0.008 | 11109327H | 0.5000 | 0.5045 | |
| | | | | | | RPD = 1.58 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.257 | 14.266 | -0.009 | 15382547H | 0.5000 | 0.5119 | |
| 2 | 15.851 | 15.860 | -0.009 | 15067076H | 0.5000 | 0.5068 | |
| | | | | | | RPD = 1.01 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.318 | 14.325 | -0.007 | 12261811H | 0.5000 | 0.5137 | |
| 2 | 15.708 | 15.716 | -0.008 | 11749166H | 0.5000 | 0.5067 | |
| | | | | | | RPD = 1.36 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.221 | 15.230 | -0.009 | 13025433H | 0.5000 | 0.5001 | |
| 2 | 14.232 | 14.242 | -0.010 | 16625756H | 0.5000 | 0.5043 | |
| | | | | | | RPD = 0.84 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.537 | 15.544 | -0.007 | 10002046H | 0.5000 | 0.5004 | |
| 2 | 15.465 | 15.473 | -0.008 | 10596335H | 0.5000 | 0.5024 | |
| | | | | | | RPD = 0.40 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.522 | 16.529 | -0.007 | 9647215H | 0.5000 | 0.5093 | |
| 2 | 18.371 | 18.382 | -0.011 | 11254893H | 0.5000 | 0.5115 | |
| | | | | | | RPD = 0.44 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.768 | 16.775 | -0.007 | 12238540H | 0.5000 | 0.4987 | |
| 2 | 15.772 | 15.783 | -0.011 | 13858996H | 0.5000 | 0.4984 | |
| | | | | | | RPD = 0.07 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.739 | 17.745 | -0.006 | 9080877H | 0.5000 | 0.5010 | |
| 2 | 18.181 | 18.189 | -0.008 | 9369635H | 0.5000 | 0.4948 | |
| | | | | | | RPD = 1.26 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.757 | 18.762 | -0.005 | 10759629H | 0.5000 | 0.5114 | |
| 2 | 20.880 | 20.884 | -0.004 | 11908471H | 0.5000 | 0.5049 | |
| | | | | | | RPD = 1.29 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.721 | 21.727 | -0.006 | 12438180H | 0.5000 | 0.4990 | |
| 2 | 20.637 | 20.641 | -0.004 | 11924807H | 0.5000 | 0.4946 | |
| | | | | | | RPD = 0.89 | |
| 26 EPN | | | | | | | |
| 1 | 22.692 | 22.698 | -0.006 | 11612545H | 0.5000 | 0.4915 | |
| 2 | 22.949 | 22.953 | -0.004 | 13192601H | 0.5000 | 0.4998 | |
| | | | | | | RPD = 1.68 | |
| 27 Famphur | | | | | | | |
| 1 | 22.985 | 22.990 | -0.005 | 13407085H | 0.5000 | 0.4946 | |
| 2 | 21.574 | 21.580 | -0.006 | 13094029H | 0.5000 | 0.4953 | |
| | | | | | | RPD = 0.14 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.317 | 23.320 | -0.003 | 10972854H | 0.5000 | 0.4849 | |
| 2 | 24.139 | 24.144 | -0.005 | 12383628H | 0.5000 | 0.4899 | |
| | | | | | | RPD = 1.04 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.950 | 25.955 | -0.005 | 12315776H | 0.5000 | 0.5088 | |
| 2 | 25.382 | 25.386 | -0.004 | 13866624H | 0.5000 | 0.4966 | |
| | | | | | | RPD = 2.43 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 0.5000 | 0.5021 | |
| 2 | | | | | 0.5000 | 0.4972 | |
| | | | | | | RPD = 0.99 | |

## Reagents:

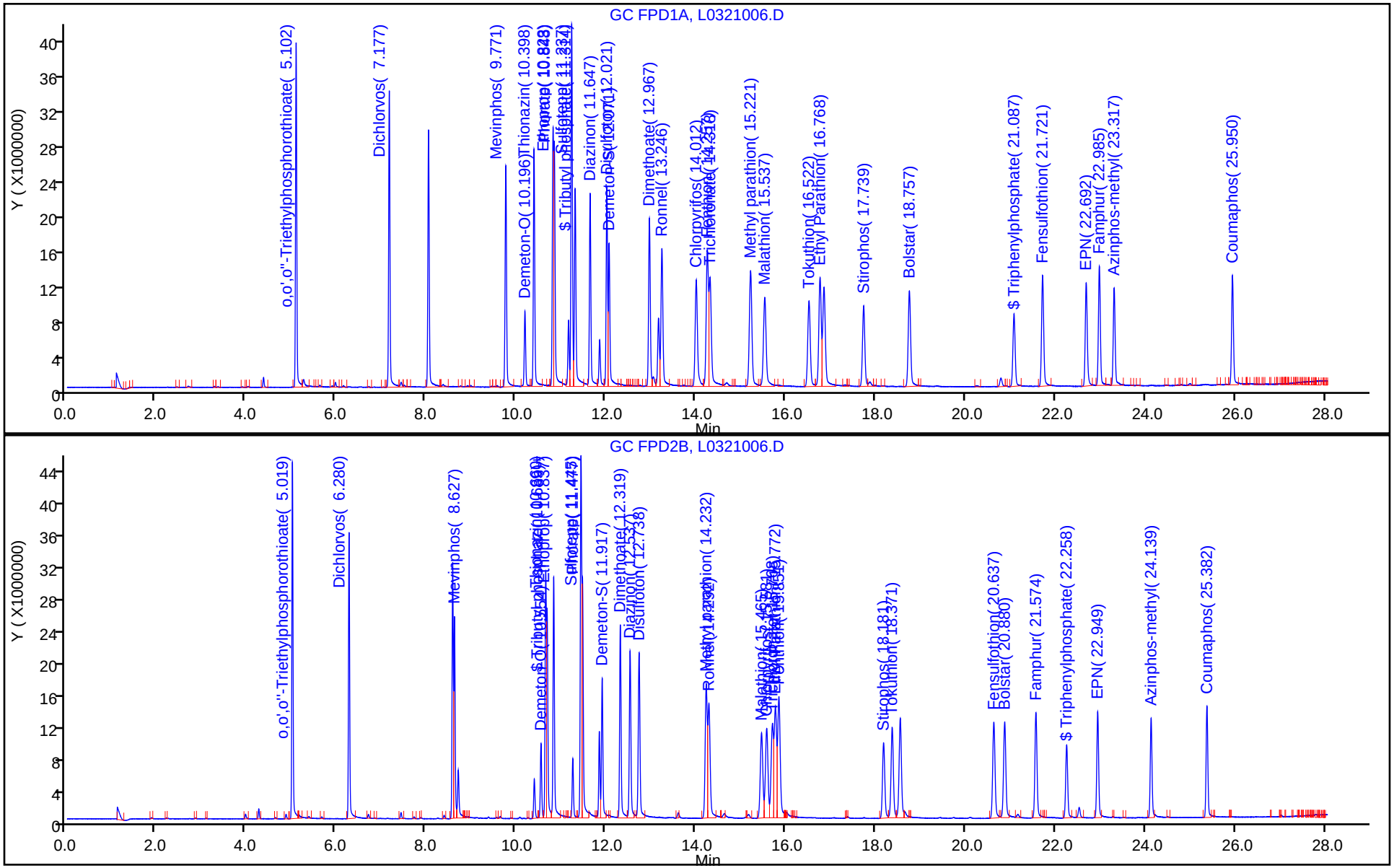
GCOPPLEVEL2_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:17:12 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321006.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Mar-2018 09:16:22 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | IC | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321007.D
Lims ID: ICRT
Client ID:
Sample Type: ICRT Calib Level: 3
Inject. Date: 21-Mar-2018 09:49:20 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-003
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:17:03 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

First Level Reviewer: oravecj Date: 21-Mar-2018 13:18:09

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.316 | 11.319 | -0.003 | 44628477H | 1.00 | 0.9809 | |
| 2 | 10.688 | 10.694 | -0.006 | 53244354H | 1.00 | 0.99 | |
| | | | | | | RPD = 1.15 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.086 | 21.092 | -0.006 | 16435853H | 1.00 | 0.9741 | |
| 2 | 22.258 | 22.264 | -0.006 | 18690485H | 1.00 | 0.9844 | |
| | | | | | | RPD = 1.06 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.103 | 5.105 | -0.002 | 78392076H | 1.00 | 1.00 | |
| 2 | 5.020 | 5.023 | -0.003 | 89037621H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.29 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.177 | 7.179 | -0.002 | 66530767H | 1.00 | 0.99 | |
| 2 | 6.281 | 6.284 | -0.003 | 71165271H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.30 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.772 | 9.774 | -0.002 | 50765314H | 1.00 | 1.01 | |
| 2 | 8.628 | 8.631 | -0.003 | 50356238H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.92 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.197 | 10.200 | -0.003 | 16846722H | 0.3400 | 0.3405 | |
| 2 | 10.556 | 10.559 | -0.003 | 18561635H | 0.3400 | 0.3412 | |
| | | | | | | RPD = 0.21 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.400 | 10.403 | -0.003 | 55029146H | 1.00 | 1.03 | |
| 2 | 10.662 | 10.665 | -0.003 | 62506368H | 1.00 | 1.02 | |
| | | | | | | RPD = 1.40 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.823 | 10.827 | -0.004 | 57807649H | 1.00 | 1.00 | |
| 2 | 10.838 | 10.842 | -0.004 | 59668612H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.62 | |
| 9 Phorate | | | | | | | |
| 1 | 10.850 | 10.854 | -0.004 | 54530307H | 1.00 | 1.01 | |
| 2 | 11.478 | 11.482 | -0.004 | 58976576H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.52 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.239 | 11.241 | -0.002 | 80925598H | 1.00 | 1.00 | |
| 2 | 11.447 | 11.450 | -0.003 | 91785159H | 1.00 | 1.01 | |
| | | | | | | RPD = 1.46 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.648 | 11.652 | -0.004 | 41559264H | 1.00 | 0.9799 | |
| 2 | 12.540 | 12.544 | -0.004 | 40332471H | 1.00 | 1.00 | |
| | | | | | | RPD = 1.72 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.022 | 12.025 | -0.003 | 44201505H | 1.00 | 1.00 | |
| 2 | 12.739 | 12.744 | -0.005 | 40927593H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.86 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.071 | 12.075 | -0.004 | 32563386H | 0.6600 | 0.6684 | |
| 2 | 11.916 | 11.920 | -0.004 | 35555288H | 0.6600 | 0.6688 | |
| | | | | | | RPD = 0.05 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.969 | 12.973 | -0.004 | 40176448H | 1.00 | 1.03 | |
| 2 | 12.322 | 12.325 | -0.003 | 51050029H | 1.00 | 1.02 | |
| | | | | | | RPD = 0.19 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.247 | 13.253 | -0.006 | 30207519H | 1.00 | 0.9881 | |
| 2 | 14.295 | 14.300 | -0.005 | 28040328H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.72 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.013 | 14.018 | -0.005 | 23008160H | 1.00 | 0.9826 | |
| 2 | 15.581 | 15.589 | -0.008 | 21987751H | 1.00 | 1.00 | |
| | | | | | | RPD = 1.60 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.261 | 14.266 | -0.005 | 29703150H | 1.00 | 0.9885 | |
| 2 | 15.855 | 15.860 | -0.005 | 29579491H | 1.00 | 0.99 | |
| | | | | | | RPD = 0.64 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.317 | 14.325 | -0.008 | 23644079H | 1.00 | 0.99 | |
| 2 | 15.710 | 15.716 | -0.006 | 23101196H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.58 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.223 | 15.230 | -0.007 | 26051755H | 1.00 | 1.00 | |
| 2 | 14.237 | 14.242 | -0.005 | 32728046H | 1.00 | 0.99 | |
| | | | | | | RPD = 0.75 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.535 | 15.544 | -0.009 | 20037214H | 1.00 | 1.00 | |
| 2 | 15.467 | 15.473 | -0.006 | 21309960H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.78 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.523 | 16.529 | -0.006 | 18797273H | 1.00 | 0.99 | |
| 2 | 18.374 | 18.382 | -0.008 | 21974894H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.64 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.768 | 16.775 | -0.007 | 24905189H | 1.00 | 1.01 | |
| 2 | 15.775 | 15.783 | -0.008 | 28030029H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.68 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.738 | 17.745 | -0.007 | 18087189H | 1.00 | 1.00 | |
| 2 | 18.184 | 18.189 | -0.005 | 18917793H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.10 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.756 | 18.762 | -0.006 | 20927762H | 1.00 | 0.99 | |
| 2 | 20.877 | 20.884 | -0.007 | 23670308H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.88 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.721 | 21.727 | -0.006 | 24829487H | 1.00 | 1.00 | |
| 2 | 20.637 | 20.641 | -0.004 | 24533807H | 1.00 | 1.02 | |
| | | | | | | RPD = 2.13 | |
| 26 EPN | | | | | | | |
| 1 | 22.693 | 22.698 | -0.005 | 23864536H | 1.00 | 1.01 | |
| 2 | 22.948 | 22.953 | -0.005 | 26415952H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.92 | |
| 27 Famphur | | | | | | | |
| 1 | 22.986 | 22.990 | -0.004 | 27119203H | 1.00 | 1.00 | |
| 2 | 21.574 | 21.580 | -0.006 | 26425021H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.09 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.315 | 23.320 | -0.005 | 22710262H | 1.00 | 1.00 | |
| 2 | 24.138 | 24.144 | -0.006 | 25406256H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.16 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.952 | 25.955 | -0.003 | 24072784H | 1.00 | 0.99 | |
| 2 | 25.381 | 25.386 | -0.005 | 27643591H | 1.00 | 0.9899 | |
| | | | | | | RPD = 0.46 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 1.00 | 1.01 | |
| 2 | | | | | 1.00 | 1.01 | |
| | | | | | | RPD = 0.10 | |

## Reagents:

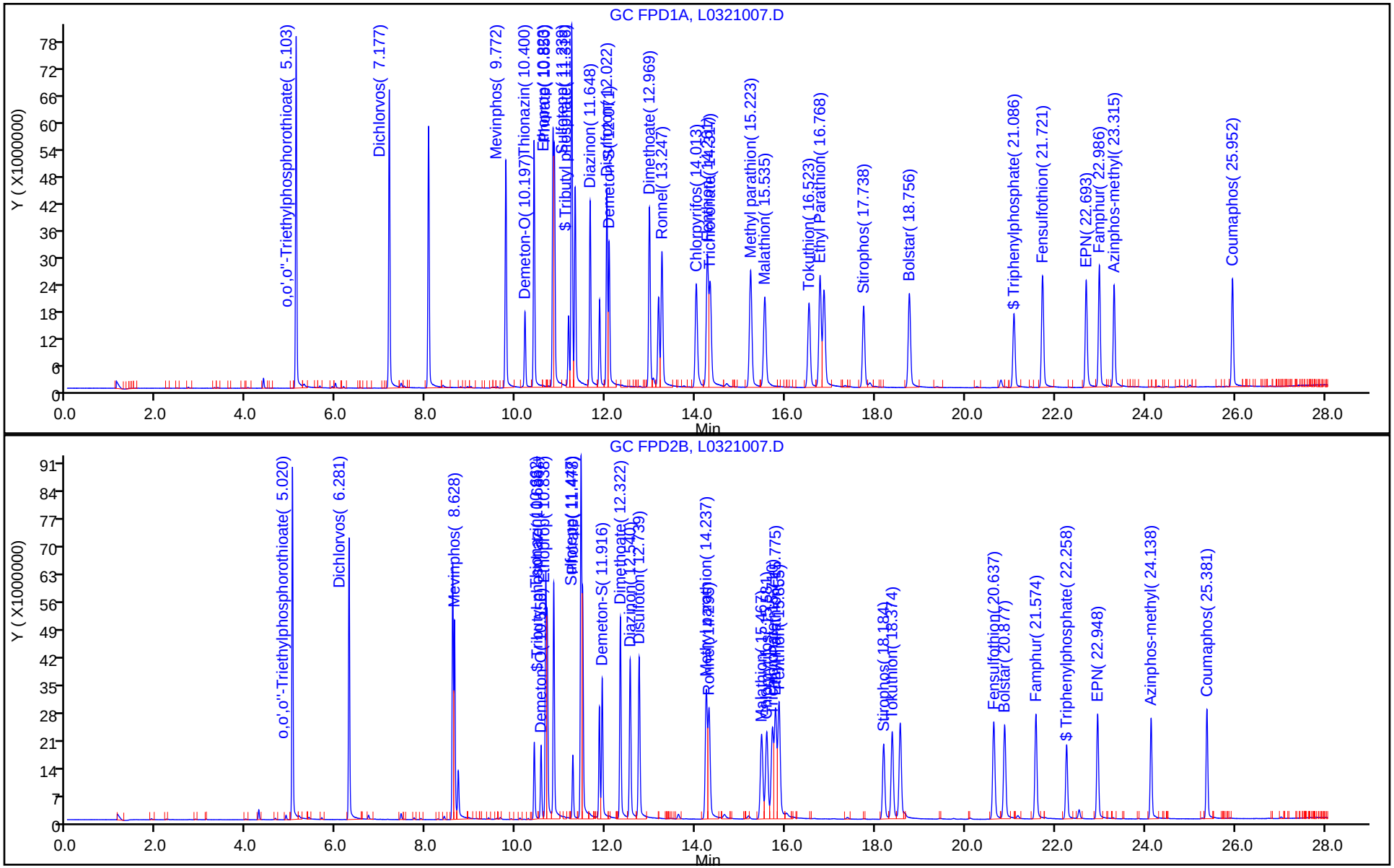
GCOPPLEVEL3_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:17:03 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321007.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Mar-2018 09:49:20 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | ICRT | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321008.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Mar-2018 10:22:25 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-004
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:16:57 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.319 | 11.319 | 0.000 | 89806415H | 2.00 | 1.97 | |
| 2 | 10.694 | 10.694 | 0.000 | 107314054H | 2.00 | 2.00 | |
| | | | | | | RPD = 1.30 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.092 | 21.092 | 0.000 | 34131333H | 2.00 | 2.02 | |
| 2 | 22.264 | 22.264 | 0.000 | 38446199H | 2.00 | 2.02 | |
| | | | | | | RPD = 0.11 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.105 | 5.105 | 0.000 | 152496922H | 2.00 | 1.95 | |
| 2 | 5.023 | 5.023 | 0.000 | 174142902H | 2.00 | 1.95 | |
| | | | | | | RPD = 0.24 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.179 | 7.179 | 0.000 | 131396065H | 2.00 | 1.96 | |
| 2 | 6.284 | 6.284 | 0.000 | 140335390H | 2.00 | 1.97 | |
| | | | | | | RPD = 0.15 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.774 | 9.774 | 0.000 | 100996102H | 2.00 | 2.02 | |
| 2 | 8.631 | 8.631 | 0.000 | 101761653H | 2.00 | 2.03 | |
| | | | | | | RPD = 0.64 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.200 | 10.200 | 0.000 | 33266235H | 0.6800 | 0.6723 | |
| 2 | 10.559 | 10.559 | 0.000 | 36952900H | 0.6800 | 0.6792 | |
| | | | | | | RPD = 1.02 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.403 | 10.403 | 0.000 | 103707780H | 2.00 | 1.95 | |
| 2 | 10.665 | 10.665 | 0.000 | 120499095H | 2.00 | 1.96 | |
| | | | | | | RPD = 0.87 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.827 | 10.827 | 0.000 | 113720487H | 2.00 | 1.97 | |
| 2 | 10.842 | 10.842 | 0.000 | 117588194H | 2.00 | 1.98 | |
| | | | | | | RPD = 0.80 | |
| 9 Phorate | | | | | | | |
| 1 | 10.854 | 10.854 | 0.000 | 106404680H | 2.00 | 1.97 | |
| 2 | 11.482 | 11.482 | 0.000 | 115943148H | 2.00 | 1.98 | |
| | | | | | | RPD = 0.23 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.241 | 11.241 | 0.000 | 161529094H | 2.00 | 1.99 | |
| 2 | 11.450 | 11.450 | 0.000 | 179536795H | 2.00 | 1.98 | |
| | | | | | | RPD = 0.56 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.652 | 11.652 | 0.000 | 84068890H | 2.00 | 1.98 | |
| 2 | 12.544 | 12.544 | 0.000 | 80835035H | 2.00 | 2.00 | |
| | | | | | | RPD = 0.79 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.025 | 12.025 | 0.000 | 87482331H | 2.00 | 1.98 | |
| 2 | 12.744 | 12.744 | 0.000 | 80750209H | 2.00 | 1.99 | |
| | | | | | | RPD = 0.55 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.075 | 12.075 | 0.000 | 65503323H | 1.32 | 1.34 | |
| 2 | 11.920 | 11.920 | 0.000 | 71856761H | 1.32 | 1.35 | |
| | | | | | | RPD = 0.52 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.973 | 12.973 | 0.000 | 84047975H | 2.00 | 2.15 | |
| 2 | 12.325 | 12.325 | 0.000 | 107775994H | 2.00 | 2.16 | |
| | | | | | | RPD = 0.73 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.253 | 13.253 | 0.000 | 61477543H | 2.00 | 2.01 | |
| 2 | 14.300 | 14.300 | 0.000 | 56396898H | 2.00 | 2.00 | |
| | | | | | | RPD = 0.46 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.018 | 14.018 | 0.000 | 46628269H | 2.00 | 1.99 | |
| 2 | 15.589 | 15.589 | 0.000 | 43958803H | 2.00 | 2.00 | |
| | | | | | | RPD = 0.24 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.266 | 14.266 | 0.000 | 59774429H | 2.00 | 1.99 | |
| 2 | 15.860 | 15.860 | 0.000 | 59697504H | 2.00 | 2.01 | |
| | | | | | | RPD = 0.93 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.325 | 14.325 | 0.000 | 46960029H | 2.00 | 1.97 | |
| 2 | 15.716 | 15.716 | 0.000 | 46586048H | 2.00 | 2.01 | |
| | | | | | | RPD = 2.11 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.230 | 15.230 | 0.000 | 52184695H | 2.00 | 2.00 | |
| 2 | 14.242 | 14.242 | 0.000 | 66574547H | 2.00 | 2.02 | |
| | | | | | | RPD = 0.79 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.544 | 15.544 | 0.000 | 40119020H | 2.00 | 2.01 | |
| 2 | 15.473 | 15.473 | 0.000 | 42193018H | 2.00 | 2.00 | |
| | | | | | | RPD = 0.33 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.529 | 16.529 | 0.000 | 37584686H | 2.00 | 1.98 | |
| 2 | 18.382 | 18.382 | 0.000 | 43583419H | 2.00 | 1.98 | |
| | | | | | | RPD = 0.17 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.775 | 16.775 | 0.000 | 48428796H | 2.00 | 1.97 | |
| 2 | 15.783 | 15.783 | 0.000 | 55697366H | 2.00 | 2.00 | |
| | | | | | | RPD = 1.48 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.745 | 17.745 | 0.000 | 36992711H | 2.00 | 2.04 | |
| 2 | 18.189 | 18.189 | 0.000 | 38780752H | 2.00 | 2.05 | |
| | | | | | | RPD = 0.33 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.762 | 18.762 | 0.000 | 41900561H | 2.00 | 1.99 | |
| 2 | 20.884 | 20.884 | 0.000 | 47594801H | 2.00 | 2.02 | |
| | | | | | | RPD = 1.31 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.727 | 21.727 | 0.000 | 53347257H | 2.00 | 2.14 | |
| 2 | 20.641 | 20.641 | 0.000 | 51861570H | 2.00 | 2.15 | |
| | | | | | | RPD = 0.50 | |
| 26 EPN | | | | | | | |
| 1 | 22.698 | 22.698 | 0.000 | 47977030H | 2.00 | 2.03 | |
| 2 | 22.953 | 22.953 | 0.000 | 53792403H | 2.00 | 2.04 | |
| | | | | | | RPD = 0.37 | |
| 27 Famphur | | | | | | | |
| 1 | 22.990 | 22.990 | 0.000 | 55041686H | 2.00 | 2.03 | |
| 2 | 21.580 | 21.580 | 0.000 | 53774512H | 2.00 | 2.03 | |
| | | | | | | RPD = 0.17 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.320 | 23.320 | 0.000 | 48460752H | 2.00 | 2.14 | |
| 2 | 24.144 | 24.144 | 0.000 | 53228184H | 2.00 | 2.11 | |
| | | | | | | RPD = 1.67 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.955 | 25.955 | 0.000 | 48377501H | 2.00 | 2.00 | |
| 2 | 25.386 | 25.386 | 0.000 | 57270682H | 2.00 | 2.05 | |
| | | | | | | RPD = 2.59 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 2.00 | 2.02 | |
| 2 | | | | | 2.00 | 2.03 | |
| | | | | | | RPD = 0.69 | |

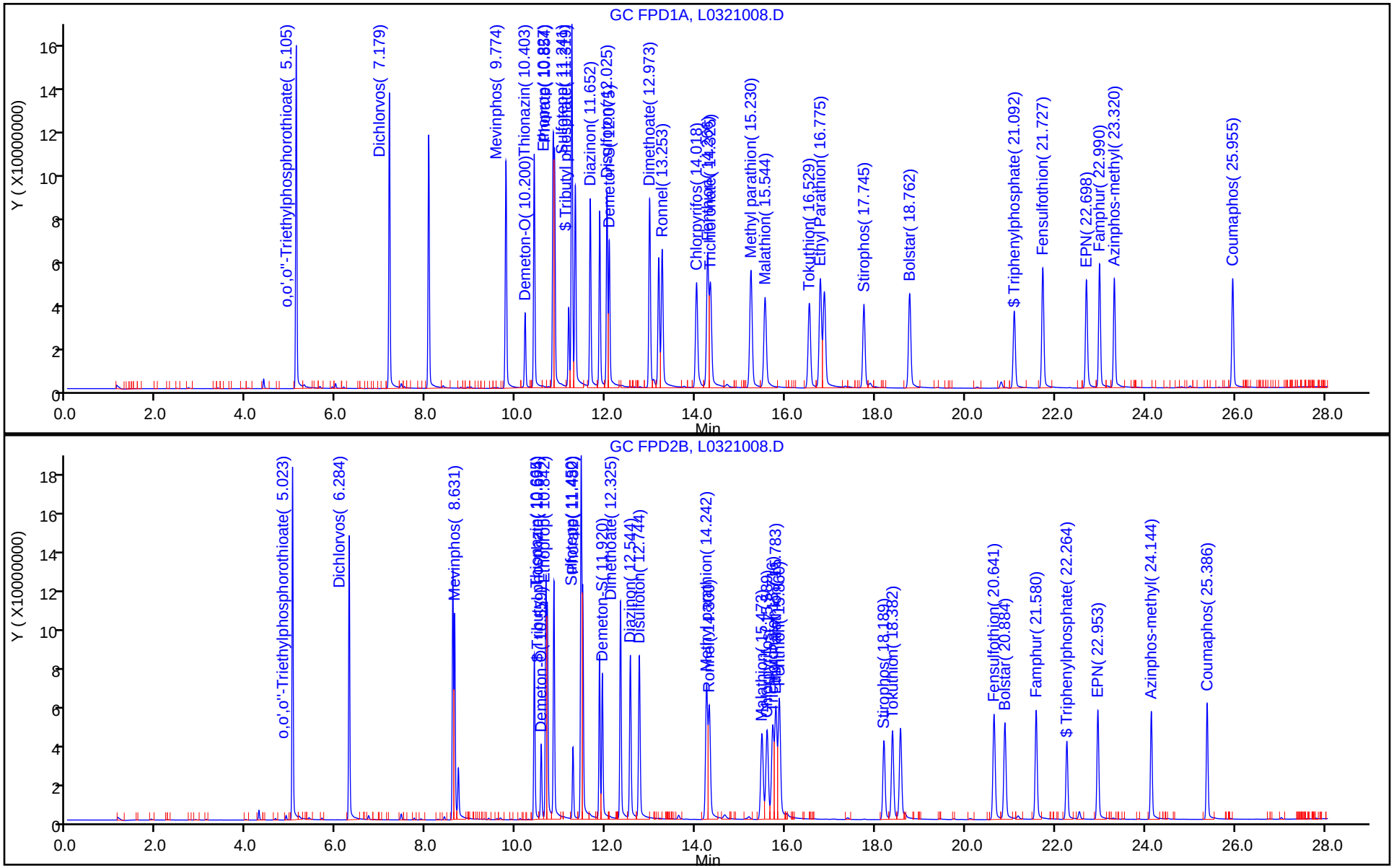
## Reagents:

GCOPPLEVEL4_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:16:58 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321008.D | | | | |
| Injection Date: | 21-Mar-2018 10:22:25 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | IC | | | Worklist Smp#: | 4 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Mar-2018 10:55:20 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-005
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:16:53 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

First Level Reviewer: oravecj Date: 22-Mar-2018 08:16:21

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.317 | 11.319 | -0.002 | 162855641H | 4.00 | 3.58 | |
| 2 | 10.692 | 10.694 | -0.002 | 196555986H | 4.00 | 3.66 | |
| | | | | | | RPD = 2.30 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.090 | 21.092 | -0.002 | 65235370H | 4.00 | 3.87 | |
| 2 | 22.263 | 22.264 | -0.001 | 73611754H | 4.00 | 3.88 | |
| | | | | | | RPD = 0.29 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.105 | 5.105 | 0.000 | 309535776H | 4.00 | 3.95 | |
| 2 | 5.023 | 5.023 | 0.000 | 351634599H | 4.00 | 3.94 | |
| | | | | | | RPD = 0.28 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.178 | 7.179 | -0.001 | 262569972H | 4.00 | 3.93 | |
| 2 | 6.283 | 6.284 | -0.001 | 280137578H | 4.00 | 3.93 | |
| | | | | | | RPD = 0.04 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.774 | 9.774 | 0.000 | 206215964H | 4.00 | 4.11 | |
| 2 | 8.632 | 8.631 | 0.001 | 202703197H | 4.00 | 4.04 | |
| | | | | | | RPD = 1.83 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.200 | 10.200 | 0.000 | 64989426H | 1.36 | 1.31 | |
| 2 | 10.559 | 10.559 | 0.000 | 71845219H | 1.36 | 1.32 | |
| | | | | | | RPD = 0.54 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.402 | 10.403 | -0.001 | 204181067H | 4.00 | 3.83 | |
| 2 | 10.665 | 10.665 | 0.000 | 238976604H | 4.00 | 3.89 | |
| | | | | | | RPD = 1.60 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.824 | 10.827 | -0.003 | 221520698H | 4.00 | 3.83 | |
| 2 | 10.842 | 10.842 | 0.000 | 229044270H | 4.00 | 3.86 | |
| | | | | | | RPD = 0.79 | |
| 9 Phorate | | | | | | | |
| 1 | 10.853 | 10.854 | -0.001 | 201102975H | 4.00 | 3.73 | |
| 2 | 11.482 | 11.482 | 0.000 | 219243901H | 4.00 | 3.74 | |
| | | | | | | RPD = 0.28 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.242 | 11.241 | 0.001 | 313038831H | 4.00 | 3.86 | |
| 2 | 11.449 | 11.450 | -0.001 | 352900651H | 4.00 | 3.89 | |
| | | | | | | RPD = 0.86 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.651 | 11.652 | -0.001 | 161860599H | 4.00 | 3.82 | |
| 2 | 12.543 | 12.544 | -0.001 | 153485439H | 4.00 | 3.79 | |
| | | | | | | RPD = 0.60 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.024 | 12.025 | -0.001 | 169343509H | 4.00 | 3.83 | |
| 2 | 12.743 | 12.744 | -0.001 | 153901646H | 4.00 | 3.79 | |
| | | | | | | RPD = 1.01 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.073 | 12.075 | -0.002 | 125785604H | 2.64 | 2.58 | |
| 2 | 11.920 | 11.920 | 0.000 | 140256529H | 2.64 | 2.64 | |
| | | | | | | RPD = 2.15 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.973 | 12.973 | 0.000 | 167859727H | 4.00 | 4.28 | |
| 2 | 12.325 | 12.325 | 0.000 | 213449833H | 4.00 | 4.28 | |
| | | | | | | RPD = 0.11 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.250 | 13.253 | -0.003 | 119314761H | 4.00 | 3.90 | |
| 2 | 14.302 | 14.300 | 0.002 | 109051205H | 4.00 | 3.87 | |
| | | | | | | RPD = 0.83 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.017 | 14.018 | -0.001 | 89481517H | 4.00 | 3.82 | |
| 2 | 15.588 | 15.589 | -0.001 | 84868441H | 4.00 | 3.85 | |
| | | | | | | RPD = 0.84 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.265 | 14.266 | -0.001 | 114343499H | 4.00 | 3.81 | |
| 2 | 15.860 | 15.860 | 0.000 | 114584327H | 4.00 | 3.85 | |
| | | | | | | RPD = 1.27 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.325 | 14.325 | 0.000 | 90258807H | 4.00 | 3.78 | |
| 2 | 15.717 | 15.716 | 0.001 | 89153099H | 4.00 | 3.84 | |
| | | | | | | RPD = 1.67 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.225 | 15.230 | -0.005 | 102538632H | 4.00 | 3.94 | |
| 2 | 14.242 | 14.242 | 0.000 | 130045547H | 4.00 | 3.94 | |
| | | | | | | RPD = 0.20 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.542 | 15.544 | -0.002 | 77333552H | 4.00 | 3.87 | |
| 2 | 15.474 | 15.473 | 0.001 | 82093133H | 4.00 | 3.89 | |
| | | | | | | RPD = 0.60 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.528 | 16.529 | -0.001 | 71665483H | 4.00 | 3.78 | |
| 2 | 18.380 | 18.382 | -0.002 | 84559083H | 4.00 | 3.84 | |
| | | | | | | RPD = 1.57 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.772 | 16.775 | -0.003 | 94927355H | 4.00 | 3.87 | |
| 2 | 15.782 | 15.783 | -0.001 | 108517268H | 4.00 | 3.90 | |
| | | | | | | RPD = 0.88 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.742 | 17.745 | -0.003 | 72358909H | 4.00 | 3.99 | |
| 2 | 18.192 | 18.189 | 0.003 | 76950974H | 4.00 | 4.06 | |
| | | | | | | RPD = 1.76 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.762 | 18.762 | 0.000 | 80167167H | 4.00 | 3.81 | |
| 2 | 20.882 | 20.884 | -0.002 | 89235012H | 4.00 | 3.78 | |
| | | | | | | RPD = 0.71 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.726 | 21.727 | -0.001 | 103899415H | 4.00 | 4.17 | |
| 2 | 20.642 | 20.641 | 0.001 | 101017770H | 4.00 | 4.19 | |
| | | | | | | RPD = 0.51 | |
| 26 EPN | | | | | | | |
| 1 | 22.698 | 22.698 | 0.000 | 97023283H | 4.00 | 4.11 | |
| 2 | 22.953 | 22.953 | 0.000 | 107087359H | 4.00 | 4.06 | |
| | | | | | | RPD = 1.21 | |
| 27 Famphur | | | | | | | |
| 1 | 22.990 | 22.990 | 0.000 | 109998984H | 4.00 | 4.06 | |
| 2 | 21.580 | 21.580 | 0.000 | 106172097H | 4.00 | 4.02 | |
| | | | | | | RPD = 1.04 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.319 | 23.320 | -0.001 | 95630844H | 4.00 | 4.23 | |
| 2 | 24.142 | 24.144 | -0.002 | 107222645H | 4.00 | 4.24 | |
| | | | | | | RPD = 0.39 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.954 | 25.955 | -0.001 | 96525697H | 4.00 | 3.99 | |
| 2 | 25.386 | 25.386 | 0.000 | 112349977H | 4.00 | 4.02 | |
| | | | | | | RPD = 0.89 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 4.00 | 3.90 | |
| 2 | | | | | 4.00 | 3.96 | |
| | | | | | | RPD = 1.61 | |

## Reagents:

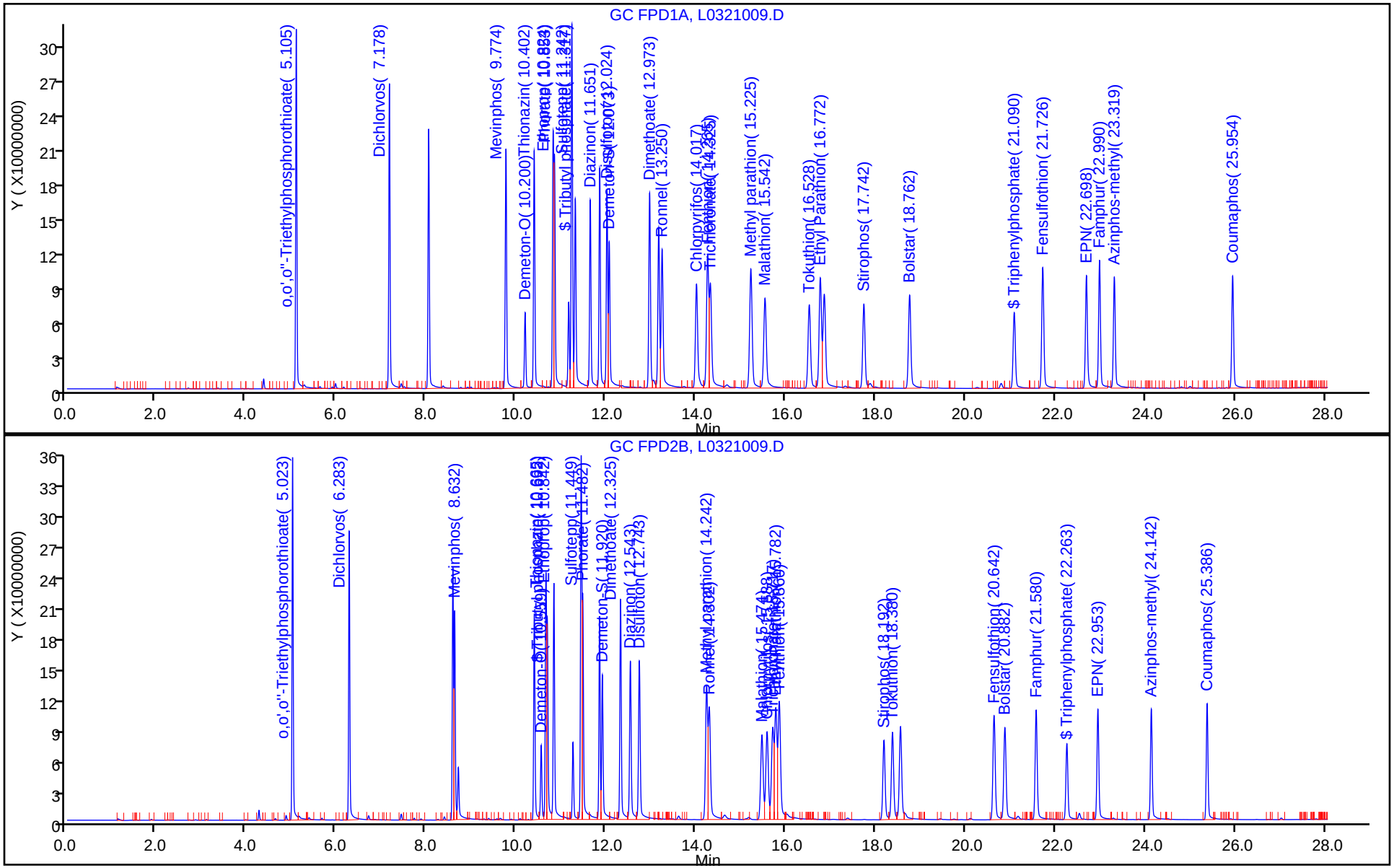
GCOPPLEVEL5_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:16:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Mar-2018 10:55:20 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | IC | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1 Analy Batch No.: 240093

SDG No.:

Instrument ID: CHGC5 GC Column: RTX-OPP2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2018 08:43 Calibration End Date: 03/21/2018 10:55 Calibration ID: 37535

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 180-240093/1 | L0321005.D |
| Level 2 | IC 180-240093/2 | L0321006.D |
| Level 3 | ICRT 180-240093/3 | L0321007.D |
| Level 4 | IC 180-240093/4 | L0321008.D |
| Level 5 | IC 180-240093/5 | L0321009.D |

| ANALYTE | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | | | | | | RT WINDOW | AVG RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O,O,O-Triethyl phosphorothioate | 5.020 | 5.019 | 5.020 | 5.023 | 5.023 | | | | | | 4.993 - 5.053 | 5.021 |
| Dichlorvos | 6.281 | 6.280 | 6.281 | 6.284 | 6.283 | | | | | | 6.254 - 6.314 | 6.282 |
| Mevinphos | 8.628 | 8.627 | 8.628 | 8.631 | 8.632 | | | | | | 8.601 - 8.661 | 8.629 |
| Demeton-O | 10.555 | 10.554 | 10.556 | 10.559 | 10.559 | | | | | | 10.529 - 10.589 | 10.557 |
| Thionazin | 10.661 | 10.660 | 10.662 | 10.665 | 10.665 | | | | | | 10.635 - 10.695 | 10.663 |
| Mocap | 10.838 | 10.837 | 10.838 | 10.842 | 10.842 | | | | | | 10.812 - 10.872 | 10.839 |
| Sulfotepp | 11.446 | 11.445 | 11.447 | 11.450 | 11.449 | | | | | | 11.420 - 11.480 | 11.447 |
| Phorate | 11.477 | 11.477 | 11.478 | 11.482 | 11.482 | | | | | | 11.452 - 11.512 | 11.479 |
| Demeton-S | 11.916 | 11.917 | 11.916 | 11.920 | 11.920 | | | | | | 11.890 - 11.950 | 11.918 |
| Dimethoate | 12.319 | 12.319 | 12.322 | 12.325 | 12.325 | | | | | | 12.295 - 12.355 | 12.322 |
| Diazinon | 12.539 | 12.537 | 12.540 | 12.544 | 12.543 | | | | | | 12.514 - 12.574 | 12.541 |
| Disulfoton | 12.737 | 12.738 | 12.739 | 12.744 | 12.743 | | | | | | 12.714 - 12.774 | 12.740 |
| Methyl parathion | 14.236 | 14.232 | 14.237 | 14.242 | 14.242 | | | | | | 14.212 - 14.272 | 14.238 |
| Ronnel | 14.292 | 14.292 | 14.295 | 14.300 | 14.302 | | | | | | 14.270 - 14.330 | 14.296 |
| Malathion | 15.463 | 15.465 | 15.467 | 15.473 | 15.474 | | | | | | 15.443 - 15.503 | 15.468 |
| Chlorpyrifos | 15.581 | 15.581 | 15.581 | 15.589 | 15.588 | | | | | | 15.559 - 15.619 | 15.584 |
| Trichloronate | 15.708 | 15.708 | 15.710 | 15.716 | 15.717 | | | | | | 15.686 - 15.746 | 15.712 |
| Parathion | 15.772 | 15.772 | 15.775 | 15.783 | 15.782 | | | | | | 15.753 - 15.813 | 15.777 |
| Fenthion | 15.850 | 15.851 | 15.855 | 15.860 | 15.860 | | | | | | 15.830 - 15.890 | 15.855 |
| Stirophos | 18.182 | 18.181 | 18.184 | 18.189 | 18.192 | | | | | | 18.159 - 18.219 | 18.186 |
| Tokuthion | 18.372 | 18.371 | 18.374 | 18.382 | 18.380 | | | | | | 18.352 - 18.412 | 18.376 |
| Fensulfothion | 20.635 | 20.637 | 20.637 | 20.641 | 20.642 | | | | | | 20.611 - 20.671 | 20.638 |
| Bolstar | 20.877 | 20.880 | 20.877 | 20.884 | 20.882 | | | | | | 20.854 - 20.914 | 20.880 |
| Famphur | 21.572 | 21.574 | 21.574 | 21.580 | 21.580 | | | | | | 21.550 - 21.610 | 21.576 |
| EPN | 22.947 | 22.949 | 22.948 | 22.953 | 22.953 | | | | | | 22.923 - 22.983 | 22.950 |
| Azinphos-methyl | 24.138 | 24.139 | 24.138 | 24.144 | 24.142 | | | | | | 24.114 - 24.174 | 24.140 |
| Coumaphos | 25.381 | 25.382 | 25.381 | 25.386 | 25.386 | | | | | | 25.356 - 25.416 | 25.383 |
| Tributyl phosphate | 10.689 | 10.689 | 10.688 | 10.694 | 10.692 | | | | | | 10.664 - 10.724 | 10.690 |
| Triphenylphosphate | 22.257 | 22.258 | 22.258 | 22.264 | 22.263 | | | | | | 22.234 - 22.294 | 22.260 |

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1 Analy Batch No.: 240093

SDG No.:

Instrument ID: CHGC5 GC Column: RTX-OPP2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2018 08:43 Calibration End Date: 03/21/2018 10:55 Calibration ID: 37535

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 180-240093/1 | L0321005.D |
| Level 2 | IC 180-240093/2 | L0321006.D |
| Level 3 | ICRT 180-240093/3 | L0321007.D |
| Level 4 | IC 180-240093/4 | L0321008.D |
| Level 5 | IC 180-240093/5 | L0321009.D |

| ANALYTE | CF | | | | CURVE TYPE | COEFFICIENT | | | # | MIN CF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 5 | LVL 2 | LVL 3 | LVL 4 | | B | M1 | M2 | | | | | | | | |
| O,O,O-Triethyl phosphorothioate | 93149810<br>87908650 | 88750618 | 89037621 | 87071451 | Ave | | 89183630.0 | | | | 2.6 | | 20.0 | | | |
| Dichlorvos | 73967900<br>70034395 | 71245948 | 71165271 | 70167695 | Ave | | 71316241.7 | | | | 2.2 | | 20.0 | | | |
| Mevinphos | 48764955<br>50675799 | 50181090 | 50356238 | 50880827 | Ave | | 50171781.8 | | | | 1.7 | | 20.0 | | | |
| Demeton-O | 55751912<br>52827367 | 54523506 | 54593044 | 54342500 | Ave | | 54407665.7 | | | | 1.9 | | 20.0 | | | |
| Thionazin | 63376200<br>59744151 | 61171800 | 62506368 | 60249548 | Ave | | 61409613.3 | | | | 2.5 | | 20.0 | | | |
| Mocap | 60682310<br>57261068 | 59954918 | 59668612 | 58794097 | Ave | | 59272200.9 | | | | 2.2 | | 20.0 | | | |
| Sulfotepp | 93323855<br>88225163 | 90203676 | 91785159 | 89768398 | Ave | | 90661250.1 | | | | 2.2 | | 20.0 | | | |
| Phorate | 61680190<br>54810975 | 59867808 | 58976576 | 57971574 | Ave | | 58661424.7 | | | | 4.3 | | 20.0 | | | |
| Demeton-S | 51734848<br>53127473 | 52657973 | 53871648 | 54436940 | Ave | | 53165776.6 | | | | 2.0 | | 20.0 | | | |
| Dimethoate | 42995230<br>53362458 | 48099376 | 51050029 | 53887997 | Ave | | 49879018.1 | | | | 9.0 | | 20.0 | | | |
| Diazinon | 41586215<br>38371360 | 41582484 | 40332471 | 40417518 | Ave | | 40458009.5 | | | | 3.2 | | 20.0 | | | |
| Disulfoton | 41908180<br>38475412 | 41140628 | 40927593 | 40375105 | Ave | | 40565383.4 | | | | 3.2 | | 20.0 | | | |
| Methyl parathion | 33051795<br>32511387 | 33251512 | 32728046 | 33287274 | Ave | | 32966002.7 | | | | 1.0 | | 20.0 | | | |
| Ronnel | 28894980<br>27262801 | 28477414 | 28040328 | 28198449 | Ave | | 28174794.5 | | | | 2.1 | | 20.0 | | | |
| Malathion | 21333815<br>20523283 | 21192670 | 21309960 | 21096509 | Ave | | 21091247.5 | | | | 1.6 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1 Analy Batch No.: 240093

SDG No.:

Instrument ID: CHGC5 GC Column: RTX-OPP2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2018 08:43 Calibration End Date: 03/21/2018 10:55 Calibration ID: 37535

| ANALYTE | CF | | | | CURVE TYPE | COEFFICIENT | | | # | MIN CF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 5 | LVL 2 | LVL 3 | LVL 4 | | B | M1 | M2 | | | | | | | | |
| Chlorpyrifos | 22706385<br>21217110 | 22218654 | 21987751 | 21979402 | Ave | | 22021860.4 | | | | 2.4 | | 20.0 | | | |
| Trichloronate | 23755800<br>22288275 | 23498332 | 23101196 | 23293024 | Ave | | 23187325.4 | | | | 2.4 | | 20.0 | | | |
| Parathion | 28306730<br>27129317 | 27717992 | 28030029 | 27848683 | Ave | | 27806550.2 | | | | 1.6 | | 20.0 | | | |
| Fenthion | 30450550<br>28646082 | 30134152 | 29579491 | 29848752 | Ave | | 29731805.4 | | | | 2.3 | | 20.0 | | | |
| Stirophos | 18403010<br>19237744 | 18739270 | 18917793 | 19390376 | Ave | | 18937638.5 | | | | 2.1 | | 20.0 | | | |
| Tokuthion | 22594770<br>21139771 | 22509786 | 21974894 | 21791710 | Ave | | 22002186.1 | | | | 2.7 | | 20.0 | | | |
| Fensulfothion | 20973735<br>25254443 | 23849614 | 24533807 | 25930785 | Ave | | 24108476.7 | | | | 8.0 | | 20.0 | | | |
| Bolstar | 24342810<br>22308753 | 23816942 | 23670308 | 23797401 | Ave | | 23587242.7 | | | | 3.2 | | 20.0 | | | |
| Famphur | 26140270<br>26543024 | 26188058 | 26425021 | 26887256 | Ave | | 26436725.9 | | | | 1.1 | | 20.0 | | | |
| EPN | 25512210<br>26771840 | 26385202 | 26415952 | 26896202 | Ave | | 26396281.1 | | | | 2.1 | | 20.0 | | | |
| Azinphos-methyl | 22792400<br>26805661 | 24767256 | 25406256 | 26614092 | Ave | | 25277133.1 | | | | 6.4 | | 20.0 | | | |
| Coumaphos | 27524500<br>28087494 | 27733248 | 27643591 | 28635341 | Ave | | 27924834.9 | | | | 1.6 | | 20.0 | | | |
| Tributyl phosphate | 60028215<br>49138997 | 52240136 | 53244354 | 53657027 | Ave | | 53661745.7 | | | | 7.4 | | 20.0 | | | |
| Triphenylphosphate | 20487760<br>18402939 | 18126164 | 18690485 | 19223100 | Ave | | 18986089.4 | | | | 4.9 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1 Analy Batch No.: 240093

SDG No.:

Instrument ID: CHGC5 GC Column: RTX-OPP2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2018 08:43 Calibration End Date: 03/21/2018 10:55 Calibration ID: 37535

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 180-240093/1 | L0321005.D |
| Level 2 | IC 180-240093/2 | L0321006.D |
| Level 3 | ICRT 180-240093/3 | L0321007.D |
| Level 4 | IC 180-240093/4 | L0321008.D |
| Level 5 | IC 180-240093/5 | L0321009.D |

| ANALYTE | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| O,O,O-Triethyl phosphorothioate | Ave | 18629962 | 44375309 | 89037621 | 174142902 | 351634599 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Dichlorvos | Ave | 14793580 | 35622974 | 71165271 | 140335390 | 280137578 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Mevinphos | Ave | 9752991 | 25090545 | 50356238 | 101761653 | 202703197 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Demeton-O | Ave | 3791130 | 9268996 | 18561635 | 36952900 | 71845219 | 0.0680 | 0.170 | 0.340 | 0.680 | 1.36 |
| Thionazin | Ave | 12675240 | 30585900 | 62506368 | 120499095 | 238976604 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Mocap | Ave | 12136462 | 29977459 | 59668612 | 117588194 | 229044270 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Sulfotepp | Ave | 18664771 | 45101838 | 91785159 | 179536795 | 352900651 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Phorate | Ave | 12336038 | 29933904 | 58976576 | 115943148 | 219243901 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Demeton-S | Ave | 6829000 | 17377131 | 35555288 | 71856761 | 140256529 | 0.132 | 0.330 | 0.660 | 1.32 | 2.64 |
| Dimethoate | Ave | 8599046 | 24049688 | 51050029 | 107775994 | 213449833 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Diazinon | Ave | 8317243 | 20791242 | 40332471 | 80835035 | 153485439 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Disulfoton | Ave | 8381636 | 20570314 | 40927593 | 80750209 | 153901646 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Methyl parathion | Ave | 6610359 | 16625756 | 32728046 | 66574547 | 130045547 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Ronnel | Ave | 5778996 | 14238707 | 28040328 | 56396898 | 109051205 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Malathion | Ave | 4266763 | 10596335 | 21309960 | 42193018 | 82093133 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Chlorpyrifos | Ave | 4541277 | 11109327 | 21987751 | 43958803 | 84868441 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Trichloronate | Ave | 4751160 | 11749166 | 23101196 | 46586048 | 89153099 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Parathion | Ave | 5661346 | 13858996 | 28030029 | 55697366 | 108517268 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Fenthion | Ave | 6090110 | 15067076 | 29579491 | 59697504 | 114584327 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Stirophos | Ave | 3680602 | 9369635 | 18917793 | 38780752 | 76950974 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Tokuthion | Ave | 4518954 | 11254893 | 21974894 | 43583419 | 84559083 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Fensulfothion | Ave | 4194747 | 11924807 | 24533807 | 51861570 | 101017770 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Bolstar | Ave | 4868562 | 11908471 | 23670308 | 47594801 | 89235012 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Famphur | Ave | 5228054 | 13094029 | 26425021 | 53774512 | 106172097 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| EPN | Ave | 5102442 | 13192601 | 26415952 | 53792403 | 107087359 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Azinphos-methyl | Ave | 4558480 | 12383628 | 25406256 | 53228184 | 107222645 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Coumaphos | Ave | 5504900 | 13866624 | 27643591 | 57270682 | 112349977 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Tributyl phosphate | Ave | 12005643 | 26120068 | 53244354 | 107314054 | 196555986 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |
| Triphenylphosphate | Ave | 4097552 | 9063082 | 18690485 | 38446199 | 73611754 | 0.200 | 0.500 | 1.00 | 2.00 | 4.00 |

Curve Type Legend:
Ave = Average by Height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321005.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Mar-2018 08:43:17 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-001
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:17:17 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

First Level Reviewer: oravecj Date: 22-Mar-2018 08:14:23

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.315 | 11.319 | -0.004 | 10539426H | 0.2000 | 0.2317 | |
| 2 | 10.689 | 10.694 | -0.005 | 12005643H | 0.2000 | 0.2237 | |
| | | | | | | RPD = 3.48 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.086 | 21.092 | -0.006 | 3643392H | 0.2000 | 0.2159 | |
| 2 | 22.257 | 22.264 | -0.007 | 4097552H | 0.2000 | 0.2158 | |
| | | | | | | RPD = 0.05 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.102 | 5.105 | -0.003 | 16376709H | 0.2000 | 0.2092 | |
| 2 | 5.020 | 5.023 | -0.003 | 18629962H | 0.2000 | 0.2089 | |
| | | | | | | RPD = 0.14 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.176 | 7.179 | -0.003 | 13950293H | 0.2000 | 0.2086 | |
| 2 | 6.281 | 6.284 | -0.003 | 14793580H | 0.2000 | 0.2074 | |
| | | | | | | RPD = 0.57 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.771 | 9.774 | -0.003 | 9591800H | 0.2000 | 0.1914 | |
| 2 | 8.628 | 8.631 | -0.003 | 9752991H | 0.2000 | 0.1944 | |
| | | | | | | RPD = 1.55 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.196 | 10.200 | -0.004 | 3492326H | 0.0680 | 0.0706 | |
| 2 | 10.555 | 10.559 | -0.004 | 3791130H | 0.0680 | 0.0697 | |
| | | | | | | RPD = 1.28 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.399 | 10.403 | -0.004 | 11038964H | 0.2000 | 0.2071 | |
| 2 | 10.661 | 10.665 | -0.004 | 12675240H | 0.2000 | 0.2064 | |
| | | | | | | RPD = 0.31 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | M |
| 1 | 10.823 | 10.827 | -0.004 | 12105263H | 0.2000 | 0.2095 | |
| 2 | 10.838 | 10.842 | -0.004 | 12136462H | 0.2000 | 0.2048 | |
| | | | | | | RPD = 2.29 | |
| 9 Phorate | | | | | | | M |
| 1 | 10.846 | 10.854 | -0.008 | 11306958H | 0.2000 | 0.2095 | |
| 2 | 11.477 | 11.482 | -0.005 | 12336038H | 0.2000 | 0.2103 | |
| | | | | | | RPD = 0.36 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.237 | 11.241 | -0.004 | 16814987H | 0.2000 | 0.2073 | |
| 2 | 11.446 | 11.450 | -0.004 | 18664771H | 0.2000 | 0.2059 | |
| | | | | | | RPD = 0.69 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.648 | 11.652 | -0.004 | 8896516H | 0.2000 | 0.2098 | |
| 2 | 12.539 | 12.544 | -0.005 | 8317243H | 0.2000 | 0.2056 | |
| | | | | | | RPD = 2.02 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.021 | 12.025 | -0.004 | 9158562H | 0.2000 | 0.2073 | |
| 2 | 12.737 | 12.744 | -0.007 | 8381636H | 0.2000 | 0.2066 | |
| | | | | | | RPD = 0.31 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.071 | 12.075 | -0.004 | 6349522H | 0.1320 | 0.1303 | |
| 2 | 11.916 | 11.920 | -0.004 | 6829000H | 0.1320 | 0.1284 | |
| | | | | | | RPD = 1.46 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.969 | 12.973 | -0.004 | 6778065H | 0.2000 | 0.1730 | |
| 2 | 12.319 | 12.325 | -0.006 | 8599046H | 0.2000 | 0.1724 | |
| | | | | | | RPD = 0.34 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.248 | 13.253 | -0.005 | 6215748H | 0.2000 | 0.2033 | |
| 2 | 14.292 | 14.300 | -0.008 | 5778996H | 0.2000 | 0.2051 | |
| | | | | | | RPD = 0.88 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.011 | 14.018 | -0.007 | 4875871H | 0.2000 | 0.2082 | |
| 2 | 15.581 | 15.589 | -0.008 | 4541277H | 0.2000 | 0.2062 | |
| | | | | | | RPD = 0.98 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.258 | 14.266 | -0.008 | 6260950H | 0.2000 | 0.2084 | |
| 2 | 15.850 | 15.860 | -0.010 | 6090110H | 0.2000 | 0.2048 | |
| | | | | | | RPD = 1.70 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.320 | 14.325 | -0.005 | 5028796H | 0.2000 | 0.2107 | |
| 2 | 15.708 | 15.716 | -0.008 | 4751160H | 0.2000 | 0.2049 | |
| | | | | | | RPD = 2.77 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.222 | 15.230 | -0.008 | 5280334H | 0.2000 | 0.2027 | |
| 2 | 14.236 | 14.242 | -0.006 | 6610359H | 0.2000 | 0.2005 | |
| | | | | | | RPD = 1.10 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.536 | 15.544 | -0.008 | 4100772H | 0.2000 | 0.2052 | |
| 2 | 15.463 | 15.473 | -0.010 | 4266763H | 0.2000 | 0.2023 | |
| | | | | | | RPD = 1.41 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.519 | 16.529 | -0.010 | 3981553H | 0.2000 | 0.2102 | |
| 2 | 18.372 | 18.382 | -0.010 | 4518954H | 0.2000 | 0.2054 | |
| | | | | | | RPD = 2.32 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.766 | 16.775 | -0.009 | 5073589H | 0.2000 | 0.2068 | |
| 2 | 15.772 | 15.783 | -0.011 | 5661346H | 0.2000 | 0.2036 | |
| | | | | | | RPD = 1.54 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.739 | 17.745 | -0.006 | 3557582H | 0.2000 | 0.1963 | |
| 2 | 18.182 | 18.189 | -0.007 | 3680602H | 0.2000 | 0.1944 | |
| | | | | | | RPD = 0.99 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.757 | 18.762 | -0.005 | 4351715H | 0.2000 | 0.2068 | |
| 2 | 20.877 | 20.884 | -0.007 | 4868562H | 0.2000 | 0.2064 | |
| | | | | | | RPD = 0.21 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.722 | 21.727 | -0.005 | 4453276H | 0.2000 | 0.1787 | |
| 2 | 20.635 | 20.641 | -0.006 | 4194747H | 0.2000 | 0.1740 | |
| | | | | | | RPD = 2.65 | |
| 26 EPN | | | | | | | |
| 1 | 22.694 | 22.698 | -0.004 | 4562132H | 0.2000 | 0.1931 | |
| 2 | 22.947 | 22.953 | -0.006 | 5102442H | 0.2000 | 0.1933 | |
| | | | | | | RPD = 0.12 | |
| 27 Famphur | | | | | | | |
| 1 | 22.988 | 22.990 | -0.002 | 5315262H | 0.2000 | 0.1961 | |
| 2 | 21.572 | 21.580 | -0.008 | 5228054H | 0.2000 | 0.1978 | |
| | | | | | | RPD = 0.85 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.316 | 23.320 | -0.004 | 4072598H | 0.2000 | 0.1800 | |
| 2 | 24.138 | 24.144 | -0.006 | 4558480H | 0.2000 | 0.1803 | |
| | | | | | | RPD = 0.21 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.949 | 25.955 | -0.006 | 4801631H | 0.2000 | 0.1984 | |
| 2 | 25.381 | 25.386 | -0.005 | 5504900H | 0.2000 | 0.1971 | |
| | | | | | | RPD = 0.62 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 0.2000 | 0.2009 | |
| 2 | | | | | 0.2000 | 0.1981 | |
| | | | | | | RPD = 1.40 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

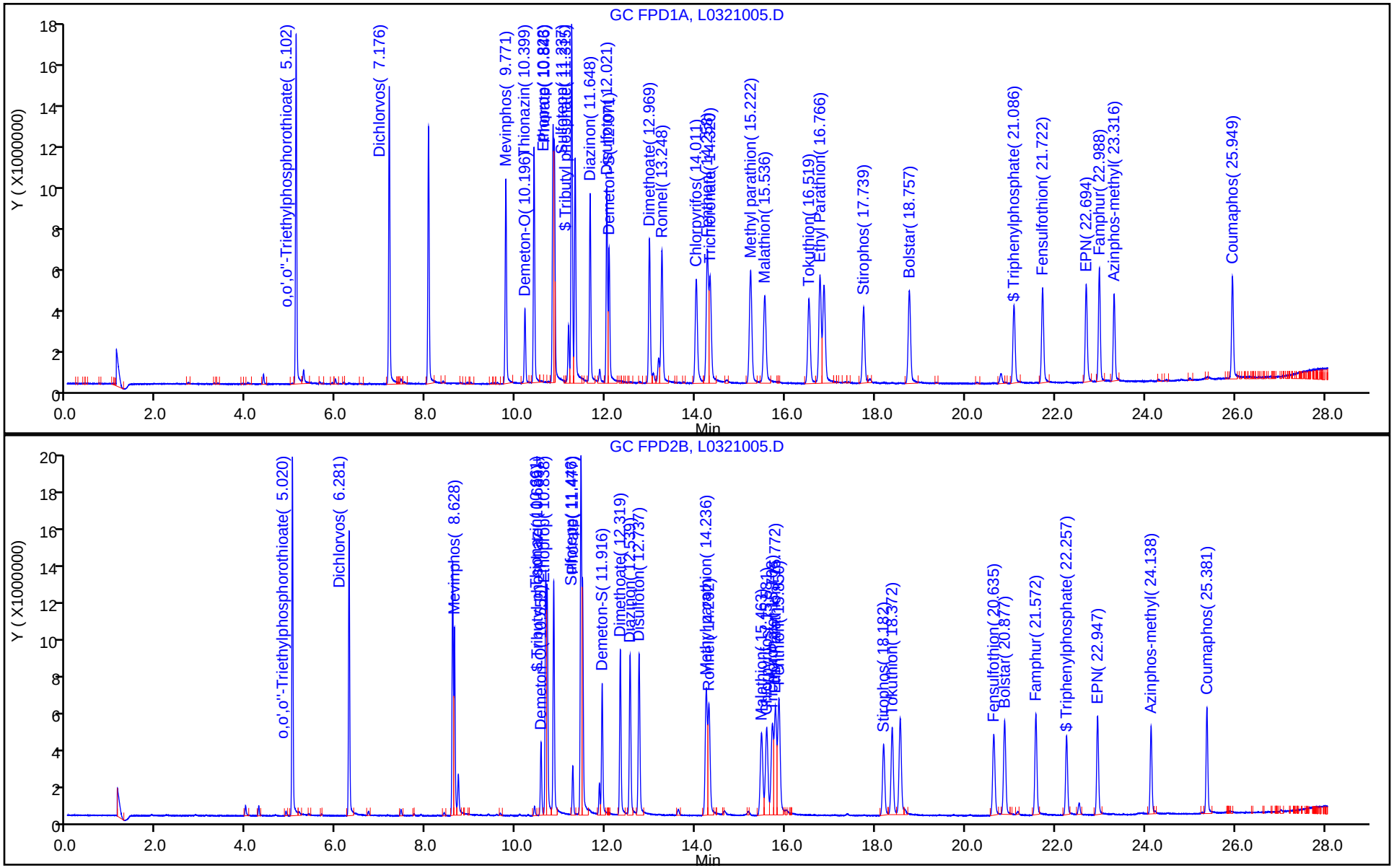
## Reagents:

GCOPPLEVEL1_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:17:19 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321005.D | | | | |
| Injection Date: | 21-Mar-2018 08:43:17 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | IC | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321006.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Mar-2018 09:16:22 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-002
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:17:11 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.314 | 11.319 | -0.005 | 22270981H | 0.5000 | 0.4895 | |
| 2 | 10.689 | 10.694 | -0.005 | 26120068H | 0.5000 | 0.4868 | |
| | | | | | | RPD = 0.56 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.087 | 21.092 | -0.005 | 8170600H | 0.5000 | 0.4842 | |
| 2 | 22.258 | 22.264 | -0.006 | 9063082H | 0.5000 | 0.4774 | |
| | | | | | | RPD = 1.43 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.102 | 5.105 | -0.003 | 38769489H | 0.5000 | 0.4952 | |
| 2 | 5.019 | 5.023 | -0.004 | 44375309H | 0.5000 | 0.4976 | |
| | | | | | | RPD = 0.48 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.177 | 7.179 | -0.002 | 33368262H | 0.5000 | 0.4990 | |
| 2 | 6.280 | 6.284 | -0.004 | 35622974H | 0.5000 | 0.4995 | |
| | | | | | | RPD = 0.10 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.771 | 9.774 | -0.003 | 24896704H | 0.5000 | 0.4968 | |
| 2 | 8.627 | 8.631 | -0.004 | 25090545H | 0.5000 | 0.5001 | |
| | | | | | | RPD = 0.66 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.196 | 10.200 | -0.004 | 8466330H | 0.1700 | 0.1711 | |
| 2 | 10.554 | 10.559 | -0.005 | 9268996H | 0.1700 | 0.1704 | |
| | | | | | | RPD = 0.43 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.398 | 10.403 | -0.005 | 26723861H | 0.5000 | 0.5013 | |
| 2 | 10.660 | 10.665 | -0.005 | 30585900H | 0.5000 | 0.4981 | |
| | | | | | | RPD = 0.64 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.823 | 10.827 | -0.004 | 29169549H | 0.5000 | 0.5048 | |
| 2 | 10.837 | 10.842 | -0.005 | 29977459H | 0.5000 | 0.5058 | |
| | | | | | | RPD = 0.19 | |
| 9 Phorate | | | | | | | |
| 1 | 10.848 | 10.854 | -0.006 | 27626832H | 0.5000 | 0.5120 | |
| 2 | 11.477 | 11.482 | -0.005 | 29933904H | 0.5000 | 0.5103 | |
| | | | | | | RPD = 0.33 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.237 | 11.241 | -0.004 | 40770496H | 0.5000 | 0.5026 | |
| 2 | 11.445 | 11.450 | -0.005 | 45101838H | 0.5000 | 0.4975 | |
| | | | | | | RPD = 1.03 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.647 | 11.652 | -0.005 | 21755395H | 0.5000 | 0.5130 | |
| 2 | 12.537 | 12.544 | -0.007 | 20791242H | 0.5000 | 0.5139 | |
| | | | | | | RPD = 0.18 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.021 | 12.025 | -0.004 | 22433878H | 0.5000 | 0.5077 | |
| 2 | 12.738 | 12.744 | -0.006 | 20570314H | 0.5000 | 0.5071 | |
| | | | | | | RPD = 0.12 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.071 | 12.075 | -0.004 | 16126874H | 0.3300 | 0.3310 | |
| 2 | 11.917 | 11.920 | -0.003 | 17377131H | 0.3300 | 0.3268 | |
| | | | | | | RPD = 1.27 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.967 | 12.973 | -0.006 | 18925086H | 0.5000 | 0.4830 | |
| 2 | 12.319 | 12.325 | -0.006 | 24049688H | 0.5000 | 0.4822 | |
| | | | | | | RPD = 0.18 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.246 | 13.253 | -0.007 | 15504653H | 0.5000 | 0.5071 | |
| 2 | 14.292 | 14.300 | -0.008 | 14238707H | 0.5000 | 0.5054 | |
| | | | | | | RPD = 0.35 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.012 | 14.018 | -0.006 | 12000228H | 0.5000 | 0.5125 | |
| 2 | 15.581 | 15.589 | -0.008 | 11109327H | 0.5000 | 0.5045 | |
| | | | | | | RPD = 1.58 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.257 | 14.266 | -0.009 | 15382547H | 0.5000 | 0.5119 | |
| 2 | 15.851 | 15.860 | -0.009 | 15067076H | 0.5000 | 0.5068 | |
| | | | | | | RPD = 1.01 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.318 | 14.325 | -0.007 | 12261811H | 0.5000 | 0.5137 | |
| 2 | 15.708 | 15.716 | -0.008 | 11749166H | 0.5000 | 0.5067 | |
| | | | | | | RPD = 1.36 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.221 | 15.230 | -0.009 | 13025433H | 0.5000 | 0.5001 | |
| 2 | 14.232 | 14.242 | -0.010 | 16625756H | 0.5000 | 0.5043 | |
| | | | | | | RPD = 0.84 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.537 | 15.544 | -0.007 | 10002046H | 0.5000 | 0.5004 | |
| 2 | 15.465 | 15.473 | -0.008 | 10596335H | 0.5000 | 0.5024 | |
| | | | | | | RPD = 0.40 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.522 | 16.529 | -0.007 | 9647215H | 0.5000 | 0.5093 | |
| 2 | 18.371 | 18.382 | -0.011 | 11254893H | 0.5000 | 0.5115 | |
| | | | | | | RPD = 0.44 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.768 | 16.775 | -0.007 | 12238540H | 0.5000 | 0.4987 | |
| 2 | 15.772 | 15.783 | -0.011 | 13858996H | 0.5000 | 0.4984 | |
| | | | | | | RPD = 0.07 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.739 | 17.745 | -0.006 | 9080877H | 0.5000 | 0.5010 | |
| 2 | 18.181 | 18.189 | -0.008 | 9369635H | 0.5000 | 0.4948 | |
| | | | | | | RPD = 1.26 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.757 | 18.762 | -0.005 | 10759629H | 0.5000 | 0.5114 | |
| 2 | 20.880 | 20.884 | -0.004 | 11908471H | 0.5000 | 0.5049 | |
| | | | | | | RPD = 1.29 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.721 | 21.727 | -0.006 | 12438180H | 0.5000 | 0.4990 | |
| 2 | 20.637 | 20.641 | -0.004 | 11924807H | 0.5000 | 0.4946 | |
| | | | | | | RPD = 0.89 | |
| 26 EPN | | | | | | | |
| 1 | 22.692 | 22.698 | -0.006 | 11612545H | 0.5000 | 0.4915 | |
| 2 | 22.949 | 22.953 | -0.004 | 13192601H | 0.5000 | 0.4998 | |
| | | | | | | RPD = 1.68 | |
| 27 Famphur | | | | | | | |
| 1 | 22.985 | 22.990 | -0.005 | 13407085H | 0.5000 | 0.4946 | |
| 2 | 21.574 | 21.580 | -0.006 | 13094029H | 0.5000 | 0.4953 | |
| | | | | | | RPD = 0.14 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.317 | 23.320 | -0.003 | 10972854H | 0.5000 | 0.4849 | |
| 2 | 24.139 | 24.144 | -0.005 | 12383628H | 0.5000 | 0.4899 | |
| | | | | | | RPD = 1.04 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.950 | 25.955 | -0.005 | 12315776H | 0.5000 | 0.5088 | |
| 2 | 25.382 | 25.386 | -0.004 | 13866624H | 0.5000 | 0.4966 | |
| | | | | | | RPD = 2.43 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 0.5000 | 0.5021 | |
| 2 | | | | | 0.5000 | 0.4972 | |
| | | | | | | RPD = 0.99 | |

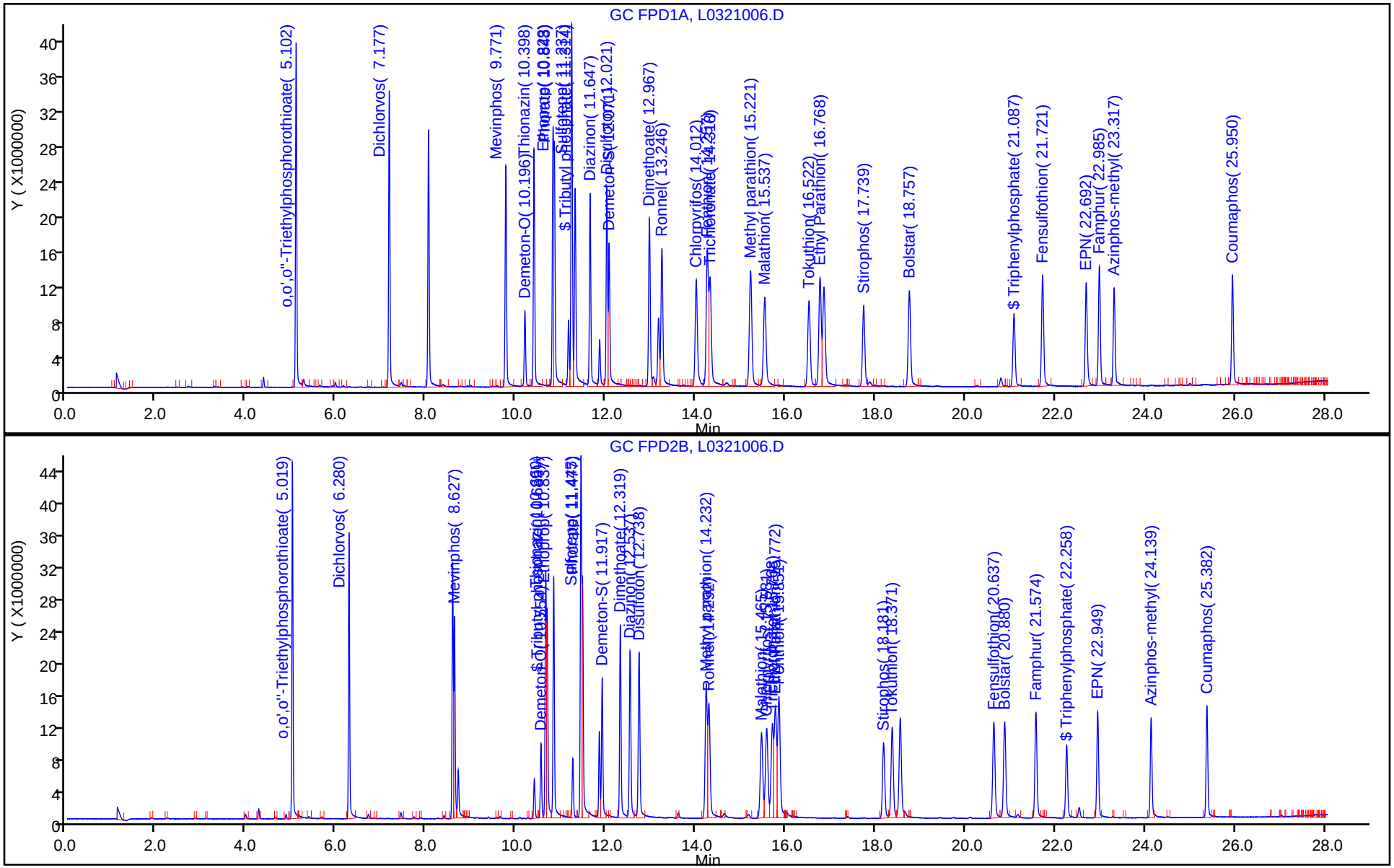
## Reagents:

GCOPPLEVEL2_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:17:13 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321006.D | | | | |
| Injection Date: | 21-Mar-2018 09:16:22 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | IC | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321007.D
Lims ID: ICRT
Client ID:
Sample Type: ICRT Calib Level: 3
Inject. Date: 21-Mar-2018 09:49:20 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-003
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:17:03 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

First Level Reviewer: oravecj Date: 21-Mar-2018 13:18:09

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.316 | 11.319 | -0.003 | 44628477H | 1.00 | 0.9809 | |
| 2 | 10.688 | 10.694 | -0.006 | 53244354H | 1.00 | 0.99 | |
| | | | | | | RPD = 1.15 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.086 | 21.092 | -0.006 | 16435853H | 1.00 | 0.9741 | |
| 2 | 22.258 | 22.264 | -0.006 | 18690485H | 1.00 | 0.9844 | |
| | | | | | | RPD = 1.06 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.103 | 5.105 | -0.002 | 78392076H | 1.00 | 1.00 | |
| 2 | 5.020 | 5.023 | -0.003 | 89037621H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.29 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.177 | 7.179 | -0.002 | 66530767H | 1.00 | 0.99 | |
| 2 | 6.281 | 6.284 | -0.003 | 71165271H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.30 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.772 | 9.774 | -0.002 | 50765314H | 1.00 | 1.01 | |
| 2 | 8.628 | 8.631 | -0.003 | 50356238H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.92 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.197 | 10.200 | -0.003 | 16846722H | 0.3400 | 0.3405 | |
| 2 | 10.556 | 10.559 | -0.003 | 18561635H | 0.3400 | 0.3412 | |
| | | | | | | RPD = 0.21 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.400 | 10.403 | -0.003 | 55029146H | 1.00 | 1.03 | |
| 2 | 10.662 | 10.665 | -0.003 | 62506368H | 1.00 | 1.02 | |
| | | | | | | RPD = 1.40 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.823 | 10.827 | -0.004 | 57807649H | 1.00 | 1.00 | |
| 2 | 10.838 | 10.842 | -0.004 | 59668612H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.62 | |
| 9 Phorate | | | | | | | |
| 1 | 10.850 | 10.854 | -0.004 | 54530307H | 1.00 | 1.01 | |
| 2 | 11.478 | 11.482 | -0.004 | 58976576H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.52 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.239 | 11.241 | -0.002 | 80925598H | 1.00 | 1.00 | |
| 2 | 11.447 | 11.450 | -0.003 | 91785159H | 1.00 | 1.01 | |
| | | | | | | RPD = 1.46 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.648 | 11.652 | -0.004 | 41559264H | 1.00 | 0.9799 | |
| 2 | 12.540 | 12.544 | -0.004 | 40332471H | 1.00 | 1.00 | |
| | | | | | | RPD = 1.72 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.022 | 12.025 | -0.003 | 44201505H | 1.00 | 1.00 | |
| 2 | 12.739 | 12.744 | -0.005 | 40927593H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.86 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.071 | 12.075 | -0.004 | 32563386H | 0.6600 | 0.6684 | |
| 2 | 11.916 | 11.920 | -0.004 | 35555288H | 0.6600 | 0.6688 | |
| | | | | | | RPD = 0.05 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.969 | 12.973 | -0.004 | 40176448H | 1.00 | 1.03 | |
| 2 | 12.322 | 12.325 | -0.003 | 51050029H | 1.00 | 1.02 | |
| | | | | | | RPD = 0.19 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.247 | 13.253 | -0.006 | 30207519H | 1.00 | 0.9881 | |
| 2 | 14.295 | 14.300 | -0.005 | 28040328H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.72 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.013 | 14.018 | -0.005 | 23008160H | 1.00 | 0.9826 | |
| 2 | 15.581 | 15.589 | -0.008 | 21987751H | 1.00 | 1.00 | |
| | | | | | | RPD = 1.60 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.261 | 14.266 | -0.005 | 29703150H | 1.00 | 0.9885 | |
| 2 | 15.855 | 15.860 | -0.005 | 29579491H | 1.00 | 0.99 | |
| | | | | | | RPD = 0.64 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.317 | 14.325 | -0.008 | 23644079H | 1.00 | 0.99 | |
| 2 | 15.710 | 15.716 | -0.006 | 23101196H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.58 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.223 | 15.230 | -0.007 | 26051755H | 1.00 | 1.00 | |
| 2 | 14.237 | 14.242 | -0.005 | 32728046H | 1.00 | 0.99 | |
| | | | | | | RPD = 0.75 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.535 | 15.544 | -0.009 | 20037214H | 1.00 | 1.00 | |
| 2 | 15.467 | 15.473 | -0.006 | 21309960H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.78 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.523 | 16.529 | -0.006 | 18797273H | 1.00 | 0.99 | |
| 2 | 18.374 | 18.382 | -0.008 | 21974894H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.64 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.768 | 16.775 | -0.007 | 24905189H | 1.00 | 1.01 | |
| 2 | 15.775 | 15.783 | -0.008 | 28030029H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.68 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.738 | 17.745 | -0.007 | 18087189H | 1.00 | 1.00 | |
| 2 | 18.184 | 18.189 | -0.005 | 18917793H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.10 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.756 | 18.762 | -0.006 | 20927762H | 1.00 | 0.99 | |
| 2 | 20.877 | 20.884 | -0.007 | 23670308H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.88 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.721 | 21.727 | -0.006 | 24829487H | 1.00 | 1.00 | |
| 2 | 20.637 | 20.641 | -0.004 | 24533807H | 1.00 | 1.02 | |
| | | | | | | RPD = 2.13 | |
| 26 EPN | | | | | | | |
| 1 | 22.693 | 22.698 | -0.005 | 23864536H | 1.00 | 1.01 | |
| 2 | 22.948 | 22.953 | -0.005 | 26415952H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.92 | |
| 27 Famphur | | | | | | | |
| 1 | 22.986 | 22.990 | -0.004 | 27119203H | 1.00 | 1.00 | |
| 2 | 21.574 | 21.580 | -0.006 | 26425021H | 1.00 | 1.00 | |
| | | | | | | RPD = 0.09 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.315 | 23.320 | -0.005 | 22710262H | 1.00 | 1.00 | |
| 2 | 24.138 | 24.144 | -0.006 | 25406256H | 1.00 | 1.01 | |
| | | | | | | RPD = 0.16 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.952 | 25.955 | -0.003 | 24072784H | 1.00 | 0.99 | |
| 2 | 25.381 | 25.386 | -0.005 | 27643591H | 1.00 | 0.9899 | |
| | | | | | | RPD = 0.46 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 1.00 | 1.01 | |
| 2 | | | | | 1.00 | 1.01 | |
| | | | | | | RPD = 0.10 | |

## Reagents:

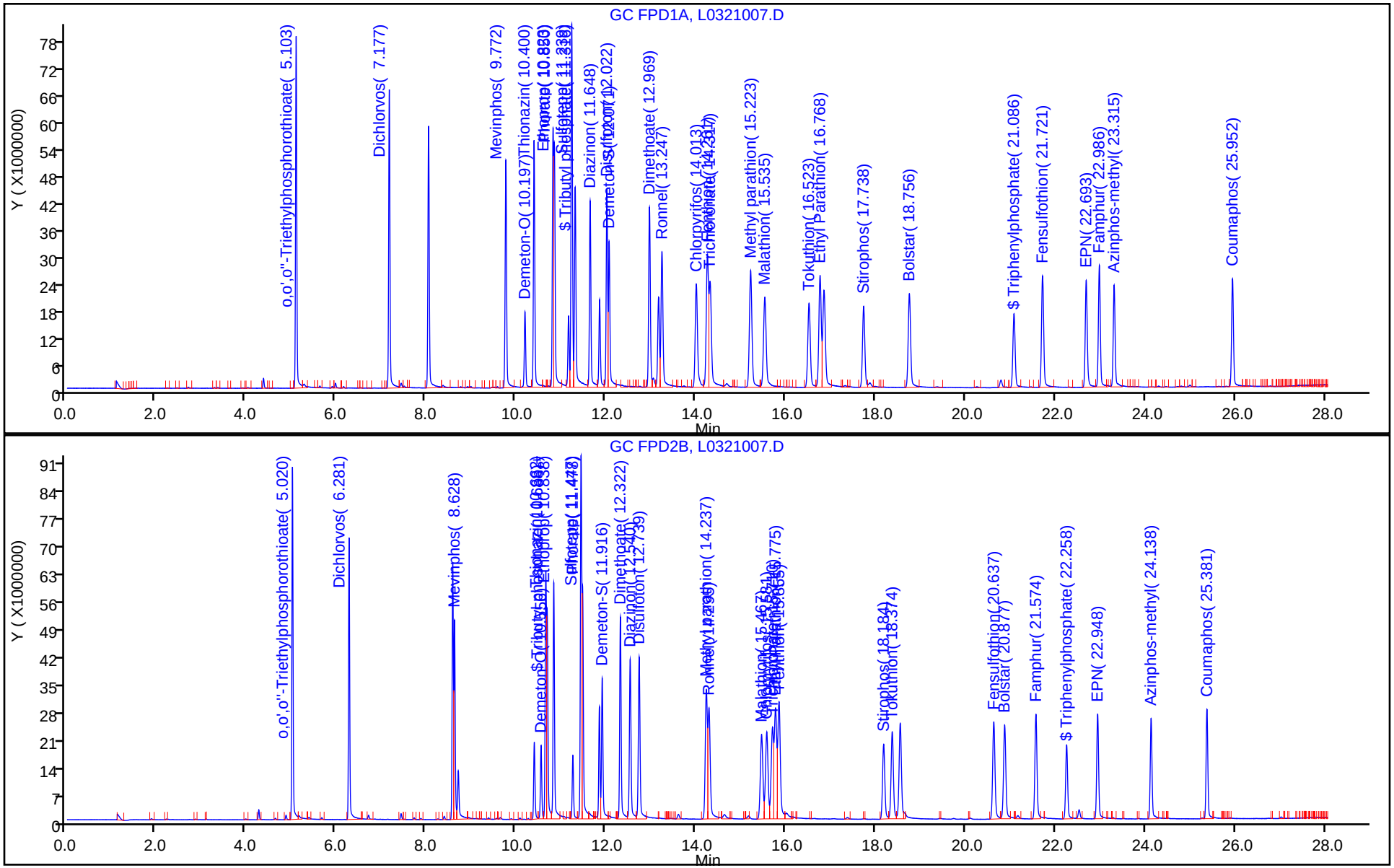
GCOPPLEVEL3_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:17:04 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321007.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Mar-2018 09:49:20 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | ICRT | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321008.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Mar-2018 10:22:25 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-004
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:16:57 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.319 | 11.319 | 0.000 | 89806415H | 2.00 | 1.97 | |
| 2 | 10.694 | 10.694 | 0.000 | 107314054H | 2.00 | 2.00 | |
| | | | | | | RPD = 1.30 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.092 | 21.092 | 0.000 | 34131333H | 2.00 | 2.02 | |
| 2 | 22.264 | 22.264 | 0.000 | 38446199H | 2.00 | 2.02 | |
| | | | | | | RPD = 0.11 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.105 | 5.105 | 0.000 | 152496922H | 2.00 | 1.95 | |
| 2 | 5.023 | 5.023 | 0.000 | 174142902H | 2.00 | 1.95 | |
| | | | | | | RPD = 0.24 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.179 | 7.179 | 0.000 | 131396065H | 2.00 | 1.96 | |
| 2 | 6.284 | 6.284 | 0.000 | 140335390H | 2.00 | 1.97 | |
| | | | | | | RPD = 0.15 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.774 | 9.774 | 0.000 | 100996102H | 2.00 | 2.02 | |
| 2 | 8.631 | 8.631 | 0.000 | 101761653H | 2.00 | 2.03 | |
| | | | | | | RPD = 0.64 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.200 | 10.200 | 0.000 | 33266235H | 0.6800 | 0.6723 | |
| 2 | 10.559 | 10.559 | 0.000 | 36952900H | 0.6800 | 0.6792 | |
| | | | | | | RPD = 1.02 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.403 | 10.403 | 0.000 | 103707780H | 2.00 | 1.95 | |
| 2 | 10.665 | 10.665 | 0.000 | 120499095H | 2.00 | 1.96 | |
| | | | | | | RPD = 0.87 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.827 | 10.827 | 0.000 | 113720487H | 2.00 | 1.97 | |
| 2 | 10.842 | 10.842 | 0.000 | 117588194H | 2.00 | 1.98 | |
| | | | | | | RPD = 0.80 | |
| 9 Phorate | | | | | | | |
| 1 | 10.854 | 10.854 | 0.000 | 106404680H | 2.00 | 1.97 | |
| 2 | 11.482 | 11.482 | 0.000 | 115943148H | 2.00 | 1.98 | |
| | | | | | | RPD = 0.23 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.241 | 11.241 | 0.000 | 161529094H | 2.00 | 1.99 | |
| 2 | 11.450 | 11.450 | 0.000 | 179536795H | 2.00 | 1.98 | |
| | | | | | | RPD = 0.56 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.652 | 11.652 | 0.000 | 84068890H | 2.00 | 1.98 | |
| 2 | 12.544 | 12.544 | 0.000 | 80835035H | 2.00 | 2.00 | |
| | | | | | | RPD = 0.79 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.025 | 12.025 | 0.000 | 87482331H | 2.00 | 1.98 | |
| 2 | 12.744 | 12.744 | 0.000 | 80750209H | 2.00 | 1.99 | |
| | | | | | | RPD = 0.55 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.075 | 12.075 | 0.000 | 65503323H | 1.32 | 1.34 | |
| 2 | 11.920 | 11.920 | 0.000 | 71856761H | 1.32 | 1.35 | |
| | | | | | | RPD = 0.52 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.973 | 12.973 | 0.000 | 84047975H | 2.00 | 2.15 | |
| 2 | 12.325 | 12.325 | 0.000 | 107775994H | 2.00 | 2.16 | |
| | | | | | | RPD = 0.73 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.253 | 13.253 | 0.000 | 61477543H | 2.00 | 2.01 | |
| 2 | 14.300 | 14.300 | 0.000 | 56396898H | 2.00 | 2.00 | |
| | | | | | | RPD = 0.46 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.018 | 14.018 | 0.000 | 46628269H | 2.00 | 1.99 | |
| 2 | 15.589 | 15.589 | 0.000 | 43958803H | 2.00 | 2.00 | |
| | | | | | | RPD = 0.24 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.266 | 14.266 | 0.000 | 59774429H | 2.00 | 1.99 | |
| 2 | 15.860 | 15.860 | 0.000 | 59697504H | 2.00 | 2.01 | |
| | | | | | | RPD = 0.93 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.325 | 14.325 | 0.000 | 46960029H | 2.00 | 1.97 | |
| 2 | 15.716 | 15.716 | 0.000 | 46586048H | 2.00 | 2.01 | |
| | | | | | | RPD = 2.11 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.230 | 15.230 | 0.000 | 52184695H | 2.00 | 2.00 | |
| 2 | 14.242 | 14.242 | 0.000 | 66574547H | 2.00 | 2.02 | |
| | | | | | | RPD = 0.79 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.544 | 15.544 | 0.000 | 40119020H | 2.00 | 2.01 | |
| 2 | 15.473 | 15.473 | 0.000 | 42193018H | 2.00 | 2.00 | |
| | | | | | | RPD = 0.33 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.529 | 16.529 | 0.000 | 37584686H | 2.00 | 1.98 | |
| 2 | 18.382 | 18.382 | 0.000 | 43583419H | 2.00 | 1.98 | |
| | | | | | | RPD = 0.17 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.775 | 16.775 | 0.000 | 48428796H | 2.00 | 1.97 | |
| 2 | 15.783 | 15.783 | 0.000 | 55697366H | 2.00 | 2.00 | |
| | | | | | | RPD = 1.48 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.745 | 17.745 | 0.000 | 36992711H | 2.00 | 2.04 | |
| 2 | 18.189 | 18.189 | 0.000 | 38780752H | 2.00 | 2.05 | |
| | | | | | | RPD = 0.33 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.762 | 18.762 | 0.000 | 41900561H | 2.00 | 1.99 | |
| 2 | 20.884 | 20.884 | 0.000 | 47594801H | 2.00 | 2.02 | |
| | | | | | | RPD = 1.31 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.727 | 21.727 | 0.000 | 53347257H | 2.00 | 2.14 | |
| 2 | 20.641 | 20.641 | 0.000 | 51861570H | 2.00 | 2.15 | |
| | | | | | | RPD = 0.50 | |
| 26 EPN | | | | | | | |
| 1 | 22.698 | 22.698 | 0.000 | 47977030H | 2.00 | 2.03 | |
| 2 | 22.953 | 22.953 | 0.000 | 53792403H | 2.00 | 2.04 | |
| | | | | | | RPD = 0.37 | |
| 27 Famphur | | | | | | | |
| 1 | 22.990 | 22.990 | 0.000 | 55041686H | 2.00 | 2.03 | |
| 2 | 21.580 | 21.580 | 0.000 | 53774512H | 2.00 | 2.03 | |
| | | | | | | RPD = 0.17 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.320 | 23.320 | 0.000 | 48460752H | 2.00 | 2.14 | |
| 2 | 24.144 | 24.144 | 0.000 | 53228184H | 2.00 | 2.11 | |
| | | | | | | RPD = 1.67 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.955 | 25.955 | 0.000 | 48377501H | 2.00 | 2.00 | |
| 2 | 25.386 | 25.386 | 0.000 | 57270682H | 2.00 | 2.05 | |
| | | | | | | RPD = 2.59 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 2.00 | 2.02 | |
| 2 | | | | | 2.00 | 2.03 | |
| | | | | | | RPD = 0.69 | |

## Reagents:

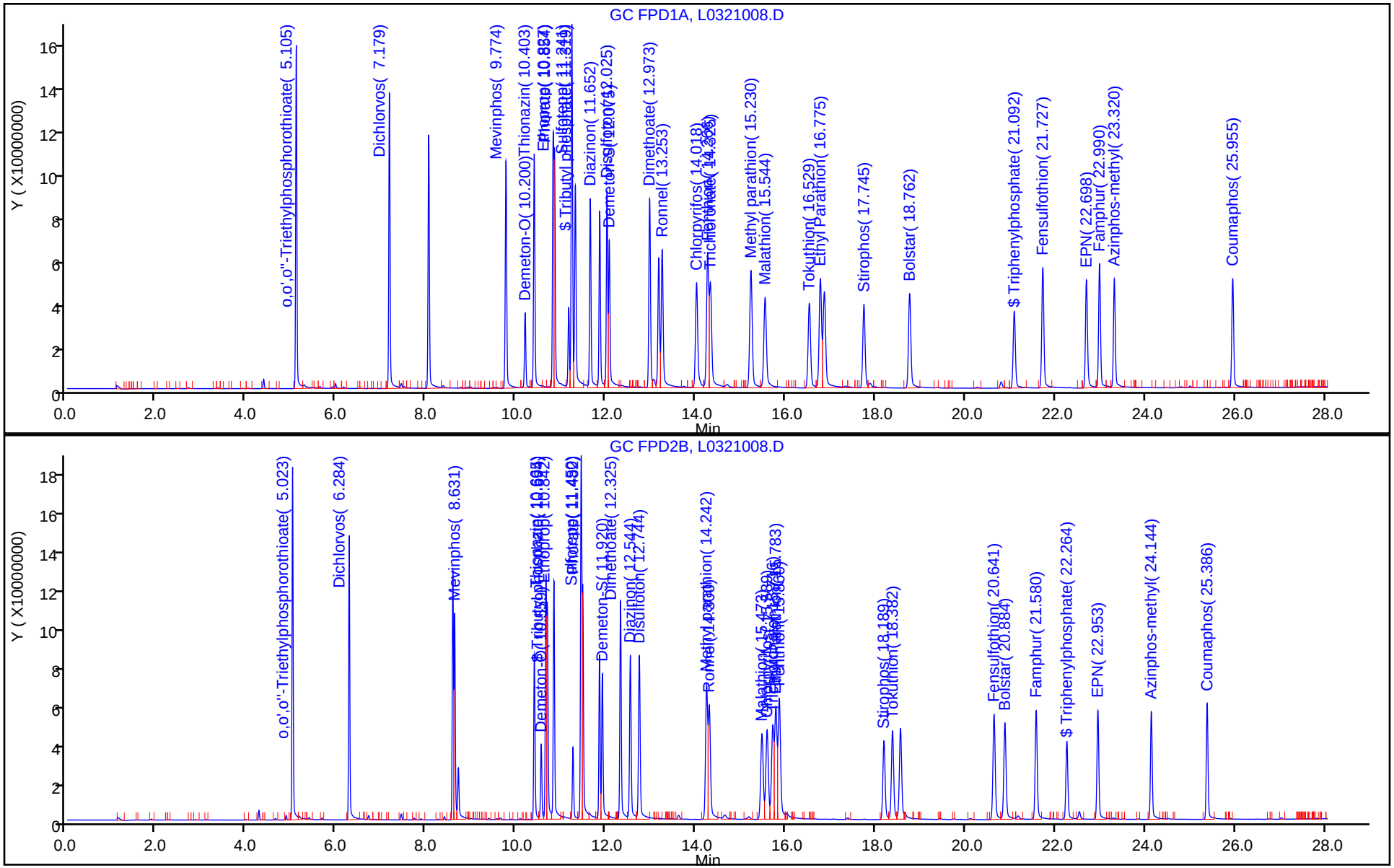
GCOPPLEVEL4_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:16:59 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321008.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Mar-2018 10:22:25 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | IC | | | Worklist Smp#: | 4 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Mar-2018 10:55:20 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0020992-005
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 22-Mar-2018 08:16:53 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK016

First Level Reviewer: oravecj Date: 22-Mar-2018 08:16:21

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.317 | 11.319 | -0.002 | 162855641H | 4.00 | 3.58 | |
| 2 | 10.692 | 10.694 | -0.002 | 196555986H | 4.00 | 3.66 | |
| | | | | | | RPD = 2.30 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 21.090 | 21.092 | -0.002 | 65235370H | 4.00 | 3.87 | |
| 2 | 22.263 | 22.264 | -0.001 | 73611754H | 4.00 | 3.88 | |
| | | | | | | RPD = 0.29 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 5.105 | 5.105 | 0.000 | 309535776H | 4.00 | 3.95 | |
| 2 | 5.023 | 5.023 | 0.000 | 351634599H | 4.00 | 3.94 | |
| | | | | | | RPD = 0.28 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 7.178 | 7.179 | -0.001 | 262569972H | 4.00 | 3.93 | |
| 2 | 6.283 | 6.284 | -0.001 | 280137578H | 4.00 | 3.93 | |
| | | | | | | RPD = 0.04 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.774 | 9.774 | 0.000 | 206215964H | 4.00 | 4.11 | |
| 2 | 8.632 | 8.631 | 0.001 | 202703197H | 4.00 | 4.04 | |
| | | | | | | RPD = 1.83 | |
| 6 Demeton-O | | | | | | | |
| 1 | 10.200 | 10.200 | 0.000 | 64989426H | 1.36 | 1.31 | |
| 2 | 10.559 | 10.559 | 0.000 | 71845219H | 1.36 | 1.32 | |
| | | | | | | RPD = 0.54 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.402 | 10.403 | -0.001 | 204181067H | 4.00 | 3.83 | |
| 2 | 10.665 | 10.665 | 0.000 | 238976604H | 4.00 | 3.89 | |
| | | | | | | RPD = 1.60 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.824 | 10.827 | -0.003 | 221520698H | 4.00 | 3.83 | |
| 2 | 10.842 | 10.842 | 0.000 | 229044270H | 4.00 | 3.86 | |
| | | | | | | RPD = 0.79 | |
| 9 Phorate | | | | | | | |
| 1 | 10.853 | 10.854 | -0.001 | 201102975H | 4.00 | 3.73 | |
| 2 | 11.482 | 11.482 | 0.000 | 219243901H | 4.00 | 3.74 | |
| | | | | | | RPD = 0.28 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 11.242 | 11.241 | 0.001 | 313038831H | 4.00 | 3.86 | |
| 2 | 11.449 | 11.450 | -0.001 | 352900651H | 4.00 | 3.89 | |
| | | | | | | RPD = 0.86 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.651 | 11.652 | -0.001 | 161860599H | 4.00 | 3.82 | |
| 2 | 12.543 | 12.544 | -0.001 | 153485439H | 4.00 | 3.79 | |
| | | | | | | RPD = 0.60 | |
| 12 Disulfoton | | | | | | | |
| 1 | 12.024 | 12.025 | -0.001 | 169343509H | 4.00 | 3.83 | |
| 2 | 12.743 | 12.744 | -0.001 | 153901646H | 4.00 | 3.79 | |
| | | | | | | RPD = 1.01 | |
| 13 Demeton-S | | | | | | | |
| 1 | 12.073 | 12.075 | -0.002 | 125785604H | 2.64 | 2.58 | |
| 2 | 11.920 | 11.920 | 0.000 | 140256529H | 2.64 | 2.64 | |
| | | | | | | RPD = 2.15 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.973 | 12.973 | 0.000 | 167859727H | 4.00 | 4.28 | |
| 2 | 12.325 | 12.325 | 0.000 | 213449833H | 4.00 | 4.28 | |
| | | | | | | RPD = 0.11 | |
| 15 Ronnel | | | | | | | |
| 1 | 13.250 | 13.253 | -0.003 | 119314761H | 4.00 | 3.90 | |
| 2 | 14.302 | 14.300 | 0.002 | 109051205H | 4.00 | 3.87 | |
| | | | | | | RPD = 0.83 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 14.017 | 14.018 | -0.001 | 89481517H | 4.00 | 3.82 | |
| 2 | 15.588 | 15.589 | -0.001 | 84868441H | 4.00 | 3.85 | |
| | | | | | | RPD = 0.84 | |
| 17 Fenthion | | | | | | | |
| 1 | 14.265 | 14.266 | -0.001 | 114343499H | 4.00 | 3.81 | |
| 2 | 15.860 | 15.860 | 0.000 | 114584327H | 4.00 | 3.85 | |
| | | | | | | RPD = 1.27 | |
| 18 Trichloronate | | | | | | | |
| 1 | 14.325 | 14.325 | 0.000 | 90258807H | 4.00 | 3.78 | |
| 2 | 15.717 | 15.716 | 0.001 | 89153099H | 4.00 | 3.84 | |
| | | | | | | RPD = 1.67 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 15.225 | 15.230 | -0.005 | 102538632H | 4.00 | 3.94 | |
| 2 | 14.242 | 14.242 | 0.000 | 130045547H | 4.00 | 3.94 | |
| | | | | | | RPD = 0.20 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 15.542 | 15.544 | -0.002 | 77333552H | 4.00 | 3.87 | |
| 2 | 15.474 | 15.473 | 0.001 | 82093133H | 4.00 | 3.89 | |
| | | | | | | RPD = 0.60 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.528 | 16.529 | -0.001 | 71665483H | 4.00 | 3.78 | |
| 2 | 18.380 | 18.382 | -0.002 | 84559083H | 4.00 | 3.84 | |
| | | | | | | RPD = 1.57 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.772 | 16.775 | -0.003 | 94927355H | 4.00 | 3.87 | |
| 2 | 15.782 | 15.783 | -0.001 | 108517268H | 4.00 | 3.90 | |
| | | | | | | RPD = 0.88 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.742 | 17.745 | -0.003 | 72358909H | 4.00 | 3.99 | |
| 2 | 18.192 | 18.189 | 0.003 | 76950974H | 4.00 | 4.06 | |
| | | | | | | RPD = 1.76 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.762 | 18.762 | 0.000 | 80167167H | 4.00 | 3.81 | |
| 2 | 20.882 | 20.884 | -0.002 | 89235012H | 4.00 | 3.78 | |
| | | | | | | RPD = 0.71 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.726 | 21.727 | -0.001 | 103899415H | 4.00 | 4.17 | |
| 2 | 20.642 | 20.641 | 0.001 | 101017770H | 4.00 | 4.19 | |
| | | | | | | RPD = 0.51 | |
| 26 EPN | | | | | | | |
| 1 | 22.698 | 22.698 | 0.000 | 97023283H | 4.00 | 4.11 | |
| 2 | 22.953 | 22.953 | 0.000 | 107087359H | 4.00 | 4.06 | |
| | | | | | | RPD = 1.21 | |
| 27 Famphur | | | | | | | |
| 1 | 22.990 | 22.990 | 0.000 | 109998984H | 4.00 | 4.06 | |
| 2 | 21.580 | 21.580 | 0.000 | 106172097H | 4.00 | 4.02 | |
| | | | | | | RPD = 1.04 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 23.319 | 23.320 | -0.001 | 95630844H | 4.00 | 4.23 | |
| 2 | 24.142 | 24.144 | -0.002 | 107222645H | 4.00 | 4.24 | |
| | | | | | | RPD = 0.39 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.954 | 25.955 | -0.001 | 96525697H | 4.00 | 3.99 | |
| 2 | 25.386 | 25.386 | 0.000 | 112349977H | 4.00 | 4.02 | |
| | | | | | | RPD = 0.89 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 4.00 | 3.90 | |
| 2 | | | | | 4.00 | 3.96 | |
| | | | | | | RPD = 1.61 | |

## Reagents:

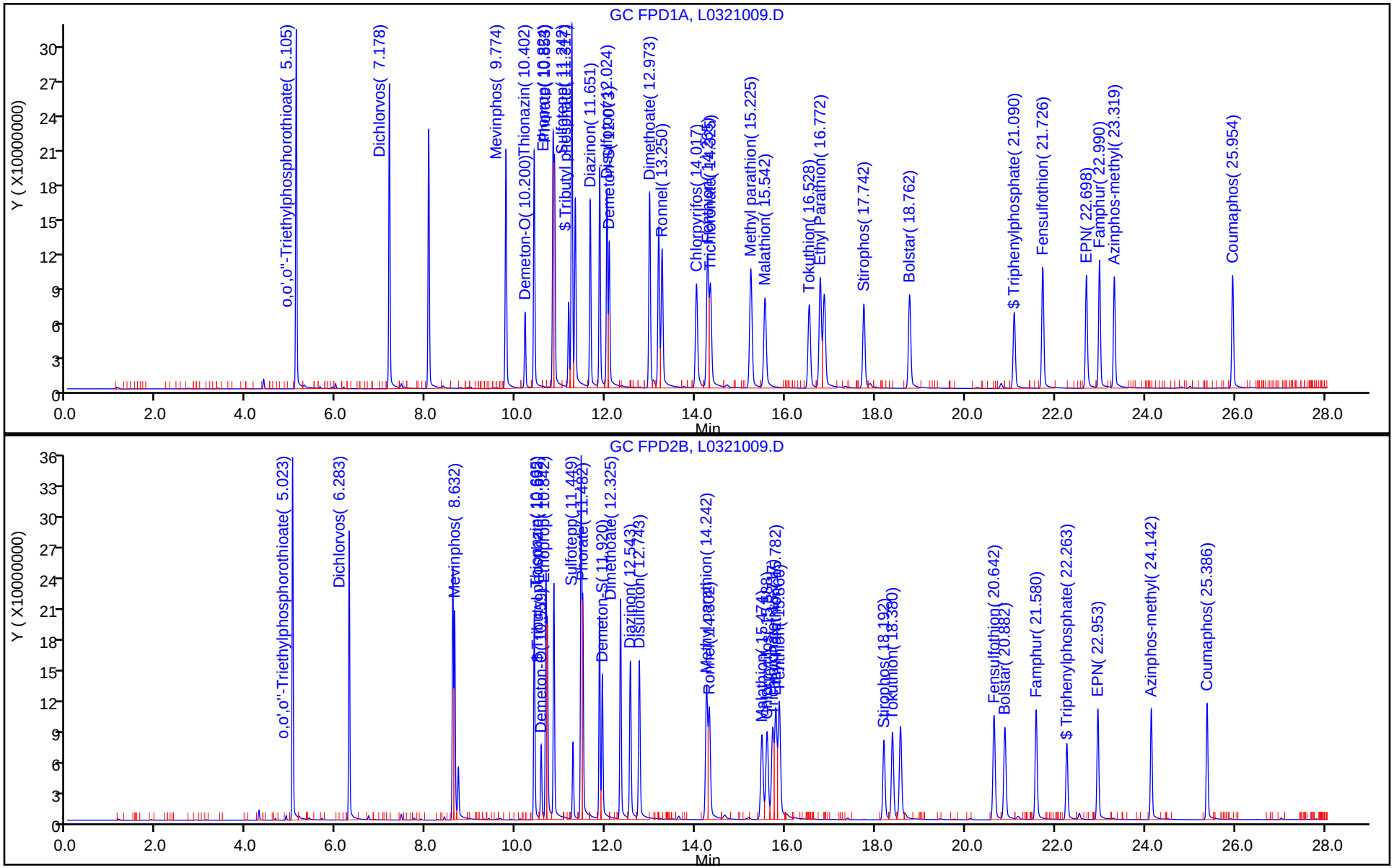
GCOPPLEVEL5_00001 Amount Added: 1.00 Units: mL

Report Date: 22-Mar-2018 08:16:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Mar-2018 10:55:20 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | IC | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: CCVRT 180-254752/1 Calibration Date: 08/23/2018 06:24

Instrument ID: CHGC5 Calib Start Date: 03/21/2018 08:43

GC Column: RTX-OPP1 ID: 0.53(mm) Calib End Date: 03/21/2018 10:55

Lab File ID: L0082301.D Conc. Units: ng/uL

| ANALYTE | CURVE TYPE | AVE CF | CF | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| O,O,O-Triethyl phosphorothioate | Ave | 78289401 | 83480047 | | 2.13 | 2.00 | 6.6 | 20.0 |
| Dichlorvos | Ave | 66871856 | 68205341 | | 2.04 | 2.00 | 2.0 | 20.0 |
| Mevinphos | Ave | 50113953 | 44918470 | | 1.79 | 2.00 | -10.4 | 20.0 |
| Demeton-O | Ave | 49483227 | 48404893 | | 0.665 | 0.680 | -2.2 | 20.0 |
| Thionazin | Ave | 53314169 | 48935976 | | 1.84 | 2.00 | -8.2 | 20.0 |
| Mocap | Ave | 57782696 | 51610349 | | 1.79 | 2.00 | -10.7 | 20.0 |
| Phorate | Ave | 53959369 | 47997224 | | 1.78 | 2.00 | -11.0 | 20.0 |
| Sulfotepp | Ave | 81113156 | 79478581 | | 1.96 | 2.00 | -2.0 | 20.0 |
| Diazinon | Ave | 42410446 | 41765276 | | 1.97 | 2.00 | -1.5 | 20.0 |
| Disulfoton | Ave | 44187823 | 54354428 | | 2.46 | 2.00 | 23.0* | 20.0 |
| Demeton-S | Ave | 48716002 | 54392042 | | 1.47 | 1.32 | 11.7 | 20.0 |
| Dimethoate | Ave | 39181173 | 40354712 | | 2.06 | 2.00 | 3.0 | 20.0 |
| Ronnel | Ave | 30572605 | 32012335 | | 2.09 | 2.00 | 4.7 | 20.0 |
| Chlorpyrifos | Ave | 23414497 | 25076002 | | 2.14 | 2.00 | 7.1 | 20.0 |
| Fenthion | Ave | 30049217 | 31104546 | | 2.07 | 2.00 | 3.5 | 20.0 |
| Trichloronate | Ave | 23871279 | 24845087 | | 2.08 | 2.00 | 4.1 | 20.0 |
| Methyl parathion | Ave | 26046259 | 26937752 | | 2.07 | 2.00 | 3.4 | 20.0 |
| Malathion | Ave | 19987613 | 19748559 | | 1.98 | 2.00 | -1.2 | 20.0 |
| Tokuthion | Ave | 18941636 | 18351214 | | 1.94 | 2.00 | -3.1 | 20.0 |
| Parathion | Ave | 24539290 | 24361094 | | 1.99 | 2.00 | -0.7 | 20.0 |
| Stirophos | Ave | 18124587 | 18018411 | | 1.99 | 2.00 | -0.6 | 20.0 |
| Bolstar | Ave | 21039533 | 21359639 | | 2.03 | 2.00 | 1.5 | 20.0 |
| Fensulfothion | Ave | 24924142 | 23527105 | | 1.89 | 2.00 | -5.6 | 20.0 |
| EPN | Ave | 23628924 | 24115090 | | 2.04 | 2.00 | 2.1 | 20.0 |
| Famphur | Ave | 27106054 | 27455257 | | 2.03 | 2.00 | 1.3 | 20.0 |
| Azinphos-methyl | Ave | 22631409 | 22105618 | | 1.95 | 2.00 | -2.3 | 20.0 |
| Coumaphos | Ave | 24206533 | 25872578 | | 2.14 | 2.00 | 6.9 | 20.0 |
| Tributyl phosphate | Ave | 45496937 | 42143817 | | 1.85 | 2.00 | -7.4 | 20.0 |
| Triphenylphosphate | Ave | 16873704 | 16049008 | | 1.90 | 2.00 | -4.9 | 20.0 |

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: CCVRT 180-254752/1 Calibration Date: 08/23/2018 06:24

Instrument ID: CHGC5 Calib Start Date: 03/21/2018 08:43

GC Column: RTX-OPP1 ID: 0.53(mm) Calib End Date: 03/21/2018 10:55

Lab File ID: L0082301.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| O,O,O-Triethyl phosphorothioate | 4.90 | 4.87 | 4.93 |
| Dichlorvos | 6.91 | 6.88 | 6.94 |
| Mevinphos | 9.47 | 9.44 | 9.50 |
| Demeton-O | 9.95 | 9.92 | 9.98 |
| Thionazin | 10.14 | 10.11 | 10.17 |
| Mocap | 10.55 | 10.52 | 10.58 |
| Phorate | 10.60 | 10.57 | 10.63 |
| Sulfotepp | 10.97 | 10.94 | 11.00 |
| Diazinon | 11.41 | 11.38 | 11.44 |
| Disulfoton | 11.77 | 11.74 | 11.80 |
| Demeton-S | 11.79 | 11.76 | 11.82 |
| Dimethoate | 12.58 | 12.55 | 12.61 |
| Ronnel | 12.91 | 12.88 | 12.94 |
| Chlorpyrifos | 13.62 | 13.59 | 13.65 |
| Fenthion | 13.83 | 13.80 | 13.86 |
| Trichloronate | 13.90 | 13.87 | 13.93 |
| Methyl parathion | 14.64 | 14.61 | 14.67 |
| Malathion | 14.98 | 14.95 | 15.01 |
| Tokuthion | 16.06 | 16.03 | 16.09 |
| Parathion | 16.21 | 16.18 | 16.24 |
| Stirophos | 17.22 | 17.19 | 17.25 |
| Bolstar | 18.30 | 18.27 | 18.33 |
| Fensulfothion | 21.20 | 21.17 | 21.23 |
| EPN | 22.26 | 22.23 | 22.29 |
| Famphur | 22.50 | 22.47 | 22.53 |
| Azinphos-methyl | 22.89 | 22.86 | 22.92 |
| Coumaphos | 25.55 | 25.52 | 25.58 |
| Tributyl phosphate | 11.04 | 11.01 | 11.07 |
| Triphenylphosphate | 20.60 | 20.57 | 20.63 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082301.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 23-Aug-2018 06:24:11 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-001
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:39 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 08:32:40

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.043 | 11.043 | 0.000 | 84287633H | 2.00 | 1.85 | |
| 2 | 10.718 | 10.718 | 0.000 | 95129988H | 2.00 | 1.77 | |
| | | | | | | RPD = 4.40 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 20.604 | 20.604 | 0.000 | 32098016H | 2.00 | 1.90 | |
| 2 | 22.270 | 22.270 | 0.000 | 37693461H | 2.00 | 1.99 | |
| | | | | | | RPD = 4.27 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 4.895 | 4.895 | 0.000 | 166960094H | 2.00 | 2.13 | |
| 2 | 5.044 | 5.044 | 0.000 | 183050102H | 2.00 | 2.05 | |
| | | | | | | RPD = 3.83 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 6.906 | 6.906 | 0.000 | 136410681H | 2.00 | 2.04 | |
| 2 | 6.305 | 6.305 | 0.000 | 140296972H | 2.00 | 1.97 | |
| | | | | | | RPD = 3.63 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.474 | 9.474 | 0.000 | 89836939H | 2.00 | 1.79 | |
| 2 | 8.652 | 8.652 | 0.000 | 88644625H | 2.00 | 1.77 | |
| | | | | | | RPD = 1.45 | |
| 6 Demeton-O | | | | | | | |
| 1 | 9.947 | 9.947 | 0.000 | 32915327H | 0.6800 | 0.6652 | |
| 2 | 10.578 | 10.578 | 0.000 | 35970436H | 0.6800 | 0.6611 | |
| | | | | | | RPD = 0.61 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.136 | 10.136 | 0.000 | 97871952H | 2.00 | 1.84 | |
| 2 | 10.683 | 10.683 | 0.000 | 109244944H | 2.00 | 1.78 | |
| | | | | | | RPD = 3.14 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.550 | 10.550 | 0.000 | 103220697H | 2.00 | 1.79 | |
| 2 | 10.862 | 10.862 | 0.000 | 113809529H | 2.00 | 1.92 | |
| | | | | | | RPD = 7.22 | |
| 9 Phorate | | | | | | | |
| 1 | 10.599 | 10.599 | 0.000 | 95994448H | 2.00 | 1.78 | |
| 2 | 11.503 | 11.503 | 0.000 | 112389556H | 2.00 | 1.92 | |
| | | | | | | RPD = 7.41 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 10.973 | 10.973 | 0.000 | 158957161H | 2.00 | 1.96 | |
| 2 | 11.464 | 11.464 | 0.000 | 173984818H | 2.00 | 1.92 | |
| | | | | | | RPD = 2.10 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.413 | 11.413 | 0.000 | 83530552H | 2.00 | 1.97 | |
| 2 | 12.565 | 12.565 | 0.000 | 79511350H | 2.00 | 1.97 | |
| | | | | | | RPD = 0.22 | |
| 12 Disulfoton | | | | | | | M |
| 1 | 11.771 | 11.771 | 0.000 | 108708855H | 2.00 | 2.46 | |
| 2 | 12.767 | 12.767 | 0.000 | 77793732H | 2.00 | 1.92 | |
| | | | | | | RPD = 24.78 | |
| 13 Demeton-S | | | | | | | M |
| 1 | 11.790 | 11.790 | 0.000 | 71797496H | 1.32 | 1.47 | |
| 2 | 11.938 | 11.938 | 0.000 | 70415614H | 1.32 | 1.32 | |
| | | | | | | RPD = 10.67 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.583 | 12.583 | 0.000 | 80709423H | 2.00 | 2.06 | |
| 2 | 12.348 | 12.348 | 0.000 | 91533337H | 2.00 | 1.84 | |
| | | | | | | RPD = 11.54 | |
| 15 Ronnel | | | | | | | |
| 1 | 12.907 | 12.907 | 0.000 | 64024670H | 2.00 | 2.09 | |
| 2 | 14.328 | 14.328 | 0.000 | 56997736H | 2.00 | 2.02 | |
| | | | | | | RPD = 3.46 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 13.619 | 13.619 | 0.000 | 50152004H | 2.00 | 2.14 | |
| 2 | 15.610 | 15.610 | 0.000 | 44401223H | 2.00 | 2.02 | |
| | | | | | | RPD = 6.05 | |
| 17 Fenthion | | | | | | | |
| 1 | 13.829 | 13.829 | 0.000 | 62209091H | 2.00 | 2.07 | |
| 2 | 15.879 | 15.879 | 0.000 | 60594538H | 2.00 | 2.04 | |
| | | | | | | RPD = 1.57 | |
| 18 Trichloronate | | | | | | | |
| 1 | 13.902 | 13.902 | 0.000 | 49690173H | 2.00 | 2.08 | |
| 2 | 15.747 | 15.747 | 0.000 | 46882248H | 2.00 | 2.02 | |
| | | | | | | RPD = 2.91 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 14.635 | 14.635 | 0.000 | 53875503H | 2.00 | 2.07 | |
| 2 | 14.270 | 14.270 | 0.000 | 63773270H | 2.00 | 1.93 | |
| | | | | | | RPD = 6.69 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 14.981 | 14.981 | 0.000 | 39497117H | 2.00 | 1.98 | |
| 2 | 15.491 | 15.491 | 0.000 | 43012991H | 2.00 | 2.04 | |
| | | | | | | RPD = 3.15 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.055 | 16.055 | 0.000 | 36702428H | 2.00 | 1.94 | |
| 2 | 18.406 | 18.406 | 0.000 | 44012243H | 2.00 | 2.00 | |
| | | | | | | RPD = 3.18 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.211 | 16.211 | 0.000 | 48722188H | 2.00 | 1.99 | |
| 2 | 15.808 | 15.808 | 0.000 | 56715335H | 2.00 | 2.04 | |
| | | | | | | RPD = 2.69 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.224 | 17.224 | 0.000 | 36036821H | 2.00 | 1.99 | |
| 2 | 18.210 | 18.210 | 0.000 | 38952764H | 2.00 | 2.06 | |
| | | | | | | RPD = 3.39 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.304 | 18.304 | 0.000 | 42719277H | 2.00 | 2.03 | |
| 2 | 20.896 | 20.896 | 0.000 | 47731142H | 2.00 | 2.02 | |
| | | | | | | RPD = 0.34 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.195 | 21.195 | 0.000 | 47054210H | 2.00 | 1.89 | |
| 2 | 20.658 | 20.658 | 0.000 | 47141766H | 2.00 | 1.96 | |
| | | | | | | RPD = 3.51 | |
| 26 EPN | | | | | | | |
| 1 | 22.255 | 22.255 | 0.000 | 48230179H | 2.00 | 2.04 | |
| 2 | 22.963 | 22.963 | 0.000 | 53322010H | 2.00 | 2.02 | |
| | | | | | | RPD = 1.04 | |
| 27 Famphur | | | | | | | |
| 1 | 22.500 | 22.500 | 0.000 | 54910514H | 2.00 | 2.03 | |
| 2 | 21.586 | 21.586 | 0.000 | 54128508H | 2.00 | 2.05 | |
| | | | | | | RPD = 1.07 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 22.894 | 22.894 | 0.000 | 44211236H | 2.00 | 1.95 | |
| 2 | 24.147 | 24.147 | 0.000 | 50066621H | 2.00 | 1.98 | |
| | | | | | | RPD = 1.38 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.547 | 25.547 | 0.000 | 51745156H | 2.00 | 2.14 | |
| 2 | 25.392 | 25.392 | 0.000 | 55012734H | 2.00 | 1.97 | |
| | | | | | | RPD = 8.16 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 2.00 | 2.14 | |
| 2 | | | | | 2.00 | 1.99 | |
| | | | | | | RPD = 7.44 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

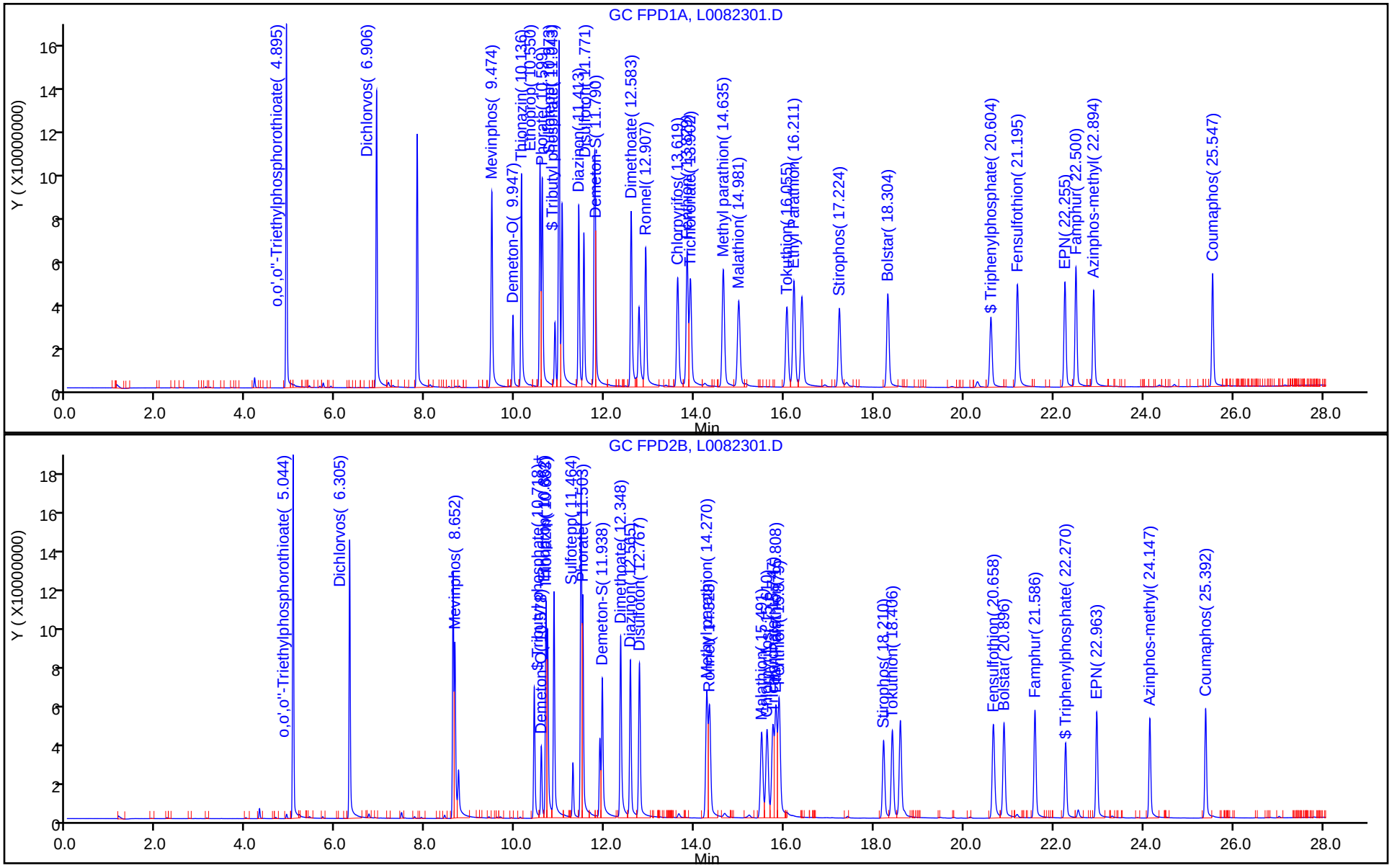
GCOPPLEVEL4_00004 Amount Added: 1.00 Units: mL

Report Date: 23-Aug-2018 10:54:39 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082301.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Aug-2018 06:24:11 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | CCVRT | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: CCVRT 180-254752/1 Calibration Date: 08/23/2018 06:24

Instrument ID: CHGC5 Calib Start Date: 03/21/2018 08:43

GC Column: RTX-OPP2 ID: 0.53(mm) Calib End Date: 03/21/2018 10:55

Lab File ID: L0082301.D Conc. Units: ng/uL

| ANALYTE | CURVE TYPE | AVE CF | CF | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| O,O,O-Triethyl phosphorothioate | Ave | 89183630 | 91525051 | | 2.05 | 2.00 | 2.6 | 20.0 |
| Dichlorvos | Ave | 71316242 | 70148486 | | 1.97 | 2.00 | -1.6 | 20.0 |
| Mevinphos | Ave | 50171782 | 44322313 | | 1.77 | 2.00 | -11.7 | 20.0 |
| Demeton-O | Ave | 54407666 | 52897700 | | 0.661 | 0.680 | -2.8 | 20.0 |
| Thionazin | Ave | 61409613 | 54622472 | | 1.78 | 2.00 | -11.1 | 20.0 |
| Mocap | Ave | 59272201 | 56904765 | | 1.92 | 2.00 | -4.0 | 20.0 |
| Sulfotepp | Ave | 90661250 | 86992409 | | 1.92 | 2.00 | -4.0 | 20.0 |
| Phorate | Ave | 58661425 | 56194778 | | 1.92 | 2.00 | -4.2 | 20.0 |
| Demeton-S | Ave | 53165777 | 53345162 | | 1.32 | 1.32 | 0.3 | 20.0 |
| Dimethoate | Ave | 49879018 | 45766669 | | 1.84 | 2.00 | -8.2 | 20.0 |
| Diazinon | Ave | 40458009 | 39755675 | | 1.97 | 2.00 | -1.7 | 20.0 |
| Disulfoton | Ave | 40565383 | 38896866 | | 1.92 | 2.00 | -4.1 | 20.0 |
| Methyl parathion | Ave | 32966003 | 31886635 | | 1.93 | 2.00 | -3.3 | 20.0 |
| Ronnel | Ave | 28174794 | 28498868 | | 2.02 | 2.00 | 1.2 | 20.0 |
| Malathion | Ave | 21091247 | 21506496 | | 2.04 | 2.00 | 2.0 | 20.0 |
| Chlorpyrifos | Ave | 22021860 | 22200612 | | 2.02 | 2.00 | 0.8 | 20.0 |
| Trichloronate | Ave | 23187325 | 23441124 | | 2.02 | 2.00 | 1.1 | 20.0 |
| Parathion | Ave | 27806550 | 28357668 | | 2.04 | 2.00 | 2.0 | 20.0 |
| Fenthion | Ave | 29731805 | 30297269 | | 2.04 | 2.00 | 1.9 | 20.0 |
| Stirophos | Ave | 18937639 | 19476382 | | 2.06 | 2.00 | 2.8 | 20.0 |
| Tokuthion | Ave | 22002186 | 22006122 | | 2.00 | 2.00 | 0.0 | 20.0 |
| Fensulfothion | Ave | 24108477 | 23570883 | | 1.96 | 2.00 | -2.2 | 20.0 |
| Bolstar | Ave | 23587243 | 23865571 | | 2.02 | 2.00 | 1.2 | 20.0 |
| Famphur | Ave | 26436726 | 27064254 | | 2.05 | 2.00 | 2.4 | 20.0 |
| EPN | Ave | 26396281 | 26661005 | | 2.02 | 2.00 | 1.0 | 20.0 |
| Azinphos-methyl | Ave | 25277133 | 25033311 | | 1.98 | 2.00 | -1.0 | 20.0 |
| Coumaphos | Ave | 27924835 | 27506367 | | 1.97 | 2.00 | -1.5 | 20.0 |
| Tributyl phosphate | Ave | 53661746 | 47564994 | | 1.77 | 2.00 | -11.4 | 20.0 |
| Triphenylphosphate | Ave | 18986089 | 18846731 | | 1.99 | 2.00 | -0.7 | 20.0 |

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: CCVRT 180-254752/1 Calibration Date: 08/23/2018 06:24

Instrument ID: CHGC5 Calib Start Date: 03/21/2018 08:43

GC Column: RTX-OPP2 ID: 0.53(mm) Calib End Date: 03/21/2018 10:55

Lab File ID: L0082301.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| O,O,O-Triethyl phosphorothioate | 5.04 | 5.01 | 5.07 |
| Dichlorvos | 6.31 | 6.28 | 6.34 |
| Mevinphos | 8.65 | 8.62 | 8.68 |
| Demeton-O | 10.58 | 10.55 | 10.61 |
| Thionazin | 10.68 | 10.65 | 10.71 |
| Mocap | 10.86 | 10.83 | 10.89 |
| Sulfotepp | 11.46 | 11.43 | 11.49 |
| Phorate | 11.50 | 11.47 | 11.53 |
| Demeton-S | 11.94 | 11.91 | 11.97 |
| Dimethoate | 12.35 | 12.32 | 12.38 |
| Diazinon | 12.57 | 12.54 | 12.60 |
| Disulfoton | 12.77 | 12.74 | 12.80 |
| Methyl parathion | 14.27 | 14.24 | 14.30 |
| Ronnel | 14.33 | 14.30 | 14.36 |
| Malathion | 15.49 | 15.46 | 15.52 |
| Chlorpyrifos | 15.61 | 15.58 | 15.64 |
| Trichloronate | 15.75 | 15.72 | 15.78 |
| Parathion | 15.81 | 15.78 | 15.84 |
| Fenthion | 15.88 | 15.85 | 15.91 |
| Stirophos | 18.21 | 18.18 | 18.24 |
| Tokuthion | 18.41 | 18.38 | 18.44 |
| Fensulfothion | 20.66 | 20.63 | 20.69 |
| Bolstar | 20.90 | 20.87 | 20.93 |
| Famphur | 21.59 | 21.56 | 21.62 |
| EPN | 22.96 | 22.93 | 22.99 |
| Azinphos-methyl | 24.15 | 24.12 | 24.18 |
| Coumaphos | 25.39 | 25.36 | 25.42 |
| Tributyl phosphate | 10.72 | 10.69 | 10.75 |
| Triphenylphosphate | 22.27 | 22.24 | 22.30 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082301.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 23-Aug-2018 06:24:11 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-001
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:39 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 08:32:40

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.043 | 11.043 | 0.000 | 84287633H | 2.00 | 1.85 | |
| 2 | 10.718 | 10.718 | 0.000 | 95129988H | 2.00 | 1.77 | |
| | | | | | | RPD = 4.40 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 20.604 | 20.604 | 0.000 | 32098016H | 2.00 | 1.90 | |
| 2 | 22.270 | 22.270 | 0.000 | 37693461H | 2.00 | 1.99 | |
| | | | | | | RPD = 4.27 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 4.895 | 4.895 | 0.000 | 166960094H | 2.00 | 2.13 | |
| 2 | 5.044 | 5.044 | 0.000 | 183050102H | 2.00 | 2.05 | |
| | | | | | | RPD = 3.83 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 6.906 | 6.906 | 0.000 | 136410681H | 2.00 | 2.04 | |
| 2 | 6.305 | 6.305 | 0.000 | 140296972H | 2.00 | 1.97 | |
| | | | | | | RPD = 3.63 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.474 | 9.474 | 0.000 | 89836939H | 2.00 | 1.79 | |
| 2 | 8.652 | 8.652 | 0.000 | 88644625H | 2.00 | 1.77 | |
| | | | | | | RPD = 1.45 | |
| 6 Demeton-O | | | | | | | |
| 1 | 9.947 | 9.947 | 0.000 | 32915327H | 0.6800 | 0.6652 | |
| 2 | 10.578 | 10.578 | 0.000 | 35970436H | 0.6800 | 0.6611 | |
| | | | | | | RPD = 0.61 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.136 | 10.136 | 0.000 | 97871952H | 2.00 | 1.84 | |
| 2 | 10.683 | 10.683 | 0.000 | 109244944H | 2.00 | 1.78 | |
| | | | | | | RPD = 3.14 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.550 | 10.550 | 0.000 | 103220697H | 2.00 | 1.79 | |
| 2 | 10.862 | 10.862 | 0.000 | 113809529H | 2.00 | 1.92 | |
| | | | | | | RPD = 7.22 | |
| 9 Phorate | | | | | | | |
| 1 | 10.599 | 10.599 | 0.000 | 95994448H | 2.00 | 1.78 | |
| 2 | 11.503 | 11.503 | 0.000 | 112389556H | 2.00 | 1.92 | |
| | | | | | | RPD = 7.41 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 10.973 | 10.973 | 0.000 | 158957161H | 2.00 | 1.96 | |
| 2 | 11.464 | 11.464 | 0.000 | 173984818H | 2.00 | 1.92 | |
| | | | | | | RPD = 2.10 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.413 | 11.413 | 0.000 | 83530552H | 2.00 | 1.97 | |
| 2 | 12.565 | 12.565 | 0.000 | 79511350H | 2.00 | 1.97 | |
| | | | | | | RPD = 0.22 | |
| 12 Disulfoton | | | | | | | M |
| 1 | 11.771 | 11.771 | 0.000 | 108708855H | 2.00 | 2.46 | |
| 2 | 12.767 | 12.767 | 0.000 | 77793732H | 2.00 | 1.92 | |
| | | | | | | RPD = 24.78 | |
| 13 Demeton-S | | | | | | | M |
| 1 | 11.790 | 11.790 | 0.000 | 71797496H | 1.32 | 1.47 | |
| 2 | 11.938 | 11.938 | 0.000 | 70415614H | 1.32 | 1.32 | |
| | | | | | | RPD = 10.67 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.583 | 12.583 | 0.000 | 80709423H | 2.00 | 2.06 | |
| 2 | 12.348 | 12.348 | 0.000 | 91533337H | 2.00 | 1.84 | |
| | | | | | | RPD = 11.54 | |
| 15 Ronnel | | | | | | | |
| 1 | 12.907 | 12.907 | 0.000 | 64024670H | 2.00 | 2.09 | |
| 2 | 14.328 | 14.328 | 0.000 | 56997736H | 2.00 | 2.02 | |
| | | | | | | RPD = 3.46 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 13.619 | 13.619 | 0.000 | 50152004H | 2.00 | 2.14 | |
| 2 | 15.610 | 15.610 | 0.000 | 44401223H | 2.00 | 2.02 | |
| | | | | | | RPD = 6.05 | |
| 17 Fenthion | | | | | | | |
| 1 | 13.829 | 13.829 | 0.000 | 62209091H | 2.00 | 2.07 | |
| 2 | 15.879 | 15.879 | 0.000 | 60594538H | 2.00 | 2.04 | |
| | | | | | | RPD = 1.57 | |
| 18 Trichloronate | | | | | | | |
| 1 | 13.902 | 13.902 | 0.000 | 49690173H | 2.00 | 2.08 | |
| 2 | 15.747 | 15.747 | 0.000 | 46882248H | 2.00 | 2.02 | |
| | | | | | | RPD = 2.91 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 14.635 | 14.635 | 0.000 | 53875503H | 2.00 | 2.07 | |
| 2 | 14.270 | 14.270 | 0.000 | 63773270H | 2.00 | 1.93 | |
| | | | | | | RPD = 6.69 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 14.981 | 14.981 | 0.000 | 39497117H | 2.00 | 1.98 | |
| 2 | 15.491 | 15.491 | 0.000 | 43012991H | 2.00 | 2.04 | |
| | | | | | | RPD = 3.15 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.055 | 16.055 | 0.000 | 36702428H | 2.00 | 1.94 | |
| 2 | 18.406 | 18.406 | 0.000 | 44012243H | 2.00 | 2.00 | |
| | | | | | | RPD = 3.18 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.211 | 16.211 | 0.000 | 48722188H | 2.00 | 1.99 | |
| 2 | 15.808 | 15.808 | 0.000 | 56715335H | 2.00 | 2.04 | |
| | | | | | | RPD = 2.69 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.224 | 17.224 | 0.000 | 36036821H | 2.00 | 1.99 | |
| 2 | 18.210 | 18.210 | 0.000 | 38952764H | 2.00 | 2.06 | |
| | | | | | | RPD = 3.39 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.304 | 18.304 | 0.000 | 42719277H | 2.00 | 2.03 | |
| 2 | 20.896 | 20.896 | 0.000 | 47731142H | 2.00 | 2.02 | |
| | | | | | | RPD = 0.34 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.195 | 21.195 | 0.000 | 47054210H | 2.00 | 1.89 | |
| 2 | 20.658 | 20.658 | 0.000 | 47141766H | 2.00 | 1.96 | |
| | | | | | | RPD = 3.51 | |
| 26 EPN | | | | | | | |
| 1 | 22.255 | 22.255 | 0.000 | 48230179H | 2.00 | 2.04 | |
| 2 | 22.963 | 22.963 | 0.000 | 53322010H | 2.00 | 2.02 | |
| | | | | | | RPD = 1.04 | |
| 27 Famphur | | | | | | | |
| 1 | 22.500 | 22.500 | 0.000 | 54910514H | 2.00 | 2.03 | |
| 2 | 21.586 | 21.586 | 0.000 | 54128508H | 2.00 | 2.05 | |
| | | | | | | RPD = 1.07 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 22.894 | 22.894 | 0.000 | 44211236H | 2.00 | 1.95 | |
| 2 | 24.147 | 24.147 | 0.000 | 50066621H | 2.00 | 1.98 | |
| | | | | | | RPD = 1.38 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.547 | 25.547 | 0.000 | 51745156H | 2.00 | 2.14 | |
| 2 | 25.392 | 25.392 | 0.000 | 55012734H | 2.00 | 1.97 | |
| | | | | | | RPD = 8.16 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 2.00 | 2.14 | |
| 2 | | | | | 2.00 | 1.99 | |
| | | | | | | RPD = 7.44 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

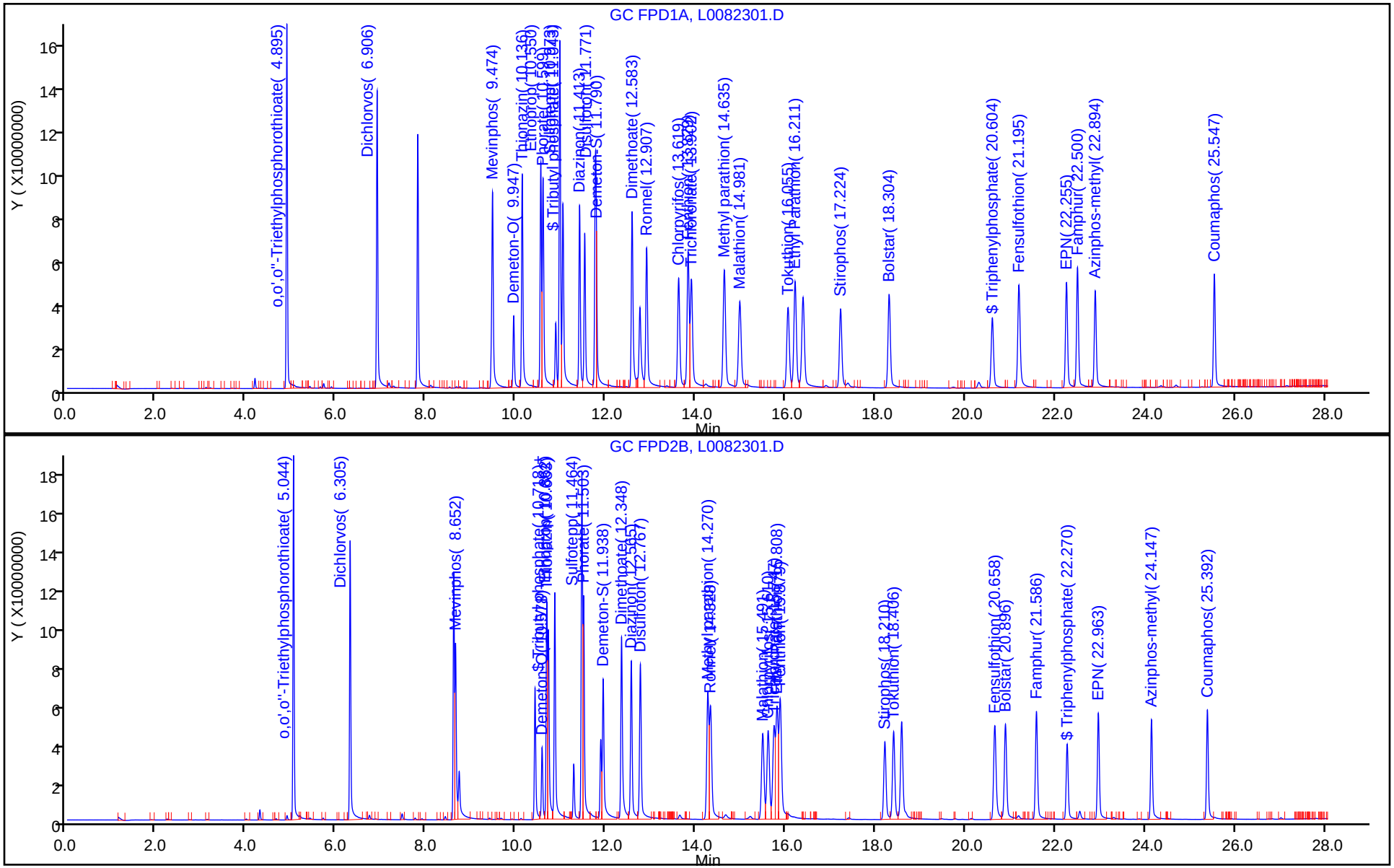
GCOPPLEVEL4_00004 Amount Added: 1.00 Units: mL

Report Date: 23-Aug-2018 10:54:40 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082301.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Aug-2018 06:24:11 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | CCVRT | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: CCV 180-254752/7 Calibration Date: 08/23/2018 09:42

Instrument ID: CHGC5 Calib Start Date: 03/21/2018 08:43

GC Column: RTX-OPP1 ID: 0.53(mm) Calib End Date: 03/21/2018 10:55

Lab File ID: L0082307.D Conc. Units: ng/uL

| ANALYTE | CURVE TYPE | AVE CF | CF | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| O,O,O-Triethyl phosphorothioate | Ave | 78289401 | 86621688 | | 2.21 | 2.00 | 10.6 | 20.0 |
| Dichlorvos | Ave | 66871856 | 75687861 | | 2.26 | 2.00 | 13.2 | 20.0 |
| Mevinphos | Ave | 50113953 | 48585900 | | 1.94 | 2.00 | -3.0 | 20.0 |
| Demeton-O | Ave | 49483227 | 50250844 | | 0.691 | 0.680 | 1.6 | 20.0 |
| Thionazin | Ave | 53314169 | 51977724 | | 1.95 | 2.00 | -2.5 | 20.0 |
| Mocap | Ave | 57782696 | 54842823 | | 1.90 | 2.00 | -5.1 | 20.0 |
| Phorate | Ave | 53959369 | 50412402 | | 1.87 | 2.00 | -6.6 | 20.0 |
| Sulfotepp | Ave | 81113156 | 83977484 | | 2.07 | 2.00 | 3.5 | 20.0 |
| Diazinon | Ave | 42410446 | 43348266 | | 2.04 | 2.00 | 2.2 | 20.0 |
| Disulfoton | Ave | 44187823 | 58184160 | | 2.63 | 2.00 | 31.7* | 20.0 |
| Demeton-S | Ave | 48716002 | 52062261 | | 1.41 | 1.32 | 6.9 | 20.0 |
| Dimethoate | Ave | 39181173 | 43337656 | | 2.21 | 2.00 | 10.6 | 20.0 |
| Ronnel | Ave | 30572605 | 33899005 | | 2.22 | 2.00 | 10.9 | 20.0 |
| Chlorpyrifos | Ave | 23414497 | 26652055 | | 2.28 | 2.00 | 13.8 | 20.0 |
| Fenthion | Ave | 30049217 | 32558316 | | 2.17 | 2.00 | 8.3 | 20.0 |
| Trichloronate | Ave | 23871279 | 26237711 | | 2.20 | 2.00 | 9.9 | 20.0 |
| Methyl parathion | Ave | 26046259 | 28790375 | | 2.21 | 2.00 | 10.5 | 20.0 |
| Malathion | Ave | 19987613 | 20803234 | | 2.08 | 2.00 | 4.1 | 20.0 |
| Tokuthion | Ave | 18941636 | 19639378 | | 2.07 | 2.00 | 3.7 | 20.0 |
| Parathion | Ave | 24539290 | 26124229 | | 2.13 | 2.00 | 6.5 | 20.0 |
| Stirophos | Ave | 18124587 | 19101668 | | 2.11 | 2.00 | 5.4 | 20.0 |
| Bolstar | Ave | 21039533 | 22609452 | | 2.15 | 2.00 | 7.5 | 20.0 |
| Fensulfothion | Ave | 24924142 | 25821899 | | 2.07 | 2.00 | 3.6 | 20.0 |
| EPN | Ave | 23628924 | 25250721 | | 2.14 | 2.00 | 6.9 | 20.0 |
| Famphur | Ave | 27106054 | 28472190 | | 2.10 | 2.00 | 5.0 | 20.0 |
| Azinphos-methyl | Ave | 22631409 | 23992514 | | 2.12 | 2.00 | 6.0 | 20.0 |
| Coumaphos | Ave | 24206533 | 27618910 | | 2.28 | 2.00 | 14.1 | 20.0 |
| Tributyl phosphate | Ave | 45496937 | 44171873 | | 1.94 | 2.00 | -2.9 | 20.0 |
| Triphenylphosphate | Ave | 16873704 | 16963682 | | 2.01 | 2.00 | 0.5 | 20.0 |

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: CCV 180-254752/7 Calibration Date: 08/23/2018 09:42

Instrument ID: CHGC5 Calib Start Date: 03/21/2018 08:43

GC Column: RTX-OPP1 ID: 0.53(mm) Calib End Date: 03/21/2018 10:55

Lab File ID: L0082307.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| O,O,O-Triethyl phosphorothioate | 4.90 | 4.87 | 4.93 |
| Dichlorvos | 6.91 | 6.88 | 6.94 |
| Mevinphos | 9.48 | 9.44 | 9.50 |
| Demeton-O | 9.95 | 9.92 | 9.98 |
| Thionazin | 10.14 | 10.11 | 10.17 |
| Mocap | 10.55 | 10.52 | 10.58 |
| Phorate | 10.60 | 10.57 | 10.63 |
| Sulfotepp | 10.97 | 10.94 | 11.00 |
| Diazinon | 11.42 | 11.38 | 11.44 |
| Disulfoton | 11.77 | 11.74 | 11.80 |
| Demeton-S | 11.79 | 11.77 | 11.83 |
| Dimethoate | 12.58 | 12.55 | 12.61 |
| Ronnel | 12.91 | 12.88 | 12.94 |
| Chlorpyrifos | 13.62 | 13.59 | 13.65 |
| Fenthion | 13.83 | 13.80 | 13.86 |
| Trichloronate | 13.91 | 13.87 | 13.93 |
| Methyl parathion | 14.64 | 14.61 | 14.67 |
| Malathion | 14.98 | 14.95 | 15.01 |
| Tokuthion | 16.06 | 16.03 | 16.09 |
| Parathion | 16.21 | 16.18 | 16.24 |
| Stirophos | 17.22 | 17.19 | 17.25 |
| Bolstar | 18.31 | 18.27 | 18.33 |
| Fensulfothion | 21.19 | 21.17 | 21.23 |
| EPN | 22.26 | 22.23 | 22.29 |
| Famphur | 22.50 | 22.47 | 22.53 |
| Azinphos-methyl | 22.89 | 22.86 | 22.92 |
| Coumaphos | 25.55 | 25.52 | 25.58 |
| Tributyl phosphate | 11.04 | 11.01 | 11.07 |
| Triphenylphosphate | 20.60 | 20.57 | 20.63 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082307.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2018 09:42:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-007
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:25 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 10:52:29

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.044 | 11.043 | 0.001 | 88343745H | 2.00 | 1.94 | |
| 2 | 10.719 | 10.718 | 0.001 | 100684611H | 2.00 | 1.88 | |
| | | | | | | RPD = 3.43 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 20.604 | 20.604 | 0.000 | 33927364H | 2.00 | 2.01 | |
| 2 | 22.271 | 22.270 | 0.001 | 39955447H | 2.00 | 2.10 | |
| | | | | | | RPD = 4.56 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 4.897 | 4.895 | 0.002 | 173243375H | 2.00 | 2.21 | |
| 2 | 5.046 | 5.044 | 0.002 | 190781106H | 2.00 | 2.14 | |
| | | | | | | RPD = 3.39 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 6.907 | 6.906 | 0.001 | 151375722H | 2.00 | 2.26 | |
| 2 | 6.307 | 6.305 | 0.002 | 153703888H | 2.00 | 2.16 | |
| | | | | | | RPD = 4.91 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.476 | 9.474 | 0.002 | 97171799H | 2.00 | 1.94 | |
| 2 | 8.654 | 8.652 | 0.002 | 95109983H | 2.00 | 1.90 | |
| | | | | | | RPD = 2.26 | |
| 6 Demeton-O | | | | | | | |
| 1 | 9.948 | 9.947 | 0.001 | 34170574H | 0.6800 | 0.6905 | |
| 2 | 10.580 | 10.578 | 0.002 | 37743450H | 0.6800 | 0.6937 | |
| | | | | | | RPD = 0.46 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.137 | 10.136 | 0.001 | 103955447H | 2.00 | 1.95 | |
| 2 | 10.685 | 10.683 | 0.002 | 116018024H | 2.00 | 1.89 | |
| | | | | | | RPD = 3.16 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.549 | 10.550 | -0.001 | 109685646H | 2.00 | 1.90 | |
| 2 | 10.863 | 10.862 | 0.001 | 119255045H | 2.00 | 2.01 | |
| | | | | | | RPD = 5.82 | |
| 9 Phorate | | | | | | | |
| 1 | 10.600 | 10.599 | 0.001 | 100824803H | 2.00 | 1.87 | |
| 2 | 11.504 | 11.503 | 0.001 | 117220879H | 2.00 | 2.00 | |
| | | | | | | RPD = 6.71 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 10.974 | 10.973 | 0.001 | 167954968H | 2.00 | 2.07 | |
| 2 | 11.466 | 11.464 | 0.002 | 180809122H | 2.00 | 1.99 | |
| | | | | | | RPD = 3.75 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.415 | 11.413 | 0.002 | 86696532H | 2.00 | 2.04 | |
| 2 | 12.568 | 12.565 | 0.003 | 83870706H | 2.00 | 2.07 | |
| | | | | | | RPD = 1.40 | |
| 12 Disulfoton | | | | | | | M |
| 1 | 11.769 | 11.771 | -0.002 | 116368319H | 2.00 | 2.63 | |
| 2 | 12.769 | 12.767 | 0.002 | 82441530H | 2.00 | 2.03 | |
| | | | | | | RPD = 25.77 | |
| 13 Demeton-S | | | | | | | M |
| 1 | 11.793 | 11.798 | -0.005 | 68722185H | 1.32 | 1.41 | |
| 2 | 11.940 | 11.946 | -0.006 | 74527998H | 1.32 | 1.40 | |
| | | | | | | RPD = 0.63 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.584 | 12.583 | 0.001 | 86675312H | 2.00 | 2.21 | |
| 2 | 12.350 | 12.348 | 0.002 | 98710578H | 2.00 | 1.98 | |
| | | | | | | RPD = 11.13 | |
| 15 Ronnel | | | | | | | |
| 1 | 12.909 | 12.907 | 0.002 | 67798010H | 2.00 | 2.22 | |
| 2 | 14.331 | 14.328 | 0.003 | 59736814H | 2.00 | 2.12 | |
| | | | | | | RPD = 4.49 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 13.620 | 13.619 | 0.001 | 53304110H | 2.00 | 2.28 | |
| 2 | 15.614 | 15.610 | 0.004 | 46330320H | 2.00 | 2.10 | |
| | | | | | | RPD = 7.89 | |
| 17 Fenthion | | | | | | | |
| 1 | 13.834 | 13.829 | 0.005 | 65116632H | 2.00 | 2.17 | |
| 2 | 15.884 | 15.879 | 0.005 | 63790797H | 2.00 | 2.15 | |
| | | | | | | RPD = 1.00 | |
| 18 Trichloronate | | | | | | | |
| 1 | 13.905 | 13.902 | 0.003 | 52475422H | 2.00 | 2.20 | |
| 2 | 15.747 | 15.747 | 0.000 | 49582742H | 2.00 | 2.14 | |
| | | | | | | RPD = 2.76 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 14.639 | 14.635 | 0.004 | 57580750H | 2.00 | 2.21 | |
| 2 | 14.273 | 14.270 | 0.003 | 67421868H | 2.00 | 2.05 | |
| | | | | | | RPD = 7.78 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 14.983 | 14.981 | 0.002 | 41606468H | 2.00 | 2.08 | |
| 2 | 15.497 | 15.491 | 0.006 | 44798107H | 2.00 | 2.12 | |
| | | | | | | RPD = 2.02 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.057 | 16.055 | 0.002 | 39278756H | 2.00 | 2.07 | |
| 2 | 18.409 | 18.406 | 0.003 | 45503021H | 2.00 | 2.07 | |
| | | | | | | RPD = 0.27 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.213 | 16.211 | 0.002 | 52248457H | 2.00 | 2.13 | |
| 2 | 15.814 | 15.808 | 0.006 | 59280363H | 2.00 | 2.13 | |
| | | | | | | RPD = 0.13 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.224 | 17.224 | 0.000 | 38203335H | 2.00 | 2.11 | |
| 2 | 18.212 | 18.210 | 0.002 | 41588708H | 2.00 | 2.20 | |
| | | | | | | RPD = 4.10 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.306 | 18.304 | 0.002 | 45218904H | 2.00 | 2.15 | |
| 2 | 20.898 | 20.896 | 0.002 | 50162264H | 2.00 | 2.13 | |
| | | | | | | RPD = 1.06 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.194 | 21.195 | -0.001 | 51643798H | 2.00 | 2.07 | |
| 2 | 20.660 | 20.658 | 0.002 | 50812771H | 2.00 | 2.11 | |
| | | | | | | RPD = 1.71 | |
| 26 EPN | | | | | | | |
| 1 | 22.255 | 22.255 | 0.000 | 50501441H | 2.00 | 2.14 | |
| 2 | 22.965 | 22.963 | 0.002 | 55635974H | 2.00 | 2.11 | |
| | | | | | | RPD = 1.39 | |
| 27 Famphur | | | | | | | |
| 1 | 22.499 | 22.500 | -0.001 | 56944379H | 2.00 | 2.10 | |
| 2 | 21.589 | 21.586 | 0.003 | 56959264H | 2.00 | 2.15 | |
| | | | | | | RPD = 2.53 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 22.894 | 22.894 | 0.000 | 47985028H | 2.00 | 2.12 | |
| 2 | 24.149 | 24.147 | 0.002 | 54038878H | 2.00 | 2.14 | |
| | | | | | | RPD = 0.83 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.548 | 25.547 | 0.001 | 55237820H | 2.00 | 2.28 | |
| 2 | 25.394 | 25.392 | 0.002 | 58832550H | 2.00 | 2.11 | |
| | | | | | | RPD = 7.98 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 2.00 | 2.10 | |
| 2 | | | | | 2.00 | 2.10 | |
| | | | | | | RPD = 0.27 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

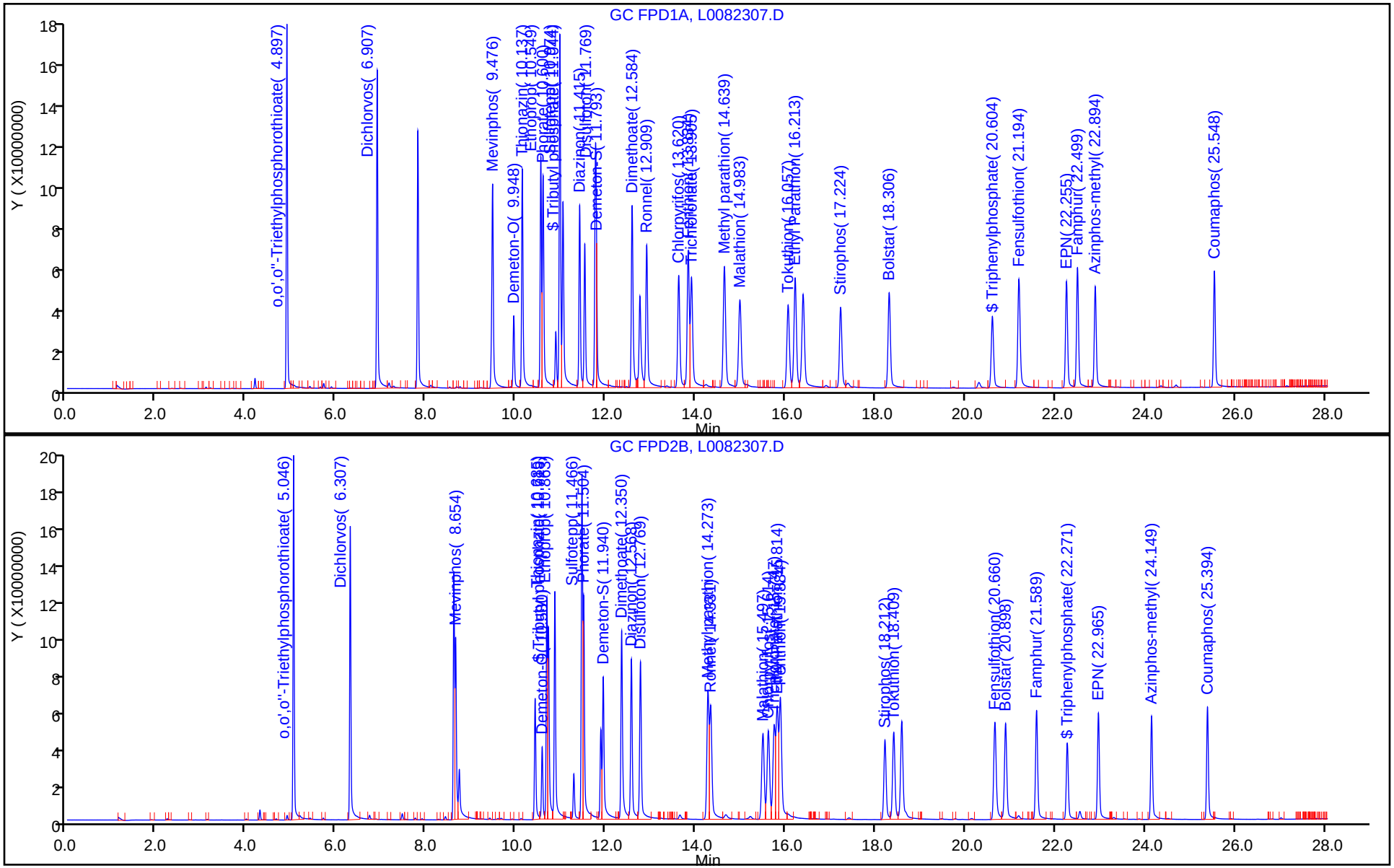
GCOPPLEVEL4_00004 Amount Added: 1.00 Units: mL

Report Date: 23-Aug-2018 10:54:25 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082307.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Aug-2018 09:42:30 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | CCV | | | Worklist Smp#: | 7 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: CCV 180-254752/7 Calibration Date: 08/23/2018 09:42

Instrument ID: CHGC5 Calib Start Date: 03/21/2018 08:43

GC Column: RTX-OPP2 ID: 0.53(mm) Calib End Date: 03/21/2018 10:55

Lab File ID: L0082307.D Conc. Units: ng/uL

| ANALYTE | CURVE TYPE | AVE CF | CF | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| O,O,O-Triethyl phosphorothioate | Ave | 89183630 | 95390553 | | 2.14 | 2.00 | 7.0 | 20.0 |
| Dichlorvos | Ave | 71316242 | 76851944 | | 2.16 | 2.00 | 7.8 | 20.0 |
| Mevinphos | Ave | 50171782 | 47554992 | | 1.90 | 2.00 | -5.2 | 20.0 |
| Demeton-O | Ave | 54407666 | 55505074 | | 0.694 | 0.680 | 2.0 | 20.0 |
| Thionazin | Ave | 61409613 | 58009012 | | 1.89 | 2.00 | -5.5 | 20.0 |
| Mocap | Ave | 59272201 | 59627523 | | 2.01 | 2.00 | 0.6 | 20.0 |
| Sulfotepp | Ave | 90661250 | 90404561 | | 1.99 | 2.00 | -0.3 | 20.0 |
| Phorate | Ave | 58661425 | 58610440 | | 2.00 | 2.00 | -0.0 | 20.0 |
| Demeton-S | Ave | 53165777 | 56460605 | | 1.40 | 1.32 | 6.2 | 20.0 |
| Dimethoate | Ave | 49879018 | 49355289 | | 1.98 | 2.00 | -1.0 | 20.0 |
| Diazinon | Ave | 40458009 | 41935353 | | 2.07 | 2.00 | 3.7 | 20.0 |
| Disulfoton | Ave | 40565383 | 41220765 | | 2.03 | 2.00 | 1.6 | 20.0 |
| Methyl parathion | Ave | 32966003 | 33710934 | | 2.05 | 2.00 | 2.3 | 20.0 |
| Ronnel | Ave | 28174794 | 29868407 | | 2.12 | 2.00 | 6.0 | 20.0 |
| Malathion | Ave | 21091247 | 22399054 | | 2.12 | 2.00 | 6.2 | 20.0 |
| Chlorpyrifos | Ave | 22021860 | 23165160 | | 2.10 | 2.00 | 5.2 | 20.0 |
| Trichloronate | Ave | 23187325 | 24791371 | | 2.14 | 2.00 | 6.9 | 20.0 |
| Parathion | Ave | 27806550 | 29640182 | | 2.13 | 2.00 | 6.6 | 20.0 |
| Fenthion | Ave | 29731805 | 31895399 | | 2.15 | 2.00 | 7.3 | 20.0 |
| Stirophos | Ave | 18937639 | 20794354 | | 2.20 | 2.00 | 9.8 | 20.0 |
| Tokuthion | Ave | 22002186 | 22751511 | | 2.07 | 2.00 | 3.4 | 20.0 |
| Fensulfothion | Ave | 24108477 | 25406386 | | 2.11 | 2.00 | 5.4 | 20.0 |
| Bolstar | Ave | 23587243 | 25081132 | | 2.13 | 2.00 | 6.3 | 20.0 |
| Famphur | Ave | 26436726 | 28479632 | | 2.15 | 2.00 | 7.7 | 20.0 |
| EPN | Ave | 26396281 | 27817987 | | 2.11 | 2.00 | 5.4 | 20.0 |
| Azinphos-methyl | Ave | 25277133 | 27019439 | | 2.14 | 2.00 | 6.9 | 20.0 |
| Coumaphos | Ave | 27924835 | 29416275 | | 2.11 | 2.00 | 5.3 | 20.0 |
| Tributyl phosphate | Ave | 53661746 | 50342306 | | 1.88 | 2.00 | -6.2 | 20.0 |
| Triphenylphosphate | Ave | 18986089 | 19977724 | | 2.10 | 2.00 | 5.2 | 20.0 |

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Lab Sample ID: CCV 180-254752/7 Calibration Date: 08/23/2018 09:42

Instrument ID: CHGC5 Calib Start Date: 03/21/2018 08:43

GC Column: RTX-OPP2 ID: 0.53(mm) Calib End Date: 03/21/2018 10:55

Lab File ID: L0082307.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| O,O,O-Triethyl phosphorothioate | 5.05 | 5.01 | 5.07 |
| Dichlorvos | 6.31 | 6.28 | 6.34 |
| Mevinphos | 8.65 | 8.62 | 8.68 |
| Demeton-O | 10.58 | 10.55 | 10.61 |
| Thionazin | 10.69 | 10.65 | 10.71 |
| Mocap | 10.86 | 10.83 | 10.89 |
| Sulfotepp | 11.47 | 11.43 | 11.49 |
| Phorate | 11.50 | 11.47 | 11.53 |
| Demeton-S | 11.94 | 11.92 | 11.98 |
| Dimethoate | 12.35 | 12.32 | 12.38 |
| Diazinon | 12.57 | 12.54 | 12.60 |
| Disulfoton | 12.77 | 12.74 | 12.80 |
| Methyl parathion | 14.27 | 14.24 | 14.30 |
| Ronnel | 14.33 | 14.30 | 14.36 |
| Malathion | 15.50 | 15.46 | 15.52 |
| Chlorpyrifos | 15.61 | 15.58 | 15.64 |
| Trichloronate | 15.75 | 15.72 | 15.78 |
| Parathion | 15.81 | 15.78 | 15.84 |
| Fenthion | 15.88 | 15.85 | 15.91 |
| Stirophos | 18.21 | 18.18 | 18.24 |
| Tokuthion | 18.41 | 18.38 | 18.44 |
| Fensulfothion | 20.66 | 20.63 | 20.69 |
| Bolstar | 20.90 | 20.87 | 20.93 |
| Famphur | 21.59 | 21.56 | 21.62 |
| EPN | 22.97 | 22.93 | 22.99 |
| Azinphos-methyl | 24.15 | 24.12 | 24.18 |
| Coumaphos | 25.39 | 25.36 | 25.42 |
| Tributyl phosphate | 10.72 | 10.69 | 10.75 |
| Triphenylphosphate | 22.27 | 22.24 | 22.30 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082307.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2018 09:42:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-007
Operator ID: 402331 Instrument ID: CHGC5
Sublist: chrom-8141_CHGC5*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:25 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 10:52:29

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.044 | 11.043 | 0.001 | 88343745H | 2.00 | 1.94 | |
| 2 | 10.719 | 10.718 | 0.001 | 100684611H | 2.00 | 1.88 | |
| | | | | | | RPD = 3.43 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 20.604 | 20.604 | 0.000 | 33927364H | 2.00 | 2.01 | |
| 2 | 22.271 | 22.270 | 0.001 | 39955447H | 2.00 | 2.10 | |
| | | | | | | RPD = 4.56 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 4.897 | 4.895 | 0.002 | 173243375H | 2.00 | 2.21 | |
| 2 | 5.046 | 5.044 | 0.002 | 190781106H | 2.00 | 2.14 | |
| | | | | | | RPD = 3.39 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 6.907 | 6.906 | 0.001 | 151375722H | 2.00 | 2.26 | |
| 2 | 6.307 | 6.305 | 0.002 | 153703888H | 2.00 | 2.16 | |
| | | | | | | RPD = 4.91 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.476 | 9.474 | 0.002 | 97171799H | 2.00 | 1.94 | |
| 2 | 8.654 | 8.652 | 0.002 | 95109983H | 2.00 | 1.90 | |
| | | | | | | RPD = 2.26 | |
| 6 Demeton-O | | | | | | | |
| 1 | 9.948 | 9.947 | 0.001 | 34170574H | 0.6800 | 0.6905 | |
| 2 | 10.580 | 10.578 | 0.002 | 37743450H | 0.6800 | 0.6937 | |
| | | | | | | RPD = 0.46 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.137 | 10.136 | 0.001 | 103955447H | 2.00 | 1.95 | |
| 2 | 10.685 | 10.683 | 0.002 | 116018024H | 2.00 | 1.89 | |
| | | | | | | RPD = 3.16 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.549 | 10.550 | -0.001 | 109685646H | 2.00 | 1.90 | |
| 2 | 10.863 | 10.862 | 0.001 | 119255045H | 2.00 | 2.01 | |
| | | | | | | RPD = 5.82 | |
| 9 Phorate | | | | | | | |
| 1 | 10.600 | 10.599 | 0.001 | 100824803H | 2.00 | 1.87 | |
| 2 | 11.504 | 11.503 | 0.001 | 117220879H | 2.00 | 2.00 | |
| | | | | | | RPD = 6.71 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 10.974 | 10.973 | 0.001 | 167954968H | 2.00 | 2.07 | |
| 2 | 11.466 | 11.464 | 0.002 | 180809122H | 2.00 | 1.99 | |
| | | | | | | RPD = 3.75 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.415 | 11.413 | 0.002 | 86696532H | 2.00 | 2.04 | |
| 2 | 12.568 | 12.565 | 0.003 | 83870706H | 2.00 | 2.07 | |
| | | | | | | RPD = 1.40 | |
| 12 Disulfoton | | | | | | | M |
| 1 | 11.769 | 11.771 | -0.002 | 116368319H | 2.00 | 2.63 | |
| 2 | 12.769 | 12.767 | 0.002 | 82441530H | 2.00 | 2.03 | |
| | | | | | | RPD = 25.77 | |
| 13 Demeton-S | | | | | | | M |
| 1 | 11.793 | 11.798 | -0.005 | 68722185H | 1.32 | 1.41 | |
| 2 | 11.940 | 11.946 | -0.006 | 74527998H | 1.32 | 1.40 | |
| | | | | | | RPD = 0.63 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.584 | 12.583 | 0.001 | 86675312H | 2.00 | 2.21 | |
| 2 | 12.350 | 12.348 | 0.002 | 98710578H | 2.00 | 1.98 | |
| | | | | | | RPD = 11.13 | |
| 15 Ronnel | | | | | | | |
| 1 | 12.909 | 12.907 | 0.002 | 67798010H | 2.00 | 2.22 | |
| 2 | 14.331 | 14.328 | 0.003 | 59736814H | 2.00 | 2.12 | |
| | | | | | | RPD = 4.49 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 13.620 | 13.619 | 0.001 | 53304110H | 2.00 | 2.28 | |
| 2 | 15.614 | 15.610 | 0.004 | 46330320H | 2.00 | 2.10 | |
| | | | | | | RPD = 7.89 | |
| 17 Fenthion | | | | | | | |
| 1 | 13.834 | 13.829 | 0.005 | 65116632H | 2.00 | 2.17 | |
| 2 | 15.884 | 15.879 | 0.005 | 63790797H | 2.00 | 2.15 | |
| | | | | | | RPD = 1.00 | |
| 18 Trichloronate | | | | | | | |
| 1 | 13.905 | 13.902 | 0.003 | 52475422H | 2.00 | 2.20 | |
| 2 | 15.747 | 15.747 | 0.000 | 49582742H | 2.00 | 2.14 | |
| | | | | | | RPD = 2.76 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 14.639 | 14.635 | 0.004 | 57580750H | 2.00 | 2.21 | |
| 2 | 14.273 | 14.270 | 0.003 | 67421868H | 2.00 | 2.05 | |
| | | | | | | RPD = 7.78 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 14.983 | 14.981 | 0.002 | 41606468H | 2.00 | 2.08 | |
| 2 | 15.497 | 15.491 | 0.006 | 44798107H | 2.00 | 2.12 | |
| | | | | | | RPD = 2.02 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.057 | 16.055 | 0.002 | 39278756H | 2.00 | 2.07 | |
| 2 | 18.409 | 18.406 | 0.003 | 45503021H | 2.00 | 2.07 | |
| | | | | | | RPD = 0.27 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.213 | 16.211 | 0.002 | 52248457H | 2.00 | 2.13 | |
| 2 | 15.814 | 15.808 | 0.006 | 59280363H | 2.00 | 2.13 | |
| | | | | | | RPD = 0.13 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.224 | 17.224 | 0.000 | 38203335H | 2.00 | 2.11 | |
| 2 | 18.212 | 18.210 | 0.002 | 41588708H | 2.00 | 2.20 | |
| | | | | | | RPD = 4.10 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.306 | 18.304 | 0.002 | 45218904H | 2.00 | 2.15 | |
| 2 | 20.898 | 20.896 | 0.002 | 50162264H | 2.00 | 2.13 | |
| | | | | | | RPD = 1.06 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.194 | 21.195 | -0.001 | 51643798H | 2.00 | 2.07 | |
| 2 | 20.660 | 20.658 | 0.002 | 50812771H | 2.00 | 2.11 | |
| | | | | | | RPD = 1.71 | |
| 26 EPN | | | | | | | |
| 1 | 22.255 | 22.255 | 0.000 | 50501441H | 2.00 | 2.14 | |
| 2 | 22.965 | 22.963 | 0.002 | 55635974H | 2.00 | 2.11 | |
| | | | | | | RPD = 1.39 | |
| 27 Famphur | | | | | | | |
| 1 | 22.499 | 22.500 | -0.001 | 56944379H | 2.00 | 2.10 | |
| 2 | 21.589 | 21.586 | 0.003 | 56959264H | 2.00 | 2.15 | |
| | | | | | | RPD = 2.53 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 22.894 | 22.894 | 0.000 | 47985028H | 2.00 | 2.12 | |
| 2 | 24.149 | 24.147 | 0.002 | 54038878H | 2.00 | 2.14 | |
| | | | | | | RPD = 0.83 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.548 | 25.547 | 0.001 | 55237820H | 2.00 | 2.28 | |
| 2 | 25.394 | 25.392 | 0.002 | 58832550H | 2.00 | 2.11 | |
| | | | | | | RPD = 7.98 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 2.00 | 2.10 | |
| 2 | | | | | 2.00 | 2.10 | |
| | | | | | | RPD = 0.27 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

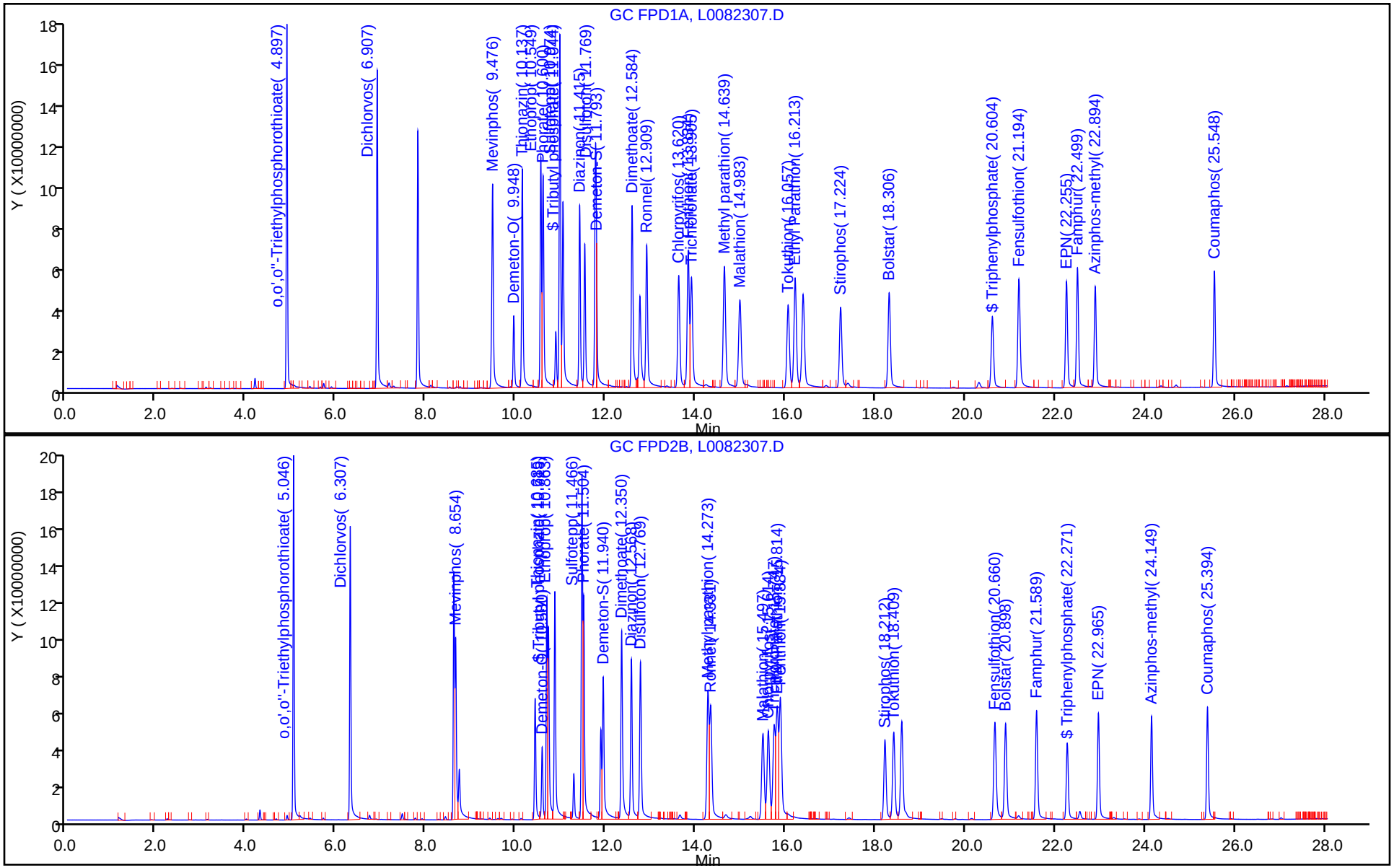
GCOPPLEVEL4_00004 Amount Added: 1.00 Units: mL

Report Date: 23-Aug-2018 10:54:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082307.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Aug-2018 09:42:30 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | CCV | | | Worklist Smp#: | 7 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-254675/1-A

Matrix: Solid | Lab File ID: L0082302.D

Analysis Method: EPA 8141B | Date Collected:

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 06:57

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP1 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 56-38-2 | Parathion | 4.1 | U | 33 | 4.1 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 81 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 87 | | 34-150 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082302.D
Lims ID: MB 180-254675/1-A
Client ID:
Sample Type: MB
Inject. Date: 23-Aug-2018 06:57:19 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-002
Operator ID: 402331 Instrument ID: CHGC5

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:25 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 08:33:46

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.043 | 11.043 | 0.000 | 73674353H | 2.00 | 1.62 | |
| 2 | 10.719 | 10.718 | 0.001 | 76462605H | 2.00 | 1.42 | |
| | | | | | | RPD = 12.77 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 20.601 | 20.604 | -0.003 | 29291416H | 2.00 | 1.74 | |
| 2 | 22.268 | 22.270 | -0.002 | 34975429H | 2.00 | 1.84 | |
| | | | | | | RPD = 5.94 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | | 4.895 | | | | ND | |
| 2 | | 5.044 | | | | | |
| 4 Dichlorvos | | | | | | | |
| 1 | | 6.906 | | | | ND | |
| 2 | | 6.305 | | | | | |
| 5 Mevinphos | | | | | | | |
| 1 | | 9.474 | | | | ND | |
| 2 | | 8.652 | | | | | |
| 6 Demeton-O | | | | | | | |
| 1 | | 9.947 | | | | ND | |
| 2 | | 10.578 | | | | | |
| 7 Thionazin | | | | | | | |
| 1 | | 10.136 | | | | ND | |
| 2 | | 10.683 | | | | | |
| 8 Ethoprop | | | | | | | |
| 1 | | 10.550 | | | | ND | |
| 2 | | 10.862 | | | | | |
| 9 Phorate | | | | | | | |
| 1 | | 10.599 | | | | ND | |
| 2 | | 11.503 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 10 Sulfotepp | | | | | | | |
| 1 | | 10.973 | | | | ND | |
| 2 | | 11.464 | | | | | |
| 11 Diazinon | | | | | | | |
| 1 | | 11.413 | | | | ND | |
| 2 | | 12.565 | | | | | |
| 12 Disulfoton | | | | | | | |
| 1 | | 11.771 | | | | ND | |
| 2 | | 12.767 | | | | | |
| 13 Demeton-S | | | | | | | |
| 1 | | 11.798 | | | | ND | |
| 2 | | 11.946 | | | | | |
| 14 Dimethoate | | | | | | | U |
| 1 | | 12.583 | | | | ND | |
| 2 | | 12.348 | | | | | |
| 15 Ronnel | | | | | | | |
| 1 | | 12.907 | | | | ND | |
| 2 | | 14.328 | | | | | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | | 13.619 | | | | ND | |
| 2 | | 15.610 | | | | | |
| 17 Fenthion | | | | | | | |
| 1 | | 13.829 | | | | ND | |
| 2 | | 15.879 | | | | | |
| 18 Trichloronate | | | | | | | |
| 1 | | 13.902 | | | | ND | |
| 2 | | 15.747 | | | | | |
| 19 Methyl parathion | | | | | | | |
| 1 | | 14.635 | | | | ND | |
| 2 | | 14.270 | | | | | |
| 20 Malathion | | | | | | | |
| 1 | | 14.981 | | | | ND | |
| 2 | | 15.491 | | | | | |
| 21 Tokuthion | | | | | | | |
| 1 | | 16.055 | | | | ND | |
| 2 | | 18.406 | | | | | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | | 16.211 | | | | ND | |
| 2 | | 15.808 | | | | | |
| 23 Stirophos | | | | | | | |
| 1 | | 17.224 | | | | ND | |
| 2 | | 18.210 | | | | | |
| 24 Bolstar | | | | | | | |
| 1 | | 18.304 | | | | ND | |
| 2 | | 20.896 | | | | | |
| 25 Fensulfothion | | | | | | | |
| 1 | | 21.195 | | | | ND | |
| 2 | | 20.658 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 26 EPN | | | | | | | |
| 1 | | 22.255 | | | | ND | |
| 2 | | 22.963 | | | | | |
| 27 Famphur | | | | | | | |
| 1 | | 22.500 | | | | ND | |
| 2 | | 21.586 | | | | | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | | 22.894 | | | | ND | |
| 2 | | 24.147 | | | | | |
| 29 Coumaphos | | | | | | | |
| 1 | | 25.547 | | | | ND | |
| 2 | | 25.392 | | | | | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | 10.230 | | | | ND | |
| 2 | | 10.611 | | | | | |

## QC Flag Legend

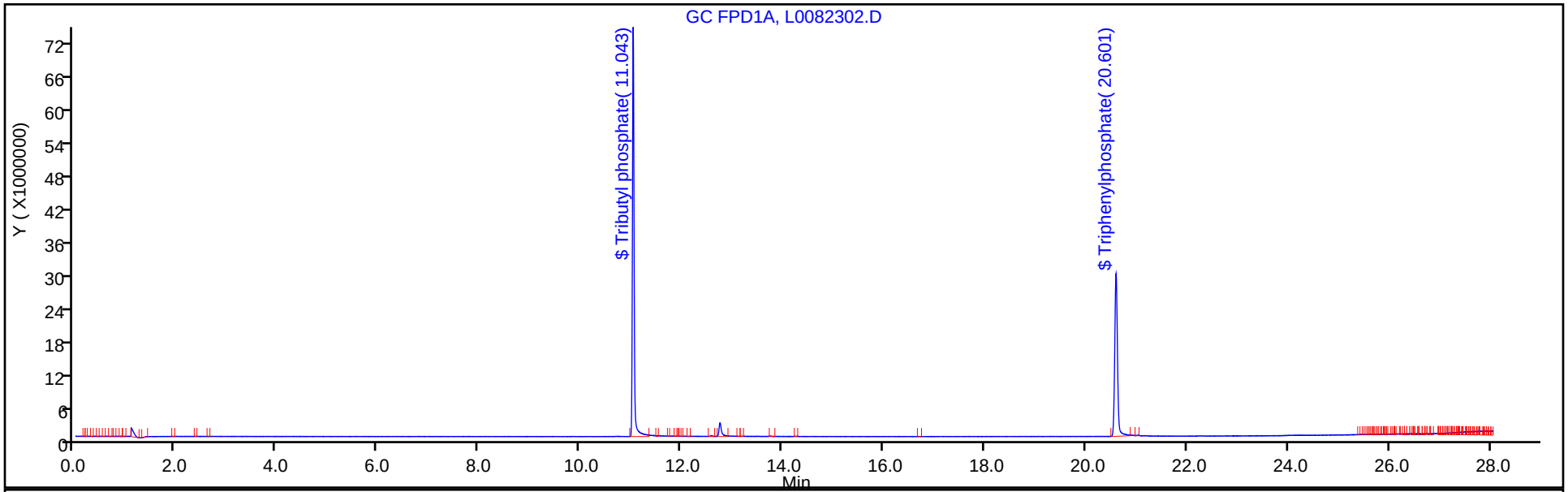
Review Flags

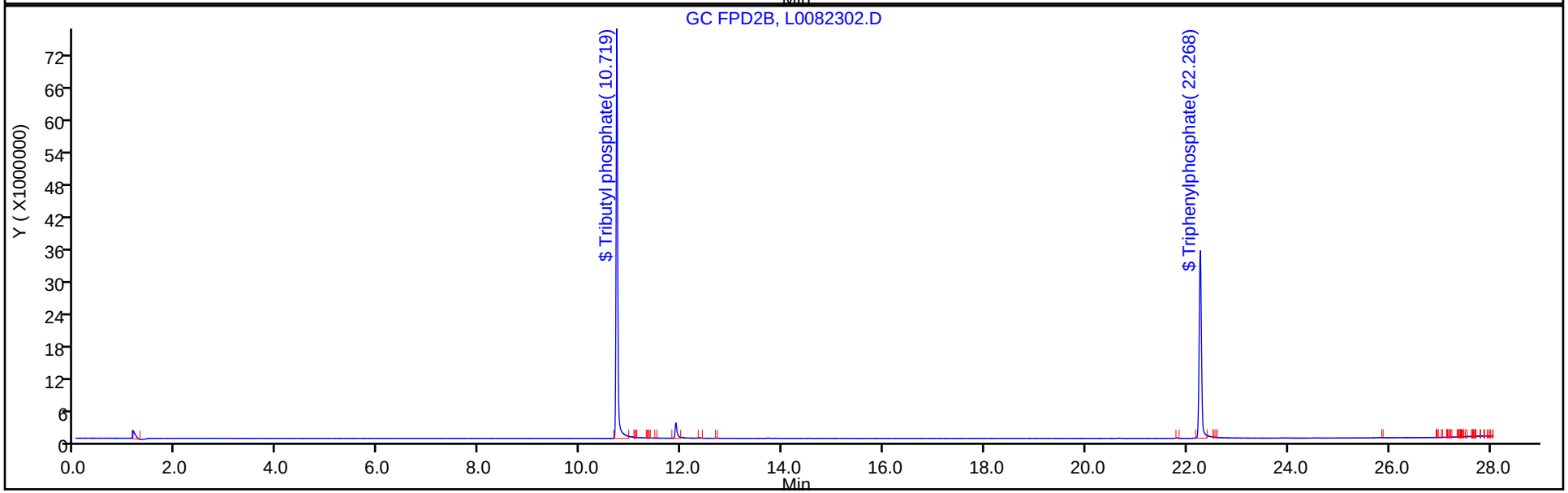
U - Marked Undetected

Report Date: 23-Aug-2018 10:54:37 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082302.D | | | | |
| Injection Date: | 23-Aug-2018 06:57:19 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | MB 180-254675/1-A | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-254675/1-A

Matrix: Solid | Lab File ID: L0082302.D

Analysis Method: EPA 8141B | Date Collected:

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 06:57

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP2 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 71 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 92 | | 34-150 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082302.D
Lims ID: MB 180-254675/1-A
Client ID:
Sample Type: MB
Inject. Date: 23-Aug-2018 06:57:19 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-002
Operator ID: 402331 Instrument ID: CHGC5

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:25 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 08:33:46

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.043 | 11.043 | 0.000 | 73674353H | 2.00 | 1.62 | |
| 2 | 10.719 | 10.718 | 0.001 | 76462605H | 2.00 | 1.42 | |
| | | | | | | RPD = 12.77 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 20.601 | 20.604 | -0.003 | 29291416H | 2.00 | 1.74 | |
| 2 | 22.268 | 22.270 | -0.002 | 34975429H | 2.00 | 1.84 | |
| | | | | | | RPD = 5.94 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | | 4.895 | | | | ND | |
| 2 | | 5.044 | | | | | |
| 4 Dichlorvos | | | | | | | |
| 1 | | 6.906 | | | | ND | |
| 2 | | 6.305 | | | | | |
| 5 Mevinphos | | | | | | | |
| 1 | | 9.474 | | | | ND | |
| 2 | | 8.652 | | | | | |
| 6 Demeton-O | | | | | | | |
| 1 | | 9.947 | | | | ND | |
| 2 | | 10.578 | | | | | |
| 7 Thionazin | | | | | | | |
| 1 | | 10.136 | | | | ND | |
| 2 | | 10.683 | | | | | |
| 8 Ethoprop | | | | | | | |
| 1 | | 10.550 | | | | ND | |
| 2 | | 10.862 | | | | | |
| 9 Phorate | | | | | | | |
| 1 | | 10.599 | | | | ND | |
| 2 | | 11.503 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 10 Sulfotepp | | | | | | | |
| 1 | | 10.973 | | | | ND | |
| 2 | | 11.464 | | | | | |
| 11 Diazinon | | | | | | | |
| 1 | | 11.413 | | | | ND | |
| 2 | | 12.565 | | | | | |
| 12 Disulfoton | | | | | | | |
| 1 | | 11.771 | | | | ND | |
| 2 | | 12.767 | | | | | |
| 13 Demeton-S | | | | | | | |
| 1 | | 11.798 | | | | ND | |
| 2 | | 11.946 | | | | | |
| 14 Dimethoate | | | | | | | U |
| 1 | | 12.583 | | | | ND | |
| 2 | | 12.348 | | | | | |
| 15 Ronnel | | | | | | | |
| 1 | | 12.907 | | | | ND | |
| 2 | | 14.328 | | | | | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | | 13.619 | | | | ND | |
| 2 | | 15.610 | | | | | |
| 17 Fenthion | | | | | | | |
| 1 | | 13.829 | | | | ND | |
| 2 | | 15.879 | | | | | |
| 18 Trichloronate | | | | | | | |
| 1 | | 13.902 | | | | ND | |
| 2 | | 15.747 | | | | | |
| 19 Methyl parathion | | | | | | | |
| 1 | | 14.635 | | | | ND | |
| 2 | | 14.270 | | | | | |
| 20 Malathion | | | | | | | |
| 1 | | 14.981 | | | | ND | |
| 2 | | 15.491 | | | | | |
| 21 Tokuthion | | | | | | | |
| 1 | | 16.055 | | | | ND | |
| 2 | | 18.406 | | | | | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | | 16.211 | | | | ND | |
| 2 | | 15.808 | | | | | |
| 23 Stirophos | | | | | | | |
| 1 | | 17.224 | | | | ND | |
| 2 | | 18.210 | | | | | |
| 24 Bolstar | | | | | | | |
| 1 | | 18.304 | | | | ND | |
| 2 | | 20.896 | | | | | |
| 25 Fensulfothion | | | | | | | |
| 1 | | 21.195 | | | | ND | |
| 2 | | 20.658 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 26 EPN | | | | | | | |
| 1 | | 22.255 | | | | ND | |
| 2 | | 22.963 | | | | | |
| 27 Famphur | | | | | | | |
| 1 | | 22.500 | | | | ND | |
| 2 | | 21.586 | | | | | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | | 22.894 | | | | ND | |
| 2 | | 24.147 | | | | | |
| 29 Coumaphos | | | | | | | |
| 1 | | 25.547 | | | | ND | |
| 2 | | 25.392 | | | | | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | 10.230 | | | | ND | |
| 2 | | 10.611 | | | | | |

## QC Flag Legend

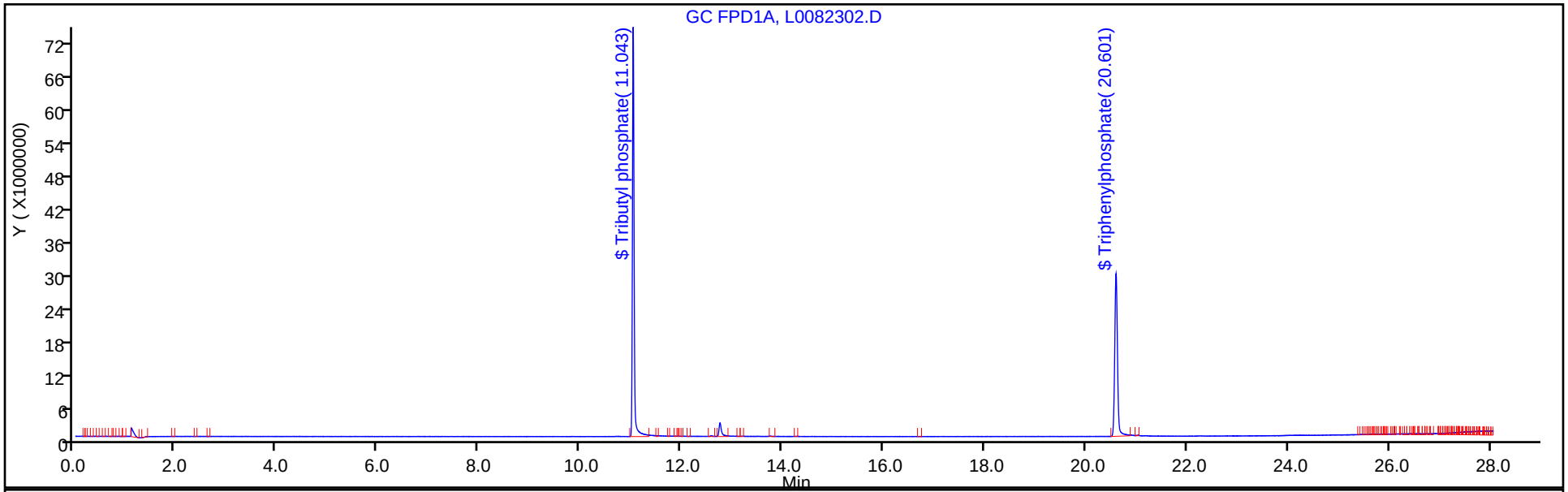
Review Flags

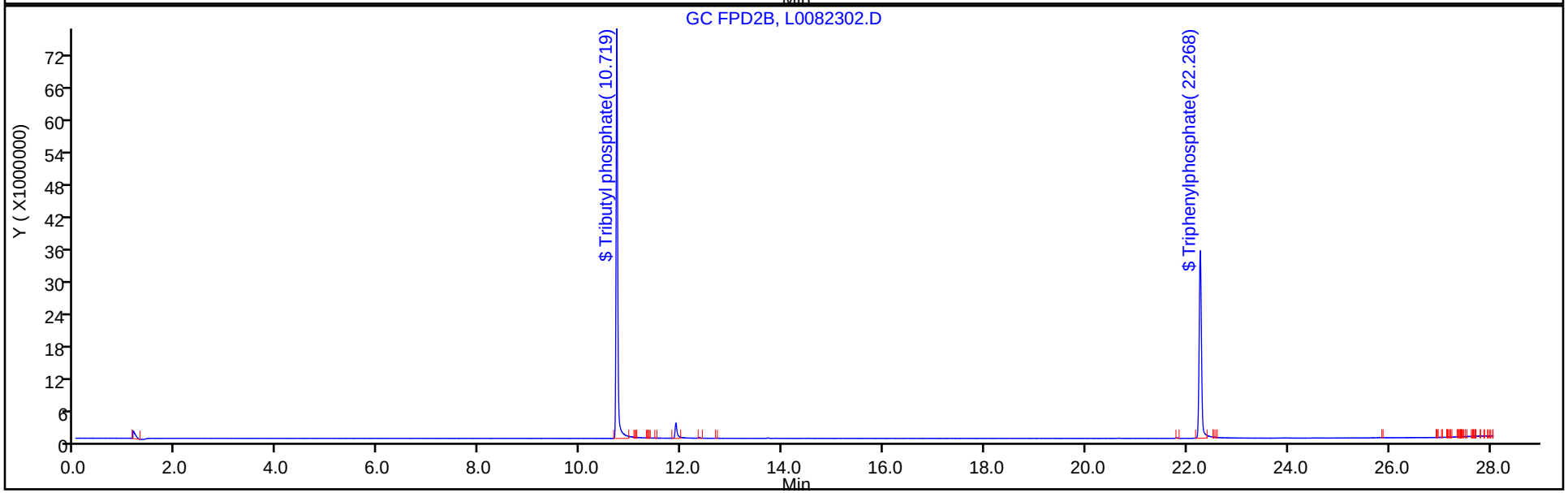
U - Marked Undetected

Report Date: 23-Aug-2018 10:54:37 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082302.D | | | | |
| Injection Date: | 23-Aug-2018 06:57:19 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | MB 180-254675/1-A | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-254675/2-A

Matrix: Solid | Lab File ID: L0082306.D

Analysis Method: EPA 8141B | Date Collected:

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 09:09

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP1 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 87 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 88 | | 34-150 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082306.D
Lims ID: LCS 180-254675/2-A
Client ID:
Sample Type: LCS
Inject. Date: 23-Aug-2018 09:09:31 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-006
Operator ID: 402331 Instrument ID: CHGC5

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:25 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 10:52:52

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.044 | 11.043 | 0.001 | 78771726H | 2.00 | 1.73 | |
| 2 | 10.718 | 10.718 | 0.000 | 87732948H | 2.00 | 1.63 | |
| | | | | | | RPD = 5.73 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 20.602 | 20.604 | -0.002 | 29554258H | 2.00 | 1.75 | |
| 2 | 22.270 | 22.270 | 0.000 | 35005291H | 2.00 | 1.84 | |
| | | | | | | RPD = 5.13 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 4.898 | 4.895 | 0.003 | 130393302H | 2.00 | 1.67 | |
| 2 | 5.046 | 5.044 | 0.002 | 143634877H | 2.00 | 1.61 | |
| | | | | | | RPD = 3.36 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 6.908 | 6.906 | 0.002 | 72933462H | 2.00 | 1.09 | |
| 2 | 6.308 | 6.305 | 0.003 | 73510634H | 2.00 | 1.03 | |
| | | | | | | RPD = 5.64 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.476 | 9.474 | 0.002 | 72027966H | 2.00 | 1.44 | |
| 2 | 8.654 | 8.652 | 0.002 | 74358252H | 2.00 | 1.48 | |
| | | | | | | RPD = 3.07 | |
| 6 Demeton-O | | | | | | | |
| 1 | 9.947 | 9.947 | 0.000 | 28988176H | 0.6800 | 0.5858 | |
| 2 | 10.580 | 10.578 | 0.002 | 31043752H | 0.6800 | 0.5706 | |
| | | | | | | RPD = 2.64 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.136 | 10.136 | 0.000 | 92637992H | 2.00 | 1.74 | |
| 2 | 10.683 | 10.683 | 0.000 | 101281014H | 2.00 | 1.65 | |
| | | | | | | RPD = 5.22 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.550 | 10.550 | 0.000 | 95710603H | 2.00 | 1.66 | |
| 2 | 10.862 | 10.862 | 0.000 | 103057897H | 2.00 | 1.74 | |
| | | | | | | RPD = 4.85 | |
| 9 Phorate | | | | | | | |
| 1 | 10.600 | 10.599 | 0.001 | 84998941H | 2.00 | 1.58 | |
| 2 | 11.503 | 11.503 | 0.000 | 96641332H | 2.00 | 1.65 | |
| | | | | | | RPD = 4.48 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 10.975 | 10.973 | 0.002 | 142516942H | 2.00 | 1.76 | |
| 2 | 11.465 | 11.464 | 0.001 | 156280547H | 2.00 | 1.72 | |
| | | | | | | RPD = 1.91 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.415 | 11.413 | 0.002 | 75637904H | 2.00 | 1.78 | |
| 2 | 12.565 | 12.565 | 0.000 | 71319988H | 2.00 | 1.76 | |
| | | | | | | RPD = 1.17 | |
| 12 Disulfoton | | | | | | | M |
| 1 | 11.769 | 11.771 | -0.002 | 100225127H | 2.00 | 2.27 | |
| 2 | 12.767 | 12.767 | 0.000 | 69748846H | 2.00 | 1.72 | |
| | | | | | | RPD = 27.52 | |
| 13 Demeton-S | | | | | | | M |
| 1 | 11.794 | 11.798 | -0.004 | 50529906H | 1.32 | 1.04 | |
| 2 | 11.939 | 11.946 | -0.007 | 61091518H | 1.32 | 1.15 | |
| | | | | | | RPD = 10.23 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.581 | 12.583 | -0.002 | 66512080H | 2.00 | 1.70 | |
| 2 | 12.346 | 12.348 | -0.002 | 75919086H | 2.00 | 1.52 | |
| | | | | | | RPD = 10.90 | |
| 15 Ronnel | | | | | | | |
| 1 | 12.906 | 12.907 | -0.001 | 58174887H | 2.00 | 1.90 | |
| 2 | 14.330 | 14.328 | 0.002 | 50098432H | 2.00 | 1.78 | |
| | | | | | | RPD = 6.78 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 13.619 | 13.619 | 0.000 | 46056266H | 2.00 | 1.97 | |
| 2 | 15.614 | 15.610 | 0.004 | 39813079H | 2.00 | 1.81 | |
| | | | | | | RPD = 8.43 | |
| 17 Fenthion | | | | | | | |
| 1 | 13.830 | 13.829 | 0.001 | 55959910H | 2.00 | 1.86 | |
| 2 | 15.880 | 15.879 | 0.001 | 53592187H | 2.00 | 1.80 | |
| | | | | | | RPD = 3.26 | |
| 18 Trichloronate | | | | | | | |
| 1 | 13.904 | 13.902 | 0.002 | 44657039H | 2.00 | 1.87 | |
| 2 | 15.746 | 15.747 | -0.001 | 42039685H | 2.00 | 1.81 | |
| | | | | | | RPD = 3.13 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 14.635 | 14.635 | 0.000 | 48997691H | 2.00 | 1.88 | |
| 2 | 14.268 | 14.270 | -0.002 | 57389968H | 2.00 | 1.74 | |
| | | | | | | RPD = 7.75 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 14.982 | 14.981 | 0.001 | 35312484H | 2.00 | 1.77 | |
| 2 | 15.493 | 15.491 | 0.002 | 38200125H | 2.00 | 1.81 | |
| | | | | | | RPD = 2.49 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.054 | 16.055 | -0.001 | 33864713H | 2.00 | 1.79 | |
| 2 | 18.407 | 18.406 | 0.001 | 39467429H | 2.00 | 1.79 | |
| | | | | | | RPD = 0.33 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.212 | 16.211 | 0.001 | 43125228H | 2.00 | 1.76 | |
| 2 | 15.811 | 15.808 | 0.003 | 49998663H | 2.00 | 1.80 | |
| | | | | | | RPD = 2.29 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.225 | 17.224 | 0.001 | 32848626H | 2.00 | 1.81 | |
| 2 | 18.210 | 18.210 | 0.000 | 34755902H | 2.00 | 1.84 | |
| | | | | | | RPD = 1.26 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.303 | 18.304 | -0.001 | 38885736H | 2.00 | 1.85 | |
| 2 | 20.896 | 20.896 | 0.000 | 42538015H | 2.00 | 1.80 | |
| | | | | | | RPD = 2.45 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.193 | 21.195 | -0.002 | 45474113H | 2.00 | 1.82 | |
| 2 | 20.654 | 20.658 | -0.004 | 46409477H | 2.00 | 1.93 | |
| | | | | | | RPD = 5.36 | |
| 26 EPN | | | | | | | |
| 1 | 22.253 | 22.255 | -0.002 | 41149024H | 2.00 | 1.74 | |
| 2 | 22.963 | 22.963 | 0.000 | 45503531H | 2.00 | 1.72 | |
| | | | | | | RPD = 1.02 | |
| 27 Famphur | | | | | | | |
| 1 | 22.499 | 22.500 | -0.001 | 47362264H | 2.00 | 1.75 | |
| 2 | 21.585 | 21.586 | -0.001 | 47776129H | 2.00 | 1.81 | |
| | | | | | | RPD = 3.37 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 22.891 | 22.894 | -0.003 | 42951536H | 2.00 | 1.90 | |
| 2 | 24.145 | 24.147 | -0.002 | 48344852H | 2.00 | 1.91 | |
| | | | | | | RPD = 0.77 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.545 | 25.547 | -0.002 | 47062314H | 2.00 | 1.94 | |
| 2 | 25.390 | 25.392 | -0.002 | 50715959H | 2.00 | 1.82 | |
| | | | | | | RPD = 6.81 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 2.00 | 1.62 | |
| 2 | | | | | 2.00 | 1.72 | |
| | | | | | | RPD = 5.78 | |

## QC Flag Legend

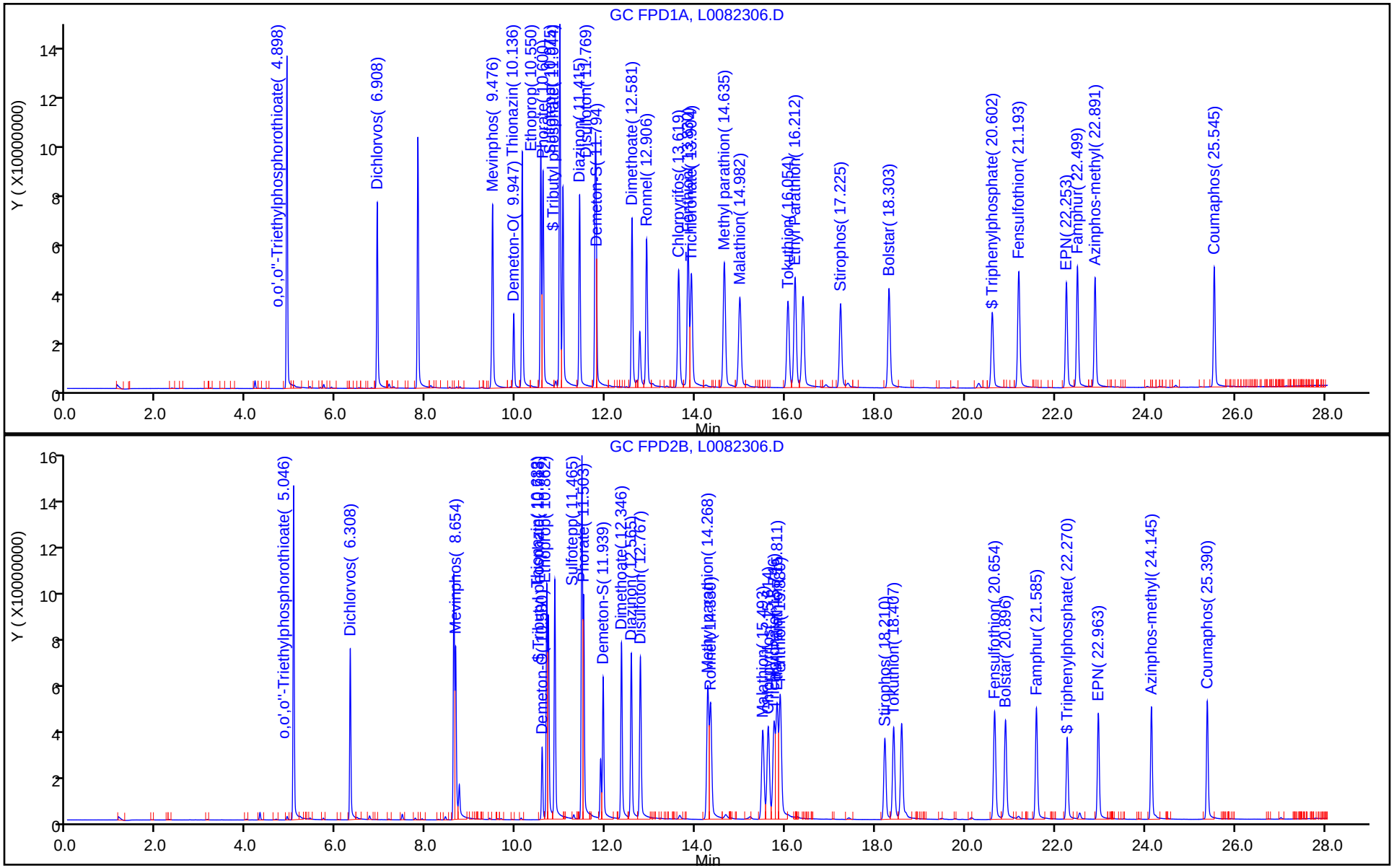
Review Flags

M - Manually Integrated

Report Date: 23-Aug-2018 10:54:27 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082306.D | | | | |
| Injection Date: | 23-Aug-2018 09:09:31 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | LCS 180-254675/2-A | | | Worklist Smp#: | 6 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-254675/2-A

Matrix: Solid | Lab File ID: L0082306.D

Analysis Method: EPA 8141B | Date Collected:

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 09:09

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP2 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 56-38-2 | Parathion | 300 | | 33 | 4.1 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 82 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 92 | | 34-150 |

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082306.D
Lims ID: LCS 180-254675/2-A
Client ID:
Sample Type: LCS
Inject. Date: 23-Aug-2018 09:09:31 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0023306-006
Operator ID: 402331 Instrument ID: CHGC5

Method: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\8141_CHGC5.m
Limit Group: GCS 8141B ICAL
Last Update: 23-Aug-2018 10:54:25 Calib Date: 21-Mar-2018 10:55:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC5\20180321-20992.b\L0321009.D

Column 1 : Det: GC FPD1A
Column 2 : Det: GC FPD2B
Process Host: XAWRK020

First Level Reviewer: oravecj Date: 23-Aug-2018 10:52:52

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| $ 1 Tributyl phosphate | | | | | | | |
| 1 | 11.044 | 11.043 | 0.001 | 78771726H | 2.00 | 1.73 | |
| 2 | 10.718 | 10.718 | 0.000 | 87732948H | 2.00 | 1.63 | |
| | | | | | | RPD = 5.73 | |
| $ 2 Triphenylphosphate | | | | | | | |
| 1 | 20.602 | 20.604 | -0.002 | 29554258H | 2.00 | 1.75 | |
| 2 | 22.270 | 22.270 | 0.000 | 35005291H | 2.00 | 1.84 | |
| | | | | | | RPD = 5.13 | |
| 3 o,o',o''-Triethylphosphorothioate | | | | | | | |
| 1 | 4.898 | 4.895 | 0.003 | 130393302H | 2.00 | 1.67 | |
| 2 | 5.046 | 5.044 | 0.002 | 143634877H | 2.00 | 1.61 | |
| | | | | | | RPD = 3.36 | |
| 4 Dichlorvos | | | | | | | |
| 1 | 6.908 | 6.906 | 0.002 | 72933462H | 2.00 | 1.09 | |
| 2 | 6.308 | 6.305 | 0.003 | 73510634H | 2.00 | 1.03 | |
| | | | | | | RPD = 5.64 | |
| 5 Mevinphos | | | | | | | |
| 1 | 9.476 | 9.474 | 0.002 | 72027966H | 2.00 | 1.44 | |
| 2 | 8.654 | 8.652 | 0.002 | 74358252H | 2.00 | 1.48 | |
| | | | | | | RPD = 3.07 | |
| 6 Demeton-O | | | | | | | |
| 1 | 9.947 | 9.947 | 0.000 | 28988176H | 0.6800 | 0.5858 | |
| 2 | 10.580 | 10.578 | 0.002 | 31043752H | 0.6800 | 0.5706 | |
| | | | | | | RPD = 2.64 | |
| 7 Thionazin | | | | | | | |
| 1 | 10.136 | 10.136 | 0.000 | 92637992H | 2.00 | 1.74 | |
| 2 | 10.683 | 10.683 | 0.000 | 101281014H | 2.00 | 1.65 | |
| | | | | | | RPD = 5.22 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 8 Ethoprop | | | | | | | |
| 1 | 10.550 | 10.550 | 0.000 | 95710603H | 2.00 | 1.66 | |
| 2 | 10.862 | 10.862 | 0.000 | 103057897H | 2.00 | 1.74 | |
| | | | | | | RPD = 4.85 | |
| 9 Phorate | | | | | | | |
| 1 | 10.600 | 10.599 | 0.001 | 84998941H | 2.00 | 1.58 | |
| 2 | 11.503 | 11.503 | 0.000 | 96641332H | 2.00 | 1.65 | |
| | | | | | | RPD = 4.48 | |
| 10 Sulfotepp | | | | | | | |
| 1 | 10.975 | 10.973 | 0.002 | 142516942H | 2.00 | 1.76 | |
| 2 | 11.465 | 11.464 | 0.001 | 156280547H | 2.00 | 1.72 | |
| | | | | | | RPD = 1.91 | |
| 11 Diazinon | | | | | | | |
| 1 | 11.415 | 11.413 | 0.002 | 75637904H | 2.00 | 1.78 | |
| 2 | 12.565 | 12.565 | 0.000 | 71319988H | 2.00 | 1.76 | |
| | | | | | | RPD = 1.17 | |
| 12 Disulfoton | | | | | | | M |
| 1 | 11.769 | 11.771 | -0.002 | 100225127H | 2.00 | 2.27 | |
| 2 | 12.767 | 12.767 | 0.000 | 69748846H | 2.00 | 1.72 | |
| | | | | | | RPD = 27.52 | |
| 13 Demeton-S | | | | | | | M |
| 1 | 11.794 | 11.798 | -0.004 | 50529906H | 1.32 | 1.04 | |
| 2 | 11.939 | 11.946 | -0.007 | 61091518H | 1.32 | 1.15 | |
| | | | | | | RPD = 10.23 | |
| 14 Dimethoate | | | | | | | |
| 1 | 12.581 | 12.583 | -0.002 | 66512080H | 2.00 | 1.70 | |
| 2 | 12.346 | 12.348 | -0.002 | 75919086H | 2.00 | 1.52 | |
| | | | | | | RPD = 10.90 | |
| 15 Ronnel | | | | | | | |
| 1 | 12.906 | 12.907 | -0.001 | 58174887H | 2.00 | 1.90 | |
| 2 | 14.330 | 14.328 | 0.002 | 50098432H | 2.00 | 1.78 | |
| | | | | | | RPD = 6.78 | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | 13.619 | 13.619 | 0.000 | 46056266H | 2.00 | 1.97 | |
| 2 | 15.614 | 15.610 | 0.004 | 39813079H | 2.00 | 1.81 | |
| | | | | | | RPD = 8.43 | |
| 17 Fenthion | | | | | | | |
| 1 | 13.830 | 13.829 | 0.001 | 55959910H | 2.00 | 1.86 | |
| 2 | 15.880 | 15.879 | 0.001 | 53592187H | 2.00 | 1.80 | |
| | | | | | | RPD = 3.26 | |
| 18 Trichloronate | | | | | | | |
| 1 | 13.904 | 13.902 | 0.002 | 44657039H | 2.00 | 1.87 | |
| 2 | 15.746 | 15.747 | -0.001 | 42039685H | 2.00 | 1.81 | |
| | | | | | | RPD = 3.13 | |
| 19 Methyl parathion | | | | | | | |
| 1 | 14.635 | 14.635 | 0.000 | 48997691H | 2.00 | 1.88 | |
| 2 | 14.268 | 14.270 | -0.002 | 57389968H | 2.00 | 1.74 | |
| | | | | | | RPD = 7.75 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---|---|---|---|---|---|---|---|
| 20 Malathion | | | | | | | |
| 1 | 14.982 | 14.981 | 0.001 | 35312484H | 2.00 | 1.77 | |
| 2 | 15.493 | 15.491 | 0.002 | 38200125H | 2.00 | 1.81 | |
| | | | | | | RPD = 2.49 | |
| 21 Tokuthion | | | | | | | |
| 1 | 16.054 | 16.055 | -0.001 | 33864713H | 2.00 | 1.79 | |
| 2 | 18.407 | 18.406 | 0.001 | 39467429H | 2.00 | 1.79 | |
| | | | | | | RPD = 0.33 | |
| 22 Ethyl Parathion | | | | | | | |
| 1 | 16.212 | 16.211 | 0.001 | 43125228H | 2.00 | 1.76 | |
| 2 | 15.811 | 15.808 | 0.003 | 49998663H | 2.00 | 1.80 | |
| | | | | | | RPD = 2.29 | |
| 23 Stirophos | | | | | | | |
| 1 | 17.225 | 17.224 | 0.001 | 32848626H | 2.00 | 1.81 | |
| 2 | 18.210 | 18.210 | 0.000 | 34755902H | 2.00 | 1.84 | |
| | | | | | | RPD = 1.26 | |
| 24 Bolstar | | | | | | | |
| 1 | 18.303 | 18.304 | -0.001 | 38885736H | 2.00 | 1.85 | |
| 2 | 20.896 | 20.896 | 0.000 | 42538015H | 2.00 | 1.80 | |
| | | | | | | RPD = 2.45 | |
| 25 Fensulfothion | | | | | | | |
| 1 | 21.193 | 21.195 | -0.002 | 45474113H | 2.00 | 1.82 | |
| 2 | 20.654 | 20.658 | -0.004 | 46409477H | 2.00 | 1.93 | |
| | | | | | | RPD = 5.36 | |
| 26 EPN | | | | | | | |
| 1 | 22.253 | 22.255 | -0.002 | 41149024H | 2.00 | 1.74 | |
| 2 | 22.963 | 22.963 | 0.000 | 45503531H | 2.00 | 1.72 | |
| | | | | | | RPD = 1.02 | |
| 27 Famphur | | | | | | | |
| 1 | 22.499 | 22.500 | -0.001 | 47362264H | 2.00 | 1.75 | |
| 2 | 21.585 | 21.586 | -0.001 | 47776129H | 2.00 | 1.81 | |
| | | | | | | RPD = 3.37 | |
| 28 Azinphos-methyl | | | | | | | |
| 1 | 22.891 | 22.894 | -0.003 | 42951536H | 2.00 | 1.90 | |
| 2 | 24.145 | 24.147 | -0.002 | 48344852H | 2.00 | 1.91 | |
| | | | | | | RPD = 0.77 | |
| 29 Coumaphos | | | | | | | |
| 1 | 25.545 | 25.547 | -0.002 | 47062314H | 2.00 | 1.94 | |
| 2 | 25.390 | 25.392 | -0.002 | 50715959H | 2.00 | 1.82 | |
| | | | | | | RPD = 6.81 | |
| S 30 Demeton, Total | | | | | | | |
| 1 | | | | | 2.00 | 1.62 | |
| 2 | | | | | 2.00 | 1.72 | |
| | | | | | | RPD = 5.78 | |

## QC Flag Legend

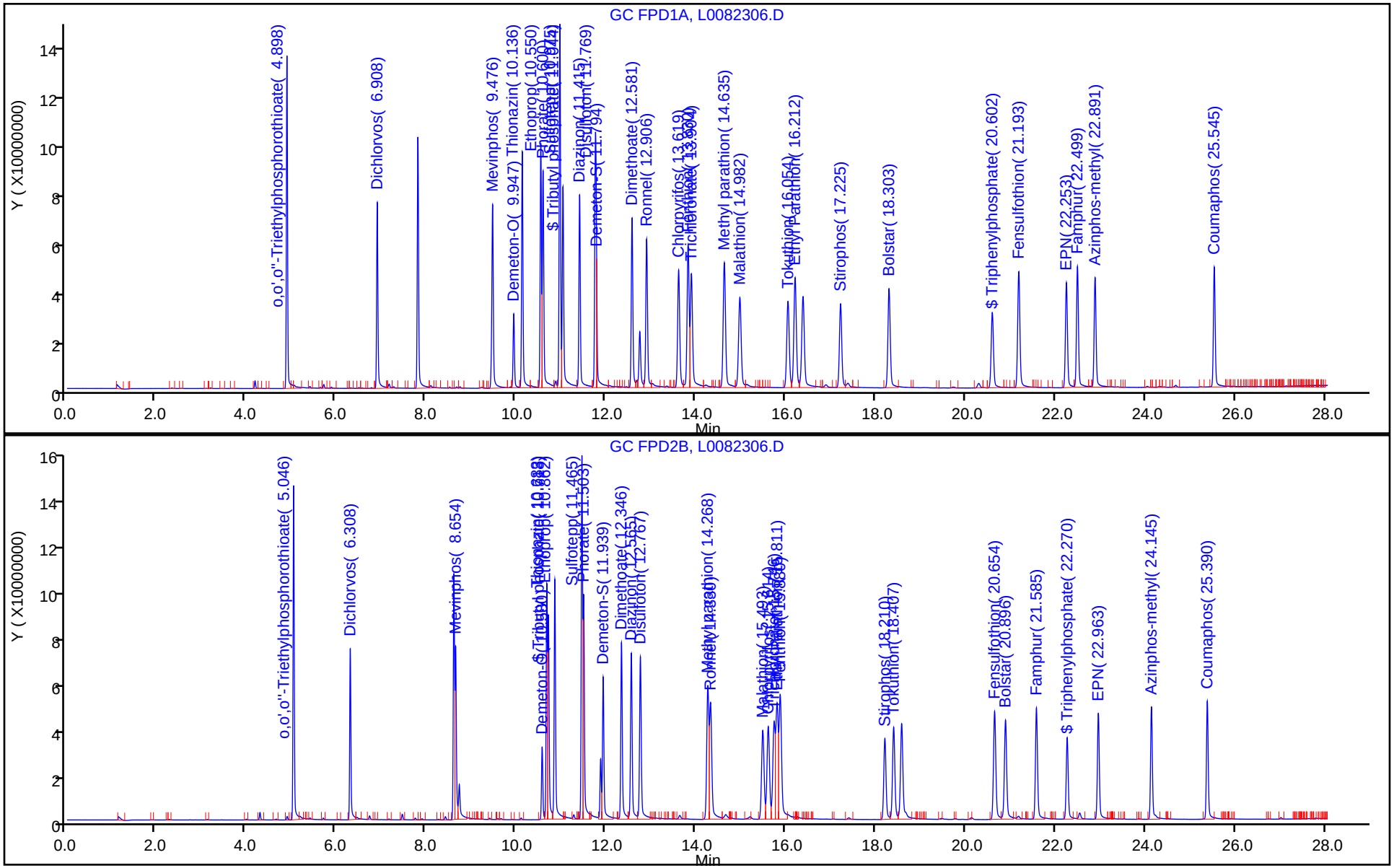
Review Flags

M - Manually Integrated

Report Date: 23-Aug-2018 10:54:28 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Pittsburgh

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\ChromNA\Pittsburgh\ChromData\CHGC5\20180823-23306.b\L0082306.D | | | | |
| Injection Date: | 23-Aug-2018 09:09:31 | Instrument ID: | CHGC5 | Operator ID: | 402331 |
| Lims ID: | LCS 180-254675/2-A | | | Worklist Smp#: | 6 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | 8141_CHGC5 | Limit Group: | GCS 8141B ICAL | | |



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: AD05999-001 MS | Lab Sample ID: 460-162840-1 MS

Matrix: Solid | Lab File ID: L0082304.D

Analysis Method: EPA 8141B | Date Collected: 08/15/2018 14:00

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 08:03

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP1 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 72 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 77 | | 34-150 |

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: AD05999-001 MS | Lab Sample ID: 460-162840-1 MS

Matrix: Solid | Lab File ID: L0082304.D

Analysis Method: EPA 8141B | Date Collected: 08/15/2018 14:00

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 08:03

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP2 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 56-38-2 | Parathion | 341 | | 41 | 5.2 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 69 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 85 | | 34-150 |

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: AD05999-001 MSD | Lab Sample ID: 460-162840-1 MSD

Matrix: Solid | Lab File ID: L0082305.D

Analysis Method: EPA 8141B | Date Collected: 08/15/2018 14:00

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 08:36

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP1 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 79 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 81 | | 34-150 |

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 460-162840-1

SDG No.:

Client Sample ID: AD05999-001 MSD | Lab Sample ID: 460-162840-1 MSD

Matrix: Solid | Lab File ID: L0082305.D

Analysis Method: EPA 8141B | Date Collected: 08/15/2018 14:00

Extraction Method: 3541 | Date Extracted: 08/22/2018 11:30

Sample wt/vol: 15.0(g) | Date Analyzed: 08/23/2018 08:36

Con. Extract Vol.: 2.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-OPP2 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 254752 | Units: ug/Kg

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 56-38-2 | Parathion | 374 | | 41 | 5.2 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 126-73-8 | Tributyl phosphate | 74 | | 20-150 |
| 115-86-6 | Triphenylphosphate | 87 | | 34-150 |

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Instrument ID: CHGC5 Start Date: 03/21/2018 08:43

Analysis Batch Number: 240093 End Date: 03/22/2018 00:23

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| IC 180-240093/1 | | 03/21/2018 08:43 | 1 | L0321005.D | RTX-OPP1 0.53(mm) |
| IC 180-240093/1 | | 03/21/2018 08:43 | 1 | L0321005.D | RTX-OPP2 0.53(mm) |
| IC 180-240093/2 | | 03/21/2018 09:16 | 1 | L0321006.D | RTX-OPP1 0.53(mm) |
| IC 180-240093/2 | | 03/21/2018 09:16 | 1 | L0321006.D | RTX-OPP2 0.53(mm) |
| ICRT 180-240093/3 | | 03/21/2018 09:49 | 1 | L0321007.D | RTX-OPP1 0.53(mm) |
| ICRT 180-240093/3 | | 03/21/2018 09:49 | 1 | L0321007.D | RTX-OPP2 0.53(mm) |
| IC 180-240093/4 | | 03/21/2018 10:22 | 1 | L0321008.D | RTX-OPP1 0.53(mm) |
| IC 180-240093/4 | | 03/21/2018 10:22 | 1 | L0321008.D | RTX-OPP2 0.53(mm) |
| IC 180-240093/5 | | 03/21/2018 10:55 | 1 | L0321009.D | RTX-OPP1 0.53(mm) |
| IC 180-240093/5 | | 03/21/2018 10:55 | 1 | L0321009.D | RTX-OPP2 0.53(mm) |
| ICV 180-240093/6 | | 03/21/2018 11:28 | 1 | | RTX-OPP1 0.53(mm) |
| ICV 180-240093/6 | | 03/21/2018 11:28 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 12:01 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 12:01 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 12:34 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 12:34 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 13:56 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 13:56 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 14:29 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 14:29 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 15:02 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 15:02 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 15:35 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 15:35 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 16:08 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 16:08 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 16:41 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 16:41 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 17:14 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 17:14 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 17:47 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 17:47 | 1 | | RTX-OPP2 0.53(mm) |
| CCV 180-240093/17 | | 03/21/2018 18:20 | 1 | | RTX-OPP1 0.53(mm) |
| CCV 180-240093/17 | | 03/21/2018 18:20 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 18:53 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 18:53 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 19:26 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 19:26 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 19:59 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 19:59 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 20:32 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 20:32 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 21:05 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 21:05 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 21:38 | 1 | | RTX-OPP1 0.53(mm) |

EPA 8141B

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Instrument ID: CHGC5 Start Date: 03/21/2018 08:43

Analysis Batch Number: 240093 End Date: 03/22/2018 00:23

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| ZZZZZ | | 03/21/2018 21:38 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 22:11 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 22:11 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 22:44 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 22:44 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 23:17 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 23:17 | 1 | | RTX-OPP2 0.53(mm) |
| ZZZZZ | | 03/21/2018 23:50 | 1 | | RTX-OPP1 0.53(mm) |
| ZZZZZ | | 03/21/2018 23:50 | 1 | | RTX-OPP2 0.53(mm) |
| CCV 180-240093/28 | | 03/22/2018 00:23 | 1 | | RTX-OPP1 0.53(mm) |
| CCV 180-240093/28 | | 03/22/2018 00:23 | 1 | | RTX-OPP2 0.53(mm) |

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Instrument ID: CHGC5 Start Date: 08/23/2018 06:24

Analysis Batch Number: 254752 End Date: 08/23/2018 09:42

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCVRT 180-254752/1 | | 08/23/2018 06:24 | 1 | L0082301.D | RTX-OPP1 0.53(mm) |
| CCVRT 180-254752/1 | | 08/23/2018 06:24 | 1 | L0082301.D | RTX-OPP2 0.53(mm) |
| MB 180-254675/1-A | | 08/23/2018 06:57 | 1 | L0082302.D | RTX-OPP1 0.53(mm) |
| MB 180-254675/1-A | | 08/23/2018 06:57 | 1 | L0082302.D | RTX-OPP2 0.53(mm) |
| 460-162840-1 | | 08/23/2018 07:30 | 1 | L0082303.D | RTX-OPP1 0.53(mm) |
| 460-162840-1 | | 08/23/2018 07:30 | 1 | L0082303.D | RTX-OPP2 0.53(mm) |
| 460-162840-1 MS | | 08/23/2018 08:03 | 1 | L0082304.D | RTX-OPP1 0.53(mm) |
| 460-162840-1 MS | | 08/23/2018 08:03 | 1 | L0082304.D | RTX-OPP2 0.53(mm) |
| 460-162840-1 MSD | | 08/23/2018 08:36 | 1 | L0082305.D | RTX-OPP1 0.53(mm) |
| 460-162840-1 MSD | | 08/23/2018 08:36 | 1 | L0082305.D | RTX-OPP2 0.53(mm) |
| LCS 180-254675/2-A | | 08/23/2018 09:09 | 1 | L0082306.D | RTX-OPP1 0.53(mm) |
| LCS 180-254675/2-A | | 08/23/2018 09:09 | 1 | L0082306.D | RTX-OPP2 0.53(mm) |
| CCV 180-254752/7 | | 08/23/2018 09:42 | 1 | L0082307.D | RTX-OPP1 0.53(mm) |
| CCV 180-254752/7 | | 08/23/2018 09:42 | 1 | L0082307.D | RTX-OPP2 0.53(mm) |

# GC SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh  Job No.: 460-162840-1

SDG No.:

Batch Number: 254675  Batch Start Date: 08/22/18 11:30  Batch Analyst: Clemente, Shawn A

Batch Method: 3541  Batch End Date: 08/22/18 15:12

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | OP8141MATRIXS 00042 | OP8141SURRSPK 00018 | | |
|---|---|---|---|---|---|---|---|---|---|
| MB 180-254675/1 | | 3541, EPA 8141B | | 15.0 g | 2.5 mL | | 0.1 mL | | |
| LCS 180-254675/2 | | 3541, EPA 8141B | | 15.0 g | 2.5 mL | 0.25 mL | 0.1 mL | | |
| 460-162840-A-1 MS | AD05999-001 | 3541, EPA 8141B | T | 15.0 g | 2.5 mL | 0.25 mL | 0.1 mL | | |
| 460-162840-A-1 MSD | AD05999-001 | 3541, EPA 8141B | T | 15.0 g | 2.5 mL | 0.25 mL | 0.1 mL | | |
| 460-162840-A-1 | AD05999-001 | 3541, EPA 8141B | T | 15.0 g | 2.5 mL | | 0.1 mL | | |

| Batch Notes | |
|---|---|
| Balance ID | T0358722 |
| Analyst ID - Concentration | SC |
| Corrected Temperature | 21 Degrees C |
| Exchange Solvent ID | Hexane 2855610 |
| Analyst ID - Extraction | SC |
| Extraction 1 End Time | 08/22/2018 15:12 |
| Extraction 1 Start Time | 08/22/2018 11:30 |
| Na2SO4 ID | 2843233 |
| Nominal Amount Used | Yes g |
| Pipette/Syringe/Dispenser ID | 2 |
| Prep Solvent ID | Hexane/acetone 2853829 |
| Soxtherm Unit ID | 4 |
| Analyst ID - Spike Analyst | SC |
| Sufficient Volume for Batch QC | Yes |
| Uncorrected Temperature | 21 Degrees C |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 460-162840-1

SDG No.:

Project: 8081617

| Client Sample ID | Lab Sample ID |
| --- | --- |
| AD05999-001 | 460-162840-1 |

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 460-162840-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: 2540G RL Date: 01/31/2010 13:27

| Analyte | Wavelength/ Mass | RL (%) | |
|---|---|---|---|
| Percent Moisture | | 0.1 | |
| Percent Solids | | 0.1 | |

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 460-162840-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: 2540G XRL Date: 01/31/2010 13:31

| Analyte | Wavelength/ Mass | XRL (%) | |
|---|---|---|---|
| Percent Moisture | | 0.1 | |
| Percent Solids | | 0.1 | |

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 460-162840-1

SDG No.:

Instrument ID: NOEQUIP Method: 2540G

Start Date: 08/23/2018 12:21 End Date: 08/23/2018 12:32

| Lab Sample ID | D / F | Type | Time | Analytes | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | % Sol | Moist | | | | | | | | | | | | | | | | | | |
| 460-162840-1 | 1 | T | 12:21 | X | X | | | | | | | | | | | | | | | | | | |
| 460-162840-1 DU | 1 | T | 12:21 | X | X | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:21 | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:21 | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:21 | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:21 | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:21 | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:21 | | | | | | | | | | | | | | | | | | | | |
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| ZZZZZZ | | | 12:21 | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:32 | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:32 | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | | | 12:32 | | | | | | | | | | | | | | | | | | | | |

Prep Types

T = Total/NA

# Subcontract Data

# Shipping and Receiving Documents

# CHAIN OF CUSTODY RECORD

162840

Hampton-Clarke, Inc.
175 US Hwy 46 West
Fairfield, New Jersey, 07004
Ph:800-426-9992 Fax:973-439-1458

**Report To:**
Hampton-Clarke, Inc.:
Attn:Reporting
175 Route 46 West
Fairfield, New Jersey 07004

**Invoice To:**
Hampton-Clarke, Inc.:
Attn:Accounting
175 Route 46 West
Fairfield, New Jersey 07004

**Project #:** 8081617

**CocID#:** 5953

**FINAL RESULTS TO: subresults@hcvlab.com**
**PRELIM/VERBAL RESULTS TO: subresults@hcvlab.com**

**EDD: NEW JERSEY HAZRESULT OR EQUIS EZEDD REQUIRED FOR ALL DATA SUBMITTALS!**

**Turn Around Time:** Standard **Preliminary Due Date:** 8/31/2018
**Report Type:** NYDOH-R (REDUCED) **Hard Copy Due Date:** 9/10/2018



| Sample Number: | Client ID | Matrix: | Date Collected: | Time Collected: | Analysis Requested |
|---|---|---|---|---|---|
| AD05999-001 | SS-1 | Soil | 8/15/2018 | 2:00:00 PM | EPA 8141 (Parathion only) |

460-162840 Chain of Custody

CK 8/16

| Relinquished By: | Accepted By: | Date: | Time: | Comments, Notes, Special Requirements, HAZARDS |
|---|---|---|---|---|
| | | 8/17/18 | 925 | |
| | | 8/17/18 | 935 | |

0.9 = 9

**Cooler Temp:**_____

**Subcontracted Lab Id and Contact:** TA-Edison, Sapna Nyyar, (732) 549-3900, LabID: House, 777 New Durham Road, , Edison, NJ, 08817

# TestAmerica Edison
## Receipt Temperature and pH Log

Job Number: 162840

Number of Coolers: 1 IR Gun # 9

### Cooler Temperatures

| | RAW | CORRECTED | | RAW | CORRECTED | | RAW | CORRECTED |
|---|---|---|---|---|---|---|---|---|
| Cooler #1: | 0.9 °C | 0.9 °C | Cooler #4: | °C | °C | Cooler #7: | °C | °C |
| Cooler #2: | °C | °C | Cooler #5: | °C | °C | Cooler #8: | °C | °C |
| Cooler #3: | °C | °C | Cooler #6: | °C | °C | Cooler #9: | °C | °C |

| TALS Sample Number | Ammonia (pH<2) | COD (pH<2) | Nitrate Nitrite (pH<2) | Metals* (pH<2) | Hardness (pH<2) | Pest (pH 5-9) | EPH or QAM (pH<2) | Phenols (pH<2) | Sulfide (pH>9) | TKN (pH<2) | TOC (pH<2) | Total Cyanide (pH>12) | Total Phos (pH<2) | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | |
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If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

*The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.*

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: KJ Date: 8/17/18

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

# Chain of Custody Record

460-162840 Chain of Custody

LEADER IN ENVIR...

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Meidhof, Marie A | | No: -52445.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: marie.meidhof@testamericainc.com | State of Origin: New Jersey | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - New Jersey | | Job #: 460-162840-1 |
| Address: 301 Alpha Drive, RIDC Park, | Due Date Requested: 8/20/2018 | | | |
| City: Pittsburgh | TAT Requested (days): | | | |
| State, Zip: PA, 15238 | | | | |
| Phone: 412-963-7058(Tel) 412-963-2468(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: NY Sites | Project #: 46025105 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8141B/3541_7d Parathion | Moisture/ Percent Moisture | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| AD05999-001 (460-162840-1) | 8/15/18 | 14:00 Eastern | | Solid | | | X | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: | | |
|---|---|---|---|---|---|
| Relinquished by: | Date/Time: 8/21/18 1800 | Company: TAL | Received by: | Date/Time: 8/22/18 915 | Company: TAL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

# Login Sample Receipt Checklist

Client: Hampton-Clarke Veritech

Job Number: 460-162840-1

**Login Number: 162840**
**List Number: 1**
**Creator: Jara, Kelly D**

**List Source: TestAmerica Edison**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: Hampton-Clarke Veritech

Job Number: 460-162840-1

**Login Number: 162840**
**List Number: 2**
**Creator: Say, Thomas C**

**List Source: TestAmerica Pittsburgh**
**List Creation: 08/22/18 10:43 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

**Pace Analytical Services, Inc.**
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

**Report Prepared for:**

Natasha Davis
Veritech
175 W. Route 46
Fairfield NJ 07004

# REPORT OF LABORATORY ANALYSIS FOR TCDD/TCDF

**Report Prepared Date:**
August 30, 2018

**Report Information:**

**Pace Project #: 10443876**
**Sample Receipt Date: 08/17/2018**
**Client Project #: 8081617**
**Client Sub PO #: N/A**
**State Cert #: MN002**

**Invoicing & Reporting Options:**

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Nathan Boberg, your Pace Project Manager.

**This report has been reviewed by:**

August 31, 2018
Nathan Boberg, Project Manager

(612) 607-6444 (fax)
nathan.boberg@pacelabs.com

## Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

**Pace Analytical Services, Inc.**
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

## DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of Veritech. The sample was analyzed for the presence or absence of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) and 2,3,7,8-tetrachlorodibenzofuran (2,3,7,8-TCDF) using USEPA Method 1613B. The reporting limits were set to correspond to the lowest calibration points and were adjusted for sample amount.

The recoveries of the isotopically-labeled TCDD/TCDF internal standards in the sample extract ranged from 63-66%. All of the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of 2,3,7,8-TCDD and 2,3,7,8-TCDF at the reporting limits.

Laboratory and matrix spike samples were also prepared using clean reference matrix or sample matrix that had been fortified with native standard materials. The recoveries of the native compounds ranged from 104-118% with relative percent differences of 1.7-2.0%. These results were within the target ranges for the method.



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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Minnesota Laboratory Certifications

| Authority | Certificate # | Authority | Certificate # |
|---|---|---|---|
| A2LA | 2926.01 | Minnesota - Pet | 1240 |
| Alabama | 40770 | Mississippi | MN00064 |
| Alaska - DW | MN00064 | Montana | CERT0092 |
| Alaska - UST | 17-009 | Nebraska | NE-OS-18-06 |
| Arizona | AZ0014 | Nevada | MN00064 |
| Arkansas - DW | MN00064 | New Hampshire | 2081 |
| Arkansas - WW | 88-0680 | New Jersey (NE | MN002 |
| CNMI Saipan | MP0003 | New York | 11647 |
| California | 2929 | North Carolina | 27700 |
| Colorado | MN00064 | North Carolina - | 27700 |
| Connecticut | PH-0256 | North Carolina - | 530 |
| EPA Region 8+ | via MN 027-053 | North Dakota | R-036 |
| Florida (NELAP | E87605 | Ohio - DW | 41244 |
| Georgia | 959 | Ohio - VAP | CL101 |
| Guam | 17-001r | Oklahoma | 9507 |
| Hawaii | MN00064 | Oregon - Primar | MN300001 |
| Idaho | MN00064 | Oregon - Secon | MN200001 |
| Illinois | 200011 | Pennsylvania | 68-00563 |
| Indiana | C-MN-01 | Puerto Rico | MN00064 |
| Iowa | 368 | South Carolina | 74003 |
| Kansas | E-10167 | South Dakota | NA |
| Kentucky - DW | 90062 | Tennessee | TN02818 |
| Kentucky - WW | 90062 | Texas | T104704192 |
| Louisiana - DE | 03086 | Utah (NELAP) | MN00064 |
| Louisiana - DW | MN00064 | Virginia | 460163 |
| Maine | MN00064 | Washington | C486 |
| Maryland | 322 | West Virginia - | 382 |
| Massachusetts | M-MN064 | West Virginia - | 9952C |
| Michigan | 9909 | Wisconsin | 999407970 |
| Minnesota | 027-053-137 | Wyoming - UST | 2926.01 |
| Minnesota - De | via MN 027-053 | | |

## REPORT OF LABORATORY ANALYSIS

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# Appendix A

Sample Management

# CHAIN OF CUSTODY RECORD

Hampton-Clarke, Inc.
175 US Hwy 46 West
Fairfield, New Jersey, 07004
Ph:800-426-9992 Fax:973-439-1458

Report No....10443876_1613TETRA_DFR

**Report To:**
Hampton-Clarke, Inc.:
Attn:Reporting
175 Route 46 West
Fairfield, New Jersey 07004

**Invoice To:**
Hampton-Clarke, Inc.:
Attn:Accounting
175 Route 46 West
Fairfield, New Jersey 07004

**Project #:** 8081617

**CocID#:** 5952

**WO# : 10443876**
10443876

**FINAL RESULTS TO: subresults@hcvlab.com**
**PRELIM/VERBAL RESULTS TO: subresults@hcvlab.com**

**EDD: NEW JERSEY HAZRESULT OR EQUIS EZEDD REQUIRED FOR ALL DATA SUBMITTALS!**

**Turn Around Time:** Standard **Preliminary Due Date:** 8/31/2018
**Report Type:** NYDOH-R (REDUCED) **Hard Copy Due Date:** 9/10/2018

| Sample Number: | Client ID | Matrix: | Date Collected: | Time Collected: | Analysis Requested |
|---|---|---|---|---|---|
| AD05999-001 | SS-1 | Soil | 8/15/2018 | 2:00:00 PM | EPA 1613 (2,3,7,8-TCDD & PCDF only) |

001

CR 8/16

| Relinquished By: | Accepted By: | Date: | Time: | Comments, Notes, Special Requirements, HAZARDS |
|---|---|---|---|---|
| [signature] CRS | CRS | 8/16/18 | 1700 | T=2.5 |
| | Austin PACE | 8/17/18 | 825 | |
| | | | | |
| | | | | |

Cooler Temp:_____

HC Lab Use Only: **Subcontracted Lab Id and Contact:** Scott Unze, (612) 608-6383, LabID: H, 1700 Elm Street, Suite 200, Minneapolis, MN, 55414

| Pace Analytical | Document Name: Sample Condition Upon Receipt Form | Document Revised: 02May2018 Page 1 of 2 |
|---|---|---|
| | Document No.: F-MN-L-213-rev.23 | Issuing Authority: Pace Minnesota Quality Office |

**Sample Condition Upon Receipt**

**Client Name:** Hampton-Clarke

**Project #:** WO#: 10443876

PM: NB3 Due Date: 08/31/18

CLIENT: H.C.Veritech

**Courier:** ☐Fed Ex ☒UPS ☐USPS ☐Client ☐Commercial ☐Pace ☐SpeeDee ☐Other:

**Tracking Number:** 1Z 1X7842 1397 8494 647

**Custody Seal on Cooler/Box Present?** ☐Yes ☒No **Seals Intact?** ☐Yes ☒No

**Optional:** Proj. Due Date: Proj. Name:

**Packing Material:** ☐Bubble Wrap ☐Bubble Bags ☐None ☒Other: Foam **Temp Blank?** ☐Yes ☒No

**Thermometer Used:** ☒G87A9170600254 ☐G87A9155100842 **Type of Ice:** ☒Wet ☐Blue ☐None ☐Dry ☐Melted

**Cooler Temp Read (°C):** 2.4 **Cooler Temp Corrected (°C):** 2.5

Temp should be above freezing to 6°C **Correction Factor:** +0.1 **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

**Date and Initials of Person Examining Contents:** AS 8/17/18

**USDA Regulated Soil** ( ☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐Yes ☒No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☒No

**If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.**

| | | | | COMMENTS: |
|---|---|---|---|---|
| Chain of Custody Present? | ☒Yes | ☐No | | 1. |
| Chain of Custody Filled Out? | ☒Yes | ☐No | | 2. |
| Chain of Custody Relinquished? | ☒Yes | ☐No | | 3. |
| Sampler Name and/or Signature on COC? | ☐Yes | ☒No | ☐N/A | 4. |
| Samples Arrived within Hold Time? | ☒Yes | ☐No | | 5. |
| **Short Hold Time Analysis (<72 hr)?** | ☐Yes | ☒No | | 6. |
| **Rush Turn Around Time Requested?** | ☐Yes | ☒No | | 7. |
| Sufficient Volume? | ☒Yes | ☐No | | 8. |
| Correct Containers Used? | ☒Yes | ☐No | | 9. |
| -Pace Containers Used? | ☐Yes | ☒No | | |
| Containers Intact? | ☒Yes | ☐No | | 10. |
| Filtered Volume Received for Dissolved Tests? | ☐Yes | ☐No | ☒N/A | 11. Note if sediment is visible in the dissolved container |
| Is sufficient information available to reconcile the samples to the COC? Matrix: SL | ☒Yes | ☐No | | 12. No time on Sample |
| All containers needing acid/base preservation have been checked? | ☐Yes | ☐No | ☒N/A | 13. ☐$HNO_3$ ☐$H_2SO_4$ ☐NaOH Positive for Res. Chlorine? Y N |
| All containers needing preservation are found to be in compliance with EPA recommendation? ($HNO_3$, $H_2SO_4$, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide) | ☐Yes | ☐No | ☒N/A | Sample # |
| Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS | ☐Yes | ☐No | ☒N/A | Initial when completed: Lot # of added preservative: |
| Headspace in VOA Vials ( >6mm)? | ☐Yes | ☐No | ☒N/A | 14. |
| Trip Blank Present? | ☐Yes | ☐No | ☒N/A | 15. |
| Trip Blank Custody Seals Present? | ☐Yes | ☐No | ☒N/A | |
| Pace Trip Blank Lot # (if purchased): | | | | |

**CLIENT NOTIFICATION/RESOLUTION** **Field Data Required?** ☐Yes ☐No

Person Contacted: Date/Time:

Comments/Resolution:

Client indicated needing TCDD+TCDF only

**Project Manager Review:** Nathan Boberg **Date:** 8/20/18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

**REPORT OF LABORATORY ANALYSIS**



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# Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Method 1613B Sample Analysis Results

Client - Veritech

| | | | |
|---|---|---|---|
| Client's Sample ID | AD05999-001 | | |
| Lab Sample ID | 10443876001 | | |
| Filename | F180825A_15 | | |
| Injected By | BAL | | |
| Total Amount Extracted | 11.4 g | Matrix | Soil |
| % Moisture | 4.2 | Dilution | NA |
| Dry Weight Extracted | 10.9 g | Collected | 08/15/2018 14:00 |
| ICAL ID | F180823 | Received | 08/17/2018 08:25 |
| CCal Filename(s) | F180825A_02 | Extracted | 08/21/2018 14:30 |
| Method Blank ID | BLANK-64231 | Analyzed | 08/25/2018 21:14 |

| **Native Isomers** | **Conc** ng/Kg | **EMPC** ng/Kg | **RL** ng/Kg | **Internal Standards** | **ng's Added** | **Percent Recovery** |
|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | ND | ----- | 0.92 | 2,3,7,8-TCDF-13C | 2.00 | 63 |
| 2,3,7,8-TCDD | ND | ----- | 0.92 | 2,3,7,8-TCDD-13C | 2.00 | 66 |
| | | | | Recovery Standard<br>1,2,3,4-TCDD-13C | 2.00 | NA |
| | | | | Cleanup Standard<br>2,3,7,8-TCDD-37Cl4 | 0.20 | 66 |

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
R = Recovery outside target range
E = Exceeds calibration range

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

## Method 1613B Blank Analysis Results

| | | | |
|---|---|---|---|
| Lab Sample Name | DFBLKBB | | |
| Lab Sample ID | BLANK-64231 | Matrix | Solid |
| Filename | U180824A_12 | Dilution | NA |
| Total Amount Extracted | 20.4 g | Extracted | 08/21/2018 14:30 |
| ICAL ID | U180818 | Analyzed | 08/24/2018 18:21 |
| CCal Filename(s) | U180823B_12 | Injected By | BAL |

| **Native Isomers** | **Conc** ng/Kg | **EMPC** ng/Kg | **RL** ng/Kg | **Internal Standards** | **ng's Added** | **Percent Recovery** |
|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | ND | ----- | 0.49 | 2,3,7,8-TCDF-13C | 2.00 | 77 |
| 2,3,7,8-TCDD | ND | ----- | 0.49 | 2,3,7,8-TCDD-13C | 2.00 | 69 |
| | | | | Recovery Standard 1,2,3,4-TCDD-13C | 2.00 | NA |
| | | | | Cleanup Standard 2,3,7,8-TCDD-37Cl4 | 0.20 | 76 |

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

## Method 1613B Laboratory Control Spike Results

| | | | |
|---|---|---|---|
| Lab Sample ID | LCS-64232 | | |
| Filename | U180824A_07 | Matrix | Solid |
| Total Amount Extracted | 20.5 g | Dilution | NA |
| ICAL ID | U180818 | Extracted | 08/21/2018 14:30 |
| CCal Filename | U180823B_12 | Analyzed | 08/24/2018 14:19 |
| Method Blank ID | BLANK-64231 | Injected By | BAL |

| Compound | Cs | Cr | Lower Limit | Upper Limit | % Rec. |
|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 10 | 12 | 8.0 | 14.7 | 118 |
| 2,3,7,8-TCDD | 10 | 12 | 7.3 | 14.6 | 115 |
| 2,3,7,8-TCDD-37Cl4 | 10 | 8.4 | 3.7 | 15.8 | 84 |
| 2,3,7,8-TCDF-13C | 100 | 84 | 26.0 | 126.0 | 84 |
| 2,3,7,8-TCDD-13C | 100 | 75 | 25.0 | 141.0 | 75 |

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Method 1613B Spiked Sample Report

Client - Veritech

| | | | |
|---|---|---|---|
| Client's Sample ID | AD05999-001-MS | | |
| Lab Sample ID | 10443876001-MS | | |
| Filename | F180825A_16 | Matrix | Soil |
| Total Amount Extracted | 11.4 g | Dilution | NA |
| ICAL ID | F180823 | Extracted | 08/21/2018 14:30 |
| CCal Filename(s) | F180825A_02 | Analyzed | 08/25/2018 21:59 |
| Method Blank ID | BLANK-64231 | Injected By | BAL |

| **Native Isomers** | **Qs** (ng) | **Qm** (ng) | % Rec. | **Internal Standards** | **ng's Added** | **Percent Recovery** |
|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 0.20 | 0.22 | 109 | 2,3,7,8-TCDF-13C | 2.00 | 81 |
| 2,3,7,8-TCDD | 0.20 | 0.21 | 105 | 2,3,7,8-TCDD-13C | 2.00 | 87 |
| | | | | 1,2,3,4-TCDD-13C | 2.00 | NA |
| | | | | 2,3,7,8-TCDD-37Cl4 | 0.20 | 94 |

Qs = Quantity Spiked  Qm = Quantity Measured  Rec. = Recovery (Expressed as Percent)

Results reported on a total weight basis and are valid to no more than 2 significant figures.

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Method 1613B Spiked Sample Report

Client - Veritech

| | | | |
|---|---|---|---|
| Client's Sample ID | AD05999-001-MSD | | |
| Lab Sample ID | 10443876001-MSD | | |
| Filename | F180825A_17 | Matrix | Soil |
| Total Amount Extracted | 11.4 g | Dilution | NA |
| ICAL ID | F180823 | Extracted | 08/21/2018 14:30 |
| CCal Filename(s) | F180825A_02 | Analyzed | 08/25/2018 22:44 |
| Method Blank ID | BLANK-64231 | Injected By | BAL |

| **Native Isomers** | **Qs** (ng) | **Qm** (ng) | % Rec. | **Internal Standards** | **ng's Added** | **Percent Recovery** |
|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 0.20 | 0.21 | 107 | 2,3,7,8-TCDF-13C | 2.00 | 78 |
| 2,3,7,8-TCDD | 0.20 | 0.21 | 104 | 2,3,7,8-TCDD-13C | 2.00 | 84 |
| | | | | 1,2,3,4-TCDD-13C | 2.00 | NA |
| | | | | 2,3,7,8-TCDD-37Cl4 | 0.20 | 87 |

Qs = Quantity Spiked  Qm = Quantity Measured  Rec. = Recovery (Expressed as Percent)

Results reported on a total weight basis and are valid to no more than 2 significant figures.

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Method 1613 Spike Sample Results

Client - Veritech

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID | AD05999-001 | | | Dry Weights | |
| Lab Sample ID | 10443876001 | Sample Filename | F180825A_15 | Sample Amount | 10.9 g |
| MS ID | 10443876001-MS | MS Filename | F180825A_16 | MS Amount | 10.9 g |
| MSD ID | 10443876001-MSD | MSD Filename | F180825A_17 | MSD Amount | 10.9 g |

| Analyte | Sample Conc. ng/Kg | MS/MSD Qs (ng) | MS Qm (ng) | MSD Qm (ng) | RPD | Background Subtracted MS % Rec. | Background Subtracted MSD % Rec. | Background Subtracted RPD |
|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 0.000 | 0.20 | 0.22 | 0.21 | 2.0 | 109 | 107 | 2.0 |
| 2,3,7,8-TCDD | 0.000 | 0.20 | 0.21 | 0.21 | 1.7 | 105 | 104 | 1.7 |

**Definitions**

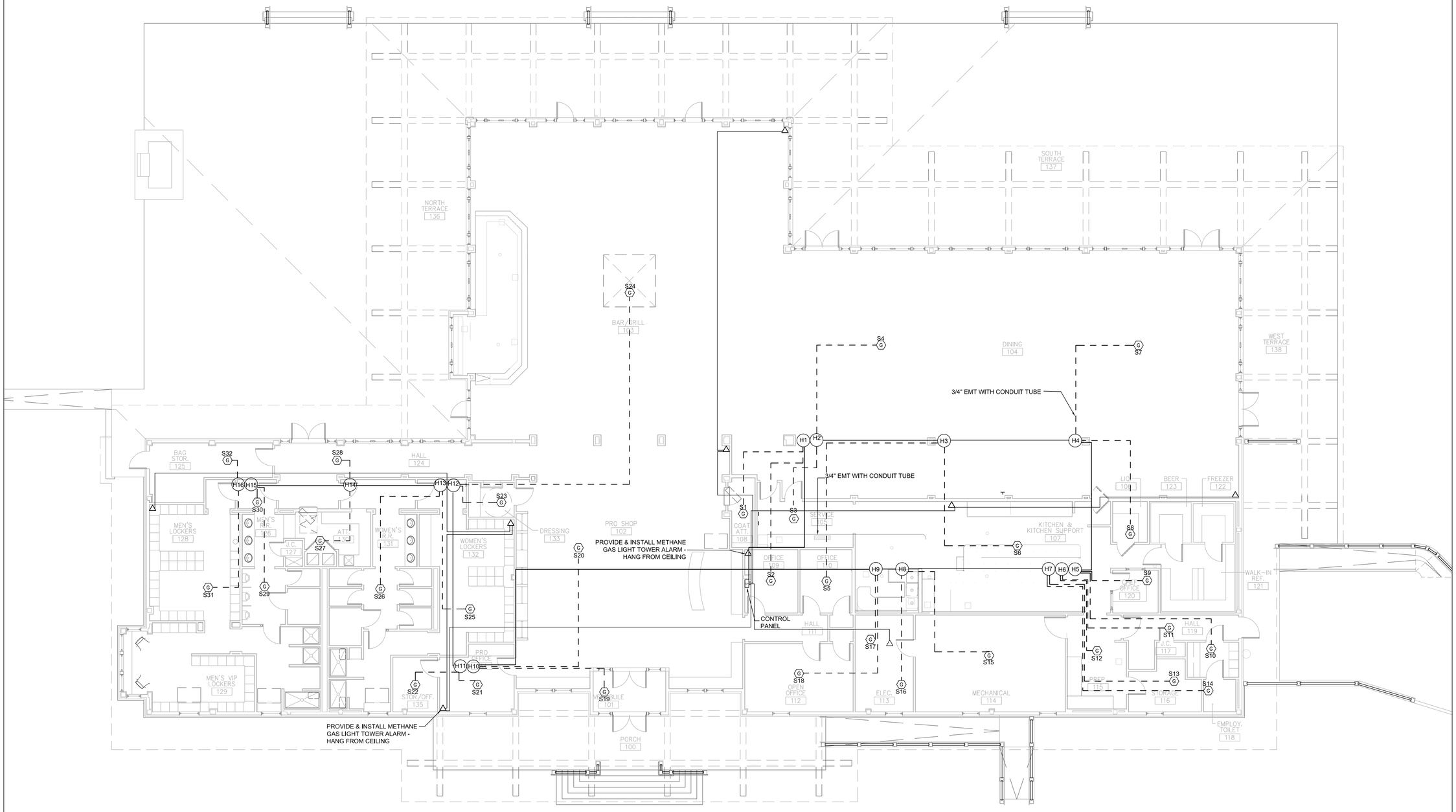
MS = Matrix Spike
MSD = Matrix Spike Duplicate
Qm = Quantity Measured
Qs = Quantity Spiked
% Rec. = Percent Recovery
RPD = Relative Percent Difference
NA = Not Applicable
NC = Not Calculated

CDD = Chlorinated dibenzo-p-dioxin
CDF = Chlorinated dibenzo-p-furan
T = Tetra
Pe = Penta
Hx = Hexa
Hp = Hepta
O = Octa

## APPENDIX O

**Drawings titled:**

- **"Methane Monitoring System Ceiling Plan (As Built)" prepared by EAI dated February 11, 2019**
- **"Vapor Remediation Floor Plan (As Built Monitoring Pt Layout as of 8/1/18") prepared by French & Parrello with annotations by EAI dated August 1, 2018**




NOTES:

1) NO CHANGES TO THE METHANE GAS LIGHT TOWER ALARM.
2) ALL SENSOR HEADS (IE H#) SHIFTED IN FIELD EXCEPT H11.
3) ONLY SENSORS (IE S#) SHIFTED > 1FT FROM SD201 DATED 9/21/17: S16, S19, S28.

## LEGEND

- GAS SENSOR
- CP — METHANE GAS SENSOR CONTROL PANEL
- METHANE GAS LIGHT TOWER ALARM
- 3/4" EMT WITH CONDUIT TUBE BETWEEN HEADS AND PANEL
- 3/4" EMT WITH CONDUIT TUBE BETWEEN HEADS AND SENSORS
- METHANE SENSOR
- POWER SUPPLY/ TRANSMITTER WITH POWER

0 4' 8' 16'

AS-BUILT

Environmental Management Services
50 Prescott Street
Jersey City, NJ 07304
Phone: 201-395-0010
Fax: 201-395-0020

| No. | Date | Revision |
|---|---|---|
| 01 | 2/11/2019 | AS-BUILT |

| | | |
|---|---|---|
| Designer: | | |
| Drawn by: | JM | |
| Checked by: | ZT | |
| Scale: 1/8" = 1' | | Date: 2/11/2019 |

Project: FERRY POINT CLUBHOUSE

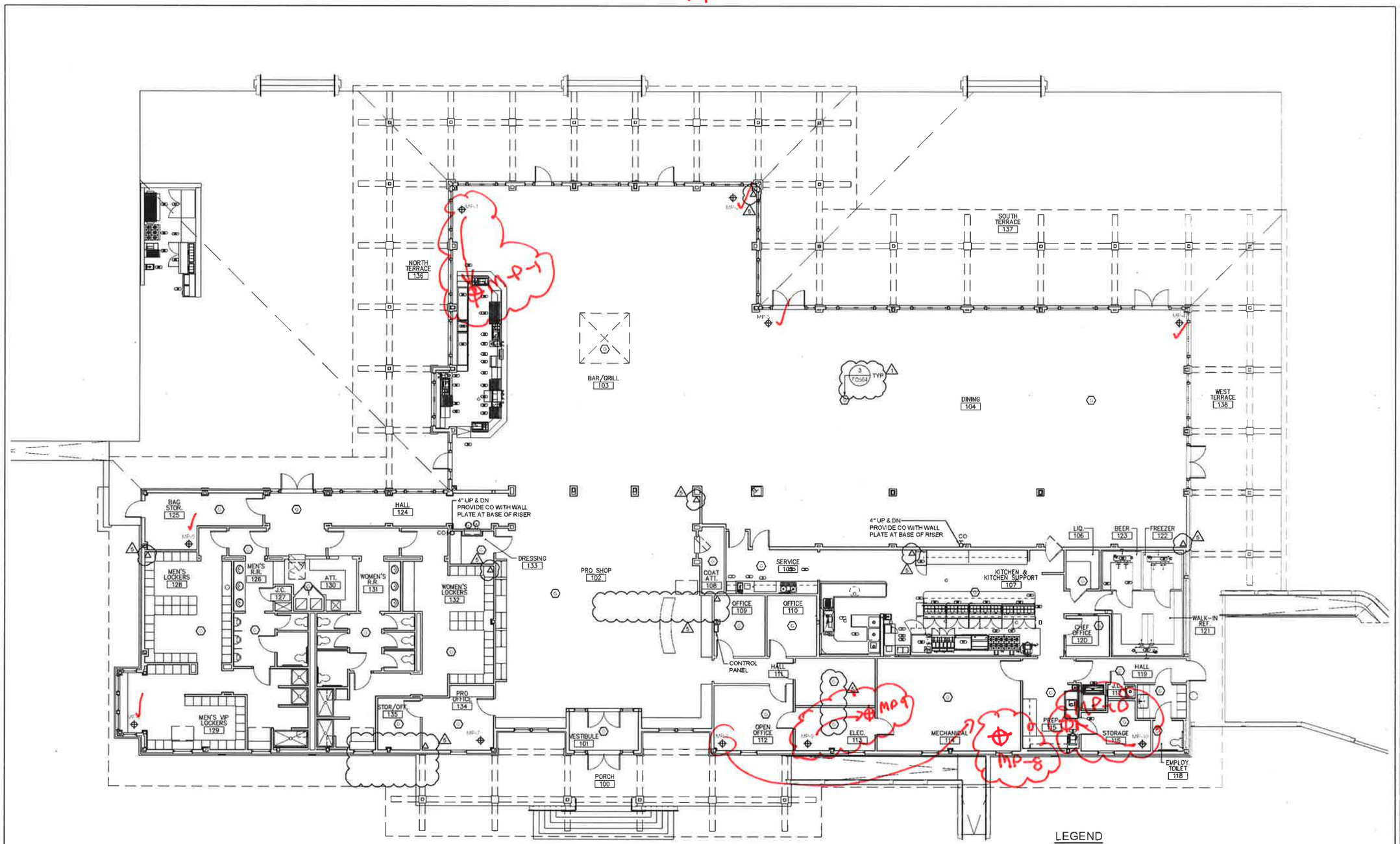
Address: 300 HUTCHINSON RIVER PARKWAY BRONX, NEW YORK 10465

Drawing Title: METHANE MONITORING SYSTEM CEILING PLAN

Drawing No.: SD201

Sheets in Drawing Set: 01 of 01

AS BUILT MONITORING PT LAYOUT AS OF 8/1/18




FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

## LEGEND

| | |
|---|---|
| SFV-1 | SUCTION FAN VERTICAL 4" RISER AND IDENTIFICATION NUMBER EXTEND THRU ATTIC TO SUCTION FAN |
| MP-1 | SUB-SLAB MONITORING POINT AND IDENTIFICATION NUMBER |
| | GAS SENSOR |
| | METHANE GAS SENSOR CONTROL PANEL |
| | METHANE GAS LIGHT TOWER ALARM - HANG FROM CEILING |

FOR CONSTRUCTION

NEW YORK ALTERATION WARNING

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW ARTICLE 145 AND NEW YORK STATE EDUCATION LAW ARTICLE 147 SECTION 7209.2 FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM IN ANY WAY. IF THE ARCHITECT AFFIXING TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY A SIGNATURE

FPA FRENCH & PARRELLO ASSOCIATES

Corporate Office
1991 Route 34, Suite 101
Wall, NJ 07719
732.974.9001

Regional Offices
Mount Arlington, NJ
Toms River, NJ

HART HOWERTON
PLANNERS ARCHITECTS
LANDSCAPE ARCHITECTS

HART HOWERTON, PLANNING, ARCHITECTURE AND LANDSCAPE ARCHITECTURE PC
10 East 40th Street New York, NY 10016
Tel: 212 695 5656 Fax: 212 691 3766
Email: NY@hartHowerton.com

TRUMP
THE TRUMP ORGANIZATION

TRUMP GOLF LINKS
FERRY POINT PARK
Bronx, New York

These plans, Architects, Landscape Architects P.C. The designs and concepts thereon are the sole property of Hart Howerton and may not be used without the prior written consent of Hart Howerton.

SCALE
NOTE: IF THE DRAWING IS NOT 24"x36", IT HAS BEEN REVISED FROM ITS ORIGINAL SIZE. SCALE NO LONGER APPLICABLE

| DATE | ISSUE |
|---|---|
| 04-16-15 | 100% DD |
| 06-02-15 | 30% CD |
| 07-01-15 | 70% CD |
| 07-27-15 | 90% CD |
| 06-15-17 | FOR CONSTRUCTION |

REVISIONS

| NO | DATE | ISSUE |
|---|---|---|
| | 02-17-17 | REMOVE B/MT |
| | 03-30-17 | DEC REVIEW |
| 3 | 04-07-17 | RE-SEE/ REMOVE B/MT |
| 4 | 05-05-17 | DEC COMMENTS |
| 5 | 06-06-17 | DEC COMMENTS |

DRAWING TITLE
VAPOR REMEDIATION FLOOR PLAN

PROJECT # 14-532
DRAWN BY
CHECKED BY FRM
DRAWING NO
EQ-501.00

# APPENDIX P

## CETCO/Minerals Technologies Letter to EAI Inc. re: "Liquid Boot Spraying Temp" dated November 9, 2017

## EAI Inc. letter to Maser Consulting P.A. re: "Vapor Remediation System Installation, Ferry Point Clubhouse, Ferry Point Park, Bronx, NY" dated October 18, 2019

**Zarah Thanasides <zaraht@eaienviro.com>**

# Liquid Boot Spraying Temp

1 message

**Matt Geary** <matt.geary@mineralstech.com> Thu, Nov 9, 2017 at 9:31 AM
To: Zarah Thanasides <zaraht@eaienviro.com>

Hi Zarah,

As per our recent conversation, regular Liquid Boot specifications call for ambient temperature to be 45 F during spraying, however down to 35 F may be acceptable and that decision is left to experienced applicators and inspectors based on field observations. When proper curing is observed spraying can continue. Below 35F and down to 25F Liquid Boot Low Temperature formulation must be used or the area being sprayed has to be heated.

Thanks,

**Matt Geary**

**Technical Sales Manager, Environmental Products**

***CETCO / A Minerals Technologies Company***

Direct: 518-430-8790

matt.geary@mineralstech.com | www.cetco.com

OUR STANDARDS. YOUR PEACE OF MIND.

EAI INC
ENVIRONMENTAL MANAGEMENT SERVICES
SPECIALTY CONTRACTING

**50 Prescott Street**
**Jersey City, NJ 07304**
**Office: (201) 395-0010**
**Fax: (201) 395-0020**
**www.eaienviro.com**

October 18, 2019

David J. Keil, PG
Maser Consulting P.A.
50 Chestnut Ridge Road, Suite 101
Montvale, NJ 07645
Cell: (201) 937-3515
Tel: (845) 352-0411 x3905
Email: dkeil@maserconsulting.com

**Re: Vapor Remediation System Installation**
**Ferry Point Clubhouse**
**Ferry Point Park**
**Bronx, NY**

Dear Mr. Keil,

This letter serves to inform you that the Vapor Remediation System at the above referenced site has been completely installed. Installation was performed in accordance with manufacturer specifications, contract documents and approved submittals.

System components included Fluid-Applied Gas Vapor Barrier, Sub-Slab Depressurization System, Sub-Slab Depressurization System Accessories and Methane Gas Detection and Alarm.

If you have any questions, please contact me at (201) 395-0010 x229. Thank you.

Sincerely,

Robert Carvalho, PG
President/CEO

# APPENDIX Q

## Drawings titled "Ferry Point Clubhouse, 500 Hutchinson Parkway, Bronx, NY" showing new gas line prepared by Victor Famulari Architect P.C. dated July 25, 2018




CONTOUR & INTERIM SURFACE BOUDARY LEGEND:

- FINAL CONTOUR (SEPTEMBER 2014)
- FINAL SPOT ELEVATION (SEPTEMBER 2014)
- FINAL CONTOUR (UNDER WATER)
- INTERIM BOUNDARY SURFACE LIMITS (SHOWN ON SHEET 1 ONLY)
- PROPERTY LINE

GOLF COURSE LEGEND:

NOTE: ALL AREAS NOT DESIGNATED TRAINING GREEN, TEE, IRRIGATED ROUGH, WETLANDS SEEDED OR PAVED" ARE DEEMED "NATIVE AREAS", TOTAL NATIVE AREA 105.3 Ac.)

552'/184 Yds.

17

- HOLE NUMBER AND YARDAGE
- TREES
- DENSE VEGETATION
- TREE LINE / BRUSH
- TEES
- GREENS
- GEOTEC CORE LIMITS
- LIMITS OF FAIRWAYS (TOTAL 4.5 Ac)
- LIMITS OF IRRIGATED ROUGH (TOTAL 27.3 Ac.)
- LIMITS OF WETLAND SEEDING (TOTAL 56,654 SF)
- BUNKERS
- STONE RIP-RAP
- WATER
- ASPHALT CART PATH
- ASPHALT CART PATH W/ ASPHALT CURB
- DIRT TRAIL
- FENCE
- RETAINING WALL
- TIMBER GUIDERAIL
- CONCRETE SIDEWALK, CONCRETE CURB & DROP CURB

GAS, ELECTRIC LEGEND:

- WCA LIGHT (IN CLUB PARKING LOT)
- BOLLARD LIGHT (AT DRIVING RANGE)
- ELECTRIC TRANSFORMER
- ELECTRIC PULL-BOX
- ELECTRIC M-11 MANHOLE
- TELEPHONE PULL-BOX
- GAS VALVE
- G GAS MAIN
- T TELEPHONE CONDUIT
- E ELECTRIC POWER CONDUIT

DRAINAGE LEGEND:

- DRAIN MANHOLE (12"-18" SOLID COVER)
- DRAIN BASIN (12"-18" GRATE)
- POND FILL STRUCTURE (48"x 48" GRATE)
- IN-LINE DRAIN (12"x 12" GRATE)
- WING WALL
- PRECAST MANHOLE (24" SOLID CASTING)
- DEP BOX CULVERT ACCESS #4 (24" W/DEEP SOLID CASTING)
- OUTLET STRUCTURE (42"x 42" GRATE)
- DRAIN INLETS AND CATCH BASINS (30"x 48" GRATE)
- PE HIGH DENSITY POLIETHYLENE DRAIN PIPE AND FLOW DIRECTION
- PVC HDPE FORCE MAIN
- DIP DUCTILE IRON PIPE
- PERFORATED PVC 4" DRAIN LINE

WATER SERVICE LEGEND:

- HYDRANT
- WATER VALVE
- 12" (PW) 12" POTTABLE WATER MAIN
- 8" (PW) 8" POTTABLE WATER MAIN
- 6" (PW) 6" POTTABLE WATER MAIN

IRRIGATION LEGEND:

- DRAIN VALVE
- AIR RELEASE VALVE
- SATELITE
- ISO VALVE
- COMO CABLE SPLC
- PRESSURE REDUCING VALVE
- POWER CABLE SPLICE BOX
- 10" IRRIGATION WATER MAIN
- 10" IRRIGATION WATER MAIN
- 8" IRRIGATION WATER MAIN
- 6" IRRIGATION WATER MAIN
- 4" IRRIGATION WATER MAIN

MONITORING LEGEND:

- LANDFILL GAS (LFG) COLLECTION PIPE CONSTRUCTED IN ACCORDANCE TO DWG. #2.13
- EXISTING LFG PASSIVE VENT WELL
- GAS VENT APPURTANANCE BOX
- PZ-16 PIEZOMETER
- SETTLEMENT PLATE
- GROUND WATER MONITORING WELL
- MW-19 Repl NEW LFG PASSIVE VENT WELL
- VENT TRENCH CONSTRUCTED IN ACCORDANCE WITH DWG. #2.3-#2.8

CONSTRUCTION DEVIATIONS REFERENCE TO THE LIST OF SUPPLEMENTAL CONTRACT DRAWINGS FOR CONSTRUCTION OF A TOURMANENT QUALITY GOLF COURSE PREPARED BY SANFORD GOLF DESIGN

Construction Deviations
April 10, 2015
Revised July 13, 2015 Notes

# FERRY POINT GOLF COURSE

CONSTRUCTED FOR:

CITY OF NEW YORK PARKS & RECREATION

PROJECT TITLE:

THE CONSTRUCTION OF A TOURNAMENT QUALITY GOLF COURSE BOUNDED BY THE EAST RIVER, BALCOLM AVENUE, MILES AVENUE AND THE WHITESTONE BRIDGE APPROACH, IN FERRY POINT PARK, BOROUGH OF THE BRONX

CONTRACT: X126-109M

Sheet 1 of 12

REVISIONS

| No | Date | Description |
|---|---|---|
| | | |

ISSUED

CLIENT

THE TRUMP ORGANIZATION

FERRY POINT CLUBHOUSE
500 HUTCHINSON PARKWAY
BRONX, NY


ARCHITECT

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SHEET TITLE

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| Chkd BY: V.F. | PAGE No. |

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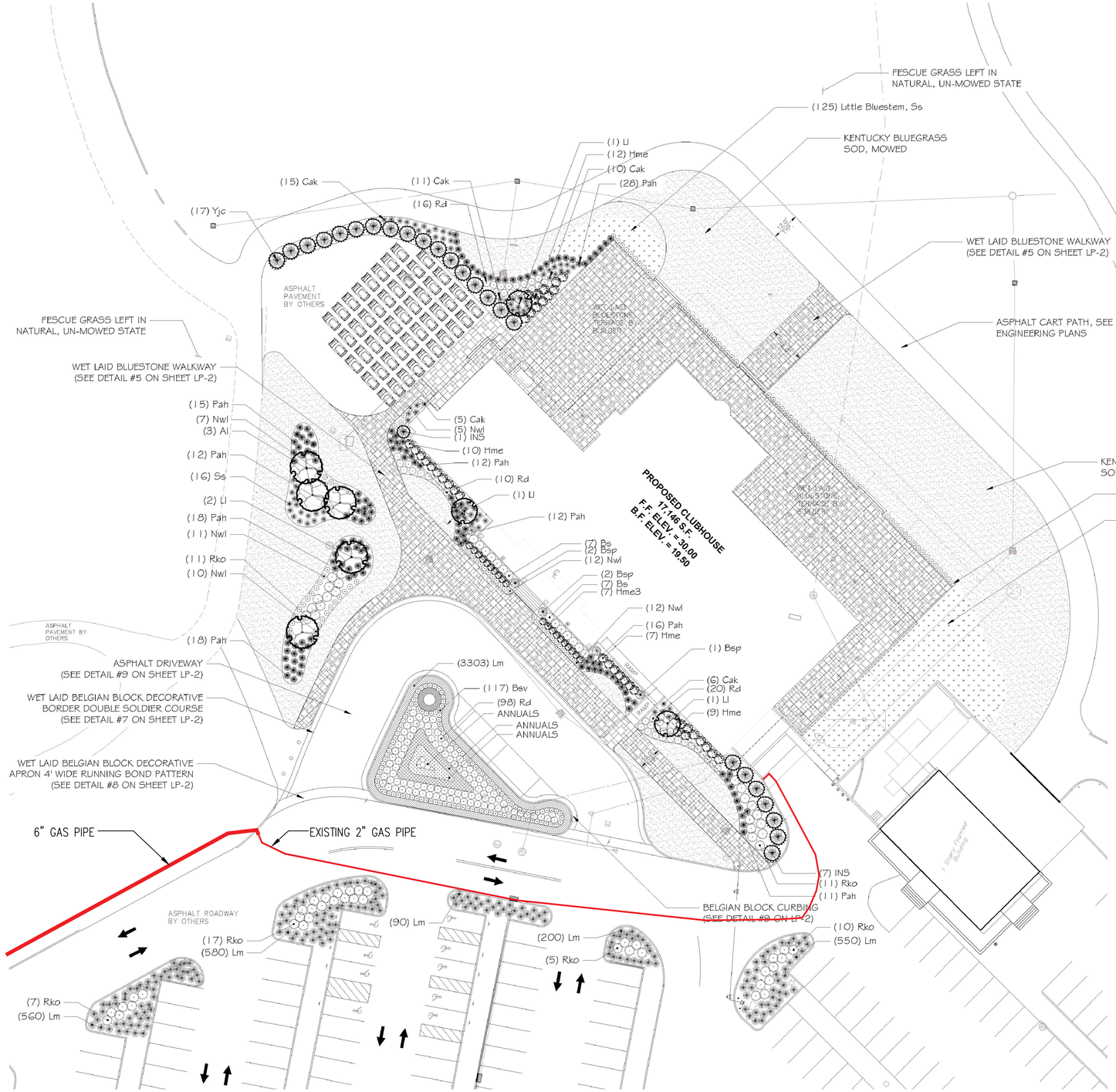
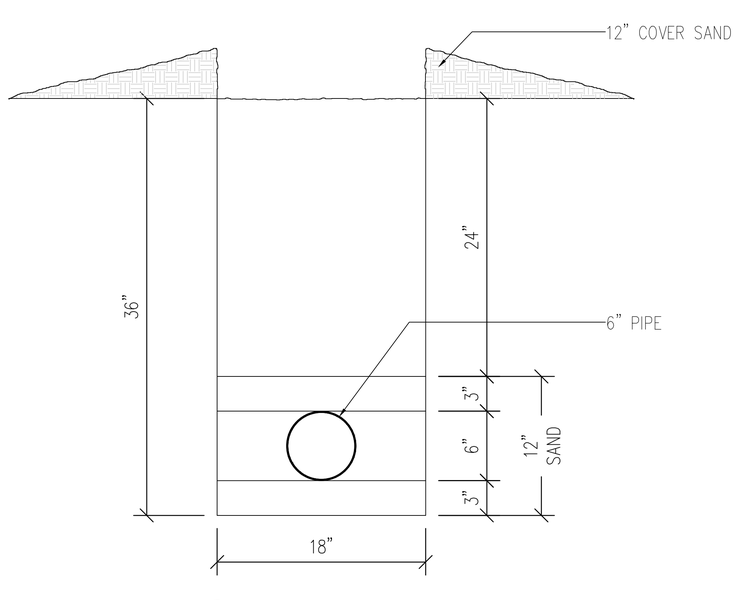



## PLANT LIST

| SYM | QTY | BOTANICAL NAME | COMMON NAME | SIZE | TYPE | SPACING |
|---|---|---|---|---|---|---|
| ORNAMENTAL TREES | | | | | | |
| Ll | 5 | Lagerstromia indica | Crapemyrtle | 8-10' ht | B&B | As shown |
| AL | 3 | Amelanchier laevis | Serviceberry | 8-10' ht | B&B | 10' o.c. |
| EVERGREEN TREES | | | | | | |
| YJC | 17 | Cryptomeria japonica 'Yoshino' | Yoshino Japanese Cedar | 10-12' ht | B&B | 7-8' oc |
| IN | 9 | Ilex x 'Nellie Stevens' | Nellie Stevens Holly | 6-7' ht | B&B | 7-8' oc |
| SHRUBS | | | | | | |
| Bs | 14 | Buxus sempervirens | American Boxwood | 30-42" | B&B | As shown |
| Bsp | 5 | Buxus sempervirens 'Green Pillar' | Green Pillar Boxwood | 5' | B&B | As shown |
| Bsv | 177 | Buxus sempervirens 'suffruticosa' | Dwarf English Boxwood | 3 Gal. | Cont | 2-3' OC |
| Hme | 30 | Hydrangea macro. 'Endless Summer' | Endless Summer Hydrangea | 5 gal | Cont | 4' oc |
| Hme3 | 17 | Hydrangea macro. 'Endless Summer' | Endless Summer Hydrangea | 3 gal | Cont | 4' oc |
| Pm | 6 | Prunus maritima | Beach Plum | 24-30" ht | Cont | 5' oc |
| Rd | 144 | Rosa 'Drift' (peach, coral) | Drift® Roses | 2 gal | Cont | 3-4' oc |
| Rko | 22 | Rosa 'Knockout' | Knockout Rose | 5 gal | Cont | 4' oc |
| ORNAMENTAL GRASS | | | | | | |
| Cak | 36 | Calamagrostis acutif. 'Karl Foerster' | Karl Foerster Reed Grass | 3 gal | Cont | 2-3' oc |
| Lm | 1880 | Leymus mollis | American Dune Grass | 1 gal | Cont | 18-24" oc |
| Pah | 142 | Pennisetum alop. 'Hameln' | Hameln Fountain Grass | 2 gal | Cont | 3' oc |
| Ss | 881 | Schizachyrium scoparium | Little Bluestem | 1 gal | Cont | 18-24" oc |
| PERENNIALS | | | | | | |
| Lr | 3303 | Liriope muscari 'Big Blue' | Lily Turf Grass | Plugs | Plugs | 6" oc |
| Nwl | 57 | Nepeta 'Walkers Low' | Walker's Low Catmint | 1 gal | Cont | 2' oc |




1 NEW 6" GAS SERVICE TRENCHING DETAIL
SCALE: NTS

REVISIONS

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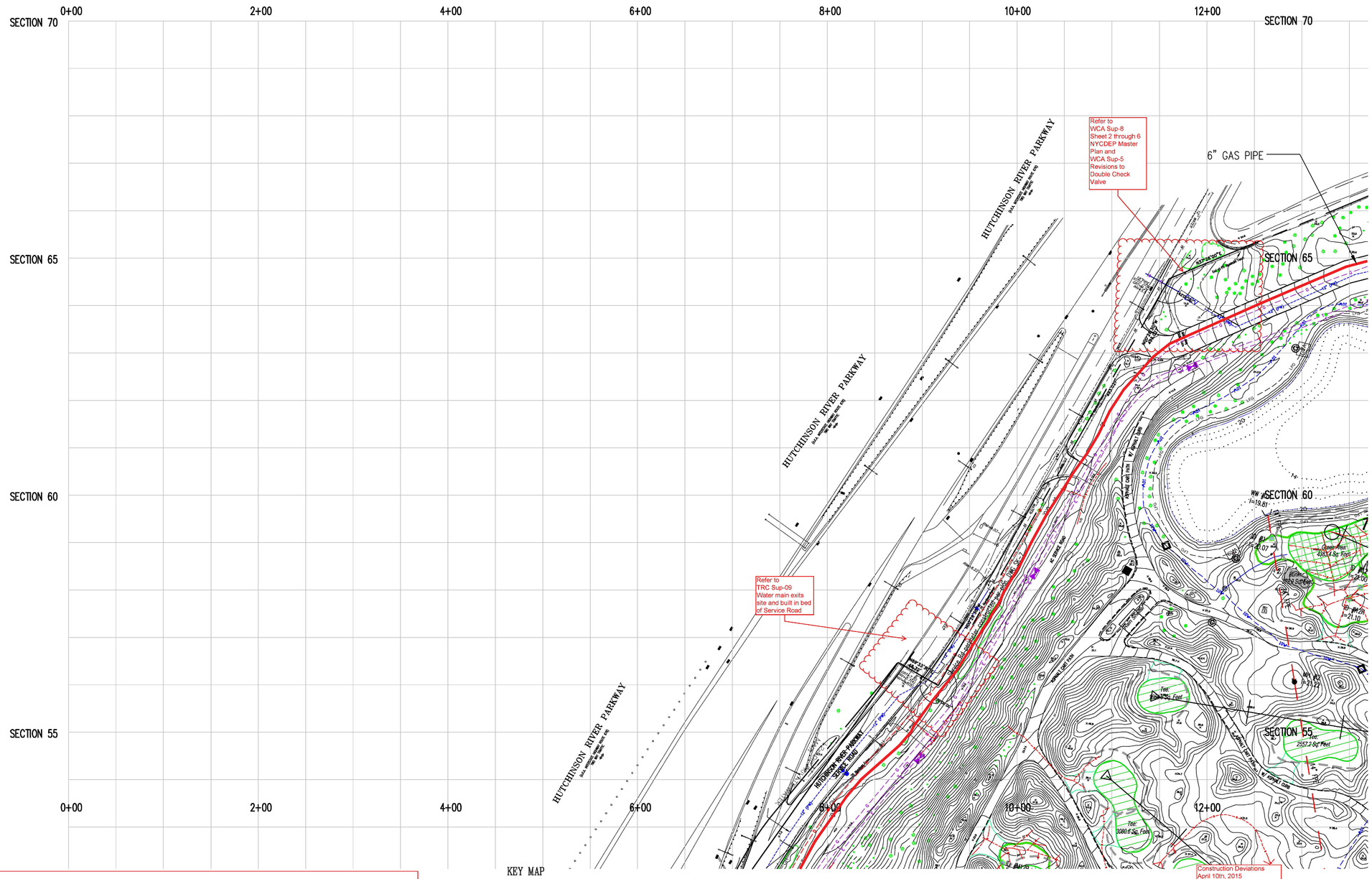


KEY MAP

| | | |
|---|---|---|
| 2 | 3 | 4 |
| 5 | 6 | 7 |
| 8 | 9 | 10 |
| 11 | 12 | |

GRAPHIC SCALE

( IN FEET )
1 inch = 40 ft.

# FERRY POINT GOLF COURSE

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Sheet 2 of 12

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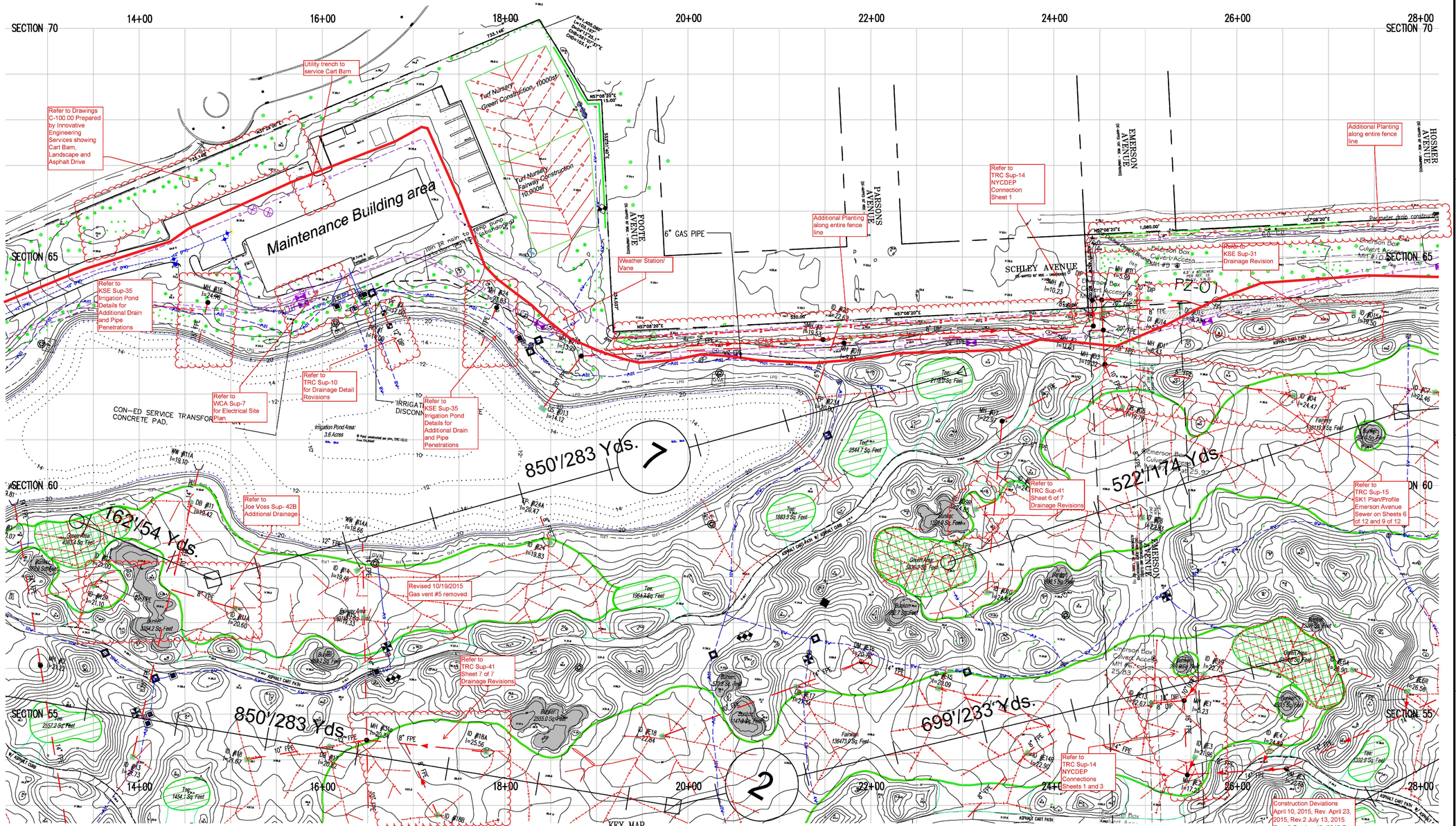


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28+00 30+00 32+00 34+00 36+00 38+00 40+00

SECTION 70 SECTION 70

SECTION 65 SECTION 65

SECTION 60 SECTION 60

SECTION 55 SECTION 55

HOSMER AVENUE (50' WIDTH) (portion of 66' WIDTH)

ROBINSON AVENUE (50' WIDTH) (portion of 66' WIDTH)

DAVIS AVENUE (50' WIDTH) (portion of 66' WIDTH)

BUTTRICK AVENUE (50' WIDTH) (portion of 66' WIDTH)

GRAFF AVENUE (50' WIDTH) (portion of 66' WIDTH)

SCHLEY AVENUE (80' WIDTH)

BALCOM AVENUE (50' WIDTH)

Additional Planting Along Fence Line

Refer To KSE Sup-29 For Drainage Revisions

Refer to KSE Sup-32 for Drainage Revisions - Added Drain C-11A

Refer to TRC Sup-14 DEP Connection Sheet 1

Refer to KSE Sup-33 for Drainage Revisions - Add Drain C-10A

Refer to TRC Sup-41 Sheet 3 of 7 Drainage Revisions

Refer to TRC Sup-41 Sheet 3 of 7 Drainage Revisions

Refer to TRC Sup-41 Sheet 4 of 7 For Drainage Revisions

Refer to TRC Sup-41 Sheet 4 of 7 For Purported Drainage Revisions

Refer to KSE Sup-27 For Drainage Revisions

Refer to SGD Sup-44 For Grading around Tees

Additional Planting Along Fence Line

Construction Deviations April 10, 2015, Revised April 23, 2015, Revised July 13, 2015 Notes

6" GAS PIPE

CON ED GATE

PZ-01 PZ-02 PZ-03 PZ-04 PZ-05 PZ-06 PZ-07

MW-1 MW-1A MW-2 (APPROX.) MW-3 (APPROX.) MW-4A

850'/283 Yds

729'/243

519'/173

KEY MAP

| | | |
|---|---|---|
| 2 | 3 | 4 |
| 5 | 6 | 7 |
| 8 | 9 | 10 |
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BRONX COORD. SYSTEM

GRAPHIC SCALE

40 0 20 40 80 160

( IN FEET )
1 inch = 40 ft.

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Sheet 4 of 12

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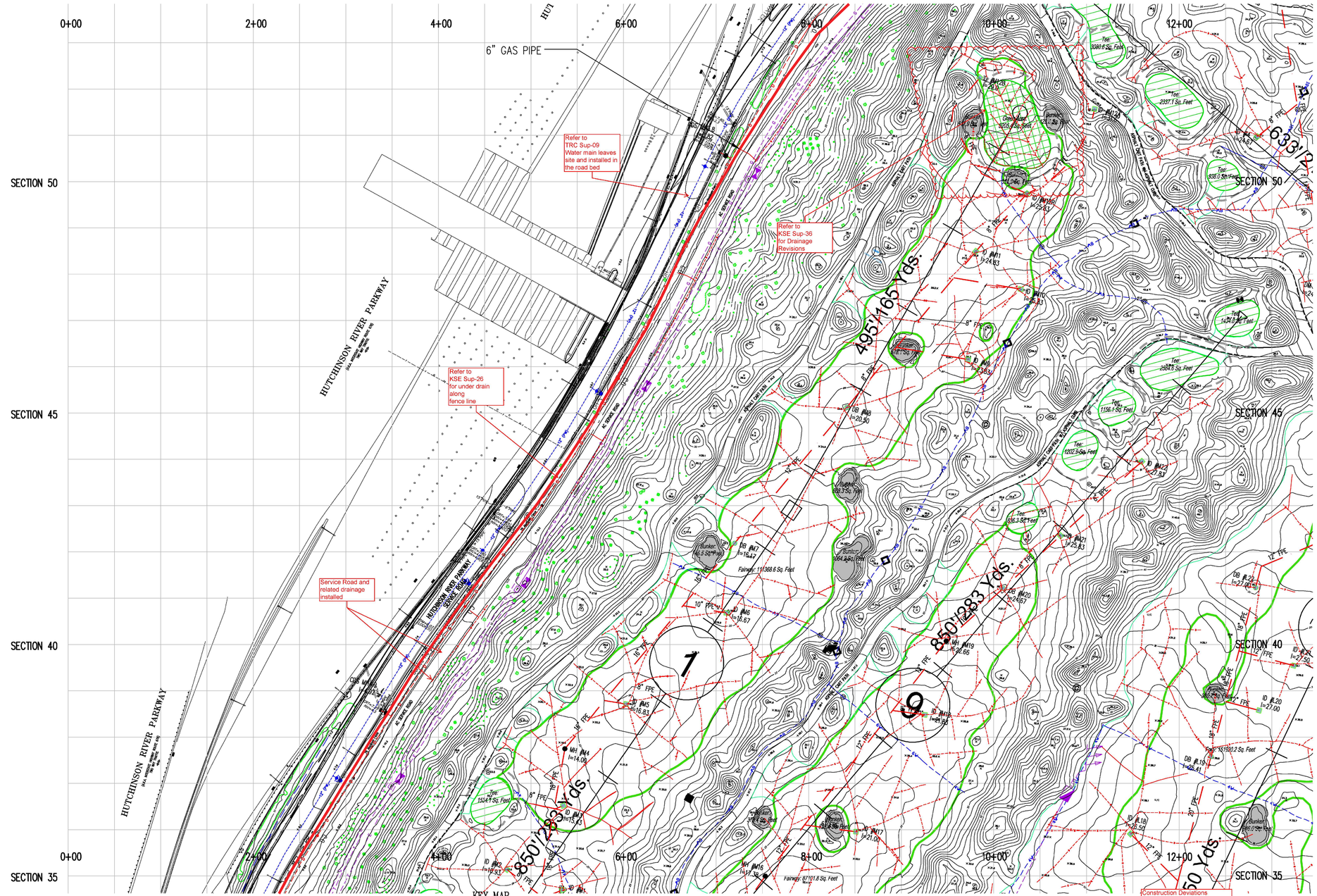


KEY MAP

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BRIDGE COORD. SYSTEM

GRAPHIC SCALE

40 0 20 40 80 160

( IN FEET )
1 inch = 40 ft.

Construction Deviations April 10, 2015, Revised July 13, 2015 Notes

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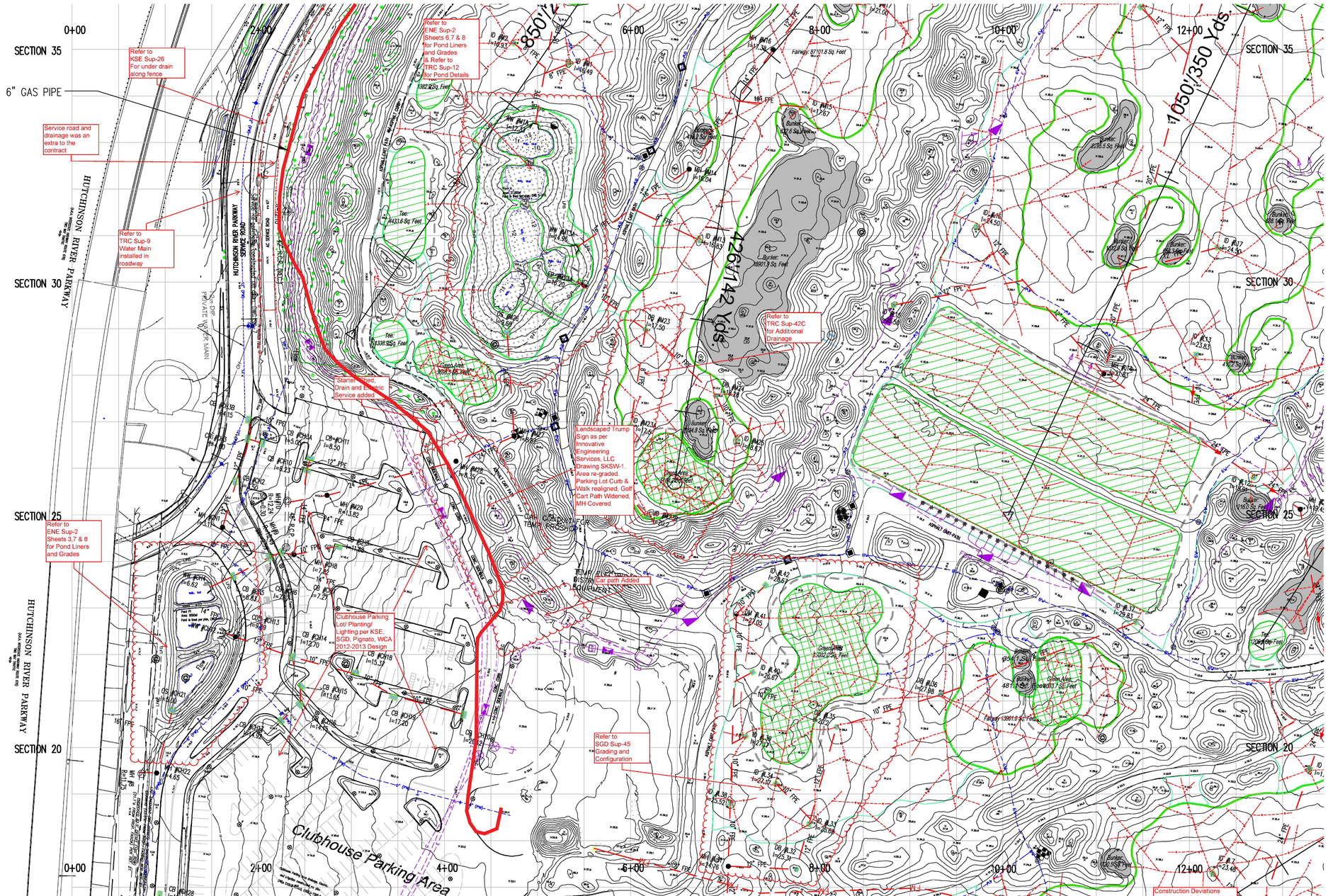


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BSCAN:

# APPENDIX R

## DORs for Installation of New 6-Inch Gas Line to Clubhouse

MASER CONSULTING P.A.

Engineers
Planners
Surveyors
Landscape Architects
Environmental Scientists

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F: 732.383.1984
www.maserconsulting.com

# DAILY FIELD OBSERVATION REPORT

**M T W TH F SA SU** **Weather:** Weather **Wind:** 0-5 mph **Humidity**
**Date:** 8-24-2018 **Time:** 7:30 (High Med Low)
**Temp:** 90+

**Name of Project:** Trump Links Golf Course - Ferry Point **Municipality:** Bronx, NY **Job No:** 17002426C

**Site Contractors:** Bellisimo Masonry & Construction (Anthony)

**Active Site Work Areas:** Proposed Gas Main installation & excavation

**Site Work Progress:** Arrived on-site at 7:30am

8:00am - Was informed by that excavation cannot commence until umbrella insurance issue is resolved.

9:00 am laying down plywood and began digging up the telecom line.

10:30am - met with Joe Rodinger. He explained that the demarcation barrier is a caution that says the msw is approximately 1-4 feet below that.

Standard SOP (according to Joe) is that we can dig to depth, replace demarcation barrier with a new one and then sand, pipe, etc.

Demarcation barrier varies from 10"-24". Barrier closest to road has no shaping material on top.

13:15 - Called and spoke to Anthony of Bellisimo, was told I was not needed anymore today.

**Remarks:** N/A

**Site Photographs:** Yes **Additional Action Required by Project Mgr. or Eng.: (YES NO)**

**Observed By:** Vince Carbone **Reviewed By:**
**Date:**

MASER CONSULTING P.A.

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Landscape Architects
Environmental Scientists

400 Valley Rd, Suite 10304
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F: 973.398.3199

# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: sunny** **Wind: breezy** **Humidity**

**Date: August 28, 2018** **Time: 0900 - 1500** High Med Low

**Temp: 95** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation along the northern side of the golf course just south of Schley Drive.**

**Site Work Progress: Over 500 linear feet of gas line trench was dug today. Cover material and shaping material was segregated on either side of the trench on plywood sheets for re-use after the gas main is installed.**

**No readings above background concentration on 4-gas meter or PID.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Gas Main Trench along the northern side of the Golf Course south of Schley Drive. Cover and shaping material are segregated on either side of the trench.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny** **Wind: breezy** **Humidity**

**Date: August 29, 2018** **Time: 1000 - 1500** High (Med) Low

**Temp: 95** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation along the northern side of the golf course just south of Schley Drive. Gas main pipeline trench was extended southward to the golf cart path.**

**Site Work Progress: Gas Line trench was extended to its first intersectin with the golf cart path along fairway…Cover material and shaping material was segregated on either side of the trench on plywood sheets for re-use after the gas main is installed.**

**No air monitoring measurements exceeded background concentrations.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Looking northward, Gas Main Trench along the northern side of the Golf Course south of Schley Drive. Cover and shaping material are segregated on either side of the trench.**

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**Photo 2: Looking southward, the gas line pipeline route-heading south toward the golf cart path- prior to excavation.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Partly sunny** **Humidity**

**Date: August 30, 2018** **Time: 6:50am** **Temp: 91** °F (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction**

**Active Site Work Areas: Construction site for new six-inch gas line**

**Activities included: Trenching**

**Site Work Progress: From the endpoint of trenching on 08/29/2018, ~ 100 feet of trenching to a depth of ~ 2 feet was completed along the north side of the 6th fairway cartpath. Sawcutting the asphalt cartpath so that the gas lines crosses over to the inside of the cartpath was postponed to next week. ~ 75 feet of trenching to a depth of ~ 2 feet was then completed on the other side of the cartpath toward the maintenance area (parallel to the 7th tee boxes). Two obstructions (large rock and large piece of formed metal) remain in the 6th fairway trench and are planned prior to laying the gas line.**

**At regular intervals, the trench bottoms were checked with a 4-gas QRAE Meter. The meter alarm is triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen or methane (as Lower Explosive Limit) are above OSHA exposure limits; the alarm was not triggered for these four gases during today's activities.**

**Remarks: Site activities concluded at 1430.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Don Bowman**

**Reviewed By:**
**Date:**

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**View of trenching completed along 6th fairway cartpath on 08/30/2018**

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**View of trenching completed along the cartpath toward the maintenance area (parallel to the 7th tee boxes) on 08/30/2018**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: cloudy** **Humidity**

**Date: August 31, 2018 Time: 0710** (High) Med Low

**Temp: 75** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors:** **Bellisimo Masonry & Construction**

**Active Site Work Areas: Construction site for new six-inch gas line**

**Activities included: Trenching**

**Site Work Progress: From the endpoint of trenching on 08/30/2018 (i.e. near the landfill gas well adjacent to the cartpath leading to the maintenance area), ~ 500 feet of trenching to depths ranging from 2-3 feet (~20-24 inches wide) was completed to near the fire hydrant at the end of the cartpath by the greens nursery and maintenance garage. Irrigation lines were uncovered during excavation at two areas, and a few additional obstructions were discovered that are planned for removal prior to laying the gas line.**

**At 1300 a ConEd representative (Kevin) arrived on site, and observed the length of the trenching to date (beginning at Schley Avenue), escorted by a Trump Organization representative. The ConEd representative stated that laying the gas piping will begin on Tuesday 09/04/2018 or Wednesday 09/05/2018; 40-foot pipe sections will be fused then laid in the trench with tracer wire and marker balls, then tested (long sections) with 150 psi of air pressure and (upon satisfactory testing results) the trench can be backfilled.**

**At regular intervals, the trench bottoms were checked with a 4-gas QRAE Meter. The meter alarm is triggered if concentrations of carbon monoxide, hydrogen sulfide, oxygen and methane (as Lower Explosive Limit) are above OSHA exposure limits; the alarm was not triggered for these four gases during today's activities.**

**Remarks: Site activities were nearing conclusion at 1515.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Don Bowman** Donald Bowman

**Reviewed By:**
**Date:**

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**View of trenching completed along the cartpath toward the maintenance area (parallel to the 7th tee boxes) on 08/31/2018**

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**View of trenching completed along the cartpath approaching the maintenance area on 08/31/2018**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: clear & sunny** **Wind: light & variable** **Humidity**

**Date: September 4, 2018** **Time: 1000 - 1400** High (Med) Low

**Temp: 90** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline: saw cutting in the maintenance area in preparation for trenching.**

**Also area between Buttrick & Schley is being prepared for pipeline installation by Con Edison.**

**No PID or four gas meter measurements above background levels.**

**Site Work Progress: Saw cutting from the cart path into the maintenance area was initiated today (contractor was to have completed this yesterday however they experienced problems with the saw cutting machine).**

**Con Edison is transporting and staging plastic 6-inch pipe at the trench on the northside of the golf course in preparation for installation.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Looking southward, Gas Main Trench along the northern side of the Golf Course south along golf cart path.**

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**Photo 2: saw cutting asphalt in the maintenance area.**

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# DAILY FIELD OBSERVATION REPORT

**M T (W) TH F SA SU** **Weather:** Weather **Wind:** 0-5 mph **Humidity** (High) Med Low)
**Date:** 9-5-2018 **Time:** 7:30 **Temp:** 90+

**Name of Project:** Trump Links Golf Course - Ferry Point **Municipality:** Bronx, NY **Job No:** 17002426C

**Site Contractors:** Bellisimo Masonry & Construction (Anthony)

**Active Site Work Areas:** Proposed Gas Main installation & excavation

**Site Work Progress:** Arrived on-site at 7:30am

Upon arrival, gas meter located in Chris' office was not working. Called Pine Environmental and had them deliver a new one.

7:45am - Began preliminary observations, asphalt in front on maintenance garage has been saw cut, had to offset in fron of bay door No. due to natural gas cap.

8:30am - ConEd arrived on-site.

9:15am - Orange Demarcation barrier is being laid down in trench (See attached map for location) (BLUE AREA)

9:20am - 3" of sand is being laid on top of orange demarcation barrier (Checking with measured broom stick handle)

10:00am - Anthony (Bellisimo) began removal asphalt layer from north and east side of the maintenance garage.
10:10am - Measured trench in asphalt - ranged from 36"-42"

**Remarks:** N/A

11:00am - Spoke to ConEd workers, they explained the bonding process. 20 min of intense heat (400-450 degrees) to bond two sections together and 20 minutes for the pieces to cool down before they can be placed in trench.

11:15am - Anthony (Bellisimo) began trenching across golf cart path (See attached map, YELLOW AREA). Steel plate placed over trench.

11:40am - Pine Environmental delivered new gas meter

12:00pm - ConEd front loader broke down, need to replace with new one

13:30pm - New front loader arrives and bonding continues
14:30 - Anthony (Bellisimo) was trenching along east side of maintenance garage. Exposed current 4"gas line (See attached map, GREEN AREA)

15:40pm - Orange demarcation barrier has been laid with 3" of sand on top from Buttrick Avenue to where the trench first crosses the golf cart path (See attached map)

15:45pm - 8 sections of new 6" gas pipe has been bonded and placed in trench.

16:30pm - Trenching has ended for the day

**Site Photographs:** Yes **Additional Action Required by Project Mgr. or Eng.: (YES (NO)**

**Observed By:** Vince Carbone **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Sunny/Slightly Cloud** **Wind: light to mild** **Humidity**

**Date: September 6, 2018** **Time: 0900 - 1630** High (Med) Low

**Temp: 90** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation pipeline: saw cutting, trenching, and backfilling in the maintenance area**

**Piping welded from Buttrick & Schley Ave to southern golf trail for pipeline installation by Con Edison.**

**No PID or four gas meter measurements above background levels.**

**Site Work Progress: Northeastern and northwestern sides of the maintenance building trench backfilled with a minimum of 3" of clean fill. Thickness of the fill measured every 10' throughout an estimated ~170 LF trench. Trench extended on the northwestern side extended ~10 – 20 LF by cutting asphalt and excavating soil material nearby.**

**Con Edison welding and installing plastic 6-inch pipe at the trench on the northside of the golf course . Note: Areas with <18" of soil above the pipe require steel section above the pipe.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Trench Along Northeastern Maintenance Building**

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**Photo 2: Trench Along Northeastern Maintenance Building Backfilled**

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**Photo 3: Northside Trench, Con-Ed Welding & Installation Staging Area**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: cloudy** **Wind: breezy** **Humidity**

**Date: September 7, 2018** **Time: 1100 - 1630** High (Med) Low

**Temp: 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation along the northern and western sides of the maintenance facility. Testing of fitting and connections by RECONN. Gas main pipeline trench was saw cut and extended southward toward the golf cart path near the 8th tee box.**

**Site Work Progress: Gas Line trench was extended to its first intersectin with the golf cart path along fairway…Cover material and shaping material was segregated on either side of the trench on plywood sheets for re-use after the gas main is installed.**

**No air monitoring measurements exceeded background concentrations.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1: Con Ed laborers preparing to install gas line along the northern side of the maintenance facility.**

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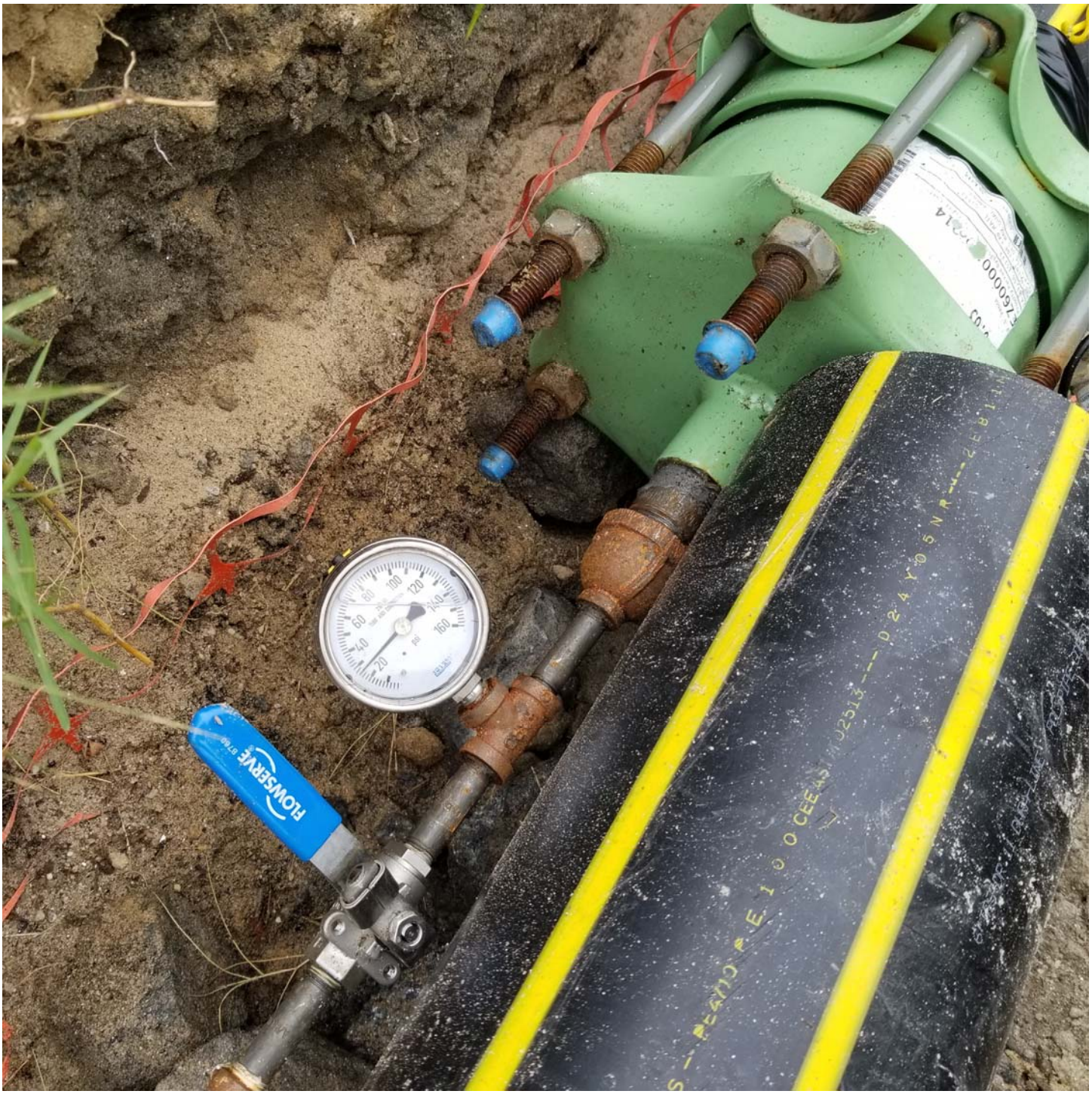


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**Photo 2: Pressure tesing of the newly installed 6-inch gas line.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: rain** **Wind: breezy** **Humidity**

**Date: September 10, 2018** **Time: 1100 - 1530** (High) Med Low

**Temp: 55** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation along the northern and western sides of the maintenance facility. Testing of fitting and connections by RECONN. Gas main pipeline trench was saw cut and extended southward toward the golf cart path near the 8th tee box. Pipeline installed**

**Site Work Progress: Gas Line trench was extended to its first intersection with the golf cart path along fairway #8. Backfilling of pipeline in trenches on the northern and western side of the maintenance facility. Weather slowed the progress of work today. All pipes that could be installaed, were installed.**

**No air monitoring measurements exceeded background concentrations.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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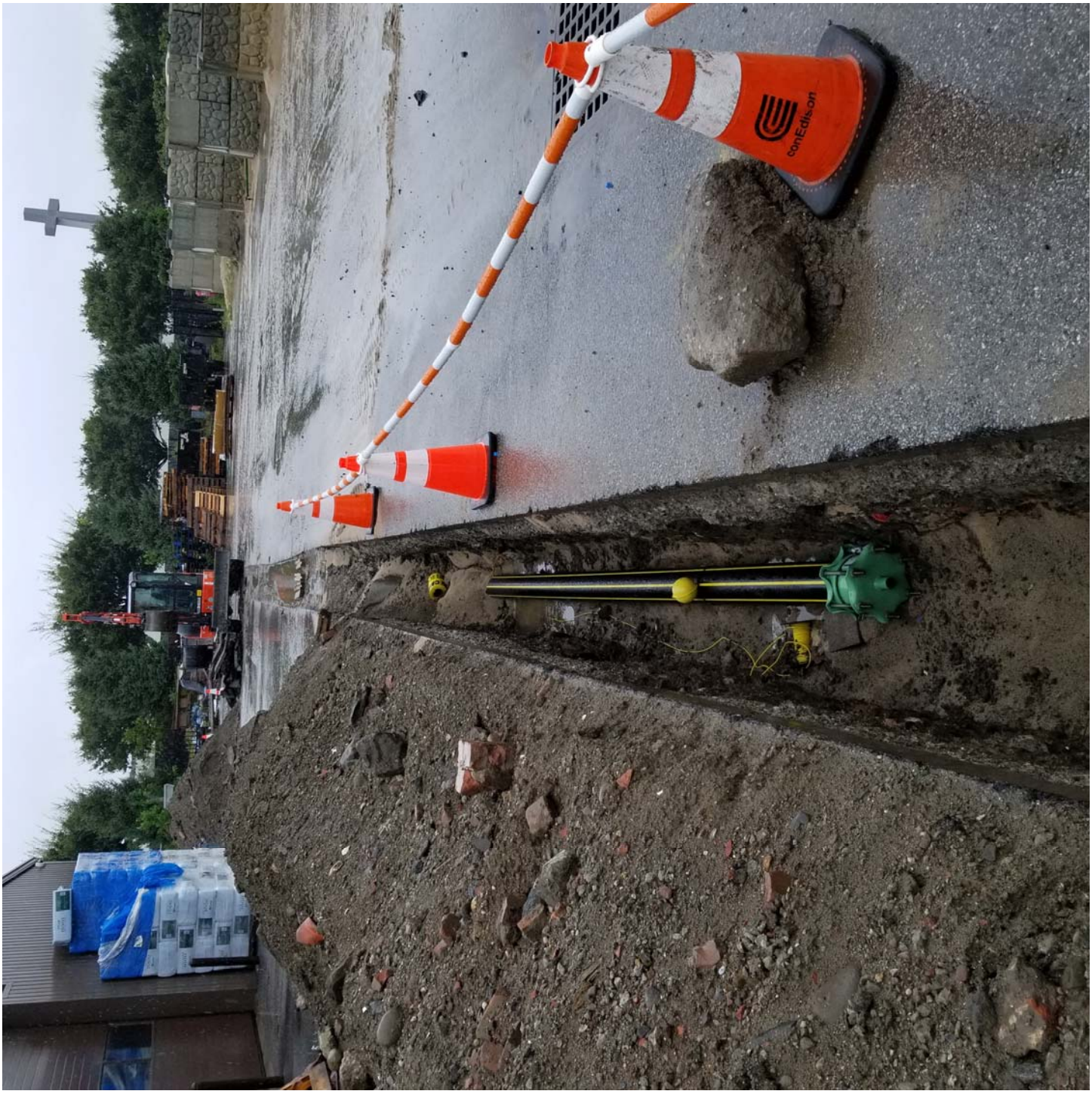


**Photo 1:Gas line along the northern side of the maitenace facility.**

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**Photo 2:Pipeline installation along the west side of the maintenance facility.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: overcast with occasional drizzle** **Wind: calm** **Humidity**

**Date: September 11, 2018** **Time: 1030 - 1530** High Med Low

**Temp: 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation along the northern side of the maintenance facility northward toward the 7th fairway. Testing of fitting and connections by RECONN. Gas main pipeline along fairway #6 was backfilled to specifications. Approximatley 450 of backfill was completed today.**

**Site Work Progress: Backfilling of pipeline from the northern side of the golf course southward toward the cart path along Fairway #6. Pipeline installation continued from the maintenance facility northward toward the 7th Tee Box.**

**No air monitoring measurements exceeded background concentrations.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**

**Date:**

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**Photo 1:Gas line along the northern side of the maitenace facility.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: Cloudy/Slightly Rainy** **Wind: light to mild** **Humidity**

**Date: September 12, 2018** **Time: 0900 - 1700** (High) Med Low

**Temp: 60 - 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline - Backfilling in the Trenches North of Maintenance Garage**

**Piping welded around trench bends for pipeline installation by Con Edison.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Various locations of trenchs were backfilled north of the maintenance building. Toward the northern end of the course near Buttrick & Dewey Ave prior backfilling and near the maintenance building area, clean cover sand was backfilled to a minimum of 3" thick above the gas pipe and shaping material soil was covered over. Areas near the intersection of the golf course were backfilled with a minimum of 3" thick clean fill sand at the base of the trench. Thickness of the clean fill above and below pipes were measured every 10' throughout the trench.**

**79,500 lbs of clean cover fill from Ranco Sand & Stone was delivered to the site at the maintenance building.**

**Con Edison welded and installed plastic 6-inch pipe at trench bends near the trail intersection of the gas installation .**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**

**Date:**

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**Photo 1: Northern Trench Near Buttrick and Dewey Ave Backfilled to Grade with Shaping S**

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**Photo 2: Northern Trench Near Maintenance Building Backfilled to Grade with Shaping Soil**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: Cloudy/Slightly Rainy** **Wind: light to mild** **Humidity**

**Date: September 13, 2018** **Time: 0800 - 1500** High (Med) Low

**Temp: 60 - 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline – Excavating Trenches South of Maintenance Garage toward clubhouse**

**Piping welded around trench bends for pipeline installation by Con Edison.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Roughly 500' of trench south of the maintenance building from the rear entrance along the path to the clubhouse was excavated. Trench depth ranged from 30 – 40" below ground surface. Near the fence line of the trench, gravel, plastic piping, and plastic liner was encountered. Roughly 10' of perforated pipe was damaged during the disturbance. The contractor (Anthony) was notified to repair the drainage area. Unmarked utilities were also encountered, but were not damaged beyond the casings. All materials were stocked onto plywood panels along the trench. Shaping layer soil was placed on the far end of the trench, while cover sand soil was placed near the trench for backfilling.**

**Remaining shaping layer soil from backfilling activities around the maintenance building was stockpiled toward the northwest end of the maintenance building.**

**Con Edison continued welding and installing plastic 6-inch pipe at trenches north of the maintenance building.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato** **Reviewed By:**
**Date:**

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**Photo 1: Trench South of Maintenance Building Along Hutchinson River Parkway**

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**Photo 2: Damaged Perforated Piping from Drainage Area**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: Cloudy/Slightly Sunny** **Wind: light to mild** **Humidity**

**Date: September 14, 2018** **Time: 0800 - 1500** High (Med) Low

**Temp: 60 - 70** °F

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline – Excavating Trenches South of Maintenance Garage toward clubhouse, Backfilling Trenches North of Maintenance Garage**

**Piping installed in southern trenches by Con Edison.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Roughly 400' of trench south of the maintenance building along Hutchinson the path to the clubhouse was excavated. Trench depth ranged from 30 – 40" below ground surface. Near the fence line of the trench, gravel, plastic piping, and plastic liner was encountered. Roughly 2' of perforated pipe was damaged during the disturbance. The contractor (Anthony) was notified to repair the drainage area. Portions of the trench were primarily composed of gravel from the runoff drainage system and will be backfilled. Asphalt was cut and concrete was broken up on the eastern rear gate prior to trenching. All materials were stocked onto plywood panels along the trench. Shaping layer soil was placed on the far end of the trench, while cover sand soil was placed near the trench for backfilling.**

**Roughly 20' of clean cover soil was backfilled over piping in trenches north of the maintenance building to a minimum thickness of 3". Caution tape was placed on top of the backfilled sand.**

**Con Edison performed a pressure test at the rear gate entrance of the maintenance garage. The test was successful with no leaks in the system. Plastic 6" pipe at trenches south of the maintenance building were installed. The trench was not backfilled with 3" minimum of bedding. Anthony and Con Edison were notified that clean cover sand must be backfilled on the bedding of the trench either prior to installation or worked around the piping. Con Edison responded that the bedding will be installed.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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**Photo 1: Trench South of Maintenance Building Along Hutchinson River Parkway**

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**Photo 2: Piping Installed in Trench near Rear Entrance Gate, Asphalt and Concrete to be Trenched.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: Sunny/Slightly Cloudy** **Wind: light to mild** **Humidity**

**Date: September 13, 2018** **Time: 0800 - 1500** **Temp: 60 - 70 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation pipeline – Excavating Trenches South of Maintenance Garage toward clubhouse, Backfilling Trenches North of Maintenance Garage**

**Piping installed in southern trenches by Con Edison.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Roughly 250' of trench south of the maintenance building along Hutchinson the path to the clubhouse was excavated. The trench was generally excavated on the inner fence line limits within the surface water drainage system area, which consisted of gravel, perforated ppe, and geotextile. The trench was generally ~36" below ground surface. Roughly 6' of perforated pipe was observed to be damaged during the trenching and scattered geotextile pieces. The contractor (Anthony) was notified to repair the drainage areas prior.**

**Asphalt was cut and concrete was broken up on the eastern rear gate prior to trenching the area in preparation of Con Edison's pipe installation. Broken up asphalt and concrete were stockpile separately for disposal. Remaining materials were stockpiled onto plywood panels along the trench or across the asphalt trail, as applicable.**

**Roughly 80' of clean cover soil was backfilled over piping in trenches north of the maintenance building to a minimum thickness of 3". Caution tape was placed on top of the backfilled sand.**

**Plastic 6" pipe at trenches south of the maintenance building were installed. The trenches were not initially backfilled with 3" minimum of bedding. Anthony and Con Edison are aware that clean cover sand must be backfilled on the bedding of the trench either prior to installation or worked around the piping. Con Edison responded that the bedding will be installed.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: John Fortunato**

**Reviewed By:**
**Date:**

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**Photo 1: Trench South of Maintenance Building Along Hutchinson River Parkway (~1/2 Length from Rear Gate to Clubhouse, Gravel & Runoff Sand Excavated and stockpiled)**

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**Photo 2: Trench Between Buttrick & Dewey Ave and trail Crossroad backfilled with minimum of 3" thick clean Sand (Backfill subsequently leveled and caution tape placed on top)**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather; Variable with heavy rains** **Wind: moderate** **Humidity**

**Date: September 18, 2018** **Time: 1000 - 1400** **Temp: 75 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation and Trenching along the cart path adjacent to Fairway #8.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Work was slowed to to heavy rains that were once Hurrican Florence. Trenching was advanced on the western side of the cart path near Fairway #8. Con Edison installed 6-inch gas line sections along this same route. Section couplings were tested and approved by RECONN.**

**Trenching operation is approximately 800 feet ahead of the pipeline installation.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo 1: Con Edison installing 6 inch pipeline section west of the cart path near Fairway #8.**

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**Photo 2: Trench on the east side of the cart path adjacent to Fairway #6 is backfilled.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather; mostly sunny and warm** **Wind: light & variable** **Humidity**

**Date: September 19, 2018** **Time: 1000 - 1500** **Temp: 70-75 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation and Trenching along the cart path adjacent to Fairway #8.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Gas line installation work continued along the utility cart path adjacent to Fairway #8. Con Edison crews were short manpower as most were getting re-certified for pipeline work installations. Bellisimo continued trenching and backfilling as appropriate.**

**To date: approximately 4,000 feet has been trenched; 2,800 feet has had pipeline installed, pressure tested and backfilled; 900 feet of open trench with pipe tested but not backfilled; 300 feet of open trench ready for pipeline installation.**

**Approximatley 1,000 feet of trenching remains.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather; mostly sunny** **Wind: light & variable** **Humidity**

**Date: September 20, 2018** **Time: 1000 - 1500** **Temp: 70 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Gas Main Installation and Trenching along the cart path adjacent to Fairway #8 up to the intersection with the parking lot.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Gas line installation work continued along the utility cart path adjacent to Fairway #8 and up to the parking lot. Con Edison crews worked to weld, install and pressure test to pipe sections-monitoring by RECONN. Bellisimo continued trenching and backfilling as appropriate.**

**To date: approximately 4,500 feet has been trenched**

**Approximatley 500 feet of trenching remains. Trump is awaiting word from the engineer how close the new pipeline needs to to get to the new clubhouse to have sufficient gas supply.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT

**M T W TH F SA SU** **Weather: Cloudy** **Wind: 10-15mph** **Humidity** (High Med Low)
**Date: 9/21/2018** **Time: 7:30am**
**Temp: 65 degrees**

**Name of Project: Trump Links Gas Main** **Municipality: Bronx, NY** **Job No: 17002426A**

**Site Contractors: Bellisimo Construction, ConEdison**

**Active Site Work Areas:**

**Site Work Progress:**
**Trenching began along west side of entrance to service road.**
**Trenching extended to wrap around to the front of the "Trump Links" sign**
**Began ripping up asphalt to connect to current gas box**
**Encountered water from either irrigation lines or rainfall in trench**
**ConEd connected gas main and pressure tested it (Passed)**
**Backfilled areas include only across the service road to allow access for cars**

**Remarks: N/A**

**Site Photographs: Yes** **Additional Action Required by Project Mgr. or Eng.: (YES NO)**

**Observed By: VJC** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather; mostly cloudy & wiindy** **Wind: windy** **Humidity**

**Date: September 24, 2018** **Time: 1000 - 1500** **Temp: 60-65 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation and Trenching extended to the Trump Links sign and across the driveway to the gas vault. Con Edison continued to weld sections of pipeline, install and test with RECONN inspections.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Gas line installation trenching is almost completed. Con Edison crews worked to weld, install and pressure test to pipe sections-monitoring by RECONN. Bellisimo continued trenching and backfilling as appropriate.**

**To date: approximately 5,000 feet has been trenched**

**Con Edison engineer indicated that the because a 6-inch line was intstalled instead of a 4-inch line there will be a sufficient volume of fuel for the new clubhouse.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

**Photo 1: Gas Main Trench is extended beyond the Trump Links Sign to the gas vault.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: heavy rain** **Wind: gusty** **Humidity**

**Date: September 25, 2018** **Time: 1200 - 1500** **Temp: 65-70** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Gas Main Installation and Trenching in front of New Club House**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Heavy rain hampered work progress today.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

**Photo: 1 Trenching in front of the new club house.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny & warm** **Wind: light & variable** **Humidity**

**Date: September 26, 2018** **Time: 1200 - 1500** **Temp: 75 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison**

**Active Site Work Areas: Gas Main Installation and Trenching in front of New Club House. Attempts made to locate existing gas service to connect it to the new 6 inch main.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Backfilling of trench in front of new clubhouse after pipeline installation and testing by Con Edison. Locate existing 2-inch service line so that it can be connected to the new 6-inch gas main.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

**Photo: 1 Trenching in front of the new club house.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**(M) T W TH F SA SU** **Weather: mostly sunny & warm** **Wind: calm** **Humidity**

**Date: October 1, 2018** **Time: 1200 - 1400** **Temp: 70** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: topping of backfilled areas with cover material to bring grade a minimum of 27" above the top of the gas line. Cover material was imported from Ranco Sand & Stone.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: areas of the gas line on the northern side of the golf course were prepared with cover material. Work areas include the gas line route along Fairways #6 and #7.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

**Photo: 1 Cover material from Ranco S&S placed over the gas line to provide adequate cover thickness.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: mostly sunny & warm** **Wind: calm** **Humidity**

**Date: October 2, 2018** **Time: 1200 - 1400** **Temp: 75 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: topping of backfilled areas with cover material to bring grade a minimum of 27" above the top of the gas line. Cover material was imported from Ranco Sand & Stone. Miscellaneous work throughout the job site as Con Edison was not on-site today.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: areas of the gas line on the northern side of the golf course were prepared with cover material. Work areas include the gas line route along Fairways #6, #7 and #8.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

**Photo: 1 Cover material at pipeline route adjacent to Fairway #7.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny & warm** **Wind: calm** **Humidity**

**Date: October 3, 2018** **Time: 1200 - 1400** **Temp: 75 °F** High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: topping of backfilled areas with cover material to bring grade a minimum of 27" above the top of the gas line. Cover material was imported from Ranco Sand & Stone. Miscellaneous work throughout the job site as Con Edison was not on-site today.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: areas of the gas line on the northern side of the golf course were prepared with cover material. Work areas include the gas line route along Fairways #6, #7 and #8.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo: 1 Cover material at pipeline route adjacent to Fairway #6.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather: overcast & warm** **Wind: calm** **Humidity**

**Date: October 9, 2018** **Time: 1000 - 1500** **Temp: 70- 75 °F** (High) Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas:Bellision Construction worked the gas pipeline route along side Fairway #6 adding sufficient cover material and grading. Additional landscaping work was conducted in from of the "Trump Links' sign. Con Edison workers were staged on the roadway north of the golf course-opening the roadway in preparation to make the connection with the gas main at Schley and Buttrick.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course were slow and meticulous due to the abundance of underground utilities.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

**Photo: 1 Cover material at pipeline route adjacent to Fairway #6.**

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**Photo #2: excavations to connect the new gas line with the existing main**

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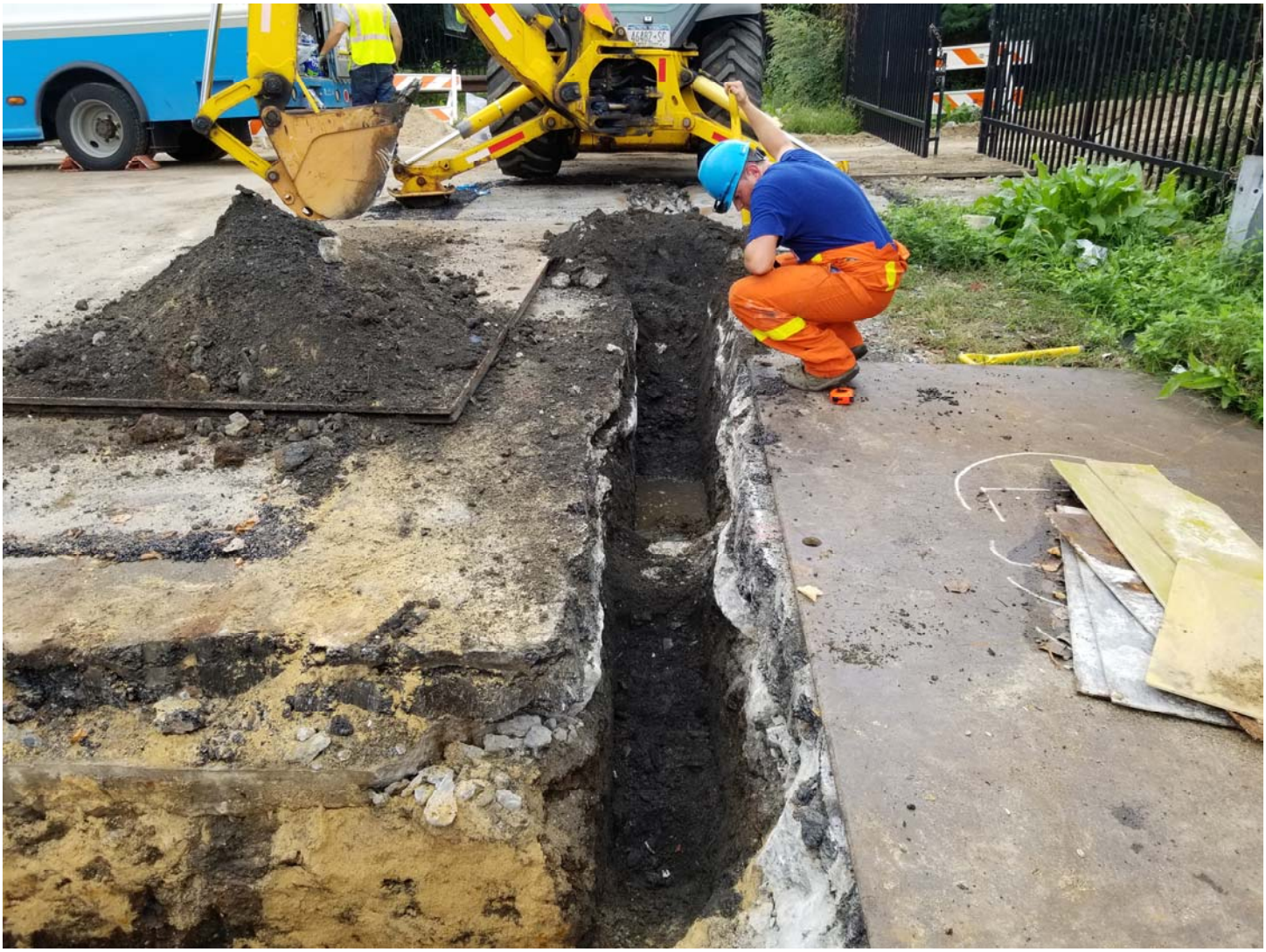

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T (W) TH F SA SU** **Weather: mostly sunny & warm** **Wind: light** **Humidity**

**Date: October 10, 2018** **Time: 1030 - 1430** **Temp: 75-78 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Bellision Continue construction work along the gas pipeline route along side Fairway #6 adding sufficient cover material and grading. Additional landscaping work was conducted in from of the "Trump Links' sign. Con Edison workers were not on-site today.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course have been backfilled. Con Edison was not on-site today so the schedule for the new gas line to be connectred to the Main is unclear.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo: 1 Cover material at pipeline route adjacent to Fairway #6.**

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**Photo #2: Area where the new gas line will be connected to the existing main.**

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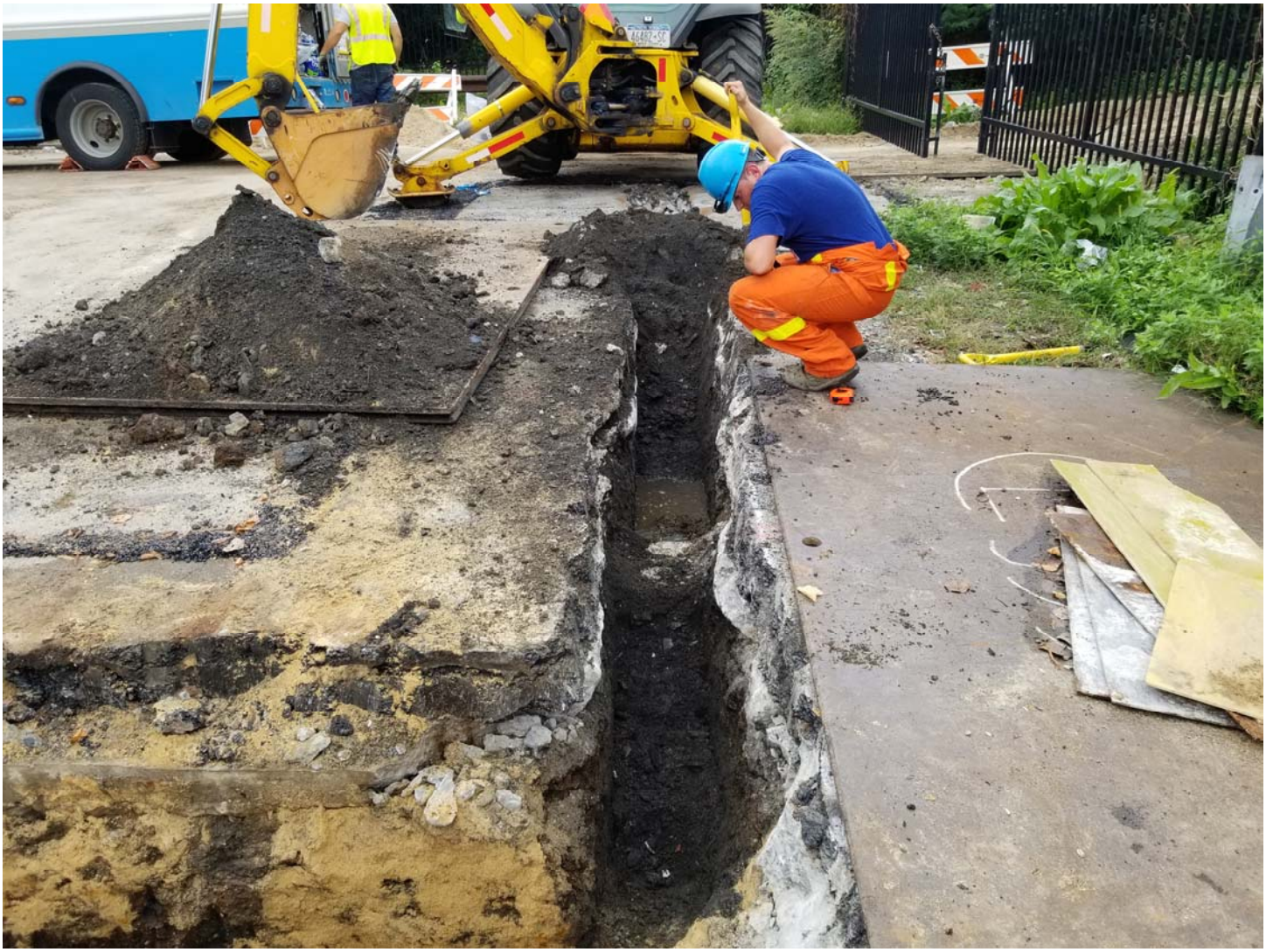

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH F SA SU** **Weather: cloudy & mild** **Wind: steady winds** **Humidity**

**Date: October 15, 2018** **Time: 1030 - 1430** **Temp: 65** °F High Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony)**

**Active Site Work Areas: Bellisimo continues miscellaneous construction work along the gas pipeline route along side Fairway #6 adding sufficient cover material and grading. Additional landscaping work was conducted in front of the "Trump Links' sign. Con Edison workers were not on-site today.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course have been covered with protective steel road plates. Con Edison was not on-site today so the schedule for the new gas line to be connected to the Main is unclear. Cover material was staged in the vicinity of open excavations so that it's ready to be deployed as soon as Con Edison makes the final gas line connections.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
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**Photo: 1 Cover material staged at the northern end of the pipeline route inpreparation for the connection to the gas main at Buttrick & Schley .**

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**Photo #2: Area where the new gas line will be connected to the existing main.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M (T) W TH F SA SU** **Weather:mostly sunny** **Wind: steady winds** **Humidity**

**Date: October 16, 2018** **Time: 1130 - 1430** **Temp: 50-55 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony) (offsite)**

**Active Site Work Areas: Bellisimo continues miscellaneous construction work along the gas pipeline route along side Fairway #6 adding sufficient cover material and grading—although they were no observed to be on-site today. Additional landscaping work was conducted in from of the "Trump Links' sign. Con Edison workers were not on-site today. Gas Main connection still needs to be accomplished at Buttrick & Schley and at the Club House.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course have been protected with steel road plates. Con Edison was not on-site today so the schedule for the new gas line to be connected to the Main is unclear. Cover material was staged in the vicinity of open excavations so that it's ready to be deployed as soon as Con Edison makes the final gas line connections.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Steel road plates cover the gas line excavation trench at Buttrick & Schley .**

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**Photo #2: Area where the new gas line will be connected to the existing service branch for the club house.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W (TH) F SA SU** **Weather: clear & sunny** **Wind: steady winds** **Humidity**

**Date: October 18, 2018** **Time: 1100 - 1530** **Temp: 45** °F High Med (Low)

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Bellisimo continues miscellaneous construction work along the gas pipeline route along side Fairway #6. They are also restoring the cart path adjacent to Fairway #6.**

**Con Edison makes the connection of the 6-inch Gas Line to the 2-inch supply line near the new club house. RECONN inspects and tests all joints and connections.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Most of the cover material along side Fairway #6 was placed above the new gasline-elevating the area as per the design specifications. Excavations in the road north of the golf course have been protected with steel road plates. Con Edison was on-site today and made the connection of the 6-ich gas line to the 2-inch supply line near the club house.**

**Site Photographs:** (Yes) No

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Con Edison making the connection of the 6-inch gas line to the 2-inch supply line near the Club house.**

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**Photo #2: Bellisimo working on the cart path adjacent to Fairway #6/Tee Box for Hole #7.**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M T W TH (F) SA SU** **Weather: mostly sunny & mild** **Wind: light** **Humidity**

**Date: October 19, 2018** **Time: 1200 - 1530** **Temp: 55 °F** High (Med) Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: Bellisimo Masonry & Construction (Anthony), Con Edison, RECONN**

**Active Site Work Areas: Bellisimo continues miscellaneous construction work along the gas pipeline route at multiple locations.**

**Con Edison makes the connection of the 6-inch Gas Line to the main gas line at the intersection for Buttrick & Schley. RECONN inspects and tests all joints and connections.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: the new 6-inch gas line has now been connected to the gas main. Following testing, the new 5,000 foot gasline can be activated.**

**Site Photographs:** Yes (No)

**Additional Action Required by Project Mgr. or Eng.:**

**YES (NO)**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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# DAILY FIELD OBSERVATION REPORT – ENVIRONMENTAL

**M** T W TH F SA SU **Weather: mostly overcast skies** **Wind: breezy** **Humidity**

**Date: October 22, 2018** **Time: 1200 - 1500** **Temp: 50- 55** °F High Med Low

**Name of Project: Trump Golf Links – Ferry Point Park** **Municipality: Bronx, NY** **Job No: 17002426C**

**Site Contractors: No contractors on site today**

**Active Site Work Areas: No active work areas as contractors were not onsite today. Open trenches at the new clubhouse and the connection point for the gas line we checked for air quality.**

**No 4-gas meter measurements above background levels.**

**Site Work Progress: Contractors were not on-site today. Air quality measurements were collected at open trenches at the northern and southern end of the pipeline route. No measurements recorded above background levels.**

**Site Photographs:** Yes No

**Additional Action Required by Project Mgr. or Eng.:**

**YES NO**

**Observed By: Dave Keil** **Reviewed By:**
**Date:**

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**Photo: 1 Gas Line connected at northern end of pipeline route.**

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**Photo #2: Pipeline connection area at southern end of pipeline route near the new clubhouse.**